HOME TEAM JOURNAL

Issue no. 10
May 2021

by Practitioners, for Practitioners

Service in the time of COVID-19

How Home Team Departments continue to keep Singapore safe and secure during a pandemic

YELLOW RIBBON
Keeping ex-offenders out of prison

INNOVATION IN THE SINGAPORE POLICE FORCE

DISRUPTING VIOLENT EXTREMISTS ONLINE

CHIEF PSYCHOLOGIST MAJEED KHADER
Titles mean nothing to my autistic son

THE LEADERSHIP INTERVIEW

"CE can stand for chief enabler. I'm here to enable, to enable my staff to succeed, to remove obstacles. ... Because of COVID, we've had to stand up a lot of operations, capabilities, go into new areas, to force-multiply the Home Team."

CHAN TSAN
Chief Executive, Home Team Science and Technology Agency

HOME TEAM JOURNAL

The *Home Team Journal* is a publication by the Home Team Academy in collaboration with the Ministry of Home Affairs of Singapore and its departments, which are collectively known as the Home Team. It is a journal by practitioners and researchers for practitioners and specialists in safety and security.

All correspondence should be addressed to the

HOME TEAM JOURNAL EDITORIAL BOARD
Home Team Academy
501 Old Choa Chu Kang Road Singapore 698928

Those wishing to submit manuscripts should send abstracts of proposed articles to the Editor at MHA_HT_Journal@mha.gov.sg.

THE HOME TEAM ACADEMY WOULD LIKE TO THANK THE FOLLOWING FOR THEIR SUPPORT:

Jansen Ang
Singapore Police Force

Chen Sei Lee
Casino Regulatory Authority

Foo Kok Chuen
Yellow Ribbon Singapore

Evelyn Ho
Home Team Science & Technology Agency

Majeed Khader
Home Team Behavioural Sciences Centre

Lal Nelson
Ministry of Home Affairs

Lee Fook Kay
Ministry of Home Affairs

Angeline Ong
Internal Security Department

Ong Choon Beng
Immigration & Checkpoints Authority

Tricia Ortega
Ministry of Home Affairs

Daniel Tan
Singapore Prison Service

Tan Hung Hooi
Singapore Police Force

Sebastian Tan
Central Narcotics Bureau

Teong How Hwa
Singapore Civil Defence Force

CONTENTS

Issue no.10 - May 2021

FOREWORD

SERVICE IN THE TIME OF COVID-19

THE LEADERSHIP INTERVIEW

STRATEGIC COMMUNICATIONS

CONTENTS

Issue no.10 - May 2021

CORRECTIONS & REHABILITATION

POLICING & INTELLIGENCE

CRIME

TERRORISM

HOMEFRONT INSIGHTS

PUBLICATIONS

FOREWORD

In the area of economics, "service" refers to the exchange of intangibles between a buyer and a seller. There are other definitions of "service". In the case of the Home Team, the "service" we provide is one of necessity to the people living in Singapore – safety and security. It goes much further than transactions. It involves personal sacrifices. With this in mind, we dedicate this issue of the *Home Team Journal* to the theme of **Service in the Time of COVID-19,** to pay tribute not only to the service of our officers but also the other frontline workers and volunteers who worked alongside us to keep Singapore safe and secure.

Indeed, we were starting to plan for this issue of the *Journal* when Singapore implemented its "circuit breaker" measures to contain the COVID-19 pandemic in April last year. I felt it was important to begin documenting the impact COVID-19 was having on the Home Team – on our collective mission to keep Singapore safe and secure, the organisations, the people – and how departments responded to this "crisis of a generation". I wanted the *Journal* to provide a first-cut of history so that as time passes, we will have the on-the-job narratives and analyses that will allow us to begin to assess the strength and resilience of our organisations and crisis leadership, to draw out lessons that can feed into future planning. This is how I envision the *Home Team Journal* growing into – a platform not just for conversations about contemporary issues, but also for documentation that can form the basis of long range, longitudinal thinking about the evolving roles of the Home Team and the conceptualisation of safety and security in Singapore.

Heeding the *Journal's* call for contributions, many Home Team officers made time to reflect on the changes their agencies have had to make. Their articles describe the urgency of staying focussed on their missions even as priorities shifted, how they leveraged technology to battle an invisible enemy even as other law enforcement threats grew and even innovated. For instance, CNB has had record drug seizures since the pandemic led to border closures except for essential supplies. In mid-April 2021, for example, CNB seized 40 kg of illicit drugs, enough to feed 12,000 abusers for a week. As guardians of law and order, we have to be as nimble and tenacious as our adversaries.

For the Home Team Academy (HTA), COVID-19 spurred us to prove that **unity is strength.** Our team of HTA-Enablers went beyond the call of duty and we were one of the first government agencies to manage three different facilities within our premises (a Government Quarantine Facility, a housing facility for relocated migrant workers from essential services, and a dormitory isolation facility), while playing our role as the Corporate University of the Home Team. We pivoted to a blended learning approach by stepping up the use of virtual modes and digital tools, which proved to be effective in meeting our course objectives.

I am also heartened to note that, as many of the articles in this issue make clear, our agencies have been determined not only to continue doing their jobs and contribute to the national efforts, but to also ensure the well-being of their officers. According to recent research cited in an article in the *Harvard Business Review*, "as we navigate various transitions over the coming months and

Giving more of themselves is what we have seen Singaporeans do all of this past year, inspired not just to save lives, but to make the "new normal" a better one.

years, leaders are likely to see employees struggle with anxiety, depression, burnout, trauma, and PTSD [post-traumatic stress disorder]."[1]

Home Team Chief Psychologist Majeed Khader's reflections, written at the request of the *Journal*, are thus a timely reminder of how the Home Team has been teaching its officers to cope with stress since the 1990s, and how departments have incorporated **behavioural sciences and psychological insights** into many areas of operations and resource management, including in selecting, recruiting and nurturing people. Even before COVID-19 was declared a global pandemic in March 2020, the Home Team's Behavioural Sciences Centre (HTBSC) was combing through available research on the psychological effects of prolonged health crises and sharing its findings with the Home Team and its community partners. These included strategies for building community resilience during what is both a biological and social pandemic where fear is the secondary contagion, and recommendations for responding to maladaptive behaviour such as panic buying, and the spread of misinformation. Several of these HTBSC briefs have been adapted into two articles for this issue of the *Journal*. Some of their recommendations – modelling responsible behaviour, sharing accurate information, rallying people to stay calm and united while carrying on as normally as possible – are tools we can all use during challenging times.

As with previous issues, we have articles on the **Home Team's core businesses** – fighting crime, saving lives, countering terrorism, rehabilitating offenders – and the tools to do our job better, by innovating, nudging and fighting disinformation. Our partners from academia and abroad also discuss their latest research, reflecting on the lessons that history has to offer.

The Leadership Interview, the third in the *Journal's* ongoing series, is with Chan Tsan, Deputy Secretary (Development) and Chief Executive of the Home Team Science & Technology Agency, better known as HTX. Set up as a statutory board, this newest addition to the Home Team family is responsible for helping the entire Home Team innovate and transform for the future. DS Chan reminds us that leadership is the art of inspiring others. As he puts it:

"When people are inspired, they give more, they give more of themselves to do their best. And how do you get them inspired? It's more effective when it comes from within, rather than being pushed, rather than being motivated by an external force."

Going back to the theme of service and sacrifices, giving more of themselves is what we have seen Singaporeans do all of this past year, inspired not just to save lives, but to make the "new normal" a better one.

CLARENCE YEO
Chief Executive, Home Team Academy

[1] Greenwood, K. and Krol, N. (2020). 8 Ways Managers Can Support Employees' Mental Health. *Harvard Business Review* August 7, 2020.

GUARDING AGAINST THE INVISIBLE ENEMY

Lian Zhimin, Arvinder Singh, Rayna Tan & Tan Chermel
Immigration & Checkpoints Authority

ABSTRACT

The emergence of the Coronavirus Disease 2019 (COVID-19) prompted many countries to impose stringent border control measures to mitigate the risk of importation of the infectious disease. Singapore was no exception. To guard against the invisible enemy, the Immigration & Checkpoints Authority (ICA) implemented tighter border control measures within a short span of time, constantly adjusting them to mitigate the fluid situation. As the global situation worsened, Singapore took the unprecedented step of closing its borders to short-term visitors. ICA also had to conduct heightened clearance operations for dedicated flights that brought home stranded Singapore residents from around the world. In anticipation of a protracted fight against COVID-19, ICA leveraged technology and fine-tuned its operational processes to alleviate the workload of the frontline officers. Beyond the borders, ICA was also responsible for implementing and enforcing the Stay-Home-Notice (SHN) regime to minimise the risk of community spread from residents returning from overseas. Many ICA officers also volunteered to be part of the Forward Assurance and Support Teams (FAST) at migrant worker dormitories to enforce Circuit Breaker Measures. This article documents ICA's response to COVID-19 as guardians of our borders, protecting more than just a line on the map. It also describes how ICA adjusted a border control regime primarily designed to deal with security threats to manage COVID-19, providing a glimpse of border control in a post-COVID-19 world.

FROM KEEPING OUT SECURITY THREATS TO SAFEGUARDING PUBLIC HEALTH

The Immigration & Checkpoints Authority (ICA) was formed in April 2003 against a backdrop of heightened security risk arising from the 9/11 terrorist attacks in the United States. A single border control authority via the merger of the Singapore Immigration & Registration (SIR) and the checkpoint operations of the Customs & Excise Department (CED), ICA has since strengthened Singapore's border security and kept key external threats at bay.

Besides combating security threats, ICA also has to help contain the spread of infectious diseases, as it did during past pandemics such as SARS (2003), H1N1 (2011), Ebola Virus Disease (2014) and MERS-COV (2015). As Singapore's first line of national defence, ICA formulates the Border Health Plan with the Ministry of Health (MOH) and medical services providers to institute border health measures at the checkpoints. For example, in 2018, ICA and MOH staged a joint exercise codenamed Exercise Sparrow Hawk to implement effective health screenings at the land checkpoints.

The Coronavirus Disease 2019 (COVID-19) is, however, not just another disease without borders. Considered "the most crucial global health calamity of the century and the greatest challenge that … humankind [has] faced since the 2nd World War" (Chakraborty and Maity, 2020), it has in one year infected more than 81 million people and caused more than 1.8 million deaths worldwide (WHO COVID-19 Dashboard, as of 31 December 2020).

Since the global outbreak in early 2020, ICA has been at the forefront of Singapore's national defence against COVID-19. This article documents the four response phases ICA undertook to combat COVID-19: (a) alert, (b) contain, (c) restore and (d) adapt to a pandemic. It also details how ICA modified

its border control regime from one that was primarily designed to deal with security threats to one that also safeguards public health.

MITIGATING THE RISK OF IMPORTING COVID-19: FOUR RESPONSE PHASES

ALERT PHASE

During the alert phase, COVID-19 cases were mainly detected in China and the initial key response was to detect and reduce the number of imported cases in Singapore.

On 31 December 2019, China alerted the World Health Organisation (WHO) to the detection of a new viral disease linked to a wholesale food market in Wuhan, the capital of Hubei province. This was followed by a rapid outbreak of the virus later identified as "severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)" within Wuhan and an unprecedented lockdown on 23 January 2020 to halt the spread of the disease. The lockdown led foreign governments to scramble to evacuate their citizens from the city (Nourah, 2020). On 30 January 2020, WHO Director-General Tedros Ghebreyesus declared the outbreak a Public Health Emergency of International Concern (WHO, 2020).

Temperature Screening. In response to the rising number of COVID-19 cases, ICA activated the Border Health Plan on 3 January 2020. One of the initial precautionary measures was the implementation of temperature screening for inbound travellers arriving from Wuhan at Changi Airport. Arriving Chinese nationals with passports issued in Hubei province were also referred by ICA to the health screening stations at the airport for further medical assessment.

Suspension of visa facilities. In the second half of January 2020, Singapore had several confirmed COVID-19 cases involving Chinese nationals from Hubei province. As the infection had spread pervasively in Hubei and 95 percent of the confirmed cases in Chinese cities had been attributed to Hubei, the Multi-Ministry Taskforce set up by the Singapore Government decided to impose additional measures to contain the risk of importation (MOH, 2020). ICA suspended the issuance of new visas and halted visa-free transit facilities for travellers holding PRC passports issued in Hubei. On 28 January 2020, ICA implemented the first set of rules of engagement (ROE) at the checkpoints to sieve out travellers with travel history to Hubei, so that they could be placed under quarantine.

As part of the national effort to contain the number of imported and community cases, Singapore enforced stricter border control measures in early February 2020 where ICA denied entry and transit facilities to travellers with travel history to high-risk countries. The list of such high-risk countries also changed frequently. To sieve out these travellers, ICA analysts conducted backend data-mining based on travellers' flight routes, last ports of embarkation, and places of passport issuance.

Mobile temperature screening at land checkpoints. In anticipation of an increase in travel volume during the 2020 Lunar New Year holiday period, ICA extended temperature screening operations to both land checkpoints from 24 January 2020 (Figure 1).

Figure 1. Mobile temperature screening at Woodlands Checkpoint

Repatriation and Special Operations. Following travel restrictions in China, ICA also worked with other government agencies to faciliate the clearance of several relief flights scheduled to bring home Singaporeans and residents from Wuhan and Hangzhou.

At the sea checkpoints, ICA conducted similar special operations to facilitate the clearance of travellers onboard a Singapore-based cruise ship, Costa Fortuna. The cruise ship had earlier been denied permission to dock in both Thailand and Malaysia as it carried about 115 travellers with travel history to countries severely affected by COVID-19. Costa Fortuna arrived at Marina Bay Cruise Centre Singapore on 10 March 2020 with 1,631 passengers and 982 crew members. Except for crew members who did not disembark, the entire end-to-end operation from medical screening to immigration clearance of the passengers was completed within 14 hours.

Before Malaysia's Lockdown. On 16 March 2020, Malaysian authorities announced the enforcement of a Movement Control Order (MCO) which would restrict the entry of foreigners and bar Malaysians from travelling abroad in two days. The announcement sparked a frantic rush amongst those who had been commuting daily across the border to work and study in Singapore as they rushed home to pack their belongings and return to Singapore before the MCO was imposed.

In anticipation of the heavy traffic, officers from other checkpoints were swiftly redeployed to support the operations at both Woodlands and Tuas Checkpoints. Old Woodlands Checkpoint also remained open throughout the day to maximise clearance capacity until traffic subsided.

CONTAIN PHASE

This was the most critical phase as the virus case count in Singapore increased and ICA had to introduce several measures within a short span of time to limit the spread of the disease.

As infections surged globally, Singapore had to gradually tighten its border control measures and eventually took the unprecedented step of closing its borders at midnight on 23 March 2020. At the checkpoints, all short-term visitors were refused entry into Singapore.

Introduction of Approved Letter of Entry (ALE). The closure of our borders affected a substantial group of travellers who needed to enter Singapore. In response, ICA developed internal guidelines to determine which visitors could be granted entry despite the border closure. These guidelines were quickly translated into executable exemption rules at the checkpoints to aid frontline officers in the processing of affected travellers. For example, travellers with roots in Singapore, or had compassionate grounds, were issued with an Approval Letter of Entry (ALE). At the checkpoints, these travellers were assessed and subjected to the prevailing health control measures before being allowed entry into Singapore.

As the number of entry requests increased, ICA quickly established a new Entry Assessment Unit and developed an online form on FormSG as a dedicated channel to handle enquiries and process applications for the ALE. To regulate the flow of arrivals, an e-booking module was developed for successful applicants to select their date of travel to Singapore.

Enforcement of the Stay Home Notice (SHN) Regime. With more countries affected by COVID-19 and residents returning home from abroad, there was an inevitable rise in imported cases in Singapore.

To rein in the importation of the virus, the Multi-Ministry Taskforce decided to put in place a "Stay Home Notice" regime for residents and long-term pass holders returning to Singapore. On 18 February 2020, all returnees from and with travel history to China were issued with SHN and required to remain home at all times for 14 days. Within the next few weeks, the number of countries from where arrivals were subjected to SHN increased rapidly. By 4 March 2020, the SHN regime was extended to all arrivals from mainland China, Iran, northern Italy, and Republic of Korea. Eventually, all travellers entering Singapore from 20 March 2020 were issued with SHNs.

To ensure that the advisories could be understood by persons on SHN who were not familiar with English, the SHN was translated into vernacular and foreign languages (e.g. Mandarin, Malay, Tamil, Korean).

An SHN helpline was also set-up and managed by various agencies such as ICA and MOH to handle queries. Multiple press releases were issued to debunk misinformation and stop the spread of fake news on social media platforms.

Despite these efforts, the number of local community cases in Singapore continued to climb and the SHN regime was further tightened. From 25 March 2020, all residents returning from the United Kingdom (UK) and United States (US) had to stay in dedicated hotels to serve their 14-day SHN. This additional precautionary measure was necessary as the returnees from UK and US accounted for the largest percentage of imported cases in Singapore, and more Singapore residents were expected to return from both countries in the following weeks. By 9 April 2020, all returning residents regardless of travel history were required to serve their SHN at designated facilities to further stem the risk of importation.

During the early stages of the SHN regime, ICA had limited resources to ensure that those on SHNs were placed under proper surveillance. There were no legal levers to enforce the SHN and there were insufficient officers to conduct house visits and surveillance phone calls. At its peak in April 2020, there were more than 40,000 persons placed on SHN, all of whom ICA had to monitor despite the constraints.

By developing monitoring and surveillance protocols and ramping up the resources of the Intelligence Division, ICA was eventually able to conduct approximately 1,000 house visits and 8,000 surveillance calls on a daily basis. To alleviate the workload and minimise the need for house visits, ICA introduced an electronic tamper-proof wristband that uses Bluetooth Low Energy communication via a gateway device to ensure those on SHNs do not leave their place of residence. These individuals are also required to download the StayHome@SG application on their mobile phone to receive and respond to periodic notifications from ICA.

ICA also set up the SHN Investigation Taskforce on 31 March 2020 with investigation officers drawn from other Home Team Departments as well as ICA's Investigation Branch, and Airport Command. These officers are empowered as Health Officers to investigate offences under the Infection Diseases Act (IDA), operating under a policy framework that stipulates punitive actions against those who breach SHN or commit other COVID-19 related offences. These actions include the prosecution of offenders in court, and administrative measures such as the cancellation of Singapore passports, entry permits and passes.

Implementation of Forward Triage points across the checkpoints. To effect policies which were regularly adjusted due to the evolving COVID-19 situation, more than 40 ROEs and instructions were disseminated to ground officers. Forward triage desks were also set up before the immigration gates to manage the different traveller groups (Figure 2).

Figure 2. Forward triage desk at Harbourfront Cruise Centre

Checkpoint operations were also calibrated to adapt to the different operating terrain of each domain to ensure that regardless of arrival by land, sea or air, contact with the local community was minimised.

Bubble-wrapped Gate-Hold Room at Changi Airport. As a safety precaution, travellers arriving from high-risk countries were ushered to a bubble-wrapped gate-hold room for the clearance and issuance of SHN. ICA officers also had to ensure that travellers possessed the necessary documents to enter Singapore before according clearance to them. Thereafter, chartered buses would transport these travellers directly to their respective dedicated SHN facilities in Singapore to minimise interactions with the local community.

Accommodating air and sea crew. To facilitate essential air travel, exemptions were made for air crew working for local airlines from serving SHN if they had not disembarked from the aircraft or left their hotel rooms, while air crew from foreign carriers were centrally housed at Crowne Plaza Hotel at Changi Airport. This arrangement helped the authorities to centrally manage the enforcement and surveillance of foreign air crew. Similar arrangements were also made for sea crew who arrived in Singapore to join the cruise ships docked in local ports. Private buses were engaged to transport sea crew arriving from the land and air checkpoints directly to the ships to serve their SHN on-board.

Tracker Ops at land checkpoints for travellers arriving via conveyance. Unlike the sea and air checkpoints, operations at the land checkpoints were more complex due to the varying modes of transportation such as cars, motorcycles and lorries. To ensure that travellers who arrived in their personal vehicles were duly transported to the dedicated facilities to serve out their SHN, a tracking system was introduced. Travellers were issued with a tracking device and allowed to proceed to their declared parking location in Singapore. Thereafter, officers from the Certis auxiliary police were activated to meet the returnees at their declared parking location and transport them directly to the dedicated SHN facilities. This arrangement effectively reduced the congregation of vehicles at both land checkpoints and ensured returnees complied with the given instructions.

Ensuring continued delivery of essential supplies during Malaysia's MCO. With the implementation of Malaysia's MCO and growing fears that the daily movement of essential supplies into Singapore could be disrupted, Prime Minister Lee Hsien Loong assured Singaporeans that the supply lines from Malaysia would not be cut. ICA, working closely with the Ministry of Trade and Industry (MTI), made arrangements to ensure the continued flow of essential goods and cargoes through the land checkpoints. These arrangements included distributing meals to the Malaysian truck drivers and issuing them with tracking devices to monitor their movements in Singapore. These efforts help safeguard public health by minimising the drivers' interaction with the local community.

Special Operations across land checkpoints. As the border crossing between Singapore and Malaysia came to a standstill, ICA conducted special operations to facilitate essential movement across the border. For example, residents in Singapore separated from their children since the MCO sought ICA's assistance to reunite with their family. Over seven months, ICA facilitated the reunion of more than 330 families in Singapore. Another notable operation was a request by the Malaysia High Commission to facilitate the departure of 50 pregnant women by bus via Woodlands Checkpoint. ICA officers were deployed to ensure the safe passage of these women without any unnecessary delay.

Ambulances and patients requiring essential medical treatment are also not restricted by the border closure policy, with both countries facilitating immigration clearance. This facility is progressively fine-tuned to ensure prompt provision of timely medical attention during emergencies.

BEYOND THE CHECKPOINTS

As soon as the Singapore Government established the Multi-Ministry Taskforce to monitor and contain the pandemic, ICA assumed the responsibility of providing data and statistical support essential to helping the Taskforce and Homefront Crisis Executive Group obtain a full picture of the developing situation, to sense-make and fine-tune policies. ICA also began providing data to the various government agencies responsible for different aspects of policy implementation, viz., MOH's contact tracing efforts, and the Ministry of Manpower's (MOM) investigations into foreign pass holders who breach the conditions of their entry. ICA's data on expected

traveller volumes also helped the Singapore Tourism Board (STB) with the planning and allocation of designated facilities for travellers serving out their SHN. ICA also identified residents who defy the no-travel advisories and were thus disqualified from subsidies at the SHN facilities.

During the contain phase, ICA officers also began taking on additional tasks as part of the Whole-of-Government response. A total of 45 ICA officers volunteered to serve on the Forward Assurance and Support Team (FAST) and were deployed to assist dormitory operators affected by the COVID-19 outbreak to look after the well-being of foreign workers.

Within ICA, two key challenges emerged: continuing to administer regular immigration and registration services with reduced manning and social distancing measures, and maintaining staff morale. This has meant leveraging technology and fine-tuning operational processes.

For example, during the circuit breaker, ICA had restricted over-the-counter services at ICA Building (ICAB) to only urgent services with pre-approved appointments. Members of the public who required urgent services had to submit an online request for an appointment via FormSG. ICA operationalised this process within three days.

To regulate the number of visitors entering ICAB after the circuit breaker, ICA extended the validity of in-principle approvals for Singapore Citizenship, Permanent Residence and Long-Term Visit Pass applicants who were unable to complete their application formalities during the circuit breaker. Beyond extending the deadline for collection of all passports and identity cards (ICs), ICA also arranged for a one-off delivery to residents who had not collected their passport and ICs because of the circuit breaker. More than 30,000 passports and ICs were delivered by courier.

As outbound flights to the rest of the world dwindled exponentially, many foreigners were stranded in Singapore. As they needed to apply for an extension of their short-term visit pass to legalise their stay in Singapore, ICA improved its online service platform to cater to the increased number of applications for visa and pass extensions.

These were not just short-term tweaks. In view of the urgency to operate under the new norms and in anticipation of an extended COVID-19 outbreak, ICA developed new systems and fine-tuned existing systems within a short span of time to support checkpoint operations, some of which are described here.

Development and enhancement of existing systems to support COVID-19 operations

Before COVID-19, the SG Arrival Card (SGAC) was only used for foreign visitors to provide their particulars prior to arrival. Due to the outbreak, enhancements were quickly made to enable the submission of electronic Health Declaration Cards (eHDC) and issuance of electronic SHN (eSHN) advisories for all arriving travellers via the SGAC (Figure 3).

The implementation of eHDC and eSHN has greatly improved the integrity of the contact tracing database which is vital for analysing COVID-19 trends and carrying out contact tracing of suspected/confirmed cases. The time needed to administer the SHN for arriving travellers has also been reduced

Figure 3. Enhanced SGAC to allow all arriving travellers to submit Electronic Health Declaration Cards

as the collection of contact details and processing of health declaration are now streamlined. The clearance logic of the existing backend systems has also been enhanced to factor in the varying travel schemes and corresponding health protocols for different groups of travellers. This has alleviated the workload for frontline officers at the forward triage desk as arriving travellers from different travel schemes are automatically differentiated by the system.

At the same time, ICA has operationalised contactless biometrics verification at the checkpoints via the Multi-Modal Biometrics System (MMBS). Since July 2020, known travellers have been able to use their facial and iris instead of fingerprints for identity verification at the checkpoints. This touch-free and safer way of clearance is timely to facilitate travel during a global pandemic such as COVID-19.

Enhanced Business Continuity Measures employed by ICA

Similar to other public agencies that provide essential services, ICA has had to implement a suite of safe distancing and safe management measures. For instance, a split team concept has been adopted to ensure that there is no interaction between staff from different shifts or teams. To ensure business continuity, work processes have been reinvented and new ways developed to ensure continued delivery of essential services to the public.

Figure 4. Thank you notes from St Anthony Primary School students

At the frontlines, checkpoints are operated in clusters to avoid cross deployment of officers between different operational zones. The ratio of onsite manpower vis-à-vis those working from alternate sites / home is regularly calibrated at our Services Centres.

With the enhanced business continuity measures, officers from Airport Command have been re-deployed to support Air Cargo Command as the demand for low value goods surged. For instance, the volume of consignments at the Air Cargo checkpoints increased by 49% between April and May 2020.

Maintaining Morale

With intensive demands placed on officers in this new operating environment, ICA leadership is making deliberate efforts to upkeep and maintain morale at the checkpoints and Services Centres.

Showing appreciation. Understanding the importance of empathy and connectedness during a crisis, ICA leaders have increased the frequency of their engagement with officers to show appreciation for their commitment and resolution amidst the pandemic. Care packages were delivered to officers who volunteered for FAST operations at the assigned dormitories. At the checkpoints and Services Centres, 'thank you' packs and cards from external organisations (see Figure 4) and members of the public have been distributed to officers. Public and internal communications are also regularly disseminated to express appreciation to officers for their roles in handling COVID-19.

Helping officers cope. At the start of the pandemic, ICA's Psychological Services (IPS) Branch developed a virtual leadership programme on morale management to ensure ICA leaders are equipped with the necessary skills to support their officers during the pandemic. The programme is specially curated to suit ICA's operational environment and focuses on research-based tips on morale management. Trainers also share results gathered from morale sensing surveys to facilitate and reinforce learning. In addition, infographics on mental well-being (see Figure 5) and leadership are regularly disseminated to help officers and leaders cope with the new normal. Given the constraints of COVID-19, new forms of outreach such as the IPS Telegram Channel are used to disseminate open-sourced information and infographics.

Figure 5. Infographic on maintaining mental well-being

RESTORE PHASE

The restoration phase began when the spread of COVID-19 in Singapore came under control and activities could gradually resume.

Reopening our Borders

While border control measures have been effective in mitigating the importation of COVID-19 into Singapore, they come with a heavy socioeconomic cost. Various economic sectors and livelihoods have been disrupted and Singapore entered its most severe economic downturn since independence (Menon, 2020). Aviation and tourism related sectors are in dire straits as travel restrictions continue to decimate air travel.

As these strict border control measures cannot be sustained in the long run without the risk of losing our status as an air hub (Ong, 2020), the Singapore Government has worked to progressively reopen its borders to revive the hard-hit travel and aviation industries. As Minster for Transport, Mr Ong Ye Kung, puts it: "The longer our borders remain closed, the greater risk of losing our air hub status, and our attractiveness as a place to invest, and to create jobs because of those investments."

With border control measures as the cornerstone of Singapore's defence strategy against COVID-19, the International Safe Travel (IST) scheme which encompasses the enforcement of SHN, management of COVID-19 swab tests, and introduction of safe travel schemes was formulated. These arrangements were originally managed in silo by different government agencies. However, with the fast-evolving border re-opening strategies and anticipated increase in travel volume, a decentralised management approach was no longer sustainable.

Implementation of Safe Travel Office under ICA. The Safe Travel Office (STO) was set up under ICA in July 2020 to centralise the management of IST schemes across the Whole-of-Government. Within a month of its formation, STO developed a central online platform known as the Safe Travel Portal (STO Portal) to serve as the main public gateway for IST management.

The STO Portal has provided better central oversight of travel applications under the various Safe Travel Lanes such as Reciprocal Green Lanes and the Periodic Commuting Arrangement with Malaysia. It has allowed agencies to better plan their resources based on the forecasted volume of arriving travellers. As the local health situation in certain countries improved, Singapore gradually allowed entry for more travellers to enter Singapore and for Long Term Pass holders to return to Singapore.

Apart from improving operational efficiency, the STO Portal has provided greater convenience to travellers seeking entry into Singapore by serving as a single touch point regardless of their travel schemes and purpose of entry. This ensures a smoother traveller experience as Singapore gradually reopens its borders to travel.

Implementation of Swabbing Operations at Checkpoints. As WHO Director-General Dr Tedros Adhanom says, the "key message is test, test, test".

As rigorous testing and swift isolation of infected individuals are key to containing transmission, ICA has collaborated with MOH and the Health Promotion Board to set up health screening stations at the land checkpoints to conduct on-site COVID-19 swab tests for travellers. This comprehensive testing regime is necessary in order to reduce the possibility of onward local transmission as the borders gradually reopen. An operation of such magnitude is unprecedented as it was not activated for past pandemics such as H1N1 and SARS.

ADAPT PHASE

During the adapt phase, countries are in a post-pandemic state and will begin to evaluate their response to the pandemic and revise their plans for a new normal.

Secure Borders, Safe Singapore

Border control is expected to be different in the post-pandemic world. Travellers' behaviour and perceptions will likely be reshaped, with a greater demand for automation and safe travel.

ICA's New Clearance Concept as an enabler of safe travel. To prepare for a future beyond this crisis, ICA has pushed forward with its transformation plans even as it manages COVID-related challenges. Under its new clearance concept, automated immigration clearance will be a new norm for all arriving visitors. Residents can also look forward to contactless immigration clearance without the need to present their passport and fingerprints. The use of iris and facial biometrics (Figure 6) will not only provide a more reliable authentication of the traveller's identity, it will also allow travellers to breeze through immigration clearance securely with minimal manual touchpoints. ICA's Services Centres will also transform as planned to an Integrated Services Centre with the vision of "No Visit, No Waiting and No Fuss" by offering more online services and greater convenience to ICA customers post-COVID-19.

EMERGING STRONGER

As Singapore takes steps to further reopen its borders and rebuild connectivity amid these uncertain times, ICA will have to adjust and adapt to more complex immigration clearance processes in line with the dynamic health control measures. Notes ICA Commissioner Marvin Sim: "As guardians of our borders, what we do is not just about protecting a line on the map. It is about taking charge when there is a problem, making a difference and constantly looking for improvements."

Figure 6. Immigration clearance using iris and facial biometrics

The road to recovery will take time and it will not be easy. ICA will build on the experiences gained over the past years and work together with other government agencies to help steer Singapore back on the road of recovery and emerge stronger from this crisis.

ABOUT THE AUTHORS

Lian Zhimin
is a Deputy Head in the Future Ops and Transformation branch of the Operations Division in ICA. He is currently leading a team to review the operational blueprints for ICA's checkpoint capabilities, and planning and implementing developmental projects across ICA.

Arvinder Singh
is a Senior Executive in the Operations Planning work unit of the Operations Division in ICA. His primary job role is related to Contingency and Crisis Planning.

Rayna Tan
is a Senior Executive in the Future Ops and Transformation branch of the Operations Division in ICA. She conducts regular reviews and environmental scanning to identify new technologies that will enhance operational capabilities for checkpoint clearance.

Tan Chermel
is a Senior Executive in the Future Ops and Transformation branch of the Operations Division in ICA. She conducts regular reviews and environmental scanning to identify new technologies that will enhance operational capabilities for checkpoint clearance.

REFERENCES

AlTakarli N, S. (2020). Emergence of COVID-19 Infection: What is known and what is to be expected – Narrative Review Article. *Dubai Medical Journal* 2020(3), 13-18. Retrieved from https://www.karger.com/Article/FullText/506678#

Ang, Desmond. (2020, March 11). One Home Team: Responding to COVID-19 (Part 2). *Home Team News*. Retrieved from https://www.mha.gov.sg/hometeamnews/our-community/ViewArticle/one-home-team-responding-to-covid-19-(part-2)

Chakraborty, Indranil, and Prasenjit Maity. (2020). COVID-19 outbreak: Migration, effects on society, global environment and prevention. *Science of the Total Environment* Vol 728. Retrieved from: https://doi.org/10.1016/j.scitotenv.2020.138882

Menon, Ravi. (2020, July 16). *Remarks at the MAS Annual Report 2019/2020 Virtual Media Conference*. Retrieved from https://www.mas.gov.sg/news/speeches/2020/remarks-by-mr-ravi-menon-at-the-mas-annual-report-2019-2020-media-conference

Ministry of Health, Singapore. (2020, January 28). Additional precautionary measures to minimise risk of community spread in Singapore. *Updates on Covid-19 Situation*. Retrieved from https://www.moh.gov.sg/news-highlights/details/additional-precautionary-measures-to-minimise-risk-of-community-spread-in-singapore

Ong, Ye Kung. (2020, October 6). *Parliamentary Ministerial Statement on Recovery of Aviation Sector*. Retrieved from https://www.mot.gov.sg/news-centre/news/detail/parliamentary-ministerial-statement-by-minister-for-transport-mr-ong-ye-kung-on-recovery-of-aviation-sector

Sim, Royston. (2020, March 17) Flow of goods and food supplies between Singapore and Malaysia will continue despite lockdown over coronavirus: PM Lee. *Straits Times*. Retrieved from https://www.straitstimes.com/politics/coronavirus-flow-of-goods-and-cargo-between-singapore-and-malaysia-including-food-supplies

Tedros, Ghebreyeus. (2020, March 11). *WHO Director-General's opening remarks at the media briefing on COVID-19*. Retrieved from https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020

World Health Organisation (WHO) Coronavirus Disease (COVID-19) Dashboard. Retrieved from https://covid19.who.int

World Health Organisation (2020, January 30). *Statement on the second meeting of the international health regulations (2005) emergency committee regarding the outbreak of novel coronavirus (2019-nCov)*. Retrieved from https://www.who.int/news/item/30-01-2020-statement-on-the-second-meeting-of-the-international-health-regulations-(2005)-emergency-committee-regarding-the-outbreak-of-novel-coronavirus-(2019-ncov)

STAYING SAFELY AND COMPETENTLY ON MISSION AMIDST A CRISIS

Cindy Goh
Central Narcotics Bureau

ABSTRACT

As a law enforcement agency, the Central Narcotics Bureau has to continue its mission of keeping Singapore drug-free even during a pandemic outbreak. Concomitantly, the Bureau has to ensure that its officers are protected against the risk of infection. This article discusses how the Bureau and its officers tackled the challenges brought about by the COVID-19 pandemic. These include making changes to the way CNB performs its three main mandates: preventive drug education, anti-drug operations and management of drug supervisees. It also discusses the efforts made to maintain the mental health and well-being of CNB staff during this difficult period.

THE NEW NORMAL

As a law enforcement agency, the Central Narcotics Bureau's work requires the majority of its officers to face the public. This does not change in a pandemic. Accordingly, even before the first confirmed case of COVID-19 infection in Singapore in January 2020, CNB began monitoring the situation closely and to plan its response. Leveraging their experience with the SARS pandemic, CNB officers set up the Emergency Management Committee (EMC) to work on contingency plans, and measures to ensure the safety of officers and the sustainability of operations. The EMC started by reviewing and updating CNB's Business Continuity Plans (BCP), ensuring that it is always aligned with the latest advisory from the Public Service Division and the Home Team Medical Services Division (HTMSD).

Among the measures taken, the EMC:

- appointed Flu Managers who were briefed on CNB's BCP, and tasked to quickly disseminate the information, and implement safety measures at their respective units;

- commenced drawing down personal protective equipment (PPE), i.e. N95 masks, surgical masks, goggles, gowns, gloves, sanitisers etc. from a central stockpile and distributing them to all ground units to ensure those working at the frontline are protected;

- broadcast health advisories to all officers educating them on personal hygiene practices, and the correct usage of PPEs for different scenarios. Together with HTMSD, CNB conducted "Train the Trainers" mask fitting exercises for unit representatives so that they can help ensure their officers use the mask properly; and

- implemented a 24-hour hotline for officers to report any COVID-19 related incidents, and to provide officers with timely advice on the precautions to take. These measures include staying away from work pending confirmation if officers come into contact with a suspected or confirmed case of COVID-19; contact tracing to identify officers in direct contact with the subject; regular checks by Flu Managers to track their well-being; disinfection of all areas – including operational vehicles – accessed by the suspected or confirmed Covid-19 case; and the identification of evacuation routes and isolation areas in the event of a case within CNB HQ.

Other safety measures that are now routine include temperature screening for all staff and visitors, daily health declarations for staff reporting to office, telecommuting arrangements for those who can

perform their duties from home, split shifts for operations teams carrying out enforcement actions, and deferment of all overseas trips. In-person training programmes are also suspended except for those imparting critical skills essential to building up and maintaining the operational readiness of CNB, such as the Video-Recording Interview and Pistol Operator courses. These courses are now conducted with smaller groups of participants, and where possible, modules have been converted into hybrid e-learning and face-to-face sessions.

CONTINUING THE MISSION

The key task facing CNB has been ensuring that its contingency plans are robust and nimble in adapting to changes in the management of the pandemic, so that CNB officers can continue to carry out their mission in a safe and sustainable way. This has entailed making changes to the way CNB performs its three main mandates: preventive drug education, anti-drug operations and management of drug supervisees.

Preventive Drug Education and Community Engagement

Preventive drug education (PDE) is the first line of defence in Singapore's national drug control strategy, and a key aspect of this is to reach out and engage the community to propagate the drug-free message and promote a healthy lifestyle. Thus, every year, CNB organises many PDE and community engagement events and programmes. However, due to the Covid-19 restrictions, all the physical activities had to be suspended in 2020. To sustain our PDE efforts, the team of officers quickly came up with alternative solutions, shifting our focus on physical engagements to the virtual realm.

One key event affected was the annual Anti-Drug Abuse Campaign (ADAC), usually which comprises large-scale events in public spaces – i.e. DrugFreeSG Light-Up in June, and the DrugFreeSG Roadshows from July to August – and involve physical interactions with members of the public. The team had to revise the concept, rework the budget and the corresponding requirements, and re-engage the stakeholders in order to keep this event alive. The CNB team finally launched the 2020 DrugFreeSG Light-up event in concert with the #ILiveFor social media campaign, with 21 key partners lighting up their buildings on 26 June 2020. CNB also collaborated with Singapore Polytechnic students on the online campaign to widen the reach and connect with younger audiences.

The PDE team knew that going virtual would be the 'new normal', and continued to creatively explore alternative ways to stay connected with audiences through various online engagements. For example:

- when a videography workshop in March had to be cancelled, online short clips were developed to continue engaging participants and disseminating PDE messages;
- to continue engaging social media followers during the Circuit Breaker, the team took the opportunity to further publicise its activity and comic books with a series of online quizzes;
- instead of physical events, CNB ran a series of online activities (IG stickers, filters, etc) in conjunction with the DrugFreeSG Light-Up;
- to cater to schools that prefer virtual PDE programmes, CNB now offers PDE talks via Zoom or Google Meet, and live streaming of PDE skits; and
- to continue supporting teachers and parents in engaging students and their children on PDE matters, CNB uploaded resources on its website (e.g. videos, publications, toolkits and Augment Reality markers) and broadcast these links to teachers and parent advocates.

The Community Engagement Unit (CEU), which leverages physical engagement to drive the PDE messages, also had to relook its engagement strategies for the Malay-Muslim and Indian communities and build its presence online through the use of online videos and social media platforms, such as Facebook, Instagram, and YouTube. Such online engagement strategies include:

- the dissemination of PDE infographics through various social media platforms;
- a Dadah Itu Haram (DIH) Campaign Hari Raya video titled "A Family's Love", aimed at emphasising the importance of strong family support in maintaining a drug-free life;
- DIH-related anti-drug quizzes, with DIH merchandise up for grabs; and
- #DontRushChallenge video featuring the Bothaiporulai Ethirthu Nirpom (BEN) campaign volunteers participating in healthy pursuits.

CEU has also moved some of its programmes from physical locations to online platforms. Since May

2020, CEU has organised and conducted outreach events via Zoom that involved youth residents and staff of welfare homes and halfway houses, tertiary level students, women and gym members. The emphasis has been on the importance of family bonds, community resilience, discipline and hard work.

In the absence of traditional physical outreach events on the ground, CEU has also shifted its focus to maintaining the strong relationship between the DIH campaign and its partners and volunteers. Dates were distributed – via delivery couriers – to volunteers and partners in appreciation of their continued support in spreading anti-drug messages.

The "new normal" has forced CNB officers out of their comfort zones, to abandon old practices and adopt new technology. It has brought about many seemingly insurmountable challenges, but also created many unprecedented opportunities. In terms of PDE, COVID-19 restrictions, especially during the Circuit Breaker period, drove up public consumption of media and social media contents and allowed CNB to further leverage social media platforms to promote anti-drug messages to a wider audience. At the same time, CNB recognises that efforts to win the hearts and minds of the public so that they support and embrace Singapore's zero-tolerance stance on drug abuse have to be complemented with meaningful, sustained physical engagements, which CNB will continue to pursue once the COVID situation improves.

Anti-drug Operations

To mitigate the risk of infection and spread, and to adhere to safe distancing measures, operations have been re-focused and calibrated progressively in tandem with the evolving COVID-19 situation.

Pre-COVID-19, CNB used to conduct the island-wide Operation Dragnet on a regular basis. The enforcement units would usually arrest up to 80-100 drug offenders within a week. To prevent overcrowding within CNB and the lockup, the operation tempo has been changed with Ops Dragnet stretching to 2 weeks instead of 1 week to spread out the arrest numbers. In addition, instead of the previous practice of rounding up large numbers of drug offenders, officers now return to base to process suspects after apprehending a few, requiring multiple trips.

During the Circuit Breaker period, the operations conducted were focused and targeted based on specific information obtained by the officers. Post-Circuit Breaker, CNB has increased the intensity of operations and adjusted manpower manning to ensure optimal manning levels for each operation. Keeping up the pressure on drug traffickers and syndicates alike is necessary because, despite the travel restrictions imposed during this period, traffickers and syndicates have continued to explore novel methods of smuggling drugs into Singapore, hiding their illicit drugs inside fruits, furniture and drones.

The statistics speak for themselves. In 2020, CNB dismantled 24 drug syndicates, working closely with other Home Team agencies to conduct over 500 operations across Singapore, including at the checkpoints to intercept attempts to smuggle drugs into Singapore. Drug seizures also remained high in 2020, with an estimated street value of S$11.6 million. There was a 79% increase in seizures of heroin to 68.25kg, up from 38.12kg in 2019. Cannabis seizures also saw a 55% increase to 43.12kg, up from 27.78kg in 2019. Seizures of crystalline methamphetamine (more commonly known as 'Ice') saw a 46% increase to 44.87kg, from 30.80kg in 2019 (CNB, 2021). Notably, in November 2020, CNB had its largest heroin bust in 19 years, seizing 14.1 kg of heroin in one operation. The following month, officers from the Immigration & Checkpoints Authority foiled two attempts to bring in a total of 4.6 kg of heroin, 5.4 kg of Ice, 5.5 kg of cannabis, 5,111 'Ecstasy' tablets and an assortment of other drugs. The drugs had been hidden in two Malaysia-registered lorries, one transporting a consignment of beansprouts, and the other carrying furniture and spare vehicle parts.

Drug Supervision Regime

A key prong of CNB's rigorous enforcement strategy is ensuring former drug abusers stay clean. Accordingly, as mandated by the Misuse of Drugs Act and the Misuse of Drugs Regulations, thousands of drug supervisees used to report to CNB's Reporting Centres for urine testing every week. To ensure safe distancing measures are adhered to, CNB has adjusted the frequency of urine testing of drug supervisees based on a risk matrix. Those deemed high risk have to continue their reporting frequency, whereas those assessed to be at lower risk of relapsing have their frequency reduced. This change is augmented by hair analysis testing. This

means that those who do not need to report every week are subjected to hair analysis, which reveals recent drug consumption going back several months. Concurrently, CNB has also increased the number of days of operation of the Reporting Centres, and conducts temperature screening so that supervisees who are unwell are segregated and turned away prior to entering the Centres.

CHALLENGES OF ADAPTING TO THE NEW NORMAL

The nature of its enforcement work means that the majority of CNB frontline officers have to continue to work onsite. Telecommuting, split team arrangements, and more safe distancing measures have been implemented to prevent any spread or forming of a COVID-19 cluster within the Bureau should any officers come into contact with a confirmed case while performing their duties.

In an organisation like CNB with a "gung-ho" culture, persuading people to stay home proved to be quite challenging at the outset. Some officers continued to report to the office despite feeling unwell because they were so used to continue working when only slightly ill, and to show up to settle a very crucial issue or attend an important meeting even when ill. The EMC thus had to use moral suasion and engage supervisors and flu managers to "cajole" their officers to change their mindsets. Officers have had to learn to accept that in a pandemic, the new normal is to seek medical attention even when slightly ill, that this is for the greater good of the organisation, and no officer is to be judged for reporting sick.

Similarly, with telecommuting, senior management led the way to gain buy-in for the new work arrangements. Beyond the initial challenge of procuring the required IT equipment and remote access for staff working from home – a situation aggravated by the surge in demand across the entire public service – both staff and supervisors initially had to grapple with work expectations and productivity issues. A new guide on "Dos & Don'ts of Telecommuting" was drafted to assist supervisors in helping their teams deliver work output, and yet maintain flexibility to assist staff in managing their work-life balance. Concomitantly, divisions made some work process changes so that more work can be done through emails, reducing the need for officers to be physically present in the office.

It also took a while to change the habits of officers who were accustomed to holding face-to-face meetings and persuade them to switch to video conferencing, and to use email to disseminate information where possible.

In addition to having to adapt to all the new changes at work, officers, not unlike others in the public and private sectors, also had to grapple with other government measures implemented to control the spread of COVID-19, such as the suspension of non-essential services, temporary closure of schools and home-based learning, that disrupted many aspects of life. In addition, close to 100 CNB officers were at one point or other involved in the national COVID-19 response, taking on duties such as contact-tracing, conducting checks on persons subject to Stay-Home Notices (SHNs), as well as helping to manage dormitory operations.

As all these changes can be expected to impact the morale of officers, CNB leaders took the pro-active step of surveying the mental health of officers and working with the Bureau's psychologists to develop management strategies to alleviate work stress.

MENTAL HEALTH AND WELL-BEING DURING THE PANDEMIC

Research studies have found associations between pandemics and adverse mental health consequences: Pandemics can lead to development of psychiatric symptoms in individuals without prior mental health conditions, as well as aggravate the condition of individuals with pre-existing mental health conditions. These psychiatric symptoms can range from symptoms of anxiety to depression as well as stress (Rajkumar, 2020). For instance, Xiong et al. (2020) found that during COVID-19, higher perceived vulnerability, having an infected acquaintance and concerns about being infected are predictive of symptoms of depression.

To assess the effects of the pandemic on CNB officers' mental health and well-being, the CNB Psychological Unit (CPU) conducted three rounds of morale sensing between February to May 2020. The aims of the morale sensing were to understand officers' concerns, gather feedback on the effectiveness of measures undertaken by the Bureau, and identify additional potential areas of support.

Overall, CNB officers appeared to have the following concerns in the early months of the pandemic:

a) General anxiety over contracting COVID-19, coming into contact with accused persons who may have COVID-19;
b) Operational fatigue as a result of reduced manpower as some officers were deployed to support other whole-of-government operations, inability to meet key performance indicators (KPIs);
c) Work processes concerns, such as delayed/ additional work processes as a result of pandemic restrictions; and
d) Telecommuting concerns, i.e. isolation from colleagues, unclear boundaries between work and personal life.

The concerns CNB officers expressed over contracting COVID-19 is consistent with literature on pandemics and mental health. For instance, studies have highlighted the heightened fear and anxiety individuals may have during the early stages of the pandemic as the virus remains unknown – a lack of knowledge about the mode of transmission, transmissibility and virulence contributes to the fear and anxiety (Ho, Chee & Ho, 2020). The literature also shows that first responders have higher levels of stress, depression and anxiety. The fear of getting infected is much higher due to their exposure (McAlonan et al., 2007).

Similarly, CNB officers' concerns over telecommuting is an inevitable by-product of the various control measures, i.e. the social isolation and disconnectedness that individuals may face, which may have adverse effects on physical and mental well-being (Haslam et al., 2018). On the other hand, research also demonstrates that timely dissemination of updated and accurate COVID-19 related information is associated with lower levels of anxiety, stress and depressive symptoms in the general public (Wang et al., 2020).

By integrating the literature research with the findings from CNB's morale sensing surveys, the Bureau conceptualised a 3Cs psychological response to the pandemic. Anchored in key resilience principles, the overarching aim of the 3Cs – Be Competent (with Facts), Take Control (of Actions and Emotions), Stay Connected (with Each Other) – is to build physical, emotional and social resilience in officers. This message was broadcast to all CNB staff in emails (see Figure 1).

Be Competent (with Facts)

Amidst the uncertainty that COVID-19 brings, leaders are a source of direction and guidance. and staff will expect leaders to be fully present physically, emotionally and spiritually (Hsieh, 2020). Based on a recent study conducted by CPU, support from senior management contributes significantly to organisational support perceived by staff, which in turn, reduces stress level and increases job satisfaction (Seah, 2019).

Understanding the importance of senior management's role particularly during this challenging period, and recognising the potentially adverse consequences that misinformation and fake news about the pandemic can result in (Frenkel, Alba & Zhong, 2020), CNB has been utilising two platforms to provide accurate COVID-19 information and guidance to officers.

Figure 1. Email broadcast on the 3Cs of Resilience in CNB

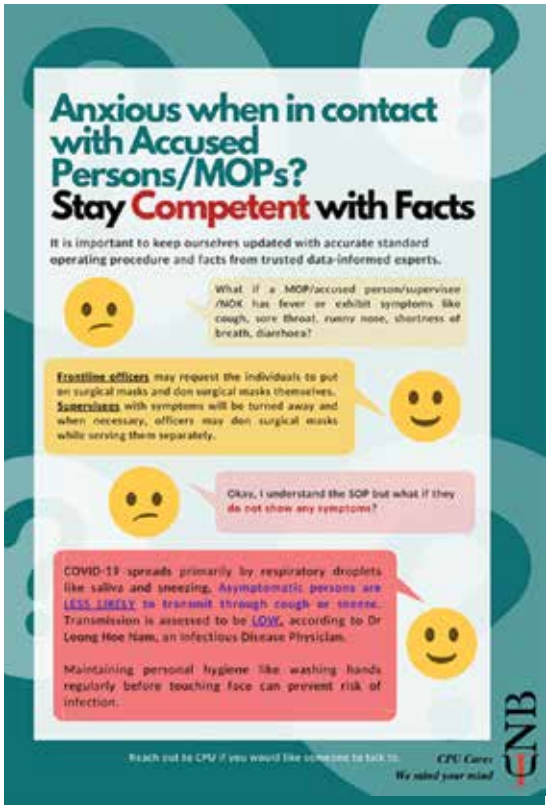


Figure 2. Example of email broadcast to help staff Be Competent with Facts

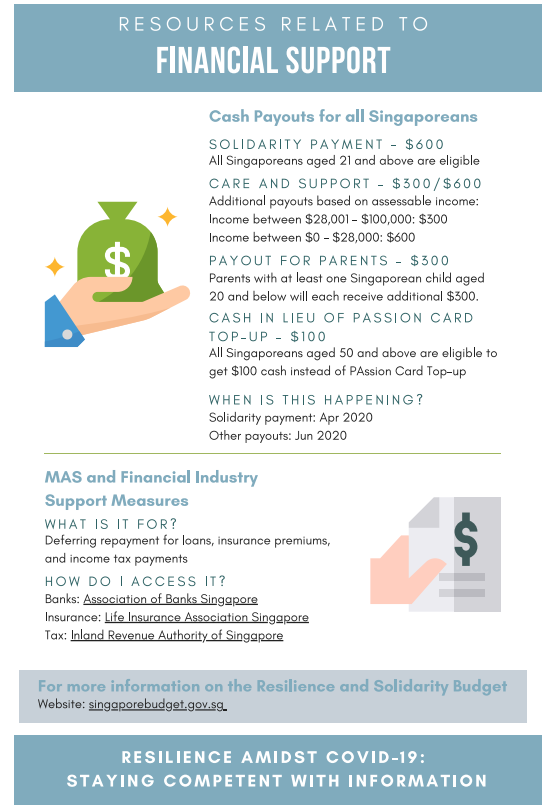


Figure 3. Snippet from the COVID-19 Resource Booklet collated by CPU

For example, CPU broadcasts weekly emails about COVID-19 to debunk myths and ease fears and anxiety (see Figure 2 for example). The Director of CNB also sends timely emails to update all officers on crucial developments, as well as to encourage and show his appreciation to officers for their commitment and perseverance. He also sends customised messages to various Divisions and groups based on group-specific concerns raised during morale sensing. This provides a more personalised touch to his messages, and directly addresses officers' concerns. He has also led his leadership teams in conducting virtual meet-ups with ground officers from different divisions.

To alleviate officers' anxiety over contracting COVID-19, CNB has also distributed Welfare Care Packs consisting of vitamins, sanitizers and dried snacks to every officer. Reusable masks and face shields have also been distributed for added protection.

Take Control (of Actions and Emotions)

Pandemics may result in the perception of a lack of control by an individual and that can contribute to a sense of helplessness (Zhang & Ma, 2020). Recognising the importance of having a sense of control for mental well-being, CPU's broadcasts are crafted to increase officers' sense of control and empower them through developing personal competence. This is done by providing resources and tips to build both physical and emotional resilience. For example, some of CPU's broadcasts have highlighted the practices that individuals can adopt to minimise the risk of infections (e.g. frequent hand-washing and refraining from contact with others). A resource booklet collating various initiatives by the government has also been specially curated and disseminated to officers to provide them with resources that they can seek help from independently (see Figure 3).

Other broadcasts focusing on emotional resilience address the challenges and stressors related to the pandemic, such as adapting to telecommuting processes and balancing work with family responsibilities, and thus help to normalise the stress that officers may be facing while offering coping strategies (see Figure 4). Through these broadcasts, officers are provided with self-help resources and

Figure 4. Example of email broadcast on Taking Control and Staying Calm

simple, bite-sized tips that they can refer to and use at their own time and pace, giving them a sense of control and self-efficacy to tackle their own challenges and stressors.

Stay Connected (with One Another)

With the implementation of telecommuting arrangements in CNB, officers have been placed on alternate-team arrangements or to work from home whenever possible. They are also encouraged to stay home and to not socialise with others outside of their household. Such measures can create isolation from colleagues and peers and add to stress. However, Zhang & Ma (2020) have found that individuals with more social support during the pandemic exhibit lower stress levels.

To create a culture of connectedness despite the physical distance, the Bureau activated its network of peer supporters to support officers activated for the Whole-of-Government COVID-19 response, and to watch for symptoms of stress in their colleagues. A series of virtual activities titled "CNB's Circuit Breaker Challenge" was also

Figure 5. Example of CNB's Circuit Breaker Challenge to help staff Stay Connected

launched for officers to participate in regardless of demographics (e.g. age/gender/activity level) and working arrangements (i.e. telecommuting or otherwise).

Examples of these virtual activities, as shown in Figure 5, included inviting officers to share ways in which they stayed connected with their colleagues

and/or family members, share photographs of their home-cooked meals, and state the one thing that they were grateful for during the circuit breaker. Prizes were given to the top 10 winning entries for every challenge to encourage participation. The winning entries were also broadcast Bureau-wide to facilitate conversations amongst the officers, and allow them to learn from one another, be it ways to engage with friends and family or recipes to try out at home. This allowed officers to stay emotionally and socially connected.

A 2019 study by CPU also found that immediate supervisors contribute to officers' perception of organisational support, stress and job satisfaction due to their frequent interactions with each other (Seah, 2019). Line and middle managers play an important role as the bridge of communication between management's directions and officers' feedback. With the COVID-19 restrictions and increase in telecommuting practices, the role of middle managers has become more pronounced.

As telecommuting is a relatively new practice in CNB, CPU conducted a literature scan to explore effective supervisory practices to better manage and connect with staff while working from home. For example, Lausch et al. (2009) recommend that supervisors provide regular updates and share information with telecommuting officers, and encourage employees to separate work and family boundaries. Findings from the research were adapted to CNB's context, and shared with key appointment holders at CNB's Staff Conference in July 2020 to provide leaders with evidence-based tips and effective practices.

Findings from the e-morale sensing survey in May 2020 indicated that staff morale and confidence in the Bureau increased significantly from March to May. Officers found the following efforts to be helpful: regular situation updates and resilience broadcasts; safe management measures instituted; provision of PPEs and welfare packages; moral support through affirmations and understanding.

Overall, CNB has adopted a multi-dimensional approach to target various areas of concern beyond work, but also in the context of employees' personal lives (e.g. family). The interventions also address various layers of the organisation, from individual stress coping mechanisms and resilience, to peer support, to leadership and management of the organisation.

CONCLUSION

While a lot of hard work has had to be put in to tackle the challenges brought about by the COVID-19 pandemic, the crisis has also brought about a new level of positivity and opportunities. As restrictions become the New Normal, CNB officers and teams have come up with a host of creative solutions to overcome obstacles in their daily work that they had previously not perceived. This epitomises the "can-do" attitude of CNB officers. For instance, CNB held its 1st ever virtual National Day celebration in August 2020 where officers flooded online communications with celebratory and encouraging messages. Some officers noted that it was a more uplifting experience for them compared to previous years. Such positive attitude is required as the COVID-19 situation is dynamic and still evolving. We need to be mentally prepared to continue fighting a protracted and uncertain battle, and find solutions to adapt to this new normal.

ABOUT THE AUTHOR

Cindy Goh
joined the Central Narcotics Bureau in 1997 after graduating from the National University of Singapore (NUS) with a Bachelor of Arts & Social Sciences. In 2014, she obtained her Master in Public Administration from the Lee Kuan Yew School of Public Policy at NUS. She is currently a Senior Assistant Director in the Operations Division where she is involved in the formulation and review of operation policies and procedures.

The author wishes to acknowledge the contributions of Salina Samion, Seah Wang Ling and Yong Kaiqi, Home Team Psychologists with the CNB Psychological Unit; inputs from colleagues of various divisions and thanks Ong Pang Thong, CNB Director of Operations, and Saherly Limat, CNB Deputy Director of Operations, for their advice.

REFERENCES

Central Narcotics Bureau (CNB). (2021, February 3). *Overview of Singapore's Drug Situation in 2020*. Retrieved from https://www.cnb.gov.sg/docs/default-source/drug-situation-report-documents/cnb-annual-statistics-2020.pdf

Frenkel, S., Alba, D., & Zhong, R. (2020, Jun. 1). Surge of virus misinformation stumps Facebook and Twitter. *The New York Times*. Retrieved from https://www.nytimes.com/2020/03/08/technology/coronavirus-misinformation-social-media.html

Haslam, C., Jetten, J. Cruwys, T., Dingle, G., & Haslam, S. A. (2018). *The new psychology of health: Unlocking the social cure*. New York, NY: Routledge.

Ho, C. S. H., Chee, C. Y. I., & Ho, R. C. M. (2020). Mental Health Strategies to Combat the Psychological Impact of COVID-19 Beyond Paranoia and Panic. *Annals, Academy of Medicine, Singapore*, 49(1), 1-3.

Hsieh, T. (2020, September 24). *Post Covid: Leadership beyond management*. Panel Discussion organised by National University of Singapore Society.

Lausch, B. A., Kossek, E. E., Eaton, S. C. (2009). Supervisory approaches and paradoxes in managing telecommuting implementation. *Human Relations* 62(6), 795-827.

McAlonan, G. M., Lee, A. M., Cheung, V., Cheung, C., Tsang, K. W. T., Sham, P.C., Chua, S. E., & Wong, J. G. W. S. (2007). Immediate and sustained psychological impact of an emerging infectious disease outbreak on health care workers. *The Canadian Journal of Psychiatry* 52(4), 241-247.

Rajkumar, R. P. (2020). COVID-19 and mental health: A review of the existing literature. *Asian Journal of Psychiatry* 52. Retrieved from https://doi.org/10.1016/j.ajp.2020.102066

Seah, W. L. (2019, Jul. 11). *The impact of experienced organizational support on job satisfaction and help-seeking* [Conference Presentation]. 4th Asian Conference of Criminal and Operations Psychology, Singapore.

Wang, H., Xia, Q., Xiong, Z., Li, Z., Xiang, W., Yuan, Y., Liu, Y., & Li, Z. (2020). The psychological distress and coping styles in the early stages of the 2019 coronavirus disease (COVID-19) epidemic in the general mainland Chinese population: A web-based survey. *PLoS ONE* 15(5), e0233410. Retrieved from https://doi.org/10.1371/journal.pone.0233410

Xiong, J., Lipsitz, O., Nasri, F., Lui, L. M. W., Gill, H., Phan, L., Chen-Li, D., Iacobucci, M., Ho, R., Majeed, A., & McIntyre, R. S. (2020). Impact of COVID-19 pandemic on mental health in the general population: A systematic review. *Journal of Affective Disorders* 277, 55-64. Retrieved from https://doi.org/10.1016/j.jad.2020.08.001

Zhang, Y., & Ma, Z. F. (2020). Impact of the COVID-19 pandemic on mental health and quality of life among local residents in Liaoning Province, China: A cross-sectional study. *International Journal of Environmental Research and Public Health* 17(7), 2381. Retrieved from https://doi.org/10.3390/ijerph17072381

KEEPING TEMPORARY DORMITORY SITES SAFE FOR OUR FOREIGN WORKERS:

A FIRE SAFETY PERSPECTIVE

Muhammad Khairul Anwar bin Khalil & Shaiful Herman
Singapore Civil Defence Force

ABSTRACT

As Singapore faced a surge of COVID-19 infections among the foreign worker community beginning April 2020, it became crucial to relocate workers from the larger dormitories to contain the spread. The Singapore Civil Defence Force (SCDF), together with other government agencies, undertook a suite of enhanced measures to ensure the safety of foreign workers at alternative temporary accommodations which were not originally designed and built as dormitories. From a fire safety perspective, SCDF sought to balance the critical fire protection requirements vis-à-vis the health needs of the foreign workers. This article explores how the SCDF worked around various challenges to establish a set of requirements and initiatives to maintain fire safety and emergency preparedness at temporary accommodations during the COVID-19 pandemic.

THE BALANCING ACT

The far-reaching impact of COVID-19 has pushed many healthcare systems around the world to its limits. To deal with the pandemic, governments have temporarily converted large, unused spaces – such as Formula One racetracks in Mexico and sports stadiums in India – into alternate care facilities (Katzenberger et al, 2020; Pinatih, 2020; Fang et al, 2020). In doing so, government agencies have needed to balance urgent public health needs against a wide spectrum of issues ranging from sanitation to fire safety.

From a fire safety standpoint, the concerns are two-fold. One, converting buildings that were not originally built to support healthcare or residential needs will alter the fire safety risk profile. Two, it is improbable that these converted premises meet prevailing fire safety regulations that address those risks (NFPA, 2020). Since the start of the COVID-19 pandemic, the National Fire Protection Association (NFPA), an international non-profit organisation based in the United States, has provided guidelines to facility managers and authorities on dealing with fire safety regulations under these extraordinary circumstances. The National Fire Chiefs Council (NFCC), the professional voice of United Kingdom fire and rescue service, has also provided fire safety advice to support the implementation of 'field hospitals' which accommodate high numbers of COVID-19 patients (NFCC, 2020). There is a consensus among professional fire safety bodies that adopting a reasonable and pragmatic approach is the most feasible way forward to ensure that fire safety is maintained during the global pandemic (NFPA, 2020; NFCC, 2020).

SITUATION IN SINGAPORE

Through 2020, the healthcare system in Singapore did not reach critical levels. However, the burgeoning number of positive COVID-19 patients within foreign workers' dormitories beginning in April forced local authorities to find quick and effective solutions to contain its spread (Ng, 2020; Wong, 2020). To begin with, dormitories with a high number of positive COVID-19 patients were gazetted as isolation areas, effectively restricting the movement of workers in the premises. In addition, healthy foreign workers who provided essential services were decanted from their dormitories to sites like army camps and sports halls to minimise cross-infection. Subsequently, more buildings such as vacant factories and former schools were identified as short- to medium-term spaces for conversion into temporary dormitories

(Goh, 2020). This prompted SCDF to formulate a guiding framework to balance critical fire safety issues with urgent public health needs for temporary dormitories converted from existing buildings.

In Singapore, the Fire Code provides a prescriptive-based approach to fire safety for the built environment. The Fire Code Review Committee – made up of representatives from professional bodies, academia, and statutory boards – plays a crucial role in providing technical insights. The committee reviews the Fire Code periodically to ensure that it keeps abreast of the latest fire safety developments. For the construction of purpose-built dormitories, the Fire Code provides prospective building developers with clear guidelines such as the length of travel distance and number of exit staircases, among other requirements. Now, when faced with the unprecedented challenge of converting existing buildings for dormitory purposes within a compressed timeframe, SCDF recognised that it was not feasible to mandate strict compliance with the Fire Code given time and cost constraints. Therefore, SCDF had to adopt a practical risk-based approach in meeting the demands of this challenge.

Responding to these unprecedented circumstances, SCDF adopted a three-pronged strategy: a) establish key baseline fire safety objectives; b) conduct site assessment to assess if the premises are able to meet these key objectives; and c) introduce additional fire safety management measures to augment existing fire safety provisions.

KEY FIRE SAFETY OBJECTIVES

SCDF first outlined three key fire safety objectives integral to ensuring the life safety of occupants. These objectives guided the formulation of a novel set of fire safety requirements unique to the process of converting identified premises into temporary workers' dormitories.

1. To limit fire spread

Compartmentation, which is defined as the "act of subdividing an area into smaller compartments using fire-resistant materials" (Cheshire, 2020), functions to control or slow down the spread of fire. Compartmentation limits the maximum extension area of the fire within the building (Botma, 2013) which then allows for occupants to evacuate the building safely. SCDF assessed that this form of passive fire protection system, which is a requirement for purpose-built dormitories in the Fire Code, should form the basis of the fire safety requirement for temporary dormitories. In general, the partitions used to create the compartments have to be non-combustible or made of a fire-resistant material.

2. To provide early alert to occupants

Fire detection systems such as fire alarms typically provide the first indication to occupants of a fire outbreak. It alerts occupants of an emergency and gives them adequate time to move to a place of safety. An automatic fire alarm system is especially crucial in premises with sleeping accommodation. In a study on the effectiveness of home fire alarms in saving lives, Ahrens (2015) found that almost three out of five homes deaths were caused by fires in properties with no fire alarms.

SCDF recognises the impact of sleep risks on the occupants' safety in these temporary dormitories, where a reliance on human detection is not enough. Also, the occupants may lack familiarity and orientation in a new place, thus prolonging the time needed to evacuate safely. With these considerations, SCDF required the installation of Home Fire Alarm Devices (HFADs) for premises that are only equipped with manual fire alarms. The HFADs will have to be interconnected so that when a detector is activated, the alarm for the entire building will sound thereby giving early warning to all sleeping occupants. For buildings with existing automatic fire alarms, they need to be checked and tested to ensure their functionality. Reliable early detection systems greatly reduce the risk and provide adequate time for occupants to evacuate the building safely while the escape routes are still clear of smoke.

3. To provide safe and adequate means of escape for building occupants

After fire detection, the availability of escape routes is an important fire safety feature that facilitates the quick evacuation of occupants in a fire emergency (Botma, 2013). It is equally important to ensure that these means of escape are constantly cleared of obstruction that will otherwise hinder movement. In addition, having clear notices directing occupants to the nearest safe evacuation routes reduce further stressors on the brain. Studies conducted by behavioural scientists have shown that in

an emergency, the cognitive processes guiding occupants to decide and take actions to ensure safety are placed under stress (Kuligowski, 2009; Proulx 1993). Therefore, it is important to always ensure that the means of escape are pre-determined and made known to occupants.

COMPREHENSIVE SITE ASSESSMENT

Guided by these baseline objectives, SCDF officers from the Fire Safety Department conducted site assessments at multiple pre-identified premises across Singapore such as vacant schools and factories. The aim was to identify existing fire safety provisions and to highlight any fire safety concerns that require further attention before the conversion work started. Information gathered provided a basis for SCDF to decide on further fire safety requirements and management measures necessary to ensure the safety of occupants.

REDUCING THE FIRE RISKS THROUGH FIRE SAFETY MANAGEMENT MEASURES

Having robust fire safety management measures help to reinforce the determined fire safety objectives. Furness and Muckett (2007) argue that beyond fire safety design, one needs to consider occupants' behavioural patterns and design measures that overcome potential problems for a safe evacuation. The safety of people in the event of a fire in buildings is dependent on having emergency procedures that make full use of the fire safety design features of the building and take into account human behaviour when faced with an emergency. Therefore, SCDF recommended a suite of fire safety management measures to ensure a comprehensive approach towards fire safety in these temporary dormitories.

Upon detection of a fire, many different and complex factors interact with one another to affect the reaction of occupants (Huseyin & Satyen, 2006; Kuligowski, 2009; Proulx 1993). Interestingly, the solutions to overcome these complex factors are simple. Many studies and research have shown that behaviours displayed during a building fire evacuation is a result of behavioural process – which can be guided through repeated actions or cues from the physical environment (Huseyin & Satyen, 2006; Kuligowski, 2009). For example, SCDF requires building managements to place prominent fire escape signs and notices at strategic places within the buildings. According to Proulx (1993), having clear information provided during emergency "helps to reduce stress and support the decision-making process required in a successful evacuation." This is to deter unsafe evacuation behaviours such as evacuating via dangerous routes. The concise information provided to the occupants help to guide their cognitive process especially during emergency situations where additional stressors may impair one's ability to think readily.

Maintaining fire safety standards on site

The appointment of a Fire Safety Manager (FSM), who is trained in fire safety, plays an important role in maintaining the on-site fire safety standards and ensuring that the occupants know what to do during a fire emergency. During normal time, the FSM has to walk the ground to ensure that the various fire safety suppression or alarm systems are in working condition and to remove any fire hazards (e.g. storing combustibles along escape routes) or malpractices (e.g. locking exits) that may increase the likelihood of fire or impede escape. FSMs should also look out for acts that increase fire risks, such as open flame cooking or connecting multiple electrical sockets together, also known as "daisy chaining". He is also responsible for formulating a robust emergency response plan, with SCDF's inputs. SCDF also encourages periodic fire evacuation drills. The importance of fire evacuation drills is often understated. In fact, researchers have argued that having such drills create indelible effects in the mind where the brain taps into past experiences in guiding their cognitive process (Keiting, 1985; Sime, 1985). Having occupants physically partake in fire drills help to instil familiarity with the evacuation routes, making them more likely to evacuate safely during an emergency.

Ensuring prompt initial response

For a comprehensive approach towards fire safety, it is crucial to address the response aspect of a fire emergency adequately (Yung, 2008). Providing quick and effective response during a fire, especially at the incipient stage, limits the damage and reduces the number of fire-related casualties (Huseyin & Satyen, 2006). Additionally, imparting fire safety knowledge and training contributes significantly to an effective emergency response (Nyankuru et al, 2017). SCDF, recognising that trained on-site staff can increase

the overall emergency readiness at premises, had introduced the Company Emergency Response Team (CERT) scheme in 2005 to train on-site personnel to provide quick mitigation and prevent an incident from escalating. Under normal circumstances, premises that require CERT will have to undergo formalised training with accredited training organisations. However, with the imposition of Circuit Breaker measures from 7 April to 1 June 2020, the accredited training organisations had to cease operations, presenting SCDF with a unique challenge. To minimise delays to the decanting process, SCDF formulated and conducted a customised half-day CERT training package for the temporary dormitories. The training sessions, comprising both theory and practical aspects, were conducted in-situ so that on-site staff were able to familiarise themselves with the existing evacuation routes and basic fire safety provisions. The participants learnt how to identify and remove fire hazards, how to conduct quick evacuations based on the emergency response plan, and how to mitigate incipient fires using fire extinguishers or hose reels. SCDF's Fire Safety Department and Volunteer and Community Partnership Department (VCPD) planned the training operations, which were largely implemented by the Community Engagement Branch of SCDF's land divisions. Over a span of 4 months, SCDF trained an estimated 1000 on-site staff across 71 sites. Other countries are now also adopting a similar approach. For example, the UK's NFCC has advised that trained on-site staff at temporary field hospitals should provide initial incident response (NFCC, 2020).

CONCLUSION

In the race against time to curb the spread of COVID-19 within dormitories, SCDF adopted an approach that was in line with established fire safety standards yet practical to support the Government's efforts in decanting foreign workers to temporary premises. The key fire safety objectives set out by SCDF served as core tenets by which key fire safety requirements were formulated. Besides design requirements, SCDF also imposed fire safety management measures to further reduce risks. SCDF also initiated training to ensure a baseline level of readiness in the temporary dormitories. As the nation perseveres through this difficult time, SCDF will continue to adapt and negotiate through the various challenges, to protect and save lives, and property.

ABOUT THE AUTHORS

Muhammad Khairul Anwar bin Khalil
is currently a Senior Staff Officer, Fire Certification, in the Fire Safety Department of the Singapore Civil Defence Force. He oversees the Fire Certification scheme that ensures the various fire safety provisions in premises are in working condition. He was actively involved in facilitating the decanting operations of foreign workers to ensure that converted premises are supported by adequate fire safety management measures at the height of the COVID-19 pandemic in Singapore.

Shaiful Herman
is currently the Commander of 1st SCDF Division, overall commanding eight fire stations which respond to fire, rescue and medical emergencies in the southern parts of Singapore. He has over 15 years of experience in operations (specialising in fire investigation and HazMat), and in policy work focusing on fire safety and security. He holds a Master's Degree in Fire Investigation from the University of Central Lancashire (UK) and a Bachelor's Degree in Chemistry and Management from the Imperial College of Science, Technology and Medicine (UK). He was previously the Deputy Director of the Fire Safety Department of SCDF, at the time when the COVID-19 outbreak began.

REFERENCES

Ahrens, M. (2019). *Smoke Alarms in U.S. Home Fires*. National Fire Protection Association (NFPA). Retrieved from https://www.nfpa.org//-/media/Files/News-and-Research/Fire-statistics-and-reports/Detection-and-signaling/ossmokealarms.pdf

Bootma, A. (2013). *Research to the performance and adequacy of Fire compartmentation*. Master Thesis. Delft University of Technology.

Cheshire, H. (2020). *What is compartmentation and why is it so important?* Retrieved from https://firearrest.com/what-is-compartmentation-and-why-is-it-so-important/

Huseyin, I., & Satyen, L (2006). Fire safety training: Its importance in enhancing fire safety knowledge and response to fire. *The Australian Journal of Emergency Management* 21(4), 48-53.

Fang, D., Pan, S., Li, Z., et al (2020). Large-scale public venues as medical emergency sites in disasters: lessons from COVID-19 and the use of Fangcang shelter hospitals in Wuhan, China. *BMJ Global Health* 5(6). 1-7.

Furness, A. & Muckett, M. (2007) *Introduction to Fire Safety Management*. Routledge.

Goh, T. (2020). Former JCs among 36 sites to be used for housing migrant workers. *The Straits Times*. Retrieved from https://straitstimes.com/singapore/former-jcs-among-36-sites-to-be-used-for-housing-migrant-workers

Katzenberger, J., Chrisman, M., & Murdock R. (2020). COVID-19: Converting existing hospitals, hotels, convention centers, and other alternate care sites for coronavirus. *Building Design + Construction*. Retrieved from https://www.bdcnetwork.com/hendersoncovid19conversions

Kuligowski, E. (2009). *The Process of Human Behavior in Fires*. National Institute of Standards and Technology, US Department of Commerce.

National Fire Chiefs Council (NFCC). (2020, March 31). *Advice and generic guidance to Fire and Rescue Services to support the implementation of 'Field Hospitals'*. Retrieved from https://www.nationalfirechiefs.org.uk/write/MediaUploads/COVID-19/NFCC_Protection-_Field_Hospitals_COVID-19_-_31_March_2020_-_FINAL.pdf

National Fire Protection Association (NFPA). (2020, April). *Considerations for Temporary Compliance Options in Health Care Environments During COVID-19*. Retrieved from https://www.nfpa.org/-/media/Files/White%20papers/NFPA550WhitePaper.pdf

National Fire Protection Association (NFPA). (2020, April). *Temporary Compliance Options for Code, Modifications, Alternate Care Sites and Facilities Related to Health Care*. Retrieved from https://www.nfpa.org/-/media/Files/White-papers/TemporaryComplianceOptionsHCWhitePaper.ashx

Ng, M. (2020, April 7). Coronavirus: Inter-agency taskforce to provide support to foreign workers, dormitory operators. *The Straits Times*. Retrieved from https://www.straitstimes.com/singapore/manpower/coronavirus-inter-agency-taskforce-to-provide-support-to-foreign-workers

Nyankuru, O., Omuterema, S., Nyandiko, N. (2017). Evaluating the Effectiveness of Fire Safety Training on Occupants' Response to Fire in Selected Public Buildings in Nairobi County, Kenya. *International Journal of Sciences: Basic and Applied Research* (IJSBAR) 36(5), 166-173.

Pinatih, A. (2020). Handling COVID-19 in Asia: Building, Converting, Facilitating & Managing Spaces. Construction+. Retrieved from https://www.constructionplusasia.com/sg/handling-covid-19-in-asia-building-converting-facilitating-managing-spaces/

Proulx, G. (1993). A Stress Model for People Facing a Fire. *Journal of Environmental Psychology* 13, 137-147.

Verzoni, A. (2020). Compliance on Hold. *NFPA Journal*. Retrieved from https://www.nfpa.org/News-and-Research/Publications-and-media/NFPA-Journal/2020/May-June-2020/Features/COVID/Facilities

Wong, L. & Tee, Z. (2020, April 14). Record 120 new coronavirus cases in Singapore, 2 foreign worker dormitories gazetted as isolation areas. *The Straits Times*. Retrieved from https://www.straitstimes.com/singapore/coronavirus-record-120-new-covid-19-cases-in-spore-two-foreign-worker-dormitories-gazetted

Yung, D. (2008). *Principles of Fire Risk Assessment in Buildings*. West Sussex, UK: John Wiley & Sons.

SINGAPORE'S EMERGENCY MEDICAL SERVICE:

REDUCING OCCUPATIONAL RISK WHILE SAVING LIVES IN A PANDEMIC

Darren Choo, Ebenezer Lee, Amelia Lim, Janice Oh & Shalini Arulanandam
Singapore Civil Defence Force

ABSTRACT

The Coronavirus disease (COVID-19) pandemic has taxed healthcare systems and ambulance services worldwide to breaking point. Singapore was among the first to report community transmission of COVID-19, and at one point, had the highest number of confirmed cases in Southeast Asia. In this article, we record the protection measures and protocols adopted by our national Emergency Medical Services (EMS) provider run by the Singapore Civil Defence Force (SCDF). This article describes the impact of the pandemic on operations and training, and discusses continuing challenges.

INTRODUCTION

As the primary national Emergency Medical Services (EMS) provider, the Singapore Civil Defence Force (SCDF) runs a fleet of 84 ambulances and is committed to responding to 80% of EMS calls at any location in Singapore within 11 minutes. In view of the COVID-19 outbreak, SCDF has developed appropriate response measures to ensure that operational readiness is maintained without placing the responders' safety and health at risk. This article outlines the deliberate steps taken by SCDF to reduce the occupational risk of infection among frontline responders, and at the same time, retain a level of medical professionalism and care of patients.

SINGAPORE'S DORSCON FRAMEWORK AND NATIONAL RESPONSE

The Disease Outbreak Response System Condition (DORSCON) is a colour-coded framework that defines the current level of threat to and impact on public health. It provides agencies with a set of necessary response measures based on the level of threat and impact. This framework was established by the Singapore Ministry of Health (MOH) in 2006 after the Severe Acute Respiratory Syndrome (SARS) epidemic in 2003 (MOH, 2014).

On 2 January 2020, MOH issued a circular advising medical practitioners to be on alert for travellers with symptoms of pneumonia and breathlessness arriving from Wuhan City, China (MOH, 2020a). A day after the Multi-Ministry Task Force was formalised, Singapore reported its first imported case of COVID-19 on 23 January 2020 (MOH, 2020b).

The DORSCON framework was immediately applied as MOH raised the DORSCON to Yellow, introducing a slew of precautionary measures aimed at minimising the risk of further transmission in the community. An ambulance service run by contracted private ambulance operators was also dedicated to ferry all suspected cases to hospitals for screening. These included patients who showed stable symptoms but were nonetheless referred by healthcare providers, as well as those placed on quarantine order. With this supplementary set-up, SCDF's emergency ambulance service was able to focus on the expected day-to-day cases and take on only urgent cases of COVID-19.

Following the emergence of local cases without any travel history to China or discovered connection to previous cases, MOH raised the DORSCON level from Yellow to Orange on 7 February 2020 (MOH, 2020c). Accordingly, SCDF

instituted several measures in line with the whole-of-government response.

SAFEGUARDING THE PUBLIC AND AMBULANCE CREW

Personal Protective Equipment (PPE) for Ambulance Crew. From the onset of DORSCON Yellow, the pandemic PPE stockpile was distributed to all fire stations within two days. SCDF also began stockpiling at least three months' worth of PPE in preparation for this global crisis. Proper donning and doffing of the PPE were exceptionally crucial, being the primary deterrent to the exposure of the virus. For all suspected cases, ambulance crew were instructed to don a standardised set of PPE comprising a fitted N95 mask, goggles, gown, gloves, as well as hair and shoe covers. N95 mask-fitting was carried out and completed over three days, alongside the concurrent execution of refresher training to ensure competency. Routine medical drills were also conducted with more attention given to the donning and doffing procedures of PPE.

Upon escalation to DORSCON Orange, travel or contact history alone were no longer reliable identifiers for COVID-19 cases. SCDF had to take additional precautionary measures, and donned full PPE for all cases regardless of the reported symptoms. The PPE protocol was surfaced and approved by a board of appointed Senior Emergency Physicians (Medical Advisory Committee) and a hospital Infection Control specialist.

Call Operator Triage. Call operators at the 995 Operations Centre and dispatch node were trained to screen for travel history, especially for cases reporting fever and respiratory symptoms. Call operators would inform the ambulance crew to don the necessary PPE prior to arriving at the location and getting in contact with the patient. Even as responders are now expected to turn out in full PPE when attending to any case, travel history screening remains part of the triaging process.

Changes to Ambulance Dispatch Protocols. To minimise potential exposure, the dispatch of fire appliances to augment the ambulance response to Out-of-Hospital Cardiac Arrest (OHCA) cases was ceased. The dispatch of Emergency Medical Technicians (EMTs) on Fast Response Bikes for high priority cases was also put on hold when DORSCON Orange was announced. Community response was another facet SCDF had to consider. The activation of Community First Responders for OHCA cases through SCDF's MyResponder mobile application was suspended, in view of the risk of community transmission. The 995 Operations Centre continued to instruct callers to perform hands-only Dispatcher-Assisted Cardiopulmonary Resuscitation (CPR).

All calls meeting the criteria of a suspected case were diverted to the National Centre for Infectious Diseases (NCID) and KK Women's and Children's Hospital designated for adults and children respectively. As for the medically unstable suspected cases, they were immediately conveyed to the Emergency Department of the nearest hospital.

Changes to Clinical Protocols. Ambulance crew were instructed to check for travel and contact history for all cases, regardless of the presentation of symptoms. To minimise the generation of aerosol, nebulisation with salbutamol was also replaced by the use of metered-dose inhalers with spacers.

Augmenting MOH's Pandemic Ambulance Service. While the dedicated MOH ambulance service covered the majority of referred cases, SCDF committed up to ten of its ambulances to help meet the demand, especially during the initial phases where there was a surge in call load.

Hospital Emergency Workflow and Ambulance Decontamination Procedures. As each Emergency Department reorganised itself infrastructurally to segregate the clean and suspected cases, SCDF had to design a suitable workflow with all ten hospitals for the transfer of patients, doffing of PPE, and ambulance decontamination. As an added resource, SCDF engaged the services of an external contractor to provide 24-hour ambulance decontamination services at NCID with a 20-minute turnaround time. The designated ambulance decontamination areas were equipped with either the Biojet or Aseptojet for the crew to perform decontamination after the conveyance of each suspected case.

Force Protection and Health Monitoring of Ambulance Crew

Since the declaration of DORSCON Yellow, responders have been required to take their temperatures twice daily, as part of stringent health monitoring practices to protect the SCDF force. Responders who develop any form of respiratory symptoms are mandated to seek immediate medical attention and stay at home until they are relieved of the symptoms. In the same vein, responders found to have conveyed confirmed cases of COVID-19 and notified by the MOH Contact Tracing Centre are instructed to serve a quarantine period of 14 days. To reduce the incidence of respiratory illness, SCDF also carried out influenza vaccination programmes with the 2020 Southern Hemisphere vaccine for all ambulance crew. Starting in January 2021, SCDF's EMS also received the Pfizer Covid-19 vaccine.

Full segregation was implemented between the Fire & Rescue crew and EMS crew at all fire stations with mealtimes and rest areas kept separate. Within the EMS crew itself for each station, segregation was also in place between the morning and night shifts to minimise the degree of contact. Movement and cross-coverage of personnel between workplaces was also intentionally scaled down, and shift reporting times staggered with brief handovers. While the segregation measures have been relaxed slightly since June 2020 to allow for resumption of the Tiered Response and relevant training, safe distancing measures are still enforced, alongside an increased frequency in the upkeeping and disinfecting of common areas.

Monitoring Psychological Health of Ambulance Crew

As part of SCDF's crisis management framework, the in-house Emergency Behavioural Science and CARE (EBSC) Unit periodically performs phone surveys to ensure that the morale and mental health of the frontline responders are not adversely affected. In spite of positive reports of morale, there was initially still a level of anxiety faced by the responders due to the lack of information regarding the virus, and a bigger concern that they might inadvertently cause infection of their families and loved ones living in the same household. In an attempt to help alleviate this issue, SCDF has made arrangements to allow the crew to launder their clothes and wash up thoroughly before departing the premises. Psychologists are also available on a 24-hour hotline to provide emotional counselling at any time.

OPERATIONAL CHALLENGES FACED BY SCDF EMS

Impact on Response Time

Due to the cessation of fire appliances augmenting SCDF's ambulance response to emergency calls and the additional time required by the responders to don the full PPE, the response time increased by about 15 seconds per call in February and March 2020.

Trend of EMS Calls Conveyed

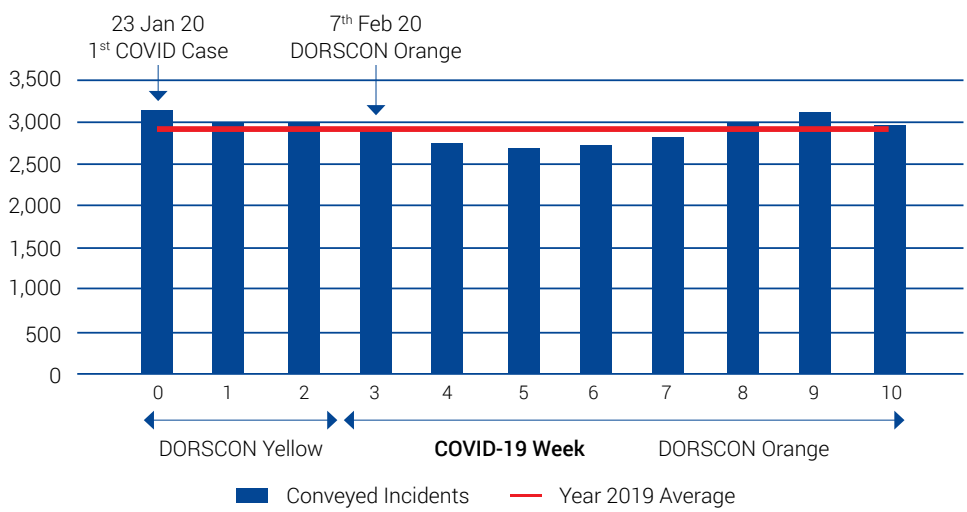


Figure 1. Number of EMS Calls Conveyed to Hospital per week

As Figure 1 shows, when the number of calls per week during the periods of DORSCON Yellow and DORSCON Orange was compared with the weekly average of EMS calls in the same time frame in 2019, there was an 8% reduction in EMS call load in the initial weeks of the outbreak. This was likely attributable to a change in the public's health-seeking behaviour. However, in March 2020, the number of calls increased week-on-week, primarily due to the increased demand in conveyance for COVID-19 cases.

SCDF observed that a large portion of COVID-19 conveyances were triaged as P3 cases (i.e. minor-emergency cases that are not life-threatening, such as cough with green phlegm, muscle cramps or sprains with stable vital signs, and cuts with no active bleeding), and most patients appeared well and medically stable. With this consideration, SCDF worked with MOH to establish triage criteria for the medical teams and lay operators at the dormitories and quarantine facilities, to ensure that ambulance capacity is reserved for higher acuity cases. With these measures in place, SCDF was able to maintain its 11-minute response time for about 90% of cases (similar to previous years) in 2020.

When private-hire drivers were tasked to augment the conveyance capability for suspected yet medically stable COVID-19 cases (Yap, 2020), SCDF helped to provide mask-fitting and training in the management of PPE for more than 900 of these drivers.

SCDF also maintains communication with the MOH Operations Cell to ensure rapid consultation and smooth handover of cases between the two (emergency and non-emergency) ambulance services. Text messaging is used as a means of rapidly updating the ambulance crew of new policies and protocols, new ambulance pick-up points at the various community isolation facilities and other operational matters, as well as to transmit feedback to managers on ground challenges.

With the above measures, the number of COVID-related EMS calls to 995 stabilised. Combined with the effects of the "circuit breaker" (which saw a 15% reduction in trauma caseload from road traffic and other accidents) and a reduction on non-emergency calls, the overall EMS call load for 2020 actually decreased for the first time in 20 years. (SCDF Fire, Emergency Medical Services and Fire Safety Enforcement Statistics, 2020)

There were also other operational challenges that required SCDF to tweak protocols to alleviate crew distress while maintaining high service standards. For example, heat stress and fatigue became a risk for responders with the regular donning of the full PPE in a pre-hospital care environment. SCDF thus introduced a degree of flexibility in the attire and decorum of its responders, allowing ambulance crew to be excused from putting on the full uniform in order to reduce heat stress.

Manpower and Logistics Shortages

Due to the precautionary measures set to reduce the risk of importation of COVID-19, there were initial concerns of short-term manpower shortage (MOH, 2020d). For SCDF, every non-occupational contact with a confirmed case renders a rapid workflow from vacating the responder's place of work for thorough cleaning and decontamination, to identifying close contacts for home quarantine, and subsequent coverage arrangements.

SCDF has tweaked its business continuity plans to ensure that in the event of significant degradation of manpower, it is able to suspend non-operational duties such as paramedic training and certification, and clinical audits, and divert additional headcounts to frontline response. Plans have also been put in place to collapse the ambulance crew structure from a 4-shift cycle to a 3-shift cycle in a worst-case scenario of manpower attrition.

The worldwide lack of PPE in the early months necessitated measures to minimise wastage through safe re-use where possible. SCDF has since been mindful to diversify the sources of supply to make sure the level of stock always remains adequate.

Impact on EMS Training

Training has been affected by the cancellation of clinical attachments to hospitals and the suspension of visits by foreign medical practitioners and lecturers. Within SCDF's training programme, the quarterly Continuing Education and Training sessions for in-service paramedics are now administered via online learning platforms with videos, recorded lectures, and e-quizzes. While online training has some advantages, such as flexibility of time and pace of learning, there have been limitations in rolling

out new protocols that require new practical skills or familiarisation with new equipment.

Fortunately, hands-on training sessions will be allowed to resume in 2021, with group size restrictions in place. In order to minimise the impact on skills-based training, SCDF will be looking at making its divisions more self-sufficient in trainers and training equipment so that training can be decentralised yet consistent.

CONCLUSION

SCDF's pandemic preparedness enabled a swift rollout of personal protective equipment and policies that ensured that none of our frontliners were infected with COVID-19, despite a high exposure rate. In comparison, a seroprevalence study among firefighters and paramedics in Florida, USA, found that up to 8.9% had been infected with the virus (Caban-Martinez et al., 2020).

Through close collaboration with MOH and other agencies to triage and cope with the COVID-related call load, SCDF was able to maintain its response times despite a temporary cessation of fire appliances' co-response to medical cases.

However, SCDF did document slightly worse clinical outcomes of out-of-hospital cardiac arrests during the peak of the pandemic in April and May 2020, measured as a decrease in pre-hospital return of spontaneous circulation to 8.7% of all out-of-hospital cardiac arrests from 12.3 to 12.7% in the same period in the prior 2 years. In addition to reducing the number of responding appliances, this change may also be attributable to the temporary cessation of activation of community first responders, as well as a documented reduction in bystander CPR and AED rates in this period, which corresponded with the "circuit breaker" (Ng et al., 2020).

The prolonged nature of this pandemic has also emphasised the importance of continuity and sustainability of our supply of essential equipment, and the need to be able to modify our training programmes to be decentralised and self-sufficient when access to local or overseas training partners is not possible.

ABOUT THE AUTHORS

Darren Choo
was a Medical Officer in the SCDF Emergency Medical Services department when the COVID-19 pandemic hit. He was involved in healthcare policy planning and helped to formulate policies regarding occupational fitness of firefighters and emergency medical personnel. He has always had a keen interest in occupational medicine and emergency medicine, and while now working in Tan Tock Seng Hospital as a Medical Officer hopes to continue to contribute to SCDF in a meaningful capacity when he returns for his reservist duties.

Janice Oh
is the Senior Assistant Director of the Emergency Medical Services (EMS) Department of the SCDF. She joined the SCDF in 1998 as a Paramedic and after a fulfilling 6 years operational tour in EMS, she underwent a 9 month-long officer course and was the first cross-trained fire officer. She served two years as a fire rota commander in Bishan Fire Station and 7 years in the Civil Defence Academy (CDA) as the Head of Medical Training. In her current job, she oversees the EMS daily operations and is heavily involved in the implementation of EMS projects, including the GOCO Model for the Private Ambulance Operators, OMNII system and EMS Tiered Response. Since 2018, she has been certified and appointed as a medical classifier with the International Search and Rescue Advisory Group. Janice believes in sharing her knowledge and conducts regular training at CDA as an adjunct trainer and provides inputs to the Singapore First Aid Resuscitation Council in her capacity as Chairman of the First Aid Sub-Committee.

ABOUT THE AUTHORS

Amelia Lim
is currently Commander of Jurong Island Fire Station, She was a Staff Officer in Emergency Medical Services (EMS) Operations Management in the EMS Department in SCDF Headquarters during the peak of the pandemic. She joined the SCDF in 2008 and spent 7 years as an operational paramedic before undergoing training to be cross-trained as a fire rota commander. After two years leading a fire rota in Sengkang Fire Station, she was appointed the EMS Team Leader of 3rd SCDF Division. In 2019, she underwent regional disaster management training under the ASEAN Coordinating Centre for Humanitarian Assistance and Disaster Management. She has been heavily involved in the implementation of High Performance CPR and the EMS Tiered Response in SCDF.

Ebenezer Lee
is a data analyst in SCDF's Emergency Medical Services (EMS) Department. He conducts data analysis and data management to support the planning and operations of EMS. He also guides a team in the development and maintenance of programming codes for regular data processing and routine reporting. He is currently helping to ensure the continuation of data workflows and routine reporting as EMS transitions to a new system in 2021.

Shalini Arulanandam
is an SAF medical officer who was seconded to SCDF as the Chief Medical Officer in April 2018. She has been reviewing the training and career development plans for paramedics in the SCDF, introducing a full-time Diploma with Nanyang Polytechnic as part of paramedic training, a new course for Paramedics to become Senior Officers, and a collaboration programme with an overseas university for paramedics to earn a degree in Paramedicine through distance learning. She has also been involved in several initiatives to optimise triage accuracy, and to automate clinical audit. During the COVID pandemic, she developed clinical policies for SCDF and worked closely with MOH, the Joint Task Force and other agencies to co-ordinate SCDF EMS's contribution to the national effort.

REFERENCES

Caban-Martinez, A.J., Schaefer-Solle, N., Santoago, K. et al. (2020). Epidemiology of SARS-CoV-2 among firefighters/paramedics of a US fire department: a cross sectional study. *Occupational & Environmental Medicine* 77(12), 857-861

Ministry of Health, Singapore (MOH). (2014). P*andemic Readiness And Response Plan For Influenza And Other Acute Respiratory Diseases*. Singapore: Ministry of Health. Retrieved from https://www.moh.gov.sg/docs/librariesprovider5/diseases-updates/interim-pandemic-plan-public-ver-_april-2014.pdf?sfvrsn=95ac7ac3_0

Ministry of Health, Singapore (MOH). (2020a). *Precautionary Measures In Response To Severe Pneumonia Cases In Wuhan China*. Retrieved from https://www.moh.gov.sg/news-highlights/details/precautionary-measures-in-response-to-severe-pneumonia-cases-in-wuhan-china

Ministry of Health, Singapore (MOH). (2020b). *Confirmed Imported Case of Novel Coronavirus Infection In Singapore*. Retrieved from https://www.moh.gov.sg/news-highlights/details/confirmed-imported-case-of-novel-coronavirus-infection-in-singapore-multi-ministry-taskforce-ramps-up-precautionary-measures

Ministry of Health, Singapore (MOH). (2020c). *Risk Assessment Raised To DORSCON Orange*. Retrieved from https://www.moh.gov.sg/news-highlights/details/risk-assessment-raised-to-dorscon-orange

Ministry of Health, Singapore (MOH). (2020d). *Additional Precautionary Measures To Prevent Further Importation of COVID-19 Cases*. Retrieved from https://www.moh.gov.sg/news-highlights/details/additional-precautionary-measures-to-prevent-further-importation-of-covid-19-cases

Ng, Q.X., Lee, E.Z.H., Tay, J.A.M., and Arulanandam, S. (2020, October 19). Impact of COVID-19 "circuit-breaker" measures on emergency medical services utilisation and out of hospital cardiac arrest outcomes in Singapore. *Emergency Medicine Australasia*. Advance online publication https://doi.org/10.1111/1742-6723.13668

Yap, J. (2020). Grab drivers, vehicles from SMRT unit deployed to help Health Ministry take suspect COVID-19 cases to hospital. *Channelnewsasia*. Retrieved from https://www.channelnewsasia.com/news/singapore/grab-drivers-smrt-help-ferry-covid-19-suspect-cases-12671368

SENSE-MAKING AND SURVEILLANCE IN AN UNPRECEDENTED MEDICAL CRISIS

Ong Si Ci & Felix Foo Yong Wei
Home Team Science and Technology Agency

ABSTRACT

As with all other changes that COVID-19 has brought about, the demands on surveillance technology have increased as well. Within the Home Team, officers in the Sense-making and Surveillance Centre of Expertise (S&S CoE) have stepped up their efforts to bring to the table various technological applications. This article describes how HTX developed and deployed within two months iFAST, an integrated temperature scanning, mask detection and facial recognition system, at the Ministry of Home Affairs Headquarters. Other projects that the team embarked on with other Home Team Departments and government agencies, such as the use of video analytics for safe distancing and crowd counting, are also featured.

THE ROLE OF TECHNOLOGY IN FIGHTING COVID-19

With the onset of the COVID-19 pandemic in early 2020, governments across the world have both swiftly deployed existing technology such as thermal cameras at airports to conduct temperature screening of travellers, as well as introduced technological interventions.

As the first country to be hit by the pandemic, China rolled out several technological solutions for digital surveillance. For example, closed-circuit television (CCTV) cameras were installed on the doors of homes of quarantined individuals to ensure that they remain inside, drones were deployed on the streets to remind citizens to keep their masks on, and a QR code system was used to track the health status of individuals. Digital contact tracing solutions such as Australia's COVIDSafe, and China's HealthCode were introduced to capture movements and interactions of individuals in order to reduce the time taken for suspect cases to be identified and isolated. South Korea and Israel monitored credit card transactions and individual mobile phone data for digital contact tracing.

In Singapore, the Multi-Ministry Taskforce was set up to oversee strategic direction and coordinate efforts to contain the spread of coronavirus. As the Home Team's force multiplier, the Home Team Science and Technology Agency (HTX) stepped up to join the COVID-19 fight through deployment of S&T capabilities to enhance operational outcomes. The HTX Sense-making and Surveillance Centre of Expertise (S&S CoE) collaborated with other Capability Development Programme Management Centres (PMCs) within HTX – the Joint Capabilities PMC, Q Team Centre of Expertise (CoE), and the Immigration and Checkpoints PMC – to provide consultation and assistance in the deployment of several technology solutions to combat COVID-19.

iFAST FOR FASTER SAFEENTRY

One of the first measures introduced by the Multi-Ministry Taskforce in early 2020 to contain the pandemic included mandatory health and travel declarations for all staff and visitors prior to entry into buildings. As a result, temperature screening and manpower resources were deployed to enforce these measures. Working with the Joint Capabilities team (JCPMC), S&S CoE explored ways to automate this process and reduce the manpower resources required while ensuring public safety and a seamless user experience.

A functional system the team dubbed iFAST (Integration and automation of Face recognition Access and Safe Temperature logging) was swiftly put together (Figure 1). It captures the identity and temperature reading of an individual

Figure 1. Trialling of iFAST by HTX staff

Figure 2. Dashboard display of facial images and body temperature readings captured of staff

at high footfall areas using facial recognition and thermal technology and automatically logs into a common database. Testing and configuration were performed by S&S CoE to determine the optimal camera positions to reduce the rate of false alarm occurrence. Besides capturing an individual's facial images upon entry, cameras can be placed at exit points as well. After several weeks of trial and configuration, we managed to achieve a 74% accuracy for facial recognition with mask and a temperature variance of ±0.3°*C*.

With the initial iFAST prototype in hand, JCPMC and S&S CoE then conducted further enhancements to obtain a stable and cyber-safe system that is fit for operational use at all entry and exit points at Ministry Headquarters in New Phoenix Park (NPPk). Ingress and egress movements are captured and integrated with SafeEntry data, and sent to Ministry of Health (MOH) for contact tracing purposes. Figure 2 shows the dashboard display of facial images and body temperature readings of staff and visitors identified and captured for monitoring purposes.

Besides deployment at NPPk, iFAST has also been developed as a working reference model for other Home Team Departments to adopt and adapt for their onsite use.

VIDEO ANALYTICS FOR REAL-TIME CROWD CONTROL

S&S CoE also leaned forward to support whole-of-government efforts by using video analytics to perform crowd analysis, provide alerts when an individual is spotted not wearing a face mask, and to determine the distance between people for social distancing enforcement.

The enforcement of safe distancing measures by the Ministry of Manpower and the National Environment Agency entails the deployment of manpower as safe distancing officers and ambassadors. Not only does this require a large amount of manpower, but such operations also require officers to be vigilant at all times. The challenge also lies in the timely deployment of officers to unanticipated hotspots

Figure 3. Crowd analytics algorithm tested on a semi-crowded scene. Safe distancing violations are annotated by the red bounding boxes.

to alleviate the situation and reduce the risk of an infection spreading within the community.

Engineers from the S&S CoE and Q Team CoE developed quick prototypes and performed trials on crowd analytics algorithms using data collected from existing systems to assess the suitability of camera angles and algorithm accuracy. While testing commercial solutions, the team also developed in-house machine learning models to perform crowd counting and achieved an accuracy of 80%. After several rounds of testing and evaluation of various models (Figure 3), an optimal result was obtained. With the support of the Singapore Police Force, the model has been deployed operationally, and provides near real-time alerts to enforcement officers on the ground.

The solution enables agencies to better plan their operational deployment of officers on the ground based on data collected on crowd levels, hence allowing for better calibration of enforcement strategies. In addition, the alerts enable officers to grasp the situation on the ground expeditiously and accurately and to make the necessary operational decisions and response.

ELECTRONIC STAY HOME NOTICE FOR MORE EFFECTIVE MONITORING

When Stay Home Notice (SHN) was introduced by the Multi-Ministry Taskforce in mid-February 2020 to minimise the risk of spread by imported cases of COVID-19, S&S CoE worked with the Immigration and Checkpoints PMC (ICPMC) to provide the Immigration & Checkpoints Authority (ICA) with an electronic solution to monitor persons on SHN. This became increasingly important as the situation exacerbated globally and Singaporeans from all over the world began returning home. The influx of returnees added to the operational pressure on ICA officers tasked to enforce the SHN regime, contributing to the strain on manpower and operational resources.

To meet this urgent need for a working solution to be delivered promptly, S&S CoE worked with existing partners and provided technical assessment of potential solutions based on the effectiveness, reliability and accuracy of the proposed technology. Application development, hardware prototyping, production deployment, etc. were then undertaken by ICPMC. With the hard work from ICA, HTX and our partners, the final solution (Figure 4) was deployed in 4 months.

SENSE-MAKING AND SURVEILLANCE IN DIFFICULT TIMES

While COVID-19 affected our everyday lives, the impact on the Home Team's operations was significant as well. HTX looked to promptly provide technological solutions to enhance operational efficiency and alleviate resource constraints. In the video analytics domain,

Figure 4. (Left to right) mobile application, IoT gateway and wristband deployed for SHN electronic monitoring

S&S officers worked hard to deliver operational solutions together with our colleagues from HTX, SPF and ICA, and commercial partners. In the process of development and implementation, the team was faced with constraints of limited resources such as backend infrastructure, computing power and bandwidth limitations. On top of that, the urgency of deployment to support COVID-19 operations further added to the project difficulty, necessitating rapid prototyping, development and deployment within a short timeline. Nevertheless, with the strong support of our colleagues and partners, S&S CoE was able to deliver timely and reliable solutions. As the world continues to fight COVID-19, we believe that HTX will be able to contribute to making Singapore a safer place amidst the pandemic.

ABOUT THE AUTHORS

Ong Si Ci

joined the Ministry of Home Affairs Science and Technology Group in September 2019, prior to the formation of the Home Team Science and Technology Agency (HTX) in December 2019. She completed her Master in Materials Science and Engineering at Imperial College London in the same year. Her first posting has seen her working in the Sense-making and Surveillance Centre of Expertise (S&S CoE) and Data Science and Artificial Intelligence CoE, working on the development and deployment of video analytics and data science capabilities to enhance Home Team operations. In addition, she is also with the Plans and Strategy Division where she does strategic planning for HTX.

Felix Foo

started his career in the Singapore Prison Service's Technology Branch in June 2011 where he was part of the team that replaced the old analogue closed-circuit televisions (CCTVs) with newer digitised CCTVs that produced much clearer images. He then furthered his interest in technology application in the Home Team through his posting to MHA's Ops-Tech group in March 2015. Felix's current portfolio at S&S CoE at HTX includes developing advanced technology road maps and collaborations while integrating existing systems to harness the multiplier effect.

REFERENCES

Kharpal, Arjun. (2020, March 26). Use of surveillance to fight coronavirus raises concerns about government power after pandemic ends. *CNBC*. Retrieved from www.cnbc.com/2020/03/27/coronavirus-surveillance-used-by-governments-to-fight-pandemic-privacy-concerns.html

Mohan, Matthew. (2020, March 5). New COVID-19 test kits used to screen swab samples collected at Singapore checkpoints. *Channel News Asia*. Retrieved from www.channelnewsasia.com/news/singapore/covid19-new-test-kits-swab-three-hours-12505658

The, Cheryl. (2020, September 17). Home Team's new unmanned drone can fly longer distance, switch payloads. *The Straits Times*. Retrieved from www.straitstimes.com/singapore/home-team-news-unmanned-drone-can-fly-longer-distance-switch-payloads

Zhuo, Tee. (2020, August 4). Coronavirus: Monitoring devices for travellers on stay-home notice outside of facilities do not store personal data or record video, audio. *The Straits Times*. Retrieved from www.straitstimes.com/singapore/devices-do-not-store-personal-data-or-record-video-audio

INNOVATING PSYCHOLOGICAL SERVICES TO SUPPORT THE POLICE IN A PANDEMIC

Ho Hui Fen, Jansen Ang, Yap Hui Lin, Mohd Zailan Salihin,
Tiffany Nicole Danker, Tan Yong Sheng, & Alyah Dinah Zalzuli
Singapore Police Force

ABSTRACT

Policing is known to be a highly stressful and challenging vocation. In peacetime, police officers and leaders are faced with operational and organisational stressors that affect their operational ability and psychological well-being. During periods of uncertainty, as presented by policing in a prolonged pandemic environment like COVID-19, the added stress of operating in an environment with an unknown biological threat with deadly consequence poses unique challenges to the operational and psychological resilience of police personnel. Apart from the operational and legal considerations of policing in a pandemic, there is a need to consider the psychological preparedness of officers for policing in such a unique environment. And given the unknown threat posed by the virus, the provision of psychological services has naturally to innovate. This paper describes how the Police Psychological Services Department of the Singapore Police used a bespoke 3 x 3 framework to plan and deliver innovative psychological support services to police officers, units and leaders policing in the current pandemic.

POLICING IN A PANDEMIC

The first case of COVID-19 in Singapore was announced on 23 January 2020, when a 66-year-old Wuhan resident on holiday in Singapore tested positive for the virus. As Singapore saw a rise in the number of cases, in particular locally transmitted cases with no links to previous cases, the risk assessment was stepped up from Disease Outbreak Response System Condition (DORSCON) Yellow to DORSCON Orange on 7 February 2020. The number of cases continued to rise as overseas Singaporeans returned home and local clusters emerged. In particular, there was a spike in the number of COVID-19 cases in several foreign worker dormitories in early April 2020. In response, the Singapore Government imposed a "Circuit Breaker" from 7 April to 1 June 2020 in a bid to curb the spread of COVID-19.

The COVID-19 Pandemic has been described by the United Nations (UN) as the worst global crisis since World War II. In Singapore's fight against this crisis, the Singapore Police Force (SPF) is substantially involved, with police officers being deployed at government quarantine facilities and at the foreign worker dormitories across Singapore to manage lockdown operations, at the frontline performing day-to-day duties with members of the public, or in contact tracing operations. Police officers and civilian officers in the staff departments have also been working long hours to support crisis operations, such as developing contingency plans and business continuity plans as well as new and innovative operating procedures for policing during the COVID-19 crisis.

In such challenging times, crime does not stop and thus, policing cannot stop either. Rather, on top of the challenging demands of policing, the added challenges of policing during a pandemic places exceptional stress on police officers, units, and leaders. For the policing function to be effective, it is critical that police officers and leaders are duly supported. In Singapore, the Police Psychological Services Department (PPSD) has through the aid of technology developed a comprehensive plan to provide 360 degree psychological and practical support for police officers. These interventions are important in enhancing, maintaining and restoring

the psychological readiness of police officers, units and leaders.

STRESS IN POLICING

Police work is almost universally acknowledged to be stressful (Bishop et al., 2007), with police officers at various times required to intervene in situations of conflict (Lee et al, 2017), apprehend violent criminals, face hostile members of the public, and deal with the inevitable political pressures of public life (Violanti et al., 2018) – these are the commonly known operational stressors police officers face. Operational stressors are often highlighted in police work, although many studies of police stress have consistently found that organisational stressors – those related to the context in which officers perform their duties – are also very common and have deleterious effects (Biggam, Power, Macdonald, Carcary, & Moodie, 1997; Brown, Cooper, & Kirkcaldy, 1996; Evans & Coman, 1993). Challenges arising from manpower shortages, long hours, job overload and changes in supervisors have been found to be among the most common organisational stressors. These stressors can lead to psychological distress, depression, alcoholism, burnout, cardiac disorders and suicide as well as family and marital problems (Alexander, 1999; Biggam, Power, Macdonald, Carcary, & Moodie, 1997; Kop, Euwema, & Schaufeli, 1999; Loo, 1999; Territo & Vetter, 1981; Violanti, 1992).

On top of these stressors, the nature of a prolonged pandemic operation threatens not only the police officers but also their loved ones and colleagues, who may be at risk of infection from human-to-human transmission. Additionally, given the insidious nature of the virus, infected officers may be asymptomatic and may therefore unknowingly infect others. This unknown, unseen and insidious nature of the virus poses unique challenges to policing.

DEVELOPING A 3 X 3 PSYCHOLOGICAL SUPPORT INTERVENTION PLAN

The Police Psychological Services Department (PPSD) is a unit in the Singapore Police entrusted with using psychological know-how to ensure operational and organisational excellence. PPSD is usually involved in operational psychological support in major and intensive policing operations. In response to the challenges faced by police officers in the prolonged pandemic operations, PPSD reviewed past operations and developed a 3 x 3 psychological support intervention plan. Bearing in mind the threat posed by an infectious virus, PPSD harnessed technology to innovate the delivery of psychological services, which are largely concerned with: (1) Psychological Readiness Management, (2) Morale Management, and (3) Operational Resilience Management (Figure 1).

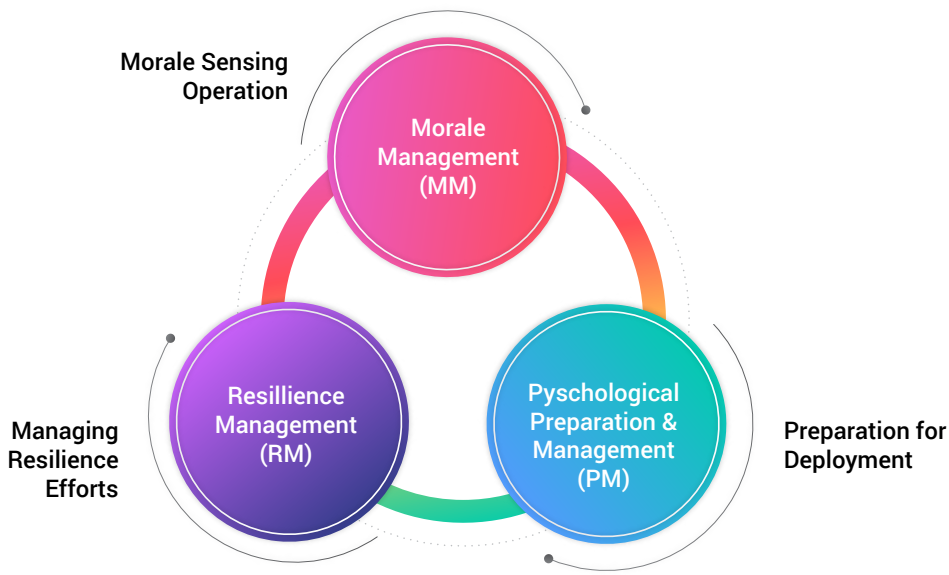


Figure 1. Principal components of psychological support interventions

As part of Psychological Readiness Management, PPSD provides schemas, scripts and cognitive maps in a safe manner to help officers and leaders understand the context of the situation and what they can and should do to prepare themselves and protect their loves ones. Working with communications experts from SPF Public Affairs Department, PPSD psychologists have been developing various psychological preparation materials and guides to mentally prepare and equip officers for the challenges they may face. These challenges include dealing with anxiety, stress and fatigue, maintaining sleep hygiene, and preparing their families for their involvement in pandemic operations.

In the area of Morale Management, PPSD conducts morale measuring, and supports morale monitoring and morale motivating efforts. For morale measuring, PPSD liaises with the Unit Morale Sensing Teams (UMSTs) to conduct e-morale sensing every two weeks. The findings from the morale measuring efforts are then shared with unit and Headquarters (HQ) leadership to calibrate the ground support required and to shape guidance to officers. Sharp dips in operational morale of units are highlighted to their leadership for timely investigation and intervention. For morale motivating, PPSD highlights areas that officers appreciate and their concerns. Unit and HQ leaders are then able to look into the concerns and take steps to boost the morale of officers at the frontline. Some of the interventions have included provision of sanitisers, masks and Vitamin C supplements.

Given the requirements of social distancing measures, morale sensing is not conducted face-to-face as is usually done in most operations. Instead PPSD worked with Ops Tech Department to develop the PPSD E-Morale Sensing capability, otherwise known as PEMS. In face-to-face morale sensing operations, teams of PPSD officers would engage ground officers to obtain a sensing of their operational morale and confidence. This process was manpower intensive and unsuitable for a fast-moving high threat environment. With the PEMS, a morale sensing form is created on FormSg and an internet link sent to officers (see Figure 2). Officers assess the form and respond to the questions. Responses are sent to a PPSD email box which auto-generates into a database the responses received. PEMS allows PPSD to quickly gather officers' feedback with no face-to-face interaction, thus removing any risk of infection. The data, being already collated on a database, is provided in an easy format for faster qualitative analysis. The results from using PEMS is an infection-free, fast and accurate morale sensing carried out without deploying any PPSD officer on the ground.

PPSD psychologists have also been working to enhance, maintain and restore operational resilience, especially when officers are infected. For Resilience Management, a standby plan was developed early for the following three scenarios in anticipation of officers: (1) being potentially contaminated in the line of duty, (2) having family members and loved ones infected, and (3) being infected themselves. Psychological support plans and reassurance operations were prepared and approved early in the deployment. These proved useful when officers eventually came across contaminated subjects as well as when they had loved ones infected and when they themselves were infected. Having the operational resilience plans ready have helped to ensure a thorough and effective response to the crisis.

Figure 2. Poster advertising e-morale sensing exercise

Before COVID-19, officers needing support were seen in face-to-face settings. However, with the virus posing a serious threat to the usual mode of providing resilience management services and creating conditions of greater uncertainties and anxieties for officers, PPSD quickly rolled out eCounselling services. Protocols were developed to allow PPSD counsellors to have therapy sessions with counsellees remotely while maintaining confidentiality of sessions. eCounselling allows officers to seek help without endangering their physical health or that of the counsellor. Work processes were also developed to manage contingencies should a counsellee need further assistance.

An important aspect of psychological resilience is in ensuring that the right officers are selected for the right roles in the organisation. Before COVID-19, all psychological interviews were conducted face-to-face. Candidates being considered for special jobs or vocations would be interviewed in person at PPSD. COVID-19 posed unique challenges as the safe distancing measures meant these interviews had to be stopped. PPSD innovated and through the use of remote meeting platforms (like MSTeams and Zoom) worked quickly to set up an eInterviewing capability. The psychological assessment team at PPSD researched existing practices and safeguards in interviewing (e.g. interviewees being coached, verifying the identity of candidates, unauthorised recording of sessions, etc.) and developed a new protocol and work process with the Police Recruitment Division to allow eInterviewing to replace the traditional face-to-face psychologist interviews without degradation in standards. Preliminary data from the eInterviewing trials have been positive. This eInterviewing capability has enabled the Singapore Police to continue selecting the right people for the right jobs in spite of the threat of the virus.

Drawing from the Operations Psychology Framework (Ang, Diong, Misir, & Cheong, 2011) and the Resilience Framework (Khader, et al., 2007) in the SPF, which were modelled after the public health intervention model, PPSD further organised interventions into three main tiers:

1. primary, which aims to reduce the risk involved
2. secondary, which aims to influence the interpretation of risk, and
3. tertiary, which aims to restore normalcy.

In the context of the pandemic, primary interventions involve measures to reduce the risk of infection among all officers, secondary interventions involve measures to reassure the officers who are at a higher risk of infection, whereas tertiary interventions involve measures to restore normalcy for infected officers and those in close contact with them. Unlike other planned operations with a long lead time, the nature of a pandemic operation means that police officers are quickly thrust into action during the viral outbreak, therefore rendering much of the psychological preparation before deployment challenging.

The psychological support interventions at each tier are further categorised into three different levels: (1) individual, (2) unit, and (3) force-wide, and executed with the support of police officers and leaders at all levels. This is illustrated in the 3 x 3 psychological support intervention plan shown in Figure 3.

PRIMARY

(1) Individual Level Interventions

At the individual level, PPSD created and disseminated psychoeducational and morale-boosting messages and infographics for all police and civilian officers. These materials are disseminated through various means, such as internal communications (i.e., emails broadcast to all SPF officers), Workspace or via WhatsApp. The varied means of dissemination ensures that the materials reach officers who may be away from the office with no access to their emails. These messages and infographics provide practical tips on coping with the pandemic situation and remind officers to stay resilient and support fellow officers, family and friends (see Figures 4 and 5 for samples). Self-care tips for leaders are also included, given that leaders may experience stress from leading in a novel and dynamic threat environment.

	Individual	Unit	Force-wide
Primary	• Weekly messages and infographics to boost morale, self-care, and provide tips on managing stress from the pandemic • Using eInterviews for job selection to ensure right person-job fit with minimal physical contact	• Leadership tips for unit leaders through PPSD microsite • Commander and command team ground visit and reassurance engagements • Support tips for paracounsellors • Morale sensing exercises through PEMS with all officers	• Provision of vitamin Cs, thermometers, hand sanitisers for all officers • Commissioner, Deputy Commissioners ground visit and reassurance engagements
Secondary	• Messages and infographics to reassure officers at higher risk (e.g. quarantine ops) and provide psychoeducation or relevant medical information through PPSD microsite • PPSD helpline for emotional support, if required	• Ops electronic morale sensing (PEMS) exercises for quarantine operations officers, officers deployed to foreign worker dormitories, frontline officers and staff department officers	• Provision of Personal Protection Equipment and alternative accommodation, where needed • Clear Rules of Engagement (ROE) from HQ on measures for policing in a pandemic and for protection • Message from Commissioner of Police / • Video call engagement by Commissioner of Police with officers deployed on the ground for COVID-related operations.
Tertiary	• PPSD helpline for emotional support, if required • Provision of psychoeducation and reassurance materials • Family reassurance or assistance • Check-ins by PPSD psychologist and paracounsellors • Leadership check-ins by unit leadership and Commissioner • Ecounselling services	• Ops electronic morale sensing (PEMS) exercises for close contacts of infected officers • Provision of psychoeducation materials • Team reassurance by Unit leaders	• Personal check-ins by Commissioner of Police • Message from Commissioner of Police

Figure 3. 3 x 3 Psychological Support Intervention Plan

Figure 4. Psychoeducational infographic disseminated to police officers

(2) Unit Level Interventions

At the unit level, leadership materials and resources are sent to unit leaders. These provide unit leaders with useful information on how to manage the morale of the team in these challenging times as well as the signs of burnout and stress to look out for in their officers. The paracounsellors nested within the units are also provided with infographics and materials on how best to support fellow officers who may be exhibiting the signs of burnout and stress (see Figure 6).

Apart from the leadership tips, the primary intervention at the unit-level involves peacetime morale sensing operations. This includes the Employment Engagement Survey (EES) that happens once every two years, as well as the Pulse survey that occurs at six monthly intervals. The peacetime morale sensing operations provide a baseline for comparison against the morale and confidence of the officers during specific operations, such as pandemic operations. Unit Commanders and leadership teams are also provided frequent reassurance and information updates to share with their officers.

Figure 5. Morale-boosting message disseminated to police officers

Figure 6. Psychoeducational infographic disseminated to unit leaders and paracounsellors

(3) Force-wide Level Interventions

At the force-wide level, to reduce the risk of infection among officers, all police and civilian officers have been issued items such as vitamin Cs, thermometers and hand sanitisers.

These items allow the officers to boost their immune system and take the precautions as recommended by health agencies (e.g., sanitising hands before eating). Commissioner, Deputy Commissioners and senior leadership also visit ground units and share frequent reassurance updates with the officers.

SECONDARY

(1) Individual Level Interventions

At the individual level, PPSD has created reassurance materials for dissemination through internal communications as well as informal channels such as WhatsApp. The PPSD helpline, a 24/7 helpline manned by PPSD psychologists and trained senior paracounsellors, is also available for all officers should they require further emotional support beyond the reassurance materials. Unlike pre-COVID days where officers can collect these resources from PPSD, during this period officers are encouraged to self-help through assessing the materials on PPSD's microsite in the intranet. This self-help allows officers to get 'just in time' information that is helpful in managing anxieties.

(2) Unit Level Interventions

At the unit level, to assess the impact of the pandemic on our officers, PPSD has conducted regular PPSD Electronic Morale Sensing (PEMS) exercises to gather feedback on COVID-19 deployment and operations. PEMS exercises are conducted via FormSG, a form builder tool developed by Singapore GovTech to create online forms that capture classified data. There are four main target groups, namely (1) officers deployed to the government quarantine facilities, (2) frontline officers, (3) officers from Staff Departments and Specialist Staff Departments, and (4) officers deployed to foreign worker dormitories.

Quantitative morale assessment is derived through officers' ratings on a 10-point Likert scale on two questions regarding current morale and overall confidence in fulfilling their operational duties. Additionally, three qualitative questions are asked to ascertain the officers' concerns, the support they may require during this period, as well as the areas they consider to be executed well during the deployment.

PEMS exercises have allowed PPSD to assess how the morale and confidence scores of the officers evolve in relation to developments in the COVID-19 situation locally and internationally, and the impact on pandemic police operations. These exercises also function as a feedback channel by highlighting the concerns that officers have in relation to their roles in the pandemic operations (see Figure 7 for example of results shared with officers). Some common concerns include the risk of infection during deployment, manpower constraints, the provision and use of PPE, etc. Following each PEMS exercise, the morale and confidence scores, as well as the concerns raised, the support required, and the areas done well are consolidated into a report and sent to the respective unit leaders for follow-up action. For concerns that warrant greater attention force-wide, they will be raised to police higher management whenever necessary.

(3) Force-wide Level Interventions

At the force-wide level, PPEs have been made available to the officers where needed. Alternative accommodation plans have also been put in place

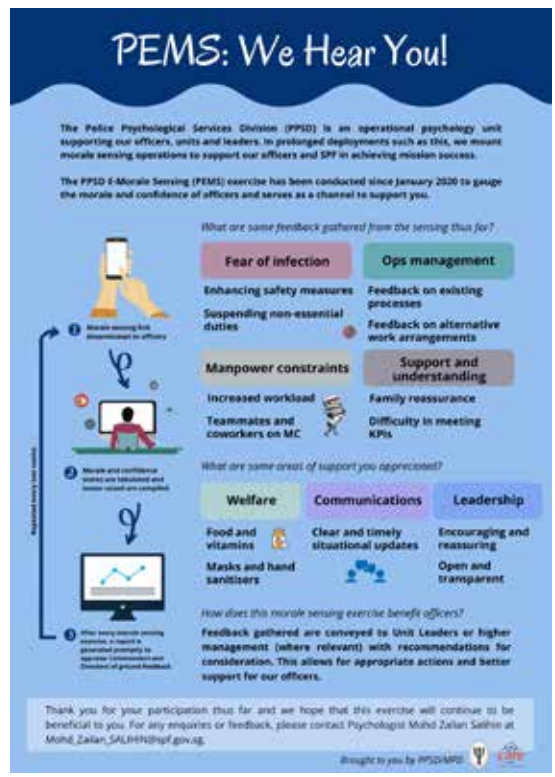


Figure 7. Communications to police officers about results of latest PEMS exercise

for officers who may require such arrangements, such as officers who have concerns about getting infected during duty and risk infecting their families if they were to return home.

Clear Rules of Engagement (ROE) have been disseminated by Police HQ on measures to be taken during policing in a pandemic and for protection. These ROEs include when officers are to put on PPEs and masks as well as procedures for handling high risk persons. These ROEs are frequently updated when new information on the virus is available, and are also aligned with practices within the government. These as well as clear staff guidance to units help to allay much of the anxiety officers have policing in a pandemic.

Apart from this, the Commissioner of Police also sends regular messages to all officers to update them on the COVID-19 situation as well as to assure them of the measures being taken to ensure their well-being. An update about the situation also serves to manage officers' expectations regarding the pandemic operations. It also recognises the officers for their efforts by highlighting and appreciating the areas of work that different units are engaged in. In addition, the Commissioner of Police also engages personally with officers deployed on the ground via video calls.

TERTIARY

(1) Individual Level Interventions

At the individual level, when an officer is infected with COVID-19, the PPSD helpline is made available to provide emotional support. If necessary, the officer will also be provided with a dedicated helpline manned by a PPSD psychologist who will conduct a personal check-in with the officer on his or her concerns and to provide psychological reassurance. This will be done via either phone call or through WhatsApp. A trained paracounsellor will also be assigned to the officer to provide psychological support and address concerns. This includes providing psychoeducation on the possible psychological symptoms that the infected officer may have as well as a comprehensive guide on how to cope with anxiety during this challenging period. If need be, officers can be supported through eCounselling.

Unit leaders are also encouraged to touch base with the infected officers' family members to check on any concerns they may have and provide reassurance.

(2) Unit Level Interventions

At the unit level, when an officer tests positive for COVID-19, PPSD conducts PEMS specifically for the officers in close contact with the infected officer, as well as the teammates and supervisors of the infected officer. These PEMS exercises allow PPSD to better understand how news of an infected officer affects the morale and overall confidence of the officers around him or her, as well as the specific concerns they may have after receiving the news.

Apart from the PEMS exercises, PPSD will also provide psychological reassurance materials to officers who were in close contact with the infected officer. These materials will be disseminated by paracounsellors in the unit. PPSD will also be in touch with unit leaders to encourage them to provide timely reassurance to officers, such as information about disinfection measures, identification of close contacts, and availability of psychological support, as well as provide clarification about work rearrangements.

(3) Force-wide Level Interventions

At the force-wide level, the Commissioner of Police has made personal video calls to officers who tested positive for COVID-19. He has also sent internal communications messages to update all officers about the situation as well as brief and reassure officers of the measures that have been taken. The messages also include the psychological support services available for all officers, such as the availability of paracounsellors as well as the PPSD helpline. The support plan for affected officers are covered in Figure 8.

LESSONS LEARNT

Using Technology

PPSD upgraded its morale sensing tools after a review of past morale sensing exercises. Traditionally, morale sensing exercises were conducted either on the ground (i.e., psychologists went on-site in person) or through the phone. Both methods were tedious and time-consuming, as they involved individually

	Affected Officers	Proposed Intervention	Remarks
1	Line of duty exposure	a. Offer temporary housing (e.g. SPOM chalet) should officer have concerns about returning home	Unit Head Manpower to work with Welfare Division
		b. Provide PPSD helpline to offer emotional support, if required	Manned by PPSD psychologists and Senior Paracounsellors
		c. Provide psychological/medical reassurance information/ support	To work with the Home Team Medical Services Division (HTMSD) in ensuring consistency of PPSD reassurance communications
		d. Provide family assurance/ assistance	Unit Leaders to touch base with family members, if need be
		e. Offer workplace reassurance	Immediate supervisor to work with officer for work re-arrangement, if need be
2	Exposure to infected family/ friends (i.e. on LOA)	a. Provide PPSD helpline to provide emotional support, if required	Manned by PPSD psychologists and Senior Paracounsellors
		b. Provide psychological/medical reassurance information/ support	To work with HTMSD in ensuring consistency of PPSD reassurance communications
		c. Provide family assurance/ assistance	Unit Leaders to touch base with family members, if need be
		d. Offer workplace reassurance	Immediate supervisor to work with officer for work re-arrangement, if need be
		e. Conduct personal check-in calls	Immediate supervisor to keep in contact with officer
		f. Psychoeducational materials	PPSD to provide and send through supervisor
		g. PPSD psychological intervention (if required)	To be advised by supervisor
3	Infected officers (i.e. officer is a confirmed case)	a. Provide PPSD helpline to provide emotional support, if required	Manned by PPSD psychologists and Senior Paracounsellors
		b. Provide family assurance/ assistance	Unit Leaders to touch base with family members, if need be
		c. Offer workplace reassurance	Commander to reassure officer's colleagues on work re-arrangement
		d. Conduct personal check-in calls	PPSD to check with officer on concerns and provide psychological reassurance
		e. Team reassurance	CO/Head/AD equivalent to check in with team to address concerns

Figure 8. Support plan for affected police officers

approaching or calling the officers to be sensed, and manually recording and collating their responses into an excel sheet. The methods were also resource-intensive, requiring several psychologists and vehicles for transport to the site. The current pandemic operation is the first operation where PPSD is conducting morale sensing exercises online (i.e., PEMS). With PEMS, PPSD psychologists can collect more responses within a shorter duration and with lesser manpower and logistics as compared to traditional morale sensing methods. This ensures that the morale sensing reports are sent to the respective unit leaders in a timely manner and enables swift follow-up actions to be taken.

Being Prepared

This 3 x 3 plan was first conceptualised on 14 February 2020, less than a month into the pandemic operations and prior to the spike in local transmission cases as well as the first few confirmed cases within the police force. The early planning gave PPSD sufficient time to explore different options on how best to support officers and to identify and work with the various stakeholders involved in the support plans. Examples of such stakeholders include Public Affairs Department, which worked with PPSD on morale messaging, and the Operations Department, which worked with PPSD on information gathering for the pandemic operations.

Prompt Response

Conceptualising the plan systematically at the different tiers and levels also allows PPSD to promptly identify what should be done when a new situation arises. For example, when the first two police officers were tested positive for COVID-19 in March 2020, PPSD was able to act swiftly to ensure that the psychological and physical needs of the infected officers, their units and all other officers were taken care of. The systematic conceptualisation also allows for ease in assigning roles to the team (e.g., one officer to be in charge of the individual level plans, another in charge of unit level plans).

Being Flexible

Beyond the initial conceptualisation of the psychological support intervention plan, the PPSD team also convenes every two weeks for a During Action Review to discuss three aspects, namely (1) what has been done well, (2) what has not been done well, and (3) suggestions for improvement. The fortnightly meetings empower PPSD to adjust and update its plans and respond according to developments in Singapore. The flexibility of the plan ensures that the psychological needs of the police officers are fully and duly met.

Insights from Past Operations

PPSD drew insights from past operations, such as the quarantine operations for Monkeypox infection, in the planning and execution of the current pandemic operations. One insight is the trend of morale and confidence scores. Based on past operations, the morale and confidence scores of officers tend to be lower at the start of operations, as officers grapple with teething issues such as role clarity or logistical issues. As the operation progresses, the morale and confidence scores tend to stabilise when these issues get resolved. These past trends allowed PPSD to better manage expectations about the morale and confidence scores in the current COVID-19, which were eventually shown to be aligned with the trends of past operations.

CONCLUSION

Crisis can strike anytime, and when it strikes, it strikes fast. It took only a month for Singapore to have its first case of COVID-19 following the emergence of the disease in China. Despite the tight timeframe, SPF has responded readily in the fight against COVID-19. Through innovation and the use of technology as an enabler, PPSD developed a timely and comprehensive 3x3 psychological support intervention plan to provide all-rounded support for Singapore Police officers. Specifically, innovation in the way morale sensing is now conducted, the way counselling services are provided, and the way personnel psychological assessment is done has allowed SPF to be supported despite the threats posed by the virus. Regardless of the length of the operation, the psychological support plan has helped ensure officers and leaders are supported while policing during a pandemic.

This article is adapted from an earlier version published in Crisis, Stress, and Human Resilience: An International Journal II(1), 15 June 2020, under the title "Supporting the Police Psychologically in a Pandemic: The Singapore Experience".

ABOUT THE AUTHORS

Ho Hui Fen

holds a Degree of Bachelor of Social Sciences in Psychology from the National University of Singapore and a Master of Science in Occupational Health Psychology from the University of Nottingham, United Kingdom. She is a registered graduate member of the British Psychological Society (BPS). She holds the Certificate of Competence in Occupational Testing (Level A and Level B) and is a qualified tester listed in the Register of Competence in Psychological Testing with the BPS. Hui Fen is currently the Assistant Director, Operations and Forensic Psychology Division in the Police Psychological Services Department (PPSD), Singapore Police Force (SPF). She oversees operations psychology work (i.e. resilience, readiness, measurement, plans and research) and crime psychology work (i.e. crime psychology research, investigation, intelligence and victim psychology). She has been actively involved in developing and driving resilience building, well-being, counselling, peer support, helpline, and critical incident stress management services in the SPF and Home Team. She is also involved in organisational psychology and crisis negotiation work in the SPF. Within the Ministry of Home Affairs, Hui Fen leads the Home Team Mental Health and Well-being Taskforce, looking into standards for practice for Home Team resilience and well-being psychological services. Hui Fen is also the Deputy Head CARE of the SPF in the National CARE Management System (NCMS) which looks into managing psychological impact arising from national crises. She manages about 400 Paracounsellors who double-up as CARE officers to respond to departmental and national crises.

Jansen Ang

is a Senior Principal Psychologist with the Ministry of Home Affairs in Singapore. Trained as a Forensic Psychologist at the University of Surrey in the United Kingdom, he holds various appointments within the Home Team. At Ministry Headquarters, he is the Deputy Chief Psychologist responsible for Crisis Operations and Research of the psychologists serving in the Police, Narcotics, Civil Defence, Prisons, Immigration & Checkpoints Authority and the Home Team Academy. He is also responsible for the Home Team's psychological response in times of national crises and disasters as well as the coordination of psychological research to support Home Team needs. Additionally, he oversees the deployment of the Human Emergency Assistance Response Team (HEART). In the Singapore Police Force, Jansen is the Director of the Police Psychological Services Department (PPSD) which provides psychological services to police officers, police operations and investigations as well as supports organisational excellence in the police. He is also the Police's representative on the National CARE Management Committee that is the body responsible for managing the psychological impact arising from national crises and incidents. An Associate Professor (Adjunct) at the Nanyang Technological University in Singapore, he lectures on the psychology of crisis stress management at the College of Humanities and Social Sciences. His current research interests are in the area of organised crime profiling as well as the development of services to support law enforcement officers and operations.

ABOUT THE AUTHORS

Yap Hui Lin
holds a Degree of Bachelor of Social Sciences (Psychology) from the National University of Singapore. She is currently a Psychologist (Operations and Forensic Psychology) in the Police Psychological Services Department (PPSD), Singapore Police Force (SPF), where she is part of the Investigation and Intelligence Psychology desk. Her main responsibilities include creating, reviewing and conducting training content for investigation and intelligence officers, as well as providing psychological inputs during live cases and cold cases. Her research interests are in the area of violent crime as well as criminal profiling. Hui Lin is also assisting with the management of the Victim Care Cadre Programme in the SPF, which oversees a pool of over 80 volunteers who are trained in psychological first aid tailored to victims of crime. The programme aims to provide acute emotional and practical support to victims of crime throughout the investigation process. She is also involved in counselling, helpline, assessment, morale sensing efforts, critical incident support and intervention system, and crisis negotiation work in the SPF. Within the Ministry of Home Affairs, she is part of the Operations and Technology Psychology workgroup, which does environmental scans to see how technology can help the Home Team psychologists better support officers, operations and organisations.

Mohamad Zailan Salihin
holds a Bachelor of Arts in Psychology and Sociology from the University at Buffalo, The State University of New York. He is currently a Psychologist (Operations and Forensics Psychology) in the Police Psychological Services Department (PPSD), Singapore Police Force (SPF). He oversees the development and provision of operations psychology services in the areas of readiness, resilience, plans and research. He is also in charge of the training and management of the Psychological Services Officers (PSOs) – a group of specialised Operationally Ready Police National Servicemen trained in mental health, psychology and crisis intervention skills. He has been actively involved in COVID-19 related morale sensing exercises as well as managing the psychological support plans for SPF officers. Zailan is also involved in counselling, helpline, assessment, critical incident support and intervention system, and crisis negotiation work in the SPF. Within the Ministry of Home Affairs, he is part of the Home Team Crisis Operations Psychology Working Group, looking into psychological community response and inter-ministry response in times of terrorist crises, as part of the SG Secure efforts.

Tan Yong Sheng
holds a Degree of Bachelor of Social Sciences (Psychology) from the National University of Singapore. He is currently a Research Analyst (Operations and Forensic Psychology) in the Police Psychological Services Department (PPSD), Singapore Police Force (SPF). He has been actively involved in supporting resilience building efforts and developing new initiatives to enhance the mental well-being of police officers within the SPF. His research interests are in the area of mental health and well-being.

ABOUT THE AUTHORS

Tiffany Danker
holds a Degree of Bachelor of Social Sciences (Psychology) from the National University of Singapore. She is a Psychologist (Operations and Forensic Psychology) in the Police Psychological Services Department (PPSD), Singapore Police Force (SPF). Throughout her time at SPF, she has been involved in conceptualising and implementing resilience frameworks and research studies, and has played a key role in supporting frontline officers during COVID-19. Tiffany is currently the Programme Manager of the Victim Care Cadre Programme in the SPF, which aims to provide acute emotional and practical support to victims of crime throughout the investigation process. She manages and provides supervision to a pool of over 80 volunteers, who are trained in psychological first aid tailored to victims of crime. She is also involved in counselling, helpline, assessment, morale sensing efforts, critical incident support and intervention system, and crisis negotiation work in the SPF. Her research interests include victim support, mental wellness, resilience building, and workplace harassment.

Alyah Dinah Zalzuli
holds a Degree of Bachelor of Science (Psychology) from the University of Northampton. She is currently a Research Analyst (Operations and Forensic Psychology) in the Police Psychological Services Department (PPSD), Singapore Police Force (SPF). She is involved in projects and research studies on mental health of investigation officers and COVID-19 related psychological support. She is currently also working on creating a screening tool for investigation officers and helping out with the management of the SPF Paracounselling Programme. Alyah's research interests are in the area of mental health and well-being.

REFERENCES

Alexander, C. (1999). Police psychological burnout and trauma. In J. M. Violanti, & D. Paton (Eds.), *Police Trauma: Psychological Aftermath of Civilian Combat* (pp. 54-64). Springfield, Illinois: Charles C. Thomas Publisher Ltd.

Ang, J., Diong, S. M., Misir, C., & Cheong, J. (2011). Operations psychology: The Singapore Police experience. *Journal of Police and Criminal Psychology 26*(2), 69-76. doi:10.1007/s11896-010-9080-9

Biggam, F. H., Power, K. G., Macdonald, R. R., Carcary, W. B., & Moodie, E. (1997). Self-perceived occupational stress and distress in a Scottish police force. *Work & Stress 11*(2), 118-133. doi:10.1080/02678379708256829

Bishop, G. D., et al. (2007). Stress on patrol: Stress and coping among police officers. In K. B. Chan (Ed.), *Work Stress and Coping Among Professionals* (pp. 61-84). Leiden: Brill.

Brown, J., Cooper, C., & Kirkcaldy, B. (1996). Occupational stress among senior police officers. *British Journal of Psychology 87*(1), 31-41. doi:10.1111/j.2044-8295.1996.tb02575.x

Evans, B. J., & Coman, G. J. (1993). General versus specific measures of occupational stress: An Australian police survey. *Stress Medicine 9*(1), 11-20. doi:10.1002/smi.2460090105

Khader, M., Ang, J., Koh, C. W., Maan, D. S., Koh, M., Poh, L. L., & Tan, C. (2007). Organisation health in the police: A 3-R approach. In K. B. Chan (Ed.), *Work Stress and Coping Among Professionals* (pp. 85-100). Leiden: Brill.

Kop, N., Euwema, M., & Schaufeli, W. (1999). Burnout, job stress and violent behaviour among Dutch police officers. *Work & Stress 13*(4), 326-340. doi:10.1080/02678379950019789

Lee, R.C., Khader, M., Goh, C., Ho, H.F., Tham, Y., Neo, S.H.F., & Ang, J. (2017). Singaporean police officers who responded to a major riot: A study of psychological reactions. *Psycho-Criminological Perspective of Criminal Justice in Asia 221-239*

Loo, R. (1999). Police suicide: The ultimate stress reaction. In J. M. Violanti, & D. Paton (Eds.), *Police Trauma: Psychological Aftermath of Civilian Combat* (pp. 241-254). Springfield, Illinois: Charles C. Thomas Publisher Ltd.

Territo, L., & Vetter, H. J. (1981). Stress and police personnel. *Journal of Police Science and Administration 9*(2), 195-208.

Violanti, J. M. (1992). Coping strategies among police recruits in a high-stress training environment. *The Journal of Social Psychology 132*(6), 717-729. doi:10.1080/00224545.1992.9712102

Violanti, J. M., Fekedulegn, D., Gu, J. K., Allison, P., Mnatsakanova, A., Tinney-Zara, C., & Andrew, M. E. (2018). Effort-reward imbalance in police work: Associations with the cortisol awakening response. *International Archives of Occupational and Environmental Health 91*(5), 513-522. doi:10.1007/s00420-018-1300-0

HOME-BASED LEARNING FOR POLICE BASIC TRAINING:

LESSONS LEARNT

Loy Chye Meng, Foo Winnie & Gay Hui Shan
Police Training Command, Singapore Police Force

ABSTRACT

At the height of the COVID-19 pandemic in Singapore in April 2020, residential basic police training was suspended. An alternative Home Based Learning (HBL) programme was developed to minimise training disruptions. This article, written by officers then in charge of curriculum development and training assessment at the Police Training Command (TRACOM), documents their planning and execution of the HBL. It provides lessons learnt, and offers some food for thought for those contemplating similar programmes for their organisations.

In April 2020, shortly after Singapore implemented circuit breaker measures to curb the spread of COVID-19 – a form of lock down that required the closure of schools, restaurants, gyms, swimming pools, and the suspension of most group activities – the Singapore Police Training Command (TRACOM) decided that the residential Police Basic Training course for Police National Service recruits should be suspended for between two to four weeks, and be replaced with Home Based Learning (HBL).

Preparations for HBL had begun as early as February 2020, from the onset of the COVID-19 pandemic, when it became clear that residential training, with trainees training and living together in close proximity, would pose a significant risk of transmission. Directing staff from both the Basic Training School, and the Curriculum Assessment Branch of TRACOM, started to examine closely the contents of the basic course, and assess the suitability of having trainees learn from home.

Eventually a total of 1,181 trainees from 2 different intakes went through 4 HBL programmes with durations ranging from 11 to 35 days. The length of each programme was not determined by training considerations but rather the prevailing COVID-19 situation, the availability of dormitories and other factors.

CONSIDERATIONS FOR HBL

What exactly is HBL? In TRACOM's case, we were quite clear that it would still be an instructor-led training programme but with trainees attending classes from their homes and connected with their instructors and peers via technology. The quality of the connection, in terms of screen resolution, disruptions to transmission etc., would depend on the technology, the equipment and available bandwidth.

We had no illusion that learning effectiveness would be at the same level as full time residential training. Clearly HBL would be of limited use for training requiring purpose-built facilities and equipment, such as firearms training, police combat tactics, etc, and to some extent field and physical training.

However, the approach we took was to work within the limits imposed by the requirement of not having trainees be physically present, make best use of HBL by re-curating training contents and redesigning training delivery.

Some of the key considerations in planning for HBL were:

- **Availability of Personal Devices** – As a general rule, trainees are equipped with laptops during

training, but these laptops are not internet accessible and they can only be used for the intranet-based Home Team Learning Management System. At the start of the HBL, 9.3% of trainees said they did not have dedicated laptops or computers at home as they either did not own one or had to share the machines with school-going siblings who were also undergoing HBL at the same time. A small number of trainees also did not have WIFI facilities. All trainees, however, said they had personal smartphones. As most of the trainees would be using their smartphones, the team assessed that HBL would be best carried out via video conferencing learning apps, together with hardcopy training materials mailed to their homes, as well as web-based training materials freely and publicly available.

- **Structure of HBL** – As part of police basic training, HBL could not be a free-for-all programme with trainees left to decide what they would learn and do. It had to be structured, supervised and validated. It should preferably be activities based, via e-discussion and e-assignments to counter lethargy and boredom, and to measure progress. There should also be a clear reporting structure with scheduled activities, and learning requirements stipulated at the appropriate juncture.

- **Training Contents** – There were several parameters to consider in the selection of suitable contents for HBL. As the materials would be transmitted over public domains, and available at home, only information publicly available, or could be made available publicly, could be shared during HBL.

  Thus we sourced HBL materials from publicly available websites, including the run-hide-tell protocols in the event of a terrorist attack available from the SGSecure website, the Singapore Statutes Online website maintained by the Attorney-General's Chambers, etc. For training materials which can be made available but not found in the public domain, or those found in the public domain but not curated for training, we asked our curriculum officers and trainers to develop the materials in a manner suitable for delivery over HBL. For example, training scenarios to illustrate how laws should be applied to various policing scenarios are usually not available in the public domain. Our trainers therefore had to create their own materials.

  We decided that fictitiously written scenarios would generally be suitable as there would be no privacy concerns. Contents relating to laws could also be discussed during HBL, although complicated law topics would require instructor-led, face-to-face sessions to clarify doubts and validate understanding. However certain police tactics and procedures, or terrain specific information which could compromise operations would not be discussed over the public domain.

  Most policing scenarios and topics are highly contextualised and situational. In a social media environment where issues are prone to sensationalism and distortion, instructors have to be aware that their opinions on certain policing responses or even training contents might be quoted out of context and attributed to the organisation. For these reasons, we informed the trainers that footage from Body Worn Cameras, and scenarios which might generate controversies were to be avoided during HBL.

- **Trainees' learning styles** – Generally HBL works well for trainees with better cognitive abilities and learning styles. However, in a typical cohort of enlistees, specific learning abilities of individual trainees are quite uneven. Individuals learn differently. Learning styles include visual, auditory, kinesthetic, logic, reading and writing etc. Thus HBL programmes must take into consideration trainees' learning profiles and be adjusted accordingly.

- **Alternatives to Instructor-led training** – Compared to residential training, interactions between trainers and trainees in a HBL setting would be muted, especially for a large group of trainees. We realized that HBL programmes must therefore leverage other means of learning to compensate for the loss of instructor-trainee connectivity and interaction.

Curation of Contents

Based on these considerations, contents suitable for HBL were carefully identified and curated so that not only the right content was used but they would also be presented in a format suitable for the available platform. For example, as most trainees would be assessing materials through their 5-inch mobile phone screens, font sizes and videos had to be carefully chosen to minimise eye strain. Videos

and e-learning packages would also have to be kept short as attention on a 5-inch screen would be hard to maintain.

As the interactive component of HBL would be conducted with one instructor for 35-40 trainees over Zoom, it would be impossible for the instructor to maintain eye contact, and to capture the attention of each and every trainee. The instructor's ability to tease, to arouse curiosity, and to encourage learning would be severely limited. We decided then that topics with a high dosage of abstract and complicated concepts would be generally less suitable for HBL. Conversely, contents which were informational in nature and easy-to-understand would be suitable for HBL, such as the following:

Topic	Titles
1	Vision, Mission and Organisational Structure
2	SPF Rank Structure & Rituals
3	Values and Ethics (Basic)
4	Conduct and Discipline (General)
5	Conduct and Discipline (Financial Embarrassment)
6	National Education Programme
7	SGSecure Tier 1 Run Hide Tell (RHT)
8	SGSecure RHT Protocol for Police officers
9	SGSecure Tier 2 Assist with Evacuation
10	Document Security
11	Data Protection
12	Constitution
13	Judiciary & Parliament
14	Police Force Act
15	Enlistment Act
16	Basic Police Powers
17	Service Awareness Training - Understanding what good service in SPF means
18	Incident Response (Dishonest Misappropriation of Property)
19	Incident Response (Managing Cases of Theft)

Delivery of Training

In terms of delivery, one of the key considerations was to put in place some form of structure so that trainees would be reminded that they were participating in a training session. This was accomplished by check-in and check-out procedures conducted at the beginning and the end of each day, to communicate the learning objectives at the beginning and to do a sum-up at the end of the day.

As we anticipated that the effectiveness of the instructor, in terms of engaging the trainees, would be severely muted in a HBL setting, we introduced e-consultations, where trainees could seek

clarification from an instructor in a one-to-one or one-to-a-small-group settings, and e-assignments in question-and-answer format to validate learning.

Another strategy we adopted for HBL was peer learning (Topping, Buchs, Duran, & Van Keer, 2017). This was done by identifying those with stronger cognitive learning styles and grouping them with the others, so that the stronger trainees could help the weaker ones. Group assignments were given to facilitate discussions and peer learning, with the stronger trainees expected to help the weaker ones. (See Annex A for an example of a scenario-based group assignment.) As basic training also entails the assessment of character and leadership qualities, we expected such activities to provide the instructors with additional observations they would otherwise be devoid of with the suspension of residential training. Similarly, group activities would also help to facilitate interaction among Singaporeans of different social backgrounds, fulfilling our National Education objectives.

A typical HBL day thus had the following schedule:

Time	Activity	Remarks
0900 – 0930 hrs	Check-in by trainer via Zoom. Depending on the topic, Trainer would deliver a short lecture as well as set expectations and remind everyone of the dos and don'ts and other stay home rules, e.g. temperature taking	To ensure the presence of all trainees
0900 – 1100 hrs	Self-study of training materials provided (either hard copies or materials available in the public domain), followed by e-Group Discussion	Assigned Group Leader to submit a learning report via email to Trainer for purpose of learning validation
1100 – 1200 hrs	E-consultation with Trainer	
1400 – 1600 hrs	Scenario-based assignments	Individual trainees (or group of trainees) to go through typical policing scenarios and submit answers to Trainer via email
1600 – 1700 hrs	Check-out via Zoom	Trainer to provide learning summary and selectively check on learning progress
1700 – 1800 hrs	Individual Static Physical Training at Home	Physical Training Videos featuring TRACOM field trainers screened over Zoom

POST-HOME BASED LEARNING

As noted earlier, not all training can be carried out effectively via HBL. Even for the topics chosen, HBL can never be as effective as formal training and it should be viewed as an alternative stop-gap measure. Certain modules are completely unsuitable for HBL and have to be conducted post-HBL when trainees return to the Academy with the proper training facilities and equipment. These include firearms training, police contact tactics, police standard obstacle course, physical scenario-based exercises, use of various policing equipment such as grip restraint, taser, etc.

Even for the topics taught during HBL, the school allocated "clarification sessions" when the trainees returned to the Academy. To gauge which topics required further clarifications, a quiz comprising multiple choice questions was administered at the end of each HBL programme. Based on the results of the quiz, individual trainers customised their clarification sessions to close the gap when the training resumed in the Academy.

TRAINEE EVALUATION OF HBL

Using Kirkpatrick (1996)'s model, the curriculum branch conducted level 1 evaluation for HBL courses 1-3. Level 1 measures learners' immediate reaction, or experience with regards to the training they received. A total of 848 trainees or 91% of the 930 HBL trainees who participated in HBL 1-3 took part in the evaluation exercise conducted via the e-platform, FormSg, on the last day of their HBL.

All trainees were asked to answer a set of questions based on their experience with HBL. The survey comprised close-ended questions and open-ended questions, broken into 12 categories:

a) General Questions on HBL (4 questions)
b) Use of Zoom application (4 questions)
c) Use of Articulate Online application (3 questions)
d) Course materials (3 questions)
e) Video Lectures (3 questions)
f) E-package (3 questions)
g) Trainer (5 questions)
h) Group Discussions (with squad mates) (3 questions)
i) Individual Assignment (3 questions)
j) Course Manager Consultation (3 questions)
k) Physical training (3 questions)
l) Others (2 questions), viz.
   - How do you think we can improve HBL further?
   - What other problems did you face during HBL?

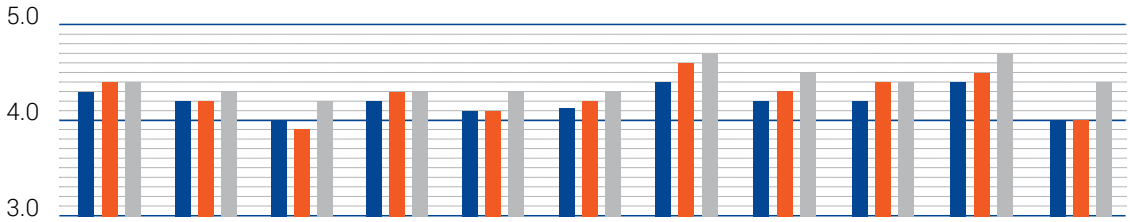
There were also fields for trainees to provide qualitative feedback on the 10 features of the HBL comprising various training modes, platforms and materials. A 5-point Likert Scale, from 1 strongly disagree; 2 disagree; 3 neutral; 4 agree to 5 strongly agree, was used in the survey.

Overall Survey Ratings for HBL 1 to 3

Figure 1 shows the average scores (on a scale of 1 to 5) based on the general HBL experience as well as the 10 features of HBL. The highest scoring features were Trainer and Course Manager Consultation (4.7). The 2 categories with the lowest scores were the Use of Articulate Online application (3.9) and Physical Training and Drills (4). Overall, the average scores for all categories were generally high; almost all categories achieved the score of 4 and above on a scale of 5. The one exception was the use of the Articulate Online application, which was scored 3.9. The ratings show trainees generally had a favourable HBL experience.

In terms of qualitative feedback, some trainees said they found the HBL lessons too easy while some said they had difficulties. This is not unexpected given the different learning styles of trainees. Trainees said they were generally happy with the instructional support given by the trainers, peer interactions, e-consultations, and the group and individual assignments.

There were, however, some problems with the technical aspects, e.g. lag transmission over Zoom especially when videos were screened. We also explored an online learning management platform, Articulate Online, but the results were no better. Some said that their computers were slow or the broadband/4G was not reliable. The home-based static PT was also assessed as "not challenging". Surprisingly most found the hard copy training materials and assignments which we prepared for HBL to be useful. One plausible explanation for favouring print material could be the frustrations trainees experienced with the poor transmission of electronic training materials over the various platforms.



General Questions on HBL	Use of Zoom Application	Use of Articulate Online Application	Course Material	Video Lectures	E-package	Trainer	Group Discussions (with squad mates)	Individual Assignment	Course Manager (CM) Consulations	Physical Training and Drills
4.3	4.2	4.0	4.2	4.1	4.1	4.4	4.2	4.2	4.4	4.0
4.4	4.2	3.9	4.3	4.1	4.2	4.6	4.3	4.4	4.5	4.0
4.4	4.3	4.2	4.3	4.3	4.3	4.7	4.5	4.4	4.7	4.4

HBL 1 HBL 2 HBL 3

Level 2 Evaluation

Apart from level 1 evaluation, we also did a limited level 2 evaluation on those from the 179th intake who were subjected to HBL. Level 2 of the Kirtpatrick's Model measures whether learning did take place. Upon the resumption of residential training after HBL, we administered a one-hour quiz to 19 squads of the 179th Intake on 3rd and 4th June 2020, to gauge how much they learned during HBL1 and HBL2. This post HBL quiz was used as a proxy for the continual assessment, which is the mid-term assessment usually conducted in the middle of the 14-week basic course.

Some have argued that a more holistic comparison should be the end-of-course assessment of HBL and non-HBL cohorts. However, adjustments and additional training were given to make up for the loss of training effectiveness during HBL, when the trainees returned to the Academy to continue their residential training, and thus we feel such comparisons are a good gauge of HBL effectiveness.

We did a comparison between the post-HBL quiz results and the continual assessment test results of non-HBL cohorts from earlier intakes. While trainees subjected to HBL achieved a decent passing rate of 78.5% for the post-HBL quiz, it was still lower than the passing rate of the non-HBL cohorts whose continual assessments scored between 84.1% to 93.9%. Apart from the overall performance, we also did an analysis of the test results vis-à-vis the profile of trainees, as well as of the test results for different topics. The results confirmed the following findings:

- Learning does take place during HBL and HBL is a viable alternative when residential training is suspended. However, it is clearly less effective when compared to traditional instructor led face-to-face training.

- Trainees strong in cognitive learning styles performed better during HBL. On the whole, trainees did worse for law subjects compared to other topics.

- A similar study comparing end-of-course academic assessment between HBL and non-HBL cohorts showed little differentiation. This could be attributed to additional catch-up training administered by the school when the trainees returned to residential training after HBL. However, the individual physical fitness test (IPPT) passing rate of HBL cohorts suffered a significant dip, at 91% compared to 96.1% for non-HBL cohorts. The IPPT results are not surprising as the HBL is generally a cognitive training, with very limited physical training other than the static PT. Moreover, physical fitness requires time to build up. This is one area that TRACOM will have to study as to how physical training can be enhanced during HBL.

Evaluation of HBL 4

In HBL 4, we worked with the Training and Capability Development Department of the SPF and the Civil Service College (CSC) to trial the LEARN platform, a civil service-wide internet accessible learning management system. A total of 251 trainees going through 11 days of HBL were provided with LEARN accounts for asynchronous learning. 10 e-packages were cleared with content owners and hosted on LEARN. The topics covered included SG Secure, Service Awareness Training, and Criminal Law. An evaluation conducted post-HBL had some trainees raising concerns over their difficulties logging into LEARN as their accounts were created based on personal email addresses instead of work email addresses. There was also feedback on issues with a couple of e-packages which were not compatible with their mobile phones (iPhones).

Although there were some difficulties faced during the trial, our initial assessment is that LEARN is a good platform as part of HBL, as it is, after all, a platform specifically designed for learning outside the classroom. Most of the issues raised were teething problems which are not insurmountable. Perhaps more refinements and trials on how we can make better use of LEARN as part of HBL should be embarked on.

CONCLUDING REMARKS

While TRACOM had conducted online learning before the formal implementation of HBL during the COVID-19 pandemic, it was on a much smaller scale and on an experimental basis. The pandemic nudged TRACOM to implement online learning on a much bigger scale, and as a key component of HBL. While our experience clearly demonstrated the viability of HBL as an alternative programme, it also showed that HBL can never be as effective as residential training, even for cognitive types of training.

The practical and logistical difficulties encountered during HBL are not a trivial matter and must be addressed to remove all the irritations and frustrations encountered by trainees. These include the availability of suitable learning devices, the conduciveness of the home environment, sufficient bandwidth, etc. Training contents and deliveries should also be finetuned further, taking into consideration trainees' learning abilities during HBL. Finally we should also explore how best we can enhance physical training during HBL, to minimise the loss of physical training sessions so that trainees can still complete the basic training with a reasonable level of physical fitness.

ANNEX A. EXAMPLE OF A SCENARIO-BASED GROUP ASSIGNMENT GIVEN TO TRAINEES

Topic 8: Incident Response (Crime & Routine): Misappropriation of Property
Dishonest Misappropriation of Property

Sec 403 Cap 224

Whoever **dishonestly misappropriates** or **converts** to his own use **movable property**, shall be punished with imprisonment for a term which may extend to 2 years, or with fine, or with both.

What It Means

- **Dishonestly**: cause wrongful gain to one person or wrongful loss to another person
- **Misappropriate**: dishonestly or unfairly take something to a wrong person or for a wrong use
- **Converts**: deals with or uses the property of another without right as if it is his own property
- **Movable Property**: Anything that can be moved from one location to another except land, things attached to the earth, or permanently fastened to anything which is attached to the earth

Differences between Theft (Section 379 Cap 224) &
Dishonest Misappropriation of Property (Sec 403 Cap 224)

	Theft	Criminal Misappropriation
How the property is obtained	The accused took it away from the rightful owner without his permission	The offender obtained it by chance (found) or with owner's implied consent.
The intention of doing something dishonestly	The dishonest intention began before the property came into possession	The dishonest intention began on or after the property came into possession or subsequent change of intention.
The office is completed when	The offender moves the property out from the rightful owner	The offender started to misappropriate or convert the property to his own use.

Police Response to Cases involving Dishonest Misappropriation of Property

Dishonest Misappropriation of Property is a **non-arrestable** offence. You should not arrest the offender without a warrant.

When responding to incidents on misappropriation of property, the first step to do is to preserve the scene by ensuring that no one is able to tamper with the scene. If there are any evidence, such as CCTV footage, or items left behind by the offender, you should preserve the evidence.

Preserving evidence can be ensuring that no one touches the item, or ensuring that the CCTV footage is stored/ recorded and not overwritten.

Preliminary investigation should be conducted to locate more evidence, after which the complainant/ witness/ victim should be interviewed. You can also search for other witnesses in the vicinity by checking if anyone has witnessed the incident. Photographs of the crime scene can be taken if there are visible evidence. If there are any non-perishable physical evidences on scene, they should be seized as case exhibits.

Steps:
1. Preserve scene
2. Preserve evidence
3. Conduct preliminary investigation
4. Interview complainant/ witness/ victim
5. Search for other witnesses
6. Take photographs (optional)
7. Seize case exhibits (optional)

HBL Assignment - Crime & Routine: Misappropriation of Property

Instruction
Read the 2 scenarios below and answer the questions, in not more than 100 words for each question. You may answer in point form too.

Scenario 1
You are conducting foot patrol when the Police Operations Command Centre (POCC) directed you to attend to an incident with the following text of message "I lost my G Shock watch at Lot 1 Shoppers' Mall McDonald's. I need assistance."

When you arrived at scene, the complainant approached you and informed you that he had used his G Shock watch to reserve his seat while he went to use the washroom, leaving his watch unattended. When he returned from the washroom five minutes later, he discovered that his G Shock watch worth $200 was missing. There are CCTVs in the McDonald's restaurant. Police classified the offence as Dishonest Misappropriation of Property under Sec 403 Cap 224.

Question
Describe how you will respond to this incident.

Answer
_____
_____

Scenario 2
Extracted from The Straits Times, 25 Dec 2019.

A teenager allegedly trespassed into King Edward VII Hall at the National University of Singapore (NUS) multiple times and **took at least nine laundry bags containing socks, exercise attire as well as male and female undergarments**. Goh An Soon, 19, faces one count each of criminal trespass, **dishonest misappropriation of property** and theft.
The Straits Times understands the Singaporean teenager was neither working nor studying at the university at the time. **Between Dec 19 last year and Feb 1 this year, Goh allegedly trespassed into the hall on eight separate occasions. Within that period, he is said to have misappropriated the laundry bags four times.**

He is also accused of stealing items worth $183 in total at the hall at around 5pm on Feb 1. They included socks, female undergarments, $80 in cash and bank cards. Court documents did not reveal what Goh - who appeared in a district court last Thursday - did with the items or how he was caught. NUS had announced in May that it had increased the number of security guards at hostels, will be adding hundreds of closed-circuit television cameras and will better secure toilets as well as shower cubicles.

Goh was offered bail of $8,000, and will be back in court on Jan 9 next year.
If convicted of criminal trespass, he can be jailed for up to a year and fined up to $3,000. Offenders convicted of dishonest misappropriation of property can be jailed for up to two years and fined. Those convicted of theft can be jailed for up to seven years and fined.

Question
Assume that the laundry bags were left unattended in a laundry room in the hostel. Explain why Goh's act of taking the laundry bags is considered to be an offence of dishonest misappropriation of property instead of theft.

Answer

Suggested Answers

Scenario 1
Describe how you will respond to this incident.

Suggested Answer
- Preserve scene by ensuring that no one touches the table which complainant had left his watch on
- Preserve evidence by reminding the restaurant staff to ensure the CCTV footage is not overwritten
- Conduct preliminary investigation for any other evidence left behind
- Interview complainant on the details of the incident
- Search for other witnesses who are seated near the table

Scenario 2
Explain why the act of taking the laundry bags was considered to be an offence of dishonest misappropriation of property instead of theft.

Suggested Answer
- The offender found the laundry bags (probably in the laundry room) in the absence of the owners.
- The offender found the laundry bags by chance.
- The dishonest intention only came in after he came into possession of the laundry bags.
- The laundry bags were movable properties and they were moved away from its original location by the offender.
- The act caused a wrongful loss to the owners of the laundry bags.

ABOUT THE AUTHORS

Loy Chye Meng
is the Police Attache of the Singapore Police Force based in Beijing. Prior to his appointment, he was the Commander of the Police Training Command. He spent 17 years in the training fraternity, having served 2 tours of duty as Commander Police Training Command, and was the Deputy Chief Executive (Development) of the Home Team Academy. He was also the founding Director of the Home Team School of Criminal Investigation.

Foo Winnie
is the Commanding Officer of the Basic Training School of Police Training Command. She was previously the Head of the Curriculum and Assessment Branch responsible for developing and reviewing the training curriculum, as well as the assessment and evaluation of all foundation and vocation training courses conducted by the Training Command.

Gay Hui Shan
is a Curriculum Review and Development Officer in TRACOM's Curriculum and Assessment Branch. She oversees the Police Officers' Basic Course (POBC), and is involved in the development of Home Based Learning for POBC.

REFERENCES

Kirkpatrick, D. (1996). Revisiting Kirkpatrick's four-level-model. *Training & Development* 1, 54-57.

Likert, R. (1932). A technique for the measurement of attitudes. *Archives of Psychology 22 140*, 55

Topping, K., Buchs, C., Duran, D., & Van Keer, H. (2017). *Effective peer learning: From principles to practical implementation*. Taylor & Francis.

BUILDING PSYCHOLOGICAL RESILIENCE DURING THE COVID-19 PANDEMIC:

FOUR STRATEGIES FOR COMMUNITY LEADERS

Pamela Goh & Xingyu Ken Chen
Home Team Behavioural Sciences Centre

ABSTRACT

The COVID-19 pandemic has highlighted how a disease outbreak is not just a public health issue, but it can also have significant social consequences for communities in Singapore. Early in the health crisis, there was panic buying and the inciting of fear through misinformation. However, the responses also showed community resilience as some used humour to cope and to encourage each other to stay strong. By drawing on past research on the SARS epidemic in Singapore, and crisis preparedness, this article examines four strategies that can help build Singapore's community resilience: 1) emphasise personal responsibility as the first line of defence to combat the crisis, 2) engage in effective crisis communications to address negative emotional reactions, 3) rally the community together in the face of adversity, and 4) maintain normalcy in day-to-day functioning.

THE PSYCHOLOGICAL IMPACT OF COVID-19 ON SINGAPOREANS

The world has been witnessing the massive spread of a novel coronavirus, also known as Covid-19, that killed a million people within nine months and took less than four months to kill another million (Mega, 2020; WHO COVID-19 Dashboard, 2021). To contain the spread of the disease in Singapore, a multi-ministry task force instituted a set of safe distancing measures, the most drastic of which it called a "circuit breaker" when infections spiked in April 2020 (Yuen, 2020). The circuit breaker involved the closure for almost nine weeks of non-essential workplaces, schools, recreation venues, attractions and places of worship as well as measures to reduce movements and interactions in public and private places, all of which were eased in June 2020 as infections fell.

Amidst the detrimental health consequences of the pandemic, panic, anxiety, and social disharmony have also arisen. It is important to recognise that fear and anxiety are common responses during a health crisis (Lin, 2020), as people inevitably and naturally worry for their own well-being. With a newly identified coronavirus that spreads unpredictably and escalates with increasing numbers of infections across the globe, the seeming lack of control over the situation will incite more fear and anxiety.

Fear of the unknown

During the early stages of the COVID-19 pandemic, much of the key information regarding the virus remained unknown and unclear – such as how severe and detrimental this virus could be as well as how it could be transmitted – which created a great deal of uncertainty. Consequently, many people in Singapore were anxious to the point of keeping their children at home; others also became suspicious of one another should anyone let out a mere sneeze or a cough (Yong, 2020). Apart from depending on the government to contain and minimise the spread of the virus, Singaporeans also speedily took action to reduce their susceptibility to and enhance protection against the virus, such as engaging in greater levels of hygiene practices (e.g., washing hands), avoiding crowded places, and not travelling to

other countries (K. Ho, 2020). Stores selling surgical masks also reported running out of stocks as people hurried to purchase the item (Chia, 2020).

While most Singaporeans engaged in adaptive actions to protect themselves from the virus, other maladaptive and concerning behaviours were also observed in the public. For instance, people began hoarding masks and selling them at inflated prices (Goh, 2020); the change of Singapore's Disease Outbreak Response System Condition (DORSCON) level from yellow to orange resulted in the panic buying of various groceries as well as household items such as toilet paper (Tan, 2020). Subsequently, supermarket representatives as well as government officials had to step forward and reassure the public that the nation had sufficient stockpiles of essential items, as long as people did not over-purchase.

"Panic Buying"

The phenomenon of panic buying is concerning, as it was observed across various regions around the world, including Singapore, Hong Kong, South Korea, Japan, Australia, Germany, Austria, the United Kingdom, and the United States, in the early months of the pandemic (Jolly & Smithers, 2020; Nunn, 2020). The images of emptied supermarket shelves and snaking queues of shoppers suggested a highly flustered, irrational, and wildly anxious public.

However, behavioural scientists have argued that this so-called "panic buying" does not qualify as panic (e.g., Savage & Torgler, 2020). There was no indication of chaos, nor was there any sense of excessive fear. Rather, according to the rational perspective, the stocking up on food and other supplies constitutes reasonable and logical decisions that people make in the face of disasters and crises; a natural consequence of humans' adaptive abilities to perceived future threats and to prepare for them.

Coupled with the knowledge that potential infections can lead to quarantine, curfew, isolation, and other disruptions in daily life, people are likely to look ahead to prepare themselves for these eventualities. In other words, so-called "panic buyers" are mostly individuals taking calculated decisions based on a heightened sense of caution about an evolving situation. The trouble arises when masses of people act in unison, motivated by this shared desire to individually prepare for the unknown. With the pervasiveness of social media enhancing the salience of highly sensational and worrisome images (e.g., emptied shelves), people's tendency towards risk-aversion may be fuelled by a herd mentality (or more technically, informational conformity e.g., "maybe others know something which I don't"; Schultz et al., 2007). The result is a substantial number of people being driven to engage in stockpiling behaviours "just in case".

Overall then, those who are casually (and inaccurately) termed "panic buyers" in reality comprise a minority of actual hoarders and, more significantly, a majority of concerned but rational individuals driven towards risk-aversive behaviours, often facilitated by social media. Such a clear dissection of the phenomenon is necessary for informing downstream response measures, such as inviting the media to shoot images of stockpiles of essential items in warehouses, as major supermarket chain FairPrice did in Singapore (Tan, 2020).

On the other hand, many members of the public reacted with humour, mocking the outrageous nature of "panic-buying" with memes on social media that highlighted the oft-cited ill-effects of over-consuming certain food items such as instant noodles (Figure 1).

Use of humour by the public

Across the world, people have been responding to the pandemic with varying sorts of humour. The form of humour that can arise during a crisis can be respectful or sarcastic (Maxwell, 2003), or even insulting and ironic (Wisse, 2016). The "humorous" reactions have been in response to varying subject matters, including the health crisis in general, city lockdowns experienced by some communities, and phenomena such as panic-buying of masks, hand sanitisers, household items, and groceries.

Humour is a method of coping that can arise during stressful circumstances (Maxwell, 2003). Even in frightening, difficult, or helpless events or

Figure 1. Memes created by Singaporeans to mock those rushing to buy large amounts of "essential items"

crises, humour – or more specifically, gallows/dark humour – can help individuals make sense of such situations, and thus ease their negative emotions as well as the terrifying nature of these events (Piemonte, 2015; Watson, 2011).

Another benefit of using humour in messaging initiatives is that it helps to reach out to and capture "the attention of a lot of people you wouldn't have otherwise" (Magon, 2019). Humour provides a useful outlet for people to not only pay attention to but to also receive and make conversations about a certain topic or piece of information. This in turn keeps them interested in and remain engaged in the issue. Humour can be used to help people learn and comprehend issues – after all, the capacity to laugh at a piece of information entails the successful receiving, processing, and understanding of these details (Magon, 2019).

The expression of emotions and thoughts through humour – more specifically, via the use of images, videos, messages, etc. – also contributes to an individual's healing process following a crisis (Beeston, et al., 2014). When these are shared with others who can relate to them, it creates an informal support network, where people with similar opinions, emotions, and thoughts about the event "come together" in support of others who are similarly trying to cope with the crisis (Hancock, 2002). In other words, indirect relationships and camaraderie are established as a result of humour, which may then foster solidarity within online communities.

When the announcement of DORSCON Orange in Singapore led to speculation of a potential lockdown and panic-buying by a large number of people, netizens reacted with satirical humour, creating memes that poked fun at quintessentially Singaporean characteristics. For instance, a short commentary on a photograph of mostly empty vegetable bins in a supermarket went viral when it declared in Singlish that Singaporeans "Die also don't want to eat Bitter Melon"; the average Singaporean can relate to the acerbic phrase because it pokes fun at their tendency to be both kiasu (afraid of losing out) and picky at the same time. In other words, even when stockpiling food to ensure their survival in a crisis, some Singaporeans will still never purchase and consume certain food items. Other memes played on puns on the virus' common name to put the illogical behaviour of fellow citizens into perspective while creating a sense of solidarity among observers (Figure 2).

LEARNING FROM SARS AND CRISIS PREPAREDNESS RESEARCH

As Singapore's biggest health crisis since the 2003 Severe Acute Respiratory Syndrome (SARS) epidemic, attention is naturally placed on whether the government is ready to manage the coronavirus health pandemic. Fortunately, previous experiences with infectious outbreaks had led to the development of protocols and structures as part of the government's crisis preparedness efforts against future pandemics. As the co-head of the government's multi-

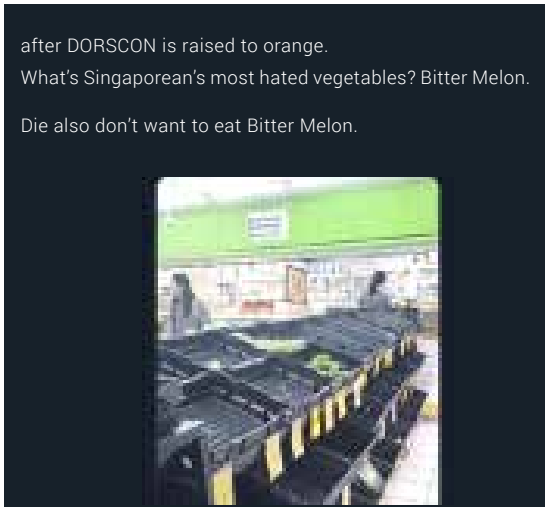


Figure 2. Memes putting "illogical" behaviour into perspective for Singaporeans

national task force and National Development Minister Lawrence Wong said: "We have put in place inter-ministry coordination mechanisms. We have put in place drawer plans for a full range of different scenarios of the virus outbreak. We want to assure Singaporeans that we are (better prepared), and that's why our message is: Keep calm, carry on with our lives, but all of us work together, take the necessary precautions and we can overcome this together" (Mahmud, 2020).

Drawing lessons from the SARS epidemic and insights from the crisis preparedness literature, this report identifies four strategies that can be adopted by community leaders to further maintain and enhance psychological resilience in the community during the health crisis.

STRATEGY 1: EMPHASISE PERSONAL RESPONSIBILITY AS THE FIRST LINE OF DEFENCE TO COMBAT THE CRISIS

For disease outbreaks, the first line of defence in combatting and containing the crisis lies with individuals. Raising awareness about the importance of personal responsibility to combat the pandemic is necessary to prompt the proactive, actual manifestation of such behaviours in individuals. When people engage in the required individual actions, the overall spread of the pandemic is reduced, thus maintaining the overall health of the community. Large-scale national measures ultimately may show only limited effect if people do not endorse individual responsibility (Anderson, et al., 2020).

Concurrently, it is essential to highlight to the public that while they undertake actions to enhance self-protection against the virus, they should do so reasonably such that self-protection does not come at the expense of the larger community. For instance, the purchase of excess masks and hand sanitisers prevents others from being able to access these vital resources.

As the community slowly returns to work at their physical offices, other issues of concern relating to personal responsibility could arise, including presenteeism. Presenteeism refers to the act of being on the job despite individuals not being able to function fully and effectively (Chan & Fan, 2020; Hemp, 2004). Despite experiencing negative physical and mental health circumstances, people may choose to continue to work for various reasons. For instance, taking a day off to look after oneself may be deemed as pointless, given that employees might still practise working from home (Rogers, 2020). Employees may also feel that they need to be in the office in order to make their visibility at work more prominent (Lim-Lange, 2020).

Nonetheless, it is critical to recognise that different people have different levels of risk tolerance and require different levels of need for safety. Some people may downplay the risks of and their susceptibility to the coronavirus, whereas others may perceive a stronger need to take additional precautions, engaging in hygiene practices that they believe in and are comforted

by. After prolonged periods of cautiousness and anxiousness, however, complacency may set in, as the number of community cases in Singapore reduces and the economy starts to reopen (Washington Post Editorial Board, 2020; United Nations, 2020).

So what can community leaders do? The foremost measure is to continue to emphasise the importance of engaging in personal responsibility:

1. Serve as a role model for the public by engaging in guidelines on what they should or should not do to protect themselves in the face of the health pandemic.
2. Highlight how real the threat of the health pandemic is by informing the public of the detrimental consequences of falling ill to the coronavirus.
3. Stress to the public that they have a role to play and are in the best position to help and/or protect themselves, hence maintaining the overall health of the community.
4. Encourage people to engage in adaptive practices and change maladaptive ones.

STRATEGY 2: ENGAGE IN EFFECTIVE CRISIS COMMUNICATIONS TO ADDRESS NEGATIVE EMOTIONAL REACTIONS

Provide information to keep the community updated on crisis developments

The continuous and prompt dissemination of both health advisories and updates on the health pandemic is critical in allaying public fear and anxiety (U.S. Department of Health and Human Services, 2002; Vaughan & Tinker, 2009). Keeping the community up to date on developments and the various concrete ways they can enhance their protection against the virus will, the research shows, foster a sense of psychological safety, minimisation of the negative emotional reactions in the community (e.g., fear or confusion), and reduce non-compliance with official advisories (Lundgren & McMakin, 2013a).

Additionally, the continuous process of providing regular and up-to-date information via multiple channels to the community helps to foster trust in leaders, because it conveys the message that: (i) the leaders are on top of things, and (ii) the public will not be kept in the dark with regard to any crisis information or development (Chess & Clarke, 2007; Lundgren & McMakin, 2013b). In turn, the public is likely to turn to community leaders as an authentic and reliable information provider.

So what should community leaders communicate? Part of the endeavour to ensure effective crisis communications is to keep the public informed of any developments regarding the pandemic:

1. Share important information and address any concerns/questions that the public have:
   a. Keep the community informed of updates on the crisis
   b. Ensure that the information shared across various platforms is consistent to those shared by official and/or reliable sources of information (Boholm, 2019)
   c. Ensure that information shared is accurate, and reflects reality (i.e., what is actually happening)

2. Continue to disseminate informative health advisories:
   a. Inform people of the right personal hygiene etiquette that they should engage in
   b. Debunk myths by providing "do you know" information
   c. Ensure that various demographic groups in the community are reached out to and/or receive the information effectively
   d. Tailor communication style and channels according to needs (Jensen, et al., 2012), such as reaching out to the elderly population in their dialects

Combat fake news swiftly

A health crisis can be exploited to further induce public panic, through the spread of fake news. In fact, fake news about cures for the virus and false warnings are abundant on social media (Thomas, 2020) as there is an audience that is receptive to such information due to worry or fear.

For instance, information that a person in Singapore had passed away from the virus was inaccurately shared and spread on the online HardwareZone Forum on 26 January

2020. The fake news was quickly addressed on the government website https://www.moh.gov.sg/2019-ncov-wuhan (Factually, 2020). The online States Times Review also carried an article claiming that face masks had run out ("Correction Directions Issued," 2020). In both cases, the government issued correction notices against such misinformation, additionally exhibiting that interventions to stop the spread of fake news can prevent further fear and anxiety emerging in the public.

So what can community leaders do to limit the spread of coronavirus-related false information?

1. Direct the public to get information from authoritative/reliable sources. In Singapore, there is the Ministry of Health website and the gov.sg group chat on WhatsApp that the public can sign up for to receive regular updates on the situation in Singapore (Gov.sg, 2020).
2. Encourage the public to check the veracity of the information, especially if the information has no links to an official source about the disease outbreak (Caulfield, 2017).
3. Remind the community that they can help to stop the spread of fake news by, for instance, referring family members and friends to official sources of information, and thus stopping the emergence of additional, unnecessary panic (Tan et al., 2019; Tandoc, 2017)
4. Remind the community not to share any unverified information even if it is done out of goodwill (i.e., to warn others because it is "better to be safe than sorry").

Does using humour help?

The use of humour during a crisis has both advantages and disadvantages. If effectively employed during a crisis, it may potentially facilitate the capturing of the public's attention, processing, and retention of critical information; additionally, it allows people to come together, thereby fostering solidarity. For instance, the well-loved, Singapore sitcom character Phua Chu Kang, who sang and rapped a song known as 'SARvivor' during the 2003 SARS crisis, has returned with a new rap video using Singlish to educate Singaporeans on what they should do during the Covid-19 pandemic. The video, produced by the government, is readily available on Gov.sg's YouTube and Facebook accounts.

In both the online (internet) and offline (real world) platforms, humorous reactions can, however, bring about both positive and negative psychological, social, and political impact in different communities (Ridanpää, 2019). The use of humour in official communications therefore needs to be applied judiciously, appropriately and sensitively, as it may lead to the public's minimisation of the severity of the crisis, or public displeasure if poorly utilised or done in poor taste. On the other hand, humour, when used in a respectful and moderate manner, can potentially have a positive effect in reaching out to and helping the masses cope more effectively during a crisis.

STRATEGY 3: RALLY THE COMMUNITY TOGETHER IN THE FACE OF ADVERSITY

The act of standing together in times of crisis is necessary to promote harmony in society, where people will come together and support each other in solidarity and empathy (Goh & Neo, 2020). When people are reminded that everyone is equally experiencing the crisis, it emphasises that everyone has an equal stake in the crisis regardless of their background or country of origin. The outcome is that it re-directs a tendency to blame specific groups of people for the cause and spread of the coronavirus towards engaging instead in active efforts to combat the health pandemic.

Xenophobia has emerged in the wake of the Covid-19 crisis. The presence of xenophobic and racial sentiments in Singapore can fuel hatred towards certain members of society, and disrupt Singapore's existing social harmony (Abdul Rahman, 2020). For instance, although Singapore, like many other countries, imposed travel restrictions to and from China early in the outbreak, some Singaporeans still started an online petition to ban the entry of Chinese nationals into Singapore (Smith, 2020). While the more than 100,000 people who signed the petition might not all have done so out of xenophobia or racism, the interest in the petition highlighted the underlying concerns of the community.

There is thus a need to rally people, so that they will stand united and in solidarity in difficult times. When the public is rallied together in times of a crisis, it helps to create a collective identity among the people, which in turn will lead to more supportive and empathetic behaviour towards each other (Abdul Rahman, 2020).

Understand sentiments of the community

Having conversations with members of the community will help leaders understand the sentiments and concerns that are brewing on the ground. For instance, before mask wearing in public was mandated in April 2020, the initial advice from the government and medical experts was that only the unwell and medical health workers should wear a mask; that created much unhappiness (Tham, 2020). The public's sentiment at that point in time was that it was better for everyone to err on the side of caution and wear a mask even if they were feeling well.

When such issues surface, leaders should address them promptly, thus preventing their escalation. This includes addressing any misconceptions that the public might have. Social tensions in the community can hence be avoided, reducing anger, hatred, and social disharmony.

In such circumstances, what can community leaders do to ensure that citizens feel heard and understood?

1. Be prepared for the various emotions that the community will exhibit:
    a. Anticipate a wide range of emotions that the community will display, including fear, anxiety, and anger.
    b. Be aware that these are normal emotional reactions to a crisis, and are not purposefully targeted at leaders.
    c. Work with the community (e.g., more prominent figures in the society, such as social influencers) to spread awareness and amplify messages, such as the rationale behind the implementation of certain measures or advice.

2. Conduct ground-sensing efforts:
    a. Engage in regular conversations with the community to understand their thoughts and feelings about the health pandemic.
    b. Establish formal communication platforms for the public to turn to, or informally walk the ground.
    c. Ensure that even the vulnerable populations are being heard, e.g., the elderly, and the poor.
    d. Address and manage any concerns and misconceptions.

Encourage people to stand united

When critical resources such as masks and hand sanitisers appeared to be lacking in the early days of the pandemic, members of the public in Singapore came together to provide these items for free (Wong, 2020). Sharing such stories of community volunteerism serves to highlight that Singaporeans have helped one another, in spite of the escalating health pandemic and the need to self-protect from the virus. In turn, it is hoped that these stories will encourage others to do the same, which may then motivate people to think of others as well. Other heart-warming displays of solidarity during this pandemic include people clapping collectively from their homes to show appreciation for all front-line workers involved in the response to the pandemic (Ho, 2020).

There is therefore a need to identify ways where leaders can support and encourage such organic efforts, for example, by publicising these acts on social media platforms. What else can community leaders do to facilitate a sense of solidarity and unity amongst the public?

1. Be empathetic and supportive of one another.
2. Respect each other's health-related beliefs and actions.
3. Share stories of how members of the public supported and helped one another.
4. Encourage people to emulate these behaviours, or pay it forward.

STRATEGY 4: MAINTAIN NORMALCY IN DAY-TO-DAY FUNCTIONING

The need to maintain normalcy is vital in times of adversity (Kuck, et al., 2009). While it is important for people to be kept up to date with the progress of the novel coronavirus, it is concurrently essential

that people do not become preoccupied with and be severely affected by news reports of the crisis (Vieira et al., 2020). Doing so may increase the likelihood of further anxiety and an unhealthy obsession with engaging in protective actions, which ultimately can disrupt the community's ability to function on a day-to-day basis.

Efforts to limit the spread of the virus have been undertaken to protect the community. When the community is informed and reassured that they are being looked after, it promotes trust in community leaders and thus government (Renn & Levine, 1991). In other words, it helps people to not place excessive attention and resources on the health pandemic, but to instead keep things in perspective and return to their daily routine. Subsequently, as people regain a sense of control of their lives, feelings of panic and anxiety will reduce.

How can community leaders be involved in ensuring that citizens are able to return to a certain level of their daily functioning?

1. Share stories of what is being done to limit the spread of the virus.
2. Regularly update on the precautionary measures that have been implemented to protect the community.
3. Encourage the community to continue with their normal way of life.
4. Assure the community that there is sufficient stockpiles of protective and essential items for everyone if people do not over-purchase.
5. Encourage the community to look out for one another, if possible, such as volunteering with the community centres to help distribute masks, or to educate the vulnerable population like the elderly.
6. Share stories of how individuals in the community balance their anxiety and continue to go to school/work, whilst protecting themselves against exposure to the coronavirus.

CONCLUSION

Just as with any crisis, a pandemic like Covid-19 can exert varying detrimental effects on society. The impact of engaging in individual acts of personal responsibility have an accumulative effect, thereby facilitating the overall effectiveness of national measures. As the crisis progresses, however, other issues of concern apart from the pandemic itself can arise, including fake news, blaming behaviours, and public frustration. In turn, social harmony and unity of citizens may be threatened, further contributing to the existing negative, uncertain nature of the crisis.

The approach to responding to a pandemic is a nation-wide one, both top-down and bottom-up. Given the importance of the community's involvement in combating the spread of the pandemic, community leaders have a vital role in encouraging every member of the public to be involved in any crisis response effort and initiative. As outlined in the four strategies above, there is a need to: 1) emphasise personal responsibility as the first line of defence to combat the crisis, 2) engage in effective crisis communications to address negative emotional reactions, 3) rally the community together in the face of adversity, and 4) maintain normalcy in day-to-day functioning.

In order to prepare for the next pandemic, there are a few areas of interest for behavioural scientists and policymakers: 1) assessing how Singapore's psychological resilience fared during the pandemic; 2) building a deeper understanding of strategies and community interventions that can help sustain such psychological resilience; and finally, 3) looking at upstream efforts to enable the community to develop a crisis-ready mindset for the next crisis when it occurs.

ABOUT THE AUTHORS

Pamela Goh
is a Senior Behavioural Sciences Research Analyst with the Home Team Behavioural Sciences Centre. Her research experience and repertoire include building national resilience in relation to nation-wide crises, as well as understanding the phenomenon of social movements. Some of her past work have included crowd behaviours during crises, building social cohesion, and crisis communications. Additionally, she has delved into research on whole-of-society engagement in response to crisis, and has organised two roundtables involving academics, government officials, non-governmental organisations, and other law enforcement agencies, to discuss community responses to terrorist attacks. Pamela is currently pursuing her PhD at the Nanyang Technological University, with an avid interest in community resilience and cohesion in times of crises. Part of her dissertation looks at understanding whether and why people act for themselves or for others during times of threatened survival, such as during a terrorist attack.

Xingyu Ken Chen
is a Senior Behavioural Sciences Research Analyst at the Home Team Behavioural Sciences Centre. He has written on psychological vulnerabilities to fake news in the aftermath of a terrorist attack for *Learning from Violent Extremist Attacks: Behavioural Sciences Insights for Practitioners and Policymakers* (2018), and on the intersection of crime and fake news for the *Encyclopaedia of Criminal Activities and the Deep Web* (2020). He is also an editor of *How to Prepare for the next pandemic: Behavioural sciences insights for practitioners and policymakers* (2021). His current research interests include online misinformation, information operations, strategic communications, natural language processing, and deep learning.

REFERENCES

Abdul Rahman, A. (2020). *COVID-19: A biological and social pandemic?* (HTBSC Research Report 14/2020). Singapore: Home Team Behavioural Sciences Centre.

Anderson, R. M., Heesterbeek, H., Klinkenberg, D., & Hollingsworth, T. D. (2020). How will country-based mitigation measures influence the course of the COVID-19 epidemic? *The Lancet 395*(10228), 931–934.

Beeston, G. P., Leon Urrutia, M., Halcrow, C., Xiao, X., Liu, L., Wang, J., Jay Kim, J., & Park, K. (2014). Humour reactions in crisis: A proximal analysis of Chinese posts on Sina Weibo in reaction to the salt panic of March 2011. *Proceedings of the 23rd International Conference on World Wide Web*, 1043–1048.

Boholm, A. (2019). Risk Communication as Government Agency Organizational Practice. *Risk Analysis 39*(10), 1–13.

Caulfield, M. A. (2017). *Web literacy for student fact-checkers*. Retrieved from https://open.umn.edu/opentextbooks/textbooks/454

Chan, C., & Fan, S. (2020, May 8). Commentary: Hello COVID-19 remote working, goodbye cult of presenteeism. *CNA*. Retrieved from https://www.channelnewsasia.com/news/commentary/presenteeism-remote-working-from-home-covid-19-coronavirus-12689284

Chess, C., & Clarke, L. (2007). Facilitation of risk communication during the anthrax attacks of 2001: The organizational backstory. *American Journal of Public Health 97*(9), 1578–1583.

Chia, R. G. (2020, January 30). Photos and videos show insane queues for masks in Singapore, Shanghai and Hong Kong, which netizens say are all sold out. *Business Insider*. Retrieved from https://www.businessinsider.in/science/health/news/photos-and-videos-show-insane-queues-for-masks-in-singapore-shanghai-and-hong-kong-which-netizens-say-are-all-sold-out/articleshow/73754567.cms

Correction directions issued over claims of Singaporeans contracting Wuhan coronavirus, shortage of masks. (2020, January 31). *CNA*. Retrieved from https://www.channelnewsasia.com/news/singapore/wuhan-virus-pofma-direction-article-facebook-12372632

Factually. (2020). *Corrections and clarifications regarding falsehoods posted on HardwareZone Forum Post*. Retrieved from http://www.gov.sg/article/factually-clarifications-on-falsehoods-posted-on-hardware-zone-forum-post

Goh, P., & Neo, L. S. (2020). *Stronger than before: 6 lessons from the Surabaya bombings* (HTBSC Research Report S05/2020). Singapore: Home Team Behavioural Sciences Centre

.

Goh, T. (2020, January 30). Wuhan virus: 5 million masks "snapped up", public urged against hoarding amid global shortage. *The Straits Times*. Retrieved from https://www.straitstimes.com/singapore/health/5-million-masks-snapped-up-in-hours-public-urged-against-hoarding-amid-global

Gov.sg. (2020). *What you can do to protect yourself from the 2019 novel coronavirus*. Retrieved from https://www.gov.sg/article/what-can-you-do-to-protect-yourself-from-2019-ncov

Hancock, M. K. (2002). *Transforming the crisis situation from hurt to harmony: A grounded theory approach to crisis humor* [PhD Thesis]. Texas Tech University.

Hemp, P. (2004, October 1). Presenteeism: At Work—But Out of It. *Harvard Business Review, October 2004*. Retrieved from https://hbr.org/2004/10/presenteeism-at-work-but-out-of-it

Ho, K. (2020). *Three in five of Singaporeans afraid of contracting the Wuhan coronavirus*. YouGov. Retrieved from // sg.yougov.com/en-sg/news/2020/01/29/three-five-singaporeans-afraid-contracting-wuhan-c/

Ho, O. (2020, March 31). Coronavirus: Claps for front-line fighters from windows, balconies. *The Straits Times*. Retrieved from https://www.straitstimes.com/singapore/claps-for-front-line-fighters-from-windows-balconies

Ishak, Syahindah. (2020, February 10). S'poreans are making memes to deal with panic buying in coronavirus situation. *Mothership*. Retrieved from https://mothership.sg/2020/02/singapore-panic-buying-memes/

Jensen, J. D., King, A. J., Carcioppolo, N., & Davis, L. (2012). Why are Tailored Messages More Effective? A Multiple Mediation Analysis of a Breast Cancer Screening Intervention. *Journal of Communication 62*(5), 851–868.

Jolly, J., & Smithers, R. (2020, March 2). UK supermarkets draw up plan to "feed the nation" as coronavirus spreads. *The Guardian*. Retrieved from https://www.theguardian.com/business/2020/mar/02/uk-supermarkets-braced-for-stockpiling-if-coronavirus-escalates-panic-buying

Kuck, X., Lin, A. L., Tan, A., Khader, M., & Ang, J. (2009). *Managing community resilience during the Influenza A (H1N1) virus threat (Learning lessons from SARS 2003)* (HTBSC Research Report 11/2009). Singapore: Home Team Behavioural Sciences Centre.

Lay, B. (2020, January 28). Over 100,000 sign online petition calling for ban on Chinese nationals entering S'pore over Wuhan virus fears. *Mothership*. Retrieved from https://mothership.sg/2020/01/over-100000-sign-online-petition-calling-for-ban-on-chinese-nationals-entering-spore-over-wuhan-virus-fears/

Lim-Lange, C. (2020, August 5). Commentary: Burned out while working from home? You should check your work-life boundaries. *CNA*. Retrieved from https://www.channelnewsasia.com/news/commentary/burn-out-remote-working-from-home-set-boundaries-say-no-12987952

Lin, S. (2020, January 31). Commentary: SARS was scary, but the experience was invaluable in shaping our Wuhan virus response. *CNA*. Retrieved from https://www.channelnewsasia.com/news/commentary/wuhan-virus-singapore-cases-response-sars-2003-quarantine-12360244

Lundgren, R. E., & McMakin, A. H. (2013a). Constraints To Effective Risk Communication. In *Risk communication: A handbook for communicating environmental, safety, and health risks*. New Jersey: John Wiley & Sons.

Lundgren, R. E., & McMakin, A. H. (2013b). Principles of Risk Communication. In *Risk communication: A handbook for communicating environmental, safety, and health risks*. New Jersey: John Wiley & Sons.

Magon, L. (2019, November 11). A little humour might help with climate change gloom. *Eco-Business*. Retrieved from https://www.eco-business.com/opinion/a-little-humour-might-help-with-climate-change-gloom/

Mahmud, A. H. (2020, January 27). Singapore must be psychologically prepared that Wuhan virus could be worse than SARS: Lawrence Wong. *CNA*. Retrieved from https://www.channelnewsasia.com/news/singapore/singapore-psychologically-prepared-wuhan-virus-worse-sars-12358110

Maxwell, W. (2003). The use of gallows humor and dark humor during crisis situation. *International Journal of Emergency Mental Health*.

Mega, E. R. (2020). COVID has killed more than one million people. How many more will die? *Nature*. https://doi.org/10.1038/d41586-020-02762-y

Ng, W. K. (2020, October 7). 10 new Covid-19 cases in Singapore, with 6 imported and none in the community. *The Straits Times*. Retrieved from https://www.straitstimes.com/singapore/10-new-covid-19-cases-in-singapore-including-6-imported-and-none-in-the-community

Nunn, G. (2020, February 28). 'It just seems sensible': The Australians stockpiling for the coronavirus. *The Guardian*. Retrieved from http://www.theguardian.com/world/2020/feb/29/it-just-seems-sensible-the-australians-stockpiling-for-the-coronavirus

Piemonte, N. M. (2015). Last laughs: Gallows humor and medical education. *Journal of Medical Humanities 36*(4), 375–390.

Renn, O., & Levine, D. (1991). Credibility and Trust in Risk Communication. *Communicating Risks to the Public. Technology, Risk and Society 4*, 175–218.

Ridanpää, J. (2019). Crisis events and the inter-scalar politics of humor. *GeoJournal 84*(4), 901–915.

Rogers, K. (2020, May 24). *Top tips for preventing presenteeism in the 'virtual' workplace during Covid-19 crisis.* The HR DIRECTOR. Retrieved from https://www.thehrdirector.com/features/employee-engagement/presenteeism-during-covid-a-hidden-cost-to-employers/

Savage, D. A., & Torgler, B. (2020, February 27). *Stocking up to prepare for a crisis isn't "panic buying". It's actually a pretty rational choice*. The Conversation. Retrieved from http://theconversation.com/stocking-up-to-prepare-for-a-crisis-isnt-panic-buying-its-actually-a-pretty-rational-choice-132437

Schultz, P. W., Nolan, J. M., Cialdini, R. B., Goldstein, N. J., & Griskevicius, V. (2007). The constructive, destructive, and reconstructive power of social norms. *Psychological Science 18*(5), 429–434.

Smith, L. M. (2020, January 28). Wuhan virus: Over 100,000 sign online petition calling for Singapore to ban travelers from China. *Business Insider Singapore*. Retrieved from https://www.businessinsider.sg/wuhan-virus-over-100000-sign-online-petition-calling-for-singapore-to-ban-travellers-from-china/

Tan, A. (2020, February 7). Coronavirus: Politicians, supermarkets urge calm amid panic-buying of groceries. *The Straits Times*. Retrieved from https://www.straitstimes.com/singapore/health/coronavirus-fairprice-chief-urges-calm-amid-panic-buying-of-groceries-singapores

Tan, H. H., Neo, L. S., & Chen, X. K. (2019, July). *Understanding why people do not intervene in the spread of fake news* [Poster]. 4th Asian Conference of Criminal & Operations Psychology, Singapore.

Tandoc, E. C., Jr. (2017, May 27). *It's up to you, yes you, to stop fake news. The Straits Times*. Retrieved from http://www.straitstimes.com/opinion/its-up-to-you-yes-you-to-stop-fake-news

Tham, Y-C. (2020, April 22). Weighing Singapore's response to the Covid-19 pandemic. *The Straits Times*. Retrieved from https://www.straitstimes.com/opinion/weighing-singapores-response-to-the-covid-19-pandemic

Thomas, Z. (2020, February 13). Misinformation on coronavirus causing "infodemic." *BBC News*. Retrieved from https://www.bbc.com/news/technology-51497800

United Nations. (2020). *COVID-19: UN helps countries fight complacency as they reopen*. Retrieved from https://www.un.org/en/coronavirus/un-supports-countries-they-reopen-warns-against-covid-19-complacency

United States Department of Health and Human Services. (2002). *Communicating in a Crisis: Risk Communication Guidelines for Public Officials*. Retrieved from https://www.orau.gov/cdcynergy/erc/content/activeinformation/resources/HHSRiskCommPrimer.pdf

Vaughan, E., & Tinker, T. (2009). Effective Health Risk Communication About Pandemic Influenza for Vulnerable Populations. *American Journal of Public Health 99*(2), S324–S332.

Vieira, C. M., Franco, O. H., Gómez Restrepo, C., & Abel, T. (2020). COVID-19: The forgotten priorities of the pandemic. *Maturitas 136*, 38–41. https://doi.org/10.1016/j.maturitas.2020.04.004

Washington Post Editorial Board. (2020, July 8). Complacency in Northern Virginia is giving Covid-19 another opening. *Washington Post*. Retrieved from https://www.washingtonpost.com/opinions/complacency-in-northern-virginia-is-giving-covid-19-another-opening/2020/07/07/f673124e-bfc0-11ea-b4f6-cb39cd8940fb_story.html

Watson, K. (2011). Gallows humor in medicine. *Hastings Center Report 41*(5), 37–45.

Wisse, G. (2016). *# Ebola: The use of different humour types on Twitter during the Ebola crisis*. Radboud University.

Wong, P. T. (2020, February 15). Faceless 'Santa Clauses' make grocery runs for family observing home quarantine. *TODAY*. Retrieved from https://www.todayonline.com/singapore/faceless-santa-clauses-make-grocery-runs-family-observing-home-quarantine

World Health Organisation (WHO) COVID-19 Dashboard. Retrieved from https://covid19.who.int

Yong, J. (2020, February 2). Commentary: As a parent, I worry about my kids and the coronavirus situation. So I'm taking action. *CNA*. Retrieved from https://www.channelnewsasia.com/news/commentary/wuhan-virus-coronavirus-parents-schools-precautions-measures-12374280

Yuen, S. (2020, June 1). Singapore ends Covid-19 circuit breaker: How does it affect you from June 2. *The Straits Times*. Retrieved from https://www.straitstimes.com/singapore/singapore-ends-covid-19-circuit-breaker-how-does-it-affect-you-from-june-2

SUPPORTING NATIONAL QUARANTINE EFFORTS WHILE ACCELERATING TRAINING TRANSFORMATION IN THE HOME TEAM

Poon Ngee, Darius Lim, Nabilah Razalie & Nicholas Tan
Home Team Academy

ABSTRACT

The Home Team Academy (HTA) was one of the first government agencies to operate a Government Quarantine Facility, an alternative housing for relocated migrant workers, and a Dormitory Isolation Facility, concurrently at our dormitory blocks, in support of Whole-of-Government efforts to mitigate the spread of COVID-19. HTA housed more than 500 migrant workers and about 700 Persons-Under-Quarantine from 30 Jan to 9 Jul 2020. Both uniformed and civilian officers from HTA were part of the operations, and took on these responsibilities on top of their day-to-day work. This article documents HTA's response and role in managing the crisis through its dormitory operations. It also describes how HTA continued to play its role as the Corporate University of the Home Team (HT) amid the COVID-19 situation, driving HT training and learning initiatives in the 'new normal'.

A TEST OF PREPAREDNESS

Organisations have long known that if they are to survive and thrive in a volatile, uncertain, complex and ambiguous (VUCA) environment, they must nurture in their leaders the ability to adapt, to be agile and to be resilient. Every crisis is a test of their preparedness, and in the case of the Home Team (HT), how well it has trained for particular scenarios.

As the Corporate University of the HT, the Home Team Academy (HTA) plays a key role in driving training and learning in the HT amid an ever-evolving security landscape. HTA ensures that HT leaders have the required knowledge and skills in crisis management and leadership, be it through its Introduction to Crisis Management Course for Public Service officers, or modules taught in its milestone leadership programmes.

As the Chief Executive of HTA, Clarence Yeo, has noted, a global pandemic not only reinforces the need for us to be always prepared in a VUCA environment, it is also "where our investment in training, such as in the areas of crisis management, leadership development, incidence responses and operating as one Home Team, are put to the test" (Yeo, 2020).

HTA's "test" came early in the ongoing COVID-19 pandemic, when it became one of the first government agencies to operate a Government Quarantine Facility, alternative housing for relocated migrant workers and a Dormitory Isolation Facility – all within HTA's premises. As a residential training academy, HTA has in place protocols for preventing the spread of diseases such as flu or gastrointestinal disease within its dormitory blocks. But COVID-19 represented an unknown and unpredictable challenge beyond the scope of usual protocols, prompting HTA to constantly adapt to the evolving situation while ensuring the safety of residents and its officers.

A CHALLENGE LIKE NO OTHER

There were no ready blueprints for what HTA had to accomplish in support of the Whole-of-Government efforts to contain the spread of COVID-19.

Figure 1. HTA officers running the daily operations such as tracking the migrant workers' movements in and out of HTA, with support from officers from the HT training schools co-located at HTA

On 28 Jan 2020, one of HTA's six dormitory blocks was activated as a Government Quarantine Facility to house Persons-Under-Quarantine. HTA received its first Persons-Under-Quarantine on 4 Feb 2020. When migrant workers from essential services had to be relocated from their dormitories to prevent the healthy from being infected, an additional dormitory block was activated in HTA on 7 Apr 2020 as alternative housing. Subsequently, a third dormitory block was activated as a Dormitory Isolation Facility on 16 Apr 2020.

In total, more than 500 migrant workers were housed in HTA. With the end of the circuit breaker on 1 Jun 2020, the migrant workers who were housed at HTA were moved to other locations. By 2 Jun 2020, the dormitory blocks used to house the relocated migrant workers and as a Dormitory Isolation Facility were reinstated as dormitory blocks for trainees. This allowed HTA to resume basic training for full-time Police National Servicemen. On 9 Jul 2020, HTA ceased its Government Quarantine Facility operations, which saw a flow-through of about 700 persons who had to be quarantined.

TAKING ON MULTIPLE ROLES IN SUPPORT OF DORMITORY OPERATIONS

Both uniformed and civilian officers from HTA took on additional responsibilities on top of their day-to-day work to manage operations at these dormitories. Their primary mission was to ensure the safe stay of Persons-Under-Quarantine and migrant workers, so that they could be isolated safely, and for those who were not infected, to continue providing essential services in Singapore.

HTA set up a Watch Commander Operations Team to oversee 24/7 daily internal operations and issues related to all individuals under its care. An operations planning team was also set up to facilitate coordination with external parties including other agencies within the Joint Task Force and to provide the Operations Team with timely information. HTA's Security Branch, HT training schools co-located at HTA (i.e. the Police Training Command, the Immigration & Checkpoints Authority Training Command, and the Singapore Prison Training Institute), auxiliary police officers and the facilities management vendor also worked together to ensure everything ran smoothly.

The officers worked round the clock to get the facilities ready in time. This included putting in place safety measures in line with Ministry of Health and Ministry of Manpower guidelines, such as allocating designated pathways to minimise crossing of paths. HTA also designed and produced illustrated posters in English, Bengali and Tamil to remind the residents to observe personal hygiene and safe distancing.

HTA's officers ensured the comfort of the Persons-Under-Quarantine, such as by providing them with iPads (if they did not have one) and access to Wi-Fi, magazines and games to occupy their time. Officers also helped with sundry needs

such as providing pails and detergent for laundry, and supported requests to contact employers and arranged to send them for medical checks when needed.

To make sure that migrant workers at both the isolation facility and alternative housing area felt at ease, HTA officers proactively engaged with them and their employers. Officers also took care of their dietary needs and arranged for meal treats during festive holidays such as Pongal and Hari Raya Puasa, as well as snacks during weekends to keep their spirits up. These efforts appeared to have paid off and a bond was forged with the migrant workers. Some of the migrant workers even produced a light-hearted video skit to remind their fellow workers to practise personal hygiene and safe distancing.

PERSEVERING AND LEARNING FROM THE EXPERIENCE

The COVID-19 outbreak at the start of 2020 was HTA's first attempt at converting its facilities in support of a national crisis. It formulated a framework to guide an approach anchored by operational excellence and future readiness, and in strategic alignment with Whole-of-Government efforts to overcome the COVID-19 crisis.

Part of this framework was the documentation of challenges, and how HTA overcame them. For instance, upon activation, procuring essential logistical equipment such as toiletries and kettles within a short turnaround time was a challenge, coupled with the limited availability of vendors when the nation went into a semi-lockdown - circuit breaker - mode. HTA quickly pooled together its available resources, at the same time tapping on alternative supply options. This experience underscored the importance of establishing a wide network of suppliers in advance to avoid any delay.

Initially operating a single block as a Government Quarantine Facility, HTA had to prepare two more blocks to house relocated migrant workers performing essential services and as a Dormitory Isolation Facility in Apr 2020. To overcome the surge in volume of meals required, HTA engaged a caterer to provide meals for the Government Quarantine Facility, then packed and delivered them from the HTA cookhouse. Additional arrangements were also made for Muslim residents during the Ramadan period. The key takeaway was to plan ahead and work with the expectation that the situation could escalate, and result in a surge in volume at any time.

Even as operations were ongoing, there was a need to constantly monitor and review work processes to optimise effectiveness and productivity. In this regard, HTA streamlined its reporting and documentation systems along the way. For example, HTA developed a database to facilitate the capture and retrieval of residents' records. HTA would need to continuously improve its processes as required during future operations, so that officers can get up to speed even faster.

There was initially limited information on the virus and its impact or implications on the health and livelihoods of the migrant workers. Guidelines had to be constantly reviewed and updated. HTA officers also had to overcome language barriers when communicating with the migrant workers, and manage employers who were anxious to know about their workers' well-being and ability to resume work. To ensure that officers remained motivated, Watch Commanders regularly engaged with their staff to find out how they were coping with work and at home. Such check-in sessions helped to identify and address any issues early. Group chats were set up to provide updates, share self-care tips and encourage one another. HTA's leadership also regularly engaged officers to ensure that morale remained high.

To safely resume basic training for full-time Police National Servicemen after the dormitory residents had been relocated to other purpose-built facilities, HTA took reference from past operations and processes to carry out measures such as disinfecting all dormitory rooms and equipment, common areas and toilets in accordance with guidelines from the National Environment Agency. Protocols are in place to ensure that HTA continues to work closely with the relevant agencies to ensure that prevailing safe management measures are strictly enforced and adhered to – both during and post-operations.

Using this COVID-19 operations framework, HTA will continue to document key learning lessons to further improve forward planning and agility in the event of future crises.

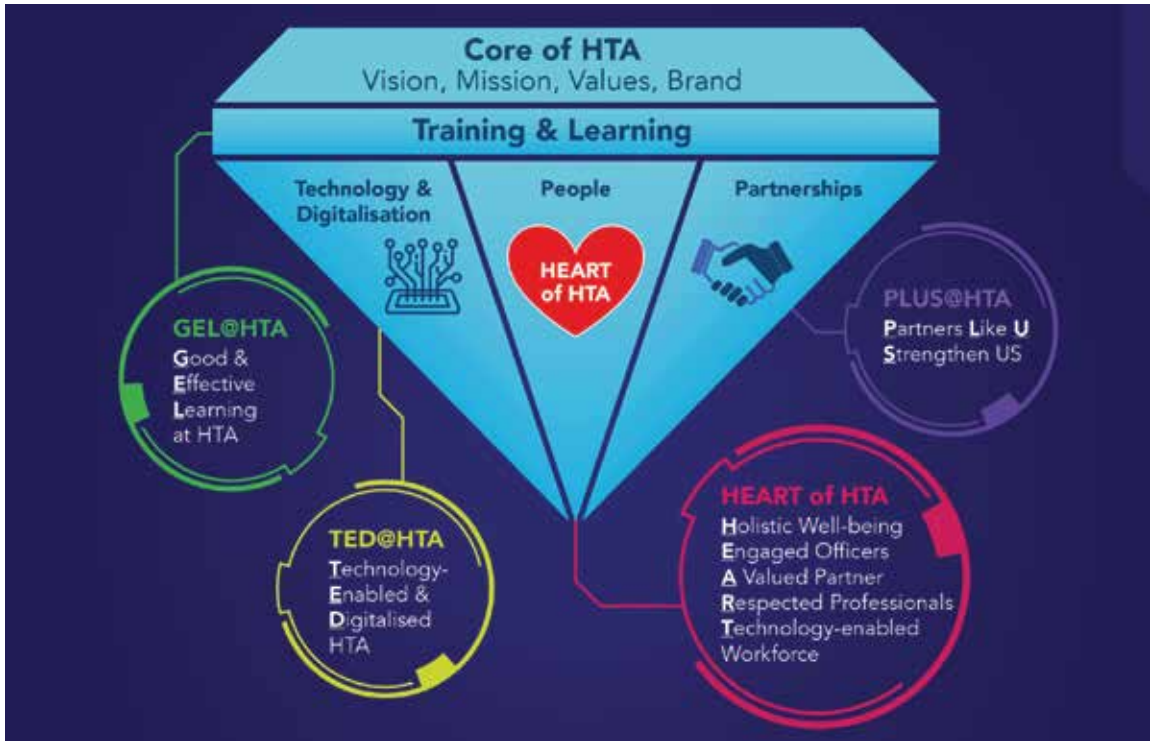


Figure 2. HTA's Gem Framework with Four Strategic Thrusts

DRIVING TRAINING AND LEARNING DURING NON-NORMALCY AND IN THE NEW NORMAL

Against the backdrop of its expanded dormitory operations, HTA also had to continue driving the transformation of training capabilities throughout the HT, to press on with training and upskilling on all fronts. As Second Minister for Home Affairs Josephine Teo said at the HTA E-Workplan Seminar in June 2020, even during a pandemic, training and learning must go on "to ensure that Home Team officers continue to be agile and ever ready for whatever new challenges come our way."

HTA's vision as a leading corporate university in homefront safety and security is guided by a holistic people-centric 'Gem' framework that ensures commitment not only to the development of knowledgeable and skilled HT officers but also in the transformation of every HT leader as a trainer, coach and mentor, all excelling together as One Home Team. Accordingly, HTA's goal is to proactively provide HT officers with the expertise and skills they need to do their jobs, and to enable them to come together to learn as one and work together for mission success.

HTA's Gem framework comprises four strategic thrusts geared towards its vision – namely providing Good and Effective Learning (GEL@HTA) through its training and learning initiatives, leveraging technology and digitalisation (TED@HTA), forging strong partnerships (PLUS@HTA); and having people as its greatest asset (HEART of HTA).

Like all major crises, and perhaps more than most, COVID-19 has left lasting changes in the way work and business take place. Learning will be the foundation of survival for both organisations and the individuals within them (Peshkam & Petriglieri, 2020). Current safe management measures mean, however, that training and learning can no longer be conducted like before. In-person interactions and discussions must now be restricted significantly and a blended approach adopted by leveraging virtual modalities.

As a result, HTA stepped up its pace of transforming training and learning approaches to continue delivering quality courses and programmes to HT officers safely. In 2020, HTA redesigned its courses, adopted new training modalities and converted some trainer development and cross-

Figure 3. Examples of infographics designed by HTA on virtual learning tips to better prepare participants for virtual learning

cutting skills courses to fully virtual courses. It now delivers training via virtual conferencing platforms, while modules have also been converted for online learning, including assignments, reading materials and training slides. For instance, with HT leaders agreeing that it was crucial to continue the milestone leadership programmes during the pandemic, HTA leveraged virtual conferencing for its popular fireside chats. Where lessons were conducted in-person, HTA ensured that safe management measures were strictly observed. HTA also designed and disseminated simple infographics on virtual learning tips to better prepare participants for virtual learning.

To ensure the transition to virtual is a smooth one, HTA has continued to leverage strong relationships with its training partners to optimise course delivery via virtual platforms. For instance, HTA collaborated with the National Institute of Education International (NIEI) to plan, review and redesign the training content, and explore various modalities for the 'Upgrading Professionally – through Specialist Certificate in Adult Learning and Education Programme' (UP-SCALE). Since the move to blended modalities, feedback from HTA's course participants has been positive. Ratings have been comparable to previous courses.

More than ever, training and learning will be a key enabler for HT leaders and officers to discharge their duties purposefully and effectively. HTA's virtual Workplan Seminar in 2020, which featured new and upcoming training and learning initiatives from HTA and the HT Departments (HTDs), demonstrated the HT's commitment to training and learning in the new normal.

For instance, HTA has been engaging with the HT training community to develop its Technology & Digitalisation Masterplan 2025. This plan serves as a strategic blueprint for HTA to deliver seamless campus experiences and achieve effective learning outcomes. An example is the development of the new HT Learning Management System 2.0, which will incorporate features such as web responsive learning, an automated marking system, and analytics capabilities to support competency development. This will push training for HT officers to the frontline, and facilitate just-in-time learning 'anytime, anywhere'.

HTA will also continue to work closely with the HTDs to better meet their training and learning needs. To augment frontline capabilities, HTA worked with the Singapore Police Force (SPF) to develop a HT Simulation System (HTS2) satellite centre at Tanglin Police Division that links to the HT Simulation Centre at HTA. The HTS2 allows HTDs to train their officers in sense-making, incident management, and operational decision-making. With this satellite centre, SPF will also be able to conduct small-scale independent exercises or joint exercises with other HTDs, paving the way for more such connected satellite centres to be developed across the HT to support HT-wide joint exercises.

A UNITED ONE HT APPROACH

Throughout the dormitory operations, HTA officers, with the support of the HT training schools co-located at HTA, were committed to playing their part to support the national response to COVID-19. Familiarity with one another facilitated coordination work greatly, and a strong rapport was quickly

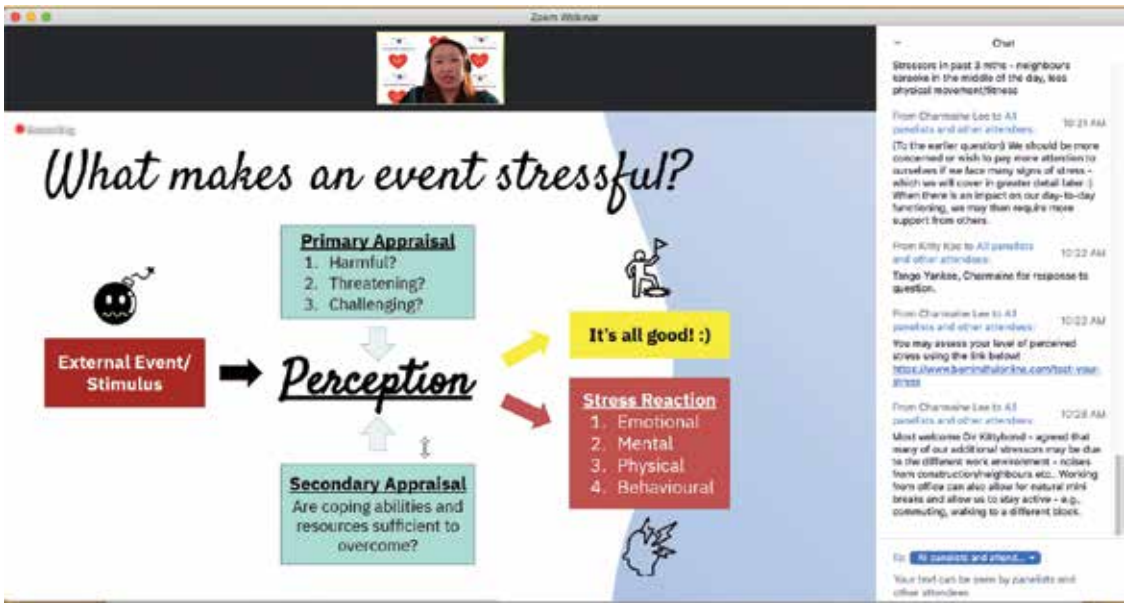


Figure 4. Examples of HTA's people engagement efforts to promote camaraderie and staff well-being

established among the officers to demonstrate a "One HT" spirit and effort. HTA also worked closely with other government departments such as the ministries of manpower, health and national development in setting up the quarantine and isolation facilities.

HTA continued to work with other HTDs to ensure that the HT training and learning ecosystem remains viable. For example, HTA has been able to count on support from participating HTDs to resume the milestone HT Foundation Course for new senior officers. This programme features experiential learning and visits to HTDs, now conducted with safe management measures in place. HTA also worked with HTDs for HTA's E-Workplan Seminar as well as for the HTDs to nominate suitable officers to participate in HT-wide events such as HTA's first virtual HT Lecture in Jan 2021, where HT officers gleaned insights from an experienced domain expert.

EMERGING STRONGER AS A FAMILY OF HTA-ENABLERS

The better an organisation is at engaging and inspiring its employees, the better its performance. Research suggests that an engaged employee is 45% more productive than a merely satisfied worker (Garton & Mankins, 2020). For HTA, being an 'HTA-Enabler' is a form of shared identity for its officers, all of whom enable HTA to achieve mission success through adding value as unique individuals and collectively as a team of HTA-Enablers. Individually, HTA officers aim to value-add to help their colleagues. As a work unit, they strive to value-add across HTA. Collectively as an organisation, HTA aspires to value-add to the Home Team and Singapore.

In view of safe management measures due to COVID-19, HTA has been going beyond physical platforms to engage with staff. Officers are kept informed of updates through frequent and consistent internal communications, as well as through virtual townhalls and dialogues. HTA also leverages technology to organise regular virtual get-togethers that encourage team bonding and interaction.

Throughout these uncertain times, HTA's Chief Executive Clarence Yeo has rallied staff through monthly messages, as well as provided close guidance on all COVID-19 related matters, while the Deputy Chief Executives directed the COVID-19 dormitory operations and helped to ensure the training schools' safe operations on the ground. Supervisors have also been checking-in virtually with staff, ensuring constant two-way communication to ensure that HTA officers are well-equipped to carry out their duties in the new normal with high morale.

Care packs with healthy snacks and cards carrying messages from the Chief Executive have been sent to staff to reinforce the importance of staying a strong and unified HTA-Family, with officers encouraged to show support for fellow colleagues. These communications efforts will be sustained to help staff cope with and embrace the cultural and behavioural shifts necessitated by this pandemic.

CONCLUSION

The COVID-19 pandemic has accelerated the need for HT training and learning to be agile and adaptive as well as to continue transforming. HTA's response as an organisation will be key in a post-COVID-19 world. The national COVID-19 challenge helped HTA staff discover their collective power as they successfully ran a 24/7 triple-operation, while continuing to carry out their role as the Corporate University of the HT. The new normal will require each officer to continue exercising individual discipline, social responsibility, and collaborative effort to keep the HTA community safe. As Chief Executive Yeo put it in a message to staff, "Our response to the pandemic has demonstrated what we can achieve as one HT. With the continued support of the HTDs and all HTA-Enablers, HTA will continue to play a key role in shaping the HT's values, culture and the mindset of our officers in the 'new normal'."

ABOUT THE AUTHORS

Poon Ngee
is the Deputy Director of the Home Team Simulation System (HTS2), Centre for HT Skills Transformation in HTA. He oversees the capability development of the HTS2 and works closely with the Home Team Departments to train frontline commanders in incident management and command and control exercises in a Home Team command post setting. He also led the operations planning team during HTA's COVID-19 dormitory operations.

Darius Lim
is the Deputy Director of the Home Team Centre for Leadership (HTCL) in HTA. He oversees the planning and execution of the strategic directions to drive leadership development, and shape leadership practices in the Home Team. He also oversees the daily and strategic operations of HTCL to ensure the quality of the leadership programmes within the Home Team, across the Whole-of-Government and at the international front. In this respect, he drives the analysis of the leadership challenges facing the Home Team, identifies learning needs, and develops frameworks to guide the development of quality leadership programmes. He also oversees the establishment of strategic partnerships with renowned centres of leadership excellence locally and internationally to collaborate and develop quality Home Team leadership programmes. He was also one of the Watch Commanders during HTA's COVID-19 dormitory operations.

Nabilah Razalie
is a Senior Executive with the Centre for Home Team Foundation Training and Heritage in HTA. Her primary job role is related to heritage research and values inculcation through training in the Home Team.

Nicholas Tan
is a Senior Executive with the Centre for Planning, Technology and Communications in HTA. His work responsibilities include communications and strategic engagements in HTA. He also documented HTA's contributions in the fight against COVID-19 through visuals and staff interviews.

REFERENCES

Garton, Eric and Michael Mankins. (2020, December 1). *The Pandemic Is Widening a Corporate Productivity Gap*. Bain & Company insights. Retrieved from https://hbr.org/2020/12/the-pandemic-is-widening-a-corporate-productivity-gap

Peshkam, Annie and Gianpiero Petriglieri. (2020, April 10). *Keep Your People Learning When You Go Virtual*. INSEAD insights. Retrieved from https://hbr.org/2020/04/keep-your-people-learning-when-you-go-virtual

Yeo, Clarence. (2020). Chief Executive's Foreword to the Home Team Academy Workplan Seminar 2020 microsite. Retrieved from https://wps-2020.hta.gov.sg/ce_address

FIGHTING THE COVID-19 WAR – WITH A LITTLE HELP FROM … CLAUSEWITZ

Kumar Ramakrishna
S. Rajaratnam School of International Studies
Nanyang Technological University

ABSTRACT

Given the rapidly unfolding and significant social, economic and geopolitical impact of the COVID-19 outbreak, it has become a wider national security matter as well, requiring a coordinated response from other sectors beyond public health. In this respect, what would a wider, more encompassing, national security response to COVID-19 entail? The current struggle against COVID-19 has been called a "war". If so, can we learn anything from the insights of the 19th century Prussian philosopher of war Carl von Clausewitz, who famously conceptualised war as comprising a "remarkable trinity" of "primordial passions"; the "play of chance and probability within which the creative spirit is free to roam"; and the "element of subordination, as an instrument of policy"? This article will show what a coordinated "trinitarian" response to the outbreak involving the public health community, the public and the government must entail.

WHAT WOULD CLAUSEWITZ SAY ?

As Singapore continues its fight against COVID-19, much has been written about what should or should not be done to keep the nation safe. Granted, the COVID-19 fight is at its core very much a public health issue, and one should take care not to hastily "securitise" the matter. Nevertheless, given the rapidly unfolding and significant social, economic and geopolitical impact of the COVID-19 outbreak, it has arguably become a wider national security matter as well, requiring a coordinated response from other sectors. In other words, we need a strategic, integrated assessment of the complex and multifaceted COVID-19 challenge, rather than piecemeal, uncoordinated assessments and ensuing responses occurring simultaneously within various sectors. The question therefore is, how can we usefully think about a wider, more encompassing, holistic and integrated national security assessment of COVID-19?

In this essay we shall look to, perhaps at first glance, a rather counterintuitive, even surprising, source for guidance: the 19th century Prussian soldier and philosopher of war Carl von Clausewitz (1780-1831). Clausewitz personally participated in and witnessed the highly destructive Napoleonic wars between 1792 and 1815 in Europe and his experiences drove him to seek to make sense of the various structural, political and psychological factors that in his view, were making war more absolute and total. The product of his intellectual endeavors – that in no small part contributed to his ensuing fame as a well-known strategic theorist in military history and strategic theory circles to this day – was his multi-volume tome *On War*, published originally in German but widely translated afterward and known for more than a century within the English-speaking world. *On War* remains an influential treatise on the nature of war and how it should be prosecuted by states. The influential 20th century American nuclear strategist Bernard Brodie went so far as to assert that *On War* is "not simply the greatest but truly the only great book *on war*" (Brodie, cited in Paret & Howard, 1976).

Clausewitz is arguably best known for his axiom that "war is the continuation of policy by other means" and because he died before completing his study of war to his satisfaction – his widow published his book posthumously in 1832 – there have been some controversies concerning how to interpret aspects of his strategic thinking (for

instance, Keegan, 1993; Bassford, 1994). That said, there are certain aspects of his work that have remained truly timeless and relevant to such an extent that his ideas have already been applied to other fields beyond war, such as business (Pietersen, 2016). It is the contention of this essay that Clausewitz's insights have relevance to the current fight against COVID-19 as well. The essay shall unpack the argument as follows. First we examine the famous Clausewitzian concept of the *Trinity of War*, showing how it has surprising applicability to Singapore's fight against COVID-19 as well. We then use "trinitarian" analysis to analyse holistically how the efforts of the public health sector, the general public and finally the government are in fact integrated and energise one another. We shall end the essay with an analysis of how think tanks and academia can better apply inter-disciplinary approaches to more effectively study the complex, interlocking sectoral challenges posed by COVID-19 and generate real-world insights that practitioners can use in dealing with what Singapore Prime Minister Lee Hsien Loong calls the "crisis of a generation" (Lee, 2020).

ADAPTING CLAUSEWITZ'S ENDURING "TRINITY"

A true strategic intellectual, Clausewitz sought to understand the essence of war above all else. In this respect, based on his experiences of and study of war, he conceptualised war as comprising a "remarkable trinity":

> War is more than a true chameleon that slightly adapts its characteristics to the given case. As a total phenomenon its dominant tendencies always make war a remarkable trinity—composed of primordial violence, hatred, and enmity, which are to be regarded as a blind natural force; of the play of chance and probability within which the creative spirit is free to roam; and of its element of subordination, as an instrument of policy, which makes it subject to reason alone (Villacres & Bassford 1995).

Clausewitz went on to elaborate:

> The first of these three aspects mainly concerns the people; the second the commander and his army; the third the government. The passions that are to be kindled in war must already be inherent in the people; the scope which the play of courage and talent will enjoy in the realm of probability and chance depends on the particular character of the commander and the army; but the political aims are the business of government alone.

In short, Clausewitz and succeeding interpreters of his ideas essentially identified "the people" as the repository of the "primordial" passions and "blind natural force" that energise the nation for conflict; the "the particular character of the commander and the army" as the source of "the creative spirit", "courage and talent" needed to neutralise threats characterised by "chance and probability"; and the government as key to harnessing such energies and responses toward clearly defined, rational, "policy aims". That said, it would be important to note that Clausewitz never tried to dogmatically pigeonhole the three enduring features of war – passions, creative spirit and reason – into the people, army and government respectively. He regarded the three latter elements as not mutually exclusive, but rather in fact constantly interacting with one another, while at the same time displaying all three aspects of the "remarkable trinity". For instance the officers and men of the army, as well as the political leaders emerge from and are part of the people. In addition, in democratic societies, government leaders are influenced to varying degrees by popular opinion. At the same time, political leaders are not emotionless, robotic rational decision-making machines – they are just "as often driven by personal needs" and irrational passions "as by rational calculation of their societies' practical requirements". Meanwhile, rapidly evolving situations on "the army's battlefields have a tremendous influence both on the people and on the political leadership, while popular and political factors, in turn, affect the army's performance" and morale. As Clausewitz argued, the "task therefore is to develop a theory that maintains a balance between these three tendencies, like an object suspended between three magnets".

Put another way, as some observers have argued, If we accept that the current struggle against COVID-19 is indeed a "war" – as many commentators have so described – what would a systematic, coordinated "trinitarian" response

encompass? Before we answer this question, though, we first need to have a concise assessment of the nature of the threat we are facing.

THE NATURE OF THE THREAT: WHAT WE KNOW ABOUT THE VIRUS THUS FAR

The COVID-19 disease is caused by a new or novel coronavirus called SARS-CoV-2. The World Organization or WHO first learned of this new virus on 31 December 2019. This was following reports of several cases of "viral pneumonia" in Wuhan, in the People's Republic of China. Importantly, COVID-19 is asymptomatic – that is, an infected person may not even present any symptoms at first, but still transmit the virus to people in close physical contact (Chew, 2020a). Of individuals who develop symptoms – fever, dry cough, fatigue, loss of taste or smell, fatigue, amongst others – about 80 percent recover from the disease without needing hospitalisation. However, about 15 percent of infected patients become very ill, requiring oxygen. Another 5 percent fare even worse, becoming critically ill and requiring intensive care. It has been found that older people aged 60 years and over, as well as those with underlying medical problems like high blood pressure, heart and lung problems, diabetes, obesity or cancer, are particularly at risk of developing serious illness if they contract COVID-19. WHO takes pains to add that in fact anyone can get sick with COVID-19 and become seriously ill, or die, at any age. In addition, several complications leading to death could occur, causing distress to infected patients. These include "respiratory failure, acute respiratory distress syndrome, sepsis and septic shock, thromboembolism, and/or multiorgan failure, including injury of the heart, liver or kidneys" (World Health Organization, 2020). WHO points out that on occasion, children can develop a severe inflammatory syndrome a few weeks following infection by COVID-19. More ominously, some patients who appear to have recovered from COVID-19 still experience symptoms weeks or even months after supposedly recovering – including those who had only experienced mild symptoms at first while being infected. Medical professionals have reported a significant number of patients reporting "mostly post-viral fatigue, muscle aches, shortness of breath, chest pain", as well as tingling sensations, "a lot of neurologic symptoms" and brain fog as well (Grey, 2020). These are the so-called "long haul" COVID-19 patients, which have caused much concern within global medical circles still struggling to comprehensively grasp the full effects – short and longer term - of the disease.

Against such a backdrop, what would a holistic – trinitarian in Clausewitzian terms – response encompass? It is argued here that three sectors – the public health sector, the general public, and the government, have a role to play in an integrated, coordinated, mutually reinforcing manner.

THE PUBLIC HEALTH SECTOR

While most acolytes of Clausewitz to this day would understandably see the nation's armed forces as the main instrument to be deployed against an adversary's invading forces, in the current "war" we are facing, another, frequently overlooked and relatively under-appreciated instrument comes into play: the public health community. This refers to the frontline medical staff in hospitals and clinics, as well as the supporting ecosystem of scientists and biotechnology researchers who in the current context of the war on COVID-19, really represent the nation's "armed forces" against the virus. It is the public health professionals who have to find ways to unleash their collective creative energies to stem the relentless, seemingly non-linear, unpredictable spread of this unseen enemy. While the front-liners fight to "flatten the curve" of infections, the supporting medical research community have to race against time to better understand myriad issues ranging from how even asymptomatic individuals can apparently shed the virus; modelling the projected spread of the virus in the community; what current treatments against other coronaviruses can be hastily jury-rigged and thrown into the fray; and how far we are from effective vaccines to cope with ever-mutating strains of the bug. The public health community literally stands between the virus and the rest of the nation. Since the very first COVID-19 case in Singapore – a 66-year old male from Wuhan – was detected on January 23 2020 (Goh, 2020b), the public health sector has been boldly and sacrificially leading the full-spectrum conflict against the virus. It has not been all smooth sailing. Due to an unfortunate outbreak of the fast-spreading virus within the densely populated foreign worker dormitories, the overall number of infected individuals in Singapore

spiked dramatically between April and July 2020. However, as of February 25, 2021, the curve had been well and truly flattened and the total number of COVID-19 cases in Singapore amounted to 59,900 – not a particularly small number, but certainly a stabilised figure, with the vast majority of these individuals recovering fully (Ministry of Health, 2021).

Importantly, Singapore's medical community had by November made great strides in both treatment of COVID-19 patients and in the quest for a vaccine. As of February 2021, only 29 people had died of COVID-19 in Singapore; "one of the lowest mortality rates in the world". By contrast, in the United States, where there have been about 28.4 million cases, more than 508,000 people had died. An important reason for the low COVID-19 mortality rate in Singapore is that the public health front-line staff at the National Centre for Infectious Diseases (NCID) and related departments had cracked the puzzle of how to effectively treat those with the disease. This was no purely national effort of course. The NCID collaborated with global pharmaceutical firms like Gilead and the US National Institutes of Health (NIH) to learn global best practices in treatment protocols and suitable drugs to administer to sick patients. Hence it was established that for "severe cases, medicines such as remdesivir and dexamethasone" were effective in treating infecting patients. Remdesivir is an anti-viral agent that directly attacks the SARS-CoV-2 virus, in the process reducing its impact on patients. Dexamethasone, on the other hand, a corticosteroid, "helps to dampen inflammation, as patients can develop severe disease due to overwhelming inflammation in the body that is triggered by the viral infection" (Chew, 2002b).

At the same time, Singapore's backend but no less critical medical and biotechnology researchers have been just as busy as well. Duke-NUS Medical School researchers have been busy co-developing a vaccine with US pharmaceutical company Arcturus Therapeutics Holdings Inc. Ongoing early stage clinical trials in Singapore have shown that a single dose of the vaccine is effective in preventing infection, which should become available sometime in 2021 ("Singapore may get first Covid-19 Arcturus vaccine in early 2021", 2020). There have been other efforts as well that have borne fruit in a relatively quick time span: Fortitude Kit, a diagnostic kit developed by A*STAR and Tan Tock Seng Hospital, can accurately detect the presence of the SARS-CoV-2 virus, and has been deployed in 13 Singapore hospitals and labs, as well as to more than 20 countries. In addition, a research team at Duke-NUS Medical School has developed a serological test that detects the presence of COVID-19 antibodies; this innovation helped accelerate Singapore's contact tracing efforts. Importantly, Duke-NUS Medical School is also collaborating internationally with entities such as the Coalition for Epidemic Preparedness Innovations (CEPI), to develop other COVID-19 vaccines and test them in Singapore ("Singapore marshalls R&R efforts to combat covid-19", 2020). Granted, Clausewitz's ideas of "the particular character of the commander and the army", as well as their "creative spirit", "courage and talent" to neutralize enemy threats characterised by "chance and probability" have conventionally been understood to apply to the military battlefield. That said, it requires little imagination to recognize that such traits are completely applicable to public health professional leaders, senior researchers and their respective "troops" in hospitals and laboratories as well, as they continue full-spectrum efforts to treat and prevent COVID-19 and secure the health of the Singaporean community. However, their efforts need to be animated and backstopped by the fighting passions, spirit and social discipline of that wider community, as we shall now see.

THE WIDER COMMUNITY

The wider community – the population of Singapore, residents and non-residents – is a key sector in this regard. No matter what accomplishments the public health sector can pull off, all will be undone if the public does not cooperate. To be sure, just as the public health sector has been under tremendous strain since the start of the COVID-19 crisis, the wider community has not had it that easy either. In January 2020, people were still going about their daily routines – working, studying, eating, playing, all utterly unmasked – routines that would be utterly upended a few short months later, with the "new normal' involving working from home, wearing a mask out and virtual meet-ups replacing mass social in-person gatherings. As the government took decisive action in the early months of 2020 to reduce the number of incoming and outgoing air, sea and land passenger traffic, and as supply chains began to strain and stretch, members of

the public perhaps understandably grew anxious, with the result that hand sanitisers and face masks flew off the shelves at an unprecedented rate. When in February, the government raised the Disease Outbreak Response System Condition, or DORSCON, to Orange, just one level shy of the top category, significant panic buying was evidenced, as supermarkets were stripped bare of toilet paper and instant noodles, for instance. At the same time, social gatherings were limited to 10 people and schools started shifting to online home-based learning. Thickening the plot for most Singaporeans, moreover, was the introduction of a so-called "circuit breaker" from Apr 7 to May 4, initially and then subsequently extended to June 1, 2020. Under the circuit breaker, life in the city-state ground to a virtual standstill, with most workplaces closed – except for those providing essential services – and schools moving to full home-based learning. Meanwhile, soon after the commencement of the circuit breaker, the government announced that anyone "stepping out of the house would have to wear a mask, or face being fined, with egregious cases to be dealt with by the courts" (Bakar, 2020).

This was, it has to be said, a telling test for the Singaporean public. In the 1960s, soon after Separation from Malaysia, founding Prime Minister Lee Kuan Yew declared that for Singapore to survive, we have to function as a "tightly organized society" (Ramakrishna, 2020). He later likened Singapore to a finely calibrated "chronometer" in which the government, businesses and the public pulled together effectively in the same direction. That generation helped lay the foundations for Singapore to take off and achieve First World status in a few decades. Today, many from that generation have passed on, or are today the very elderly that are being constantly cautioned to be wary when outside as any infection is likely to be especially harmful for them. The big question since the COVID-19 outbreak has been: can the current generation rise to the occasion and emulate the generalised social discipline and "primordial passions" of that post-Separation cohort of "can-do" Singaporeans? To be sure, Singaporeans as a whole have risen to the occasion.

From January to May 2020, Singaporeans donated SGD 90 million to Community Chest, Community Foundation of Singapore's Sayang Sayang Fund, and through Giving.sg. Apart from financial generosity towards the less well-off members of society impacted by the pandemic, volunteering rates went up considerably as well: more than 13,300 people signed up to volunteer at Giving.sg from January to May 2020, an increase of 2000 over the same period in 2019. This was "despite a deliberate reduction of volunteering opportunities to only essential aid services during the circuit breaker period" ("Singapore Cares spirit shines through COVID-19 pandemic with rise in community philanthropy and volunteerism", 2020). Furthermore, when it became apparent that the foreign worker dormitories had been severely hit by the pandemic and that the living conditions were in dire need of improvement, the intensified publicity on the issue sparked "a surge of charitable collections" (Tan, 2020). Many other Singaporeans contributed in their own ways to community needs: one family sewed 300 reusable masks for distribution to low-income families in the early months of the pandemic when there was concern about a mask shortage ("Siblings Sew and Donate Over 300 Masks to the Needy", 2020). To be sure, there have been recalcitrants: it was reported that by late June, in excess of 1,100 fines for "offences related to mask-wearing" and "more than 5,500 fines for the breaching of safe distancing measures" had been meted out (Goh, 2020a). On the whole though, it has become clear that as Clausewitz would have put it, the "passions" of the people have prevailed. Hence as one minister put it, the pandemic has "not dampened" the Singaporean community's "spirit of caring", and "instead brought out the best in Singaporeans" ("Singapore Cares spirit shines through COVID-19 pandemic with rise in community philanthropy and volunteerism", 2020). She urged the community "to continue to grow this spirit of Singapore Together, and partner one another to overcome our challenge", so that the country can "make it through this difficult period, and emerge as a stronger society."

THE GOVERNMENT

Finally, the creative energies of the public health sector in the daily battle against COVID-19, as well as the passions and spirit of the wider community, need to be harnessed and channelled in meaningful ways at the grand strategic level to ensure ultimate victory over the virus. This is where the government – the third element of the Clausewitzian trinity – must come into play. Beyond the fight raging in hospitals and biotechnology laboratories, one of

the biggest challenges the government has had to face in 2020 has been coping with the sudden outbreak of infections within the densely packed foreign worker dormitories. At first, soon after Singapore saw its first imported virus cases in late January, a "huge contact tracing programme began and a national coronavirus-tracing app was rolled out", along with clear public communication campaigns – prompting "Harvard epidemiologists" to hail Singapore's approach as the "gold standard of near perfect detection" (Tan, 2020). However, there was a sucker punch looming. Singapore has long been home to more than 300,000 low-wage foreign workers from countries like India and Bangladesh, deployed largely in the manufacturing and construction sectors. As a norm, these contracted workers reside in employer-run dormitories and "commute from their dorms in packed vans to building sites where they work and take breaks alongside men from other crowded dorms - perfect conditions for the virus to spread" (Tan, 2020). Since the first two infections in dormitories – purpose-built facilities, factory-converted and construction temporary quarters – were reported on March 29, 2020, the number of infections in dormitories had grown to 54,485 by October – forming the bulk of Singapore's 57,884 cases by that time. At its peak, "more than 1,000 new cases" were being identified each day (Yong, 2020). However, a very strong governmental response then ensued, including aggressive testing of the foreign worker population, separating those infected from their healthy compatriots – with the latter then housed in army camps and vacant public housing flats. These measures, executed by dedicated medical teams focused on eradicating the disease in the dormitories, eventually led to an improving situation, such that by 13 October, no new cases were being reported (Yong, 2020). Government leaders conceded that their approach to the COVID-19 threat to foreign worker dormitories had not been "without shortcomings" – and, seemingly taking a leaf out of *On War*, even quipped: "In the fog of war, it is not possible always to make the perfect decisions" (Tan, 2020).

As many observers have recognized, moreover, the COVID-19 war is foggy not least because it really has more than one front. The direct public health threat of the disease to the country is just for starters. Economically, the government has had to draw on past reserves to fund massive budgets to stabilise a rapidly-contracting virus-hit economy to save jobs and businesses, while at the same time finding various means to maintain the resilience of food and other critical supply chains. Moreover, security and intelligence agencies have had to keep abreast of the continually evolving transnational terrorist threat, given that the both violent Islamist and White Supremacist networks have urged their followers worldwide to take advantage of the COVID-19 situation to strike hard at distracted states and societies. In addition, the government must continue navigating an even more troubled regional and global security landscape, in the light of heightened US-China tensions fuelled not just by trade issues but now by accusations and counter-accusations over each side's handling of the COVID-19 situation as well. Moreover, there are indications that certain major powers have also capitalised on the global pandemic to sow disinformation and foment chaos along ethno-cultural lines in multicultural societies. These same powers, their affiliates or transnational criminal networks may also take advantage of the societal distraction caused by the COVID-19 outbreak to launch cyber-attacks against national infrastructures. These complex, interlocking full-spectrum challenges on the grand strategic plane of the war against COVID-19, help shed light on why it falls to the government to ensure that the entire national effort is not permitted to drift haphazardly but rather, tightly coordinated and integrated in line with the overall national "policy aim", based on an attribute highly prized by Clausewitz: reason.

FINAL THOUGHTS ON THE CLAUSWITZIAN TRINITY AND COVID-19 AND IMPLICATIONS FOR THE THINK TANK/ACADEMIC COMMUNITY

Make no mistake: with more than 113 million cases and over 2.5 million deaths worldwide at February 25, 2021, the struggle against COVID-19 is, as has been said in some quarters, likely to be the defining struggle of this era ("Coronavirus Update", 2020). The world – including Singapore – have to do whatever it takes to win this war, because there is simply no other choice. In this short essay we have tried to employ Clauzewitzian trinitarian analysis to help us frame the war against COVID-19 in a hopefully useful and practical way. While we have tried to articulate what each key sector – public health, the wider community and the government – contributes to the war against the disease and the virus causing it, as mentioned earlier, one must avoid rigidly pigeonholing the

three enduring features of war – passions, creative spirit and reason - into the wider community, public health sector or government respectively. After all, the public health sector and the government ultimately emerge from and are part of, the wider community. Ultimately, therefore, the real issue is whether the wider community that berths the political leadership and frontline forces possess the requisite moral resilience to confront and surmount national, existential challenges. As two leading modern interpreters of Clausewitiz, Peter Paret and Michael Howard, argue:

> "The moral elements are the most important in war. They constitute the spirit that permeates war as a whole, and at an early stage they establish a close affinity with the will that moves and leads the whole mass of force. . . . History provides the strongest proof of the importance of moral factors and their often incredible effect" (cited in Strange & Iron, 2004).

In a way, therefore, what matters is if the primordial passions of the Singaporean nation *as a whole* are vital enough to sustain a long multi-front struggle against COVID-19 – and whatever new disease emerges in the coming years. This is a question that is worth pondering deeply as we move forward. Can we sustain the Singaporean spirit from generation to generation? To someone like Clausewitz, in the end this will always remain the most important commodity that separates mediocre nations from those with that special quality that keeps them successful and resilient in the face of diverse current – and future – shocks.

A closing comment: one final take-away from the COVID-19 war would be that the think tank sector and academia can no longer afford to think in mono-dimensional terms about interlocking security challenges. In 1999, the great Harvard biologist E.O. Wilson (1999) argued – prophetically – that the "issues that vex humanity daily – ethnic conflict, arms escalation, overpopulation, abortion, environment and endemic poverty" – cannot be solved without integrating insights from the natural sciences with that of the social sciences and humanities. Wilson (1999) insisted that only "fluency across the boundaries will provide a clear view of the world as it really is." Singapore should position itself to take the lead in such a quest for building systematic, interdisciplinary expertise – and in so doing prepare the nation for future national security challenges.

ABOUT THE AUTHOR

Kumar Ramakrishna
is a tenured Associate Professor, Associate Dean in charge of Policy Studies, as well as Head of the International Centre for Political Violence and Terrorism Research (ICPVTR), in the S. Rajaratnam School of International Studies (RSIS), in Nanyang Technological University, Singapore. He was previously the Head of the Centre of Excellence for National Security (CENS) at RSIS from 2006-2015, and Head of the National Security Studies Programme (NSSP) from 2016-2020. He remains Research Adviser to NSSP. A historian by background, Kumar has been a frequent speaker on counter-terrorism before local and international audiences, a regular media commentator on counter-terrorism, and an established author in numerous internationally refereed journals. His first book, *Emergency Propaganda: The Winning of Malayan Hearts and Minds 1948-1958* (2002), was described by the *International History Review* as "required reading for historians of Malaya, and for those whose task is to counter insurgents, guerrillas, and terrorists". His second major book, *Radical Pathways*: *Understanding Muslim Radicalisation in Indonesia* (2009) was featured as one of the top 150 books on terrorism and counterterrorism in the respected journal Perspectives on Terrorism, which identified him as "one of Southeast Asia's leading counterterrorism experts". His recent research has focused on understanding, preventing and countering violent extremism in Southeast Asia.

REFERENCES

Bakar, Jalelah Abu. (2020, June 15, 2020). Singapore's circuit breaker and beyond: Timeline of the COVID-19 reality. *Channel News Asia*. Retrieved from https://www.channelnewsasia.com/news/singapore/covid-19-circuit-breaker-chronicles-charting-evolution-12779048

Bassford, Christopher. (1994). John Keegan and the Grand Tradition of Trashing Clausewitz: A Polemic. *War in History* 1(3), 319-336.

Chew, Hui Min. (2020a, June 4). Almost a quarter of infected household members of COVID-19 patients were asymptomatic, Singapore study finds. *Channel News Asia*. Retrieved from https://www.channelnewsasia.com/news/singapore/infected-household-members-covid-19-asymptomatic-12803192

Chew, Hui Min. (2020b, October 24). No longer groping in the dark: NCID doctors share how COVID-19 is being treated in Singapore. *Channel News Asia*. Retrieved from https://www.channelnewsasia.com/news/singapore/ncid-doctors-covid-19-coronavirus-treatment-singapore-13239020

Coronavirus Update. (2020, November 22). *Worldometer*. Retrieved from: https://www.worldometers.info/coronavirus/?

Goh, Timothy. (2020a, July 5). Over 6,600 fines issued for flouting Covid-19 rules. *The Straits Times*. Retrieved from https://www.straitstimes.com/singapore/health/over-6600-fines-issued-for-flouting-covid-19-rules

Goh, Timothy. (2020b, July 26). Six months of Covid-19 in Singapore: A timeline. *The Straits Times*. Retrieved from: https://www.straitstimes.com/singapore/six-months-of-covid-19-in-singapore-a-timeline

Grey, Heather. (2020, October 12). From Back Pain to Coughing, Life with Long-Haul COVID-19. *Healthline*. Retrieved from https://www.healthline.com/health-news/from-back-pain-to-coughing-life-with-long-haul-covid-19

How coronavirus is spreading across the world. *The Straits Times*. Retrieved from: https://www.straitstimes.com/multimedia/graphics/2020/02/coronavirus-global-numbers/index.html

Keegan, John. (1993). *A History of Warfare*. New York: Knopf.

Lee, Hsien Loong. (2020, June 7). *Overcoming the Crisis of a Generation* [Speech]. Retrieved from https://www.gov.sg/article/pm-lee-hsien-loong-overcoming-the-crisis-of-a-generation

Ministry of Culture, Community and Youth. (2020, June 26). *Singapore Cares spirit shines through COVID-19 pandemic with rise in community philanthropy and volunteerism* [Press Statement]. Retrieved from https://www.mccy.gov.sg/about-us/news-and-resources/press-statements/2020/jun/singapore-cares-spirit-shines-through-covid-19-pandemic

Ministry of Health. (2021, February 25). *Daily Report on COVID-19*. Retrieved from https://www.moh.gov.sg/docs/librariesprovider5/2019-ncov/ceg_20210225_daily_report_on_covid-19_cabinet.pdf

Paret, Peter, and Michael Howard, Eds. (1976). *Carl von Clausewitz, On War*. Princeton: Princeton University Press.

Pietersen, Willie. (2016). Von Clausewitz on War: Six Lessons for the Modern Strategist. *Columbia Business School Ideas and Insights*. Retrieved from https://www8.gsb.columbia.edu/articles/node/1788/von-clausewitz-on-war-six-lessons-for-the-modern-strategist.

Ramakrishna, Kumar (2020, April 15). War on COVID-19: More than One Front. *RSIS Commentary*. Retrieved from https://www.rsis.edu.sg/rsis-publication/icpvtr/global-health-security-war-on-covid-19-more-than-one-front/#.X7jKlqozaCU

Siblings Sew and Donate Over 300 Masks to the Needy. (2020, July 10). *Gov.sg*. Retrieved from https://www.gov.sg/article/siblings-sew-and-donate-over-300-masks-to-the-needy

Singapore marshalls R&R efforts to combat covid-19. (2020, November 2). *Agency for Science Technology and Research News*. Retrieved from https://www.a-star.edu.sg/News-and-Events/a-star-news/news/covid-19/singapore-marshalls-r-d-efforts-to-combat-covid-19

Singapore may get first Covid-19 Arcturus vaccine in early 2021. (2020, November 10). *Bangkok Post*. Retrieved from https://www.bangkokpost.com/world/2017251/singapore-may-get-first-covid-19-arcturus-vaccine-in-early-2021

Strange, Joseph L., and Richard Iron. Centre of Gravity: What Clausewitz Really Meant. *Joint Forces Quarterly 35* (2004), pp. 20-27.

Tan, Yvette. (2020, September 17). Covid-19 Singapore: A 'pandemic of inequality' exposed. *BBC News*. Retrieved from https://www.bbc.com/news/world-asia-54082861

Villacres Edward J. & Christopher Bassford (1995). Reclaiming the Clausewitzian Trinity. *Parameters 25*(1). Retrieved from https://press.armywarcollege.edu/parameters/vol25/iss1/9

Wilson, E.O. (1999). Consilience: *The Unity of Knowledge*. New York: Vintage Books.

World Health Organization. (2020, October 12). *COVID-19 Questions and Answers*. Retrieved from https://www.who.int/emergencies/diseases/novel-coronavirus-2019/question-and-answers-hub/q-a-detail/coronavirus-disease-covid-19

Yong, Michael. (2020, October 13). Timeline: No new COVID-19 case in Singapore's dormitories for the first time in more than 6 months. *Channel News Asia*. Retrieved from https://www.channelnewsasia.com/news/singapore/covid-19-cases-singapore-dormitory-zero-six-months-13271976

THE LEADERSHIP INTERVIEW

with **Chan Tsan**

Chief Executive, Home Team Science and Technology Agency

I see myself as a chief enabler. CE can stand for chief enabler. I'm here to enable, to enable my staff to succeed, to remove obstacles. The job of a leader is growing his people, so that's the way I see myself.

His personal story does not matter, says Chan Tsan. The first Chief Executive of the Home Team Science and Technology Agency (HTX) believes the job of a leader is to inspire people to dare to try, to learn, to exceed expectations, to rally around the cause and not the leader himself.

In the Leadership Interview with *Journal* Editor **Susan Sim** soon after celebrating HTX's first anniversary, Chan is candid in discussing his vision for HTX, his leadership philosophy, and some of the hard choices he has had to make since taking up appointment as head of the Home Team's latest agency. His pride in the 1,300 HTX staff is palpable – they had in one year made the transition from working for individual Home Team Departments to working as one entity for the entire Home Team without "dropping any balls", and at the same time, embraced the challenges posed by the COVID-19 pandemic, taking on new missions to become a force multiplier for the departments.

"In hindsight, it was a good thing that HTX was formed just before COVID. If not, I would imagine it would have been a lot more difficult for the Home Team Departments to pull this off together because the resources would have been spread out all over the place," he says when asked if it was fortuitous that HTX was stood up as a statutory board on 1 December 2019.

HTX runs what he calls "a cradle to grave operation", drawing in all the science and tech talent and projects of all the different departments under one roof. He is thus grateful to the Heads of Home Team Departments for putting their faith in his fledging agency.

Chan, a French-trained engineer with almost two decades of working experience in technology and ops-technology roles in the Home Team, is concurrently Deputy Secretary (Development) at the Ministry of Home Affairs Headquarters.

Following is an edited transcript[1] of the *Journal*'s interview with CE Chan Tsan:

STANDING UP HTX

"DEAL WITH A FEW OF OUR BUGBEARS"

What was your brief and how difficult was it to go about staffing a new agency that essentially involved "poaching" manpower and portfolios from existing Home Team Departments?

HTX is one year old but the journey to get us here started before that. You would have heard of Home Team Transformation. It was started by then Permanent Secretary of Home Affairs Leo Yip in 2015, to get the Home Team Departments to think about what the future would be like in 2025 and beyond, and how we need to transform ourselves to transform the way we work in order to be effective in future.

A lot of the strategies that came out of this Home Team Transformation exercise centred around science and technology. It was already very clear to the Home Team that science and technology was going to feature a lot in whatever they do. And this was in 2015.

But what hadn't really been crystallised at that stage was "how". How were we going to build this capability? How were we going to change the way we look at technology, the way we look at capability development in the Home Team in order to achieve those gains?

We had sort of an idea that we had to change the way that the Home Team was doing its capability development. Back then, it was very silo, silo-fied if there is such a word. Each Home Team Department had its own technology department. They all did their own thing with some high-level coordination at MHQ level.

The idea to form a dedicated S&T agency became more concrete in late 2017 after Prime Minister visited Woodlands Checkpoint. It was basically a visit to the Home Team to look at how we used technology. And he said the Home Team should be doing more, we should be looking at building our own capacity, our own organisation, our own organic capabilities. I think he stopped short of saying, set up a Stat Board. But he sort of gave his support for us to really look at it very differently.

I came into the picture early part of 2018. PS Pang Kin Keong and then 2PS Lai Chung Han approached me to come and take on this job.

My brief was extremely simple. It's basically "deal with a few bugbears". There were a few pet peeves and bugbears, a few things that we thought, the both of them thought, we could change. One of which was that it was taking too long for us to implement projects to deliver capabilities. The whole cycle was just too long, and we must do something radically different to change it. And second was this thing – working in silos. It's sub-optimal. We had made significant investments in S&T personnel but because they were all spread out, they were doing similar things, but in different Home Team Departments, and not always talking to each other. These were two of the things that the PSs wanted to change.

So, my brief was to re-organise the whole thing.

I would say the journey towards HTX started end 2017, and we launched December 2019. I came in at the halfway mark in January 2019. So I would say, a lot of the work, a lot of the ground work, very solid foundation had already been laid by the time I came on full-time.

It wasn't easy getting the necessary buy-in to form a stat board. We needed buy-in from three groups. First, the external stakeholders, the WOG [whole-of-government] stakeholders. Because forming a stat board is not so simple. Many people need to say yes. MOF [Ministry of Finance] has to say yes, PSD [Public Service Division] has to say yes. There's this committee on government organisations chaired by then DPM [Deputy Prime Minister] Teo Chee Hean. If you want to form any new government organisation, you have to present a case to the Ministerial Committee on Government Organisation. They have to say yes. So, quite a number of people have to say yes. Then you need to go to Cabinet.

---

[1] *The interview was transcribed by Lim Jing Jing. This transcript has been edited for length and clarity.*

I'm very grateful all this was settled by the time I came on board. A lot of heavy-lifting went into it by our own PSs, PS Kin Keong and back then, 2PS Lai Chung Han. They had to move a lot of things, exert their influence. But a lot of it was also made easier because PM said to do it.

Were there naysayers who said, there's already a limited talent pool, why do we need another agency?

There is this analogy that was given to me, that S&T talent in Singapore is scarce, like fruits of a tree, and many people are competing for the same fruits. I prefer to see it differently. I prefer to see it as, in HTX, we now have a chance to grow more fruit trees, to add a different colour to the garden to attract young people to want to join, take up a career in science and tech because we're different. DSTA attracts a certain type of people – the heavy machinery, the weapons, the warfare, the ships and planes. Ours is a bit different. You could say that the tech is not as advanced, not as sophisticated. But ours touches the lives of every Singaporean. It's a lot more relatable. I don't know whether it plays a part; I think it has a certain appeal that is different. Not so hard and so macho.

"A RACE AGAINST TIME"

Beyond external stakeholders, who else did you have to win over?

The second group of stakeholders is very important - our Home Team Departments. I would also say that by the time I came on board, that was also more or less settled by the PSs. We have a team of extremely enlightened Heads of Departments right now in the Home Team. They all saw that in order for the Home Team to move forward, to take us to the next lap, having our own science and tech agency was the right thing to do, even if it meant all of them had to give up something. They gave their full support. So by the time I came, that was already settled. All the Home Team Heads of Departments were all fully involved. There was no resistance whatsoever, they completely bought into this idea that MHA would have a science and tech stat board.

The key thing which I had to do when I came in was the internal part, bringing all the different officers doing science and tech work, who were all across MHA, under one roof. What is the structure to house them? Are we going to unify the scheme of service? A lot of HR, admin, change management to be done. And to form a stat board, you need to go to Parliament, which has to pass the HTX Act. We had 12 months. Well, effectively 11 months since the launch date was to be 1 December.

So I would say the challenge for me and my team was one of a race against time. We had a rough structure, a rough skeleton of what the stat board would look like, as well as a rough organisation structure. But who would fill those boxes? I didn't have a team yet.

It was really a race against time when you compare HTX's formation with the formation of DSTA. I am quite familiar with the formation of DSTA because when I finished my studies in France, in engineering, and came back to serve NS beginning of 1999, I was sent to the Defence Technology Group (what would eventually become DSTA). By then, they had already decided to launch DSTA in 2000. At that point in time, the Defence Technology Group had already been in place many years. This means that by the time they decided to form DSTA, they already had all the different technology groups that were spread out in different parts of Mindef under one Defence Technology Group for many years. And even after they formed DSTA, they didn't immediately change the scheme. I think it was two, three years later that they unified all the schemes in different forces under one roof, the DSTA scheme.

And we were trying to cram everything into 11 months, this mammoth reorganising task. There was a point in time when we weren't sure whether we would make it by 1st December. But we decided we would just get it done.

Six months before the launch, we decided to invite PM. We thought since PM was the one who gave us impetus, it would be a nice story. And to my surprise, PM responded within a day that he was happy to do the launch.

You were also able to do product demos, to show proof of concept?

We had a few things that we did differently. We did a hologram show, a live show on stage with professional actors. It looked like a scene from Minority Report; it wouldn't have looked out of place in a Hollywood movie. But what I really liked about it was that the concept was developed by our own staff, every piece of technology you saw in that 10-minute show was something that we were either already working on, or something we had already conceived, had started doing research on. It was a very strong and bold statement of intent of where HTX wants to bring the Home Team. In that 10-minute show, we wanted to give the audience a picture, an image so powerful, so strong of what the Home Team will be like X years from now.

And after the hologram show, we had a tech demo outside, of many of the things we showed in the production, the prototypes. Most of them were not ready for use but you could see where we were heading, the overall direction.

For instance, one of the vehicles that was featured in the hologram show was Xentinel. This is the counter-drone vehicle. The idea is that it's a one-man operated vehicle, with a counter-drone system onboard. If you want to protect a certain area, one police officer can drive the vehicle, park it there, and start the system. Then you have a bubble of protection against drones. That idea was conceived at the beginning of 2019, February/March, and by the launch, 1st December, we showcased the vehicle. It wasn't fully operational. It's still undergoing testing. But it worked.

"WHAT TOOK US SO LONG?"

And the third group you had to persuade?

That third group is the internal stakeholders. Rather, the science and tech officers, the 1,300 officers that ended up in HTX. I would say that, overall, this group was not a difficult sell because to many of them, the feeling was – what took us so long? So that was the feeling I got when I came in and formed the initial team. All raring to go. Let's not waste any time, let's roll up our sleeves, let's get to work.

My job in rallying this group was not that difficult because the mission is clear, the raison d'etre for HTX is very clear. It sold itself. It's the execution that we had to be mindful of. There were small things, small decisions that we took which, I felt, were appreciated by staff. For instance, the principle that HTX will not leave any men behind. What was difficult was the nitty gritty, the HR [human resource] aspects, the schemes, people calculating, comparing. So those were the parts we had to be careful of.

The HR exercise was massive. First, we had to bring people together, change the schemes for a thousand over officers. The added complexity was that out of these 1,300 officers, about 200 are not even Home Team officers. They're from GovTech, they're from DSTA, seconded, embedded, whatever you call it. So we had to work things out with their parent agencies.

"YOU CANNOT DROP ANY BALLS"

You were taking everyone on board? All the existing science and technology folks? Were they given a choice?

The Home Team has 28,000 officers. We had to identify job by job, which jobs are considered S&T jobs. If at that point in time, you are doing an S&T job, the job goes into HTX, you go to HTX.

If at that point in time you are already on the Home Team Specialist Scheme as an engineer or scientist, that scheme will become the HTX scheme. So, you have no choice. You will be legislatively transferred into HTX.

Where you have a choice is if you're on another scheme, e.g., a HUS [Home Team Uniformed Service] officer. You have a choice whether to convert your scheme. You can choose not to convert your scheme, to carry on as HUS and continue to be seconded to HTX, until such time that secondment ends. Or you can choose to convert to HTX scheme. The choice is yours. I will not look at your CV, look at your CEP and start picking and choosing who I want if you don't want to go back to your Home Team Department. So that was one of the first principles we adopted very early on.

The instruction or brief given to us by my bosses was, "you cannot drop any balls". In transitioning all these people, all these projects, all these assets – in the process, you cannot drop any balls. So "no balls dropped" became our mantra. We went to every Home Team Department to meet all the HODs [Heads of Departments], and told them we are now going to take over all these projects, all the officers, all these assets, but I promise you I won't drop any balls in the process. So that was another massive challenge. I've described it as trying to overhaul a car engine when the car is moving. Or performing heart surgery when the patient refuses to lie down. It's a very delicate task trying to re-engineer the whole thing but the machine cannot stop running.

"EVERYBODY HAS TO LEAVE THEIR EGOS AT THE DOOR"

You've alluded to the work that is done in HTX as breaking out of siloes. But when you break out of siloes, you inevitably trample on egos. How do you find the balance? What do you tell your own officers?

There is this quote which I've borrowed from DPM Teo. I can't remember on what occasion he said it, but it's in relation to us forming this stat board. He said that to do this massive restructuring and for it to succeed, "everybody has to leave their egos at the door".

I remember I borrowed this quote the first time I gathered the HTX leadership team for a retreat at SPOM [Senior Police Officers Mess]. I had spent about two months identifying and interviewing all these people I could appoint as directors. What I call my leadership team are directors and above, about 30 of them. So I borrowed this quote from DPM: Doesn't matter what you were before this, who your boss was before this, but for us to succeed, for HTX to succeed, everybody here has to leave your egos at the door, including myself.

"NOW THE INDUSTRIES SIT UP AND LISTEN TO US"

The HTX vision statement is "Exponentially impacting Singapore's safety and security". Can you explain that in layman's terms?

It's quite simple. We want to use science and technology – that's implicit – to impact Singapore's safety and security. It's also implicit that it's positive impact. And the only term that needs explanation, I suppose, is exponential. So what is exponential versus linear?

Imagine you're running on a treadmill. If the treadmill is set to linear, the speed increases gradually until you can't cope at some point. Usually you will have some time to react when you realize the speed is going too fast. At exponential speed you need to increase your pace multiple times every second. The treadmill will suddenly go so fast you will not have time to react.

So where I see HTX is, we want to bring that impact. We want to leverage science and tech to help the Home Team officer running on the treadmill to stay on the treadmill even if it goes exponential. And the only way to do it is if he or she has the tech support, tech capabilities to help him or her to be many times more effective than just one person. If one becomes two, two becomes four, four becomes eight, then quickly, the capabilities of the Home Team become way beyond the 28,000 people that we have, many times more.

Do the Home Team Departments come to you with problems and say, find me a solution? Is it a two-way process, or is it you saying "there's this technology we want to work on that we think will help you?"

Yes, the idea is we want it to be a lot more two-way. In the past before it was HTX, things were a lot more one-way – ops pull. Ops pull is when the ops user comes with the tech and says, I have a problem, I need this to solve the problem, can you go and buy this for me to solve the problem, while I develop whatever it is. Tech push is the other way, tech push is the tech people know roughly what kind of problems you are facing today, what are some of the problems you are likely to face tomorrow, and then proactively offer solutions, offer suggestions on what kind of tech would be useful to you.

With the formation of HTX, the idea is we want to have more tech push. In the past, with tech being

departments within HTDs, some even within the ops departments, a lot of it was, "the ops tell me to do this, then I do this." We want that to change a bit as we balance; sometimes there is a bit of tension, ops pull and tech push.

How do your people find out about new technologies out there? Do they sit and dream about these or do you send them out to visit other agencies?

Certainly, going outside to see what's being done is a very, very big part of what we do. And one of the advantages of forming a science and tech stat board like HTX is that you consolidate the entire demand of the entire Home Team. When my people, let's say if you are from the Robotics, Automation and Unmanned Systems Centre of Expertise, when you go around to talk to partners, industry partners, international partners, we're not just talking about robotics for police, we're not just talking about robotics for SCDF, but the entire Home Team. The demand becomes aggregated, it becomes a lot more substantive, and the industries sit up and listen to us.

What we've done is, we've created 15 Centres of Expertise. We want to hone the growth. We want to make us deep specialists, specialists in forensics, specialists in data science, specialists in cybersecurity. So when we talk to Home Team Departments, when we talk to industry, we carry a lot more weight because these are experts in the programme that we're starting to build.

We didn't start from scratch. Before we started HTX, there were already pockets of these

expertise around. We brought them together, then we invested more in them.

IMPACT OF COVID-19

"WE HAD THE OPPORTUNITY TO LIVE OUT OUR MISSION IN A MORE VIVID MANNER"

Was it fortuitous then, that HTX had already been set up when the COVID-19 pandemic hit Singapore?

This is an interesting take on it. I guess it depends on whether you look at the glass half-full or half-empty. We launched HTX 1st December 2019. And then, in January – Virus in Wuhan.

A lot of our plans went haywire. We had a lot of plans to do townhalls, culture building, bringing people together, activities, healthy lifestyle – all down the drain. All could not be done. So the glass half-empty part would be that a lot of our plans were disrupted.

But the glass half-full part, which I think now in reflection, I would agree that it was fortuitous because without COVID, we wouldn't have been able to do a lot of things. We wouldn't have been able to stand up a lot of operations, capabilities. We wouldn't have had the opportunity to contribute at a much higher level. So we stood up testing for COVID-19 at the checkpoints, the borders, when people started coming back from overseas. That was completely something new for the Home Team.

We've always had labs at the checkpoints, but we never did human testing. But because of COVID, there was a need and we rose to the occasion. Today, our lab is certified by MOH [Ministry of Health]. We wouldn't have had the opportunity to do all these things, we wouldn't have had the opportunity to deploy robots in dorms, and fly drones to support Police operations, to implement the e-wrist band – for ICA to enforce Stay Home Notice. We wouldn't have had the opportunity to live out our mission, to force-multiply the Home Team in such a vivid and in-your-face manner.

So, in hindsight, maybe it was a good thing that HTX was formed just before COVID. If not, I would imagine it would have been a lot more difficult for the Home Team Departments to pull this off together because the resources would have been spread out all over the place.

Has COVID-19 changed your vision for HTX? It has changed your trajectory. Has it changed your vision?

I would say it hasn't changed our vision. In fact, it has made it even more – how would I say it? – more real. It's re-affirmed that this is the vision that we need to pursue.

I give you one example. ICA's New Clearance Concept. All this was conceived before COVID. And the idea is that we want a future where people travelling in and out of Singapore can breeze through immigration. No need to take out passport. Don't even need to stop, just walk through the gantries. The sensors, the systems, the intelligence, the AI will take readings of that person, and be able to tell us what's the threat level – high, medium, low, whatever it is – and then allocate the appropriate response. That will mean, let the person pass, or assign an immigration officer to speak to the person. All this was conceived pre-COVID.

Post-COVID, it tells us that our vision is correct, because now everything needs to be contact-free and automated. If anything, COVID really confirms even more that this is an evolution for MHA. If anything, we'll work even harder to get this right.

"GATHER 1,000 PEOPLE ONLINE FOR A TOWNHALL?"

What about the building of your organisational culture, given the disruption in workflows that COVID has created? How are you going about building an organisational culture?

This is one of the things that's really been disrupted a fair bit. We were planning to do townhalls, something like three major townhalls where we bring all these shared offices together. What is ironical is that because of COVID, we have done even more – at least one per month. Some months we had two townhalls. And on a scale that we didn't imagine was possible. Gather 1,000 people online for a townhall? It's not that we didn't know it was possible, it just wasn't done. You think of townhall,

you think of, you know, gather people, must have makan, and it's a live show.

The first townhall we did was from my own house. I borrowed my son's bedroom, changed the backdrop, took down his Iron Man and Spiderman posters – my wife helped.

So in a way, COVID forced us to do things differently. I must say again, it was a good thing that came out of it. And we realised then that engagement is very important, especially when you have a crisis to cope with, and officers are uncertain – to be able to hold up the phone, to see management, to hear from management regularly.

What do you say to your people in the townhalls? Are these for solving problems, or are these about "how are you"?

The first few were very much about COVID. How to cope with the circuit breaker and because we are essential services, some of the officers had to continue working on the ground. For them, it was about giving them assurance that their needs would be taken care of and they can carry on working in a safe manner. Whatever you need on the ground, let us know, we will see to those needs. And then to those who are forced to work from home, it was about giving them the support that they need, rallying people around because not everybody has an easy time working from home. Like myself. I have four young kids at home, so I know it is a challenge.

Then when we were out of the circuit breaker, people wanted to know, can I go back to work? Can I not go back to work? Then subsequently we moved on, to talk about organisational things, about building HTX, even about coming to our new home [Mediacorp Campus]. We did a poll, asked officers what kind of breakout rooms they want. Some of the designs came out of a competition. We had ten or twelve different ideas and we got officers to vote on what they want to see in the breakout rooms. We did things like that. It helps build that sense of belonging, that sense of ownership in HTX. All this was done virtually, that's why I would say without COVID, we wouldn't have done that. And because of COVID, all these online tools became part and parcel of our everyday life. And we were able to use them quite effectively because every month we have a townhall.

"WE TAKE CARE OF TECH CRADLE TO GRAVE"

What about HTX and its work are you most proud of?

I would say a few things. One is the "no balls dropped" part. I'm quite proud of the way we handled the transition, that we brought everybody, all the projects, systems in. I still remember some of these numbers because at the first anniversary, I had to give a speech.

Today we manage, I think, it's 850 projects all across the different Home Team Departments. About 850 projects, 270 properties. They're all under HTX's care.

270 properties.

Properties. Building and infrastructure properties. Police stations, division HQs, the ICA Building, all the building infrastructure, Ministry HQ maintenance. All taken care of by HTX.

A few thousand vehicles and vessels, tens of thousands of ICT devices, computers, laptops, phones. Three hundred ICT systems.

It's a huge responsibility that we've undertaken and I'm quite proud of the fact that we've done this in one year, brought all this under our wing. And there's not been any perceived drop in level of support. Many areas I think we've done better than before.

So you're telling me that the iPads issued by HTA, for instance, are supported by HTX. You're responsible for their procurement and maintenance.

Procurement, maintenance. If you see a police vehicle breakdown on the road, there's help on the way.

That doesn't sound very sexy.

(Laughs) No. It's not. So that's the thing about HTX. We don't just do the sexy bits of the work. We take care of technology from cradle to grave, literally. We're not just the ones that play with toys and then leave you the toy. Once you play with the toy, we sell you the concept, and then develop it into a full use, full-fledged solution that works, not only works, but it doesn't break down. And if it breaks down, we're the ones who

will come in and fix it for you. So it's really cradle to grave, end to end, whatever you call it.

It's a huge responsibility that we don't take lightly, whether it's the sexier bits of the work, or the completely unsexy part. We take every node in the chain, the entire chain, entire lifecycle, as seriously as we ought to because it's really about keeping lights on, keeping the Home Team running 24 by 7. It's a huge responsibility. I'm quite proud that we have handled the transition in one year. I would say very well.

Second achievement is our growth. We have grown a fair bit. So despite COVID, or maybe thanks to COVID, I'm not sure, we have grown significantly. We recruited 260 staff in 2020. So that is quite a significant number. And we only really ramped up four, five months ago, because when we first formed HTX, our HR team was so small, we had to first grow the HR team before it could start operating at an optimum level. But since four, five months ago, we ramped up and we're recruiting today at a rate of about one new officer per day. That's quite phenomenal. And I'm quite heartened when I do recruitment interviews that people do recognise the value proposition that HTX has.

I think what makes us unique and compelling, I would summarise in three things. One is our mission. People find it very meaningful that they have an opportunity to contribute to the safety and security of Singapore in a very tangible way. Two, the science and tech work that we do is impactful. Impactful in the sense that it's work that you do and you see, you see it serving the needs of Singaporeans, you see it serving the needs of policemen, the fire-fighters, etc. It's about saving lives, it's about solving crime, securing our borders. These are things that people identify with and they, jobseekers, like the fact that I can come in and do these things, I can see the impact. And the third, the third thing I would say is that they are attracted that we are new, that we're a stat board but we're almost like a start-up stat board like no other. So that's an attraction to some who prefer joining an establishment that's a lot more stable, established, but for some, especially the younger ones, they see that it's exciting, it's new. It's a chance to be part of something new. I find it encouraging.

GROWING TALENT AND GROOMING LEADERS

"ARE THE EMCEES REALLY ENGINEERS?"

Do you meet every new recruit? Interview every applicant you want to recruit?

Not every single person. I interview typically those of a certain seniority and also fresh grads.

We started what we call the HTX Science and Tech Associate Programme. This is where we select, we recruit fresh grads, typically those better performing ones, high potential ones. I interview every single one of them. The idea is we want to groom the next generation of science and tech leaders of the Home Team. And when they come in, we typically send them into different areas depending on what field they are studying. We will stretch them; they will not just do technical work. We will get them to do all sorts of things, such as organising the recent anniversary event, or even last year, the launch event. We started recruiting associates in 2019, so all 20 of them were handling lots of things. Planning for seating, where to put PM, where to put SM. I thought it would be quite fun for a fresh grad to do something like that. Our event emcees were associates. Fresh out of school – I think they joined us in July. They did so well that friends in the audience asked, "These are engineers? Real or fake ones? They're engineers or they're emcees?" They are real engineers. Amazing young people.

I count this as one of the achievements as well – how the team has come together. It was barely one year ago that we came from all over the Home Team to form HTX. A thousand three hundred people. You could say similar DNA because all Home Team, but yet different. You know the Home Team Departments – they have sub-cultures, sub-DNAs, they're all slightly different.

So, to see all those people come together, work together as a team, it was very gratifying. And one particular instance – this was I think, April, March, when the borders were still open and many of our students studying overseas, in the US, UK, were flooding back. And all these people when they landed in Singapore, we would test them for COVID. Our lab team was very, very stretched, because our lab is in Pasir Panjang but the samples were coming in from

Changi Airport, some from Woodlands. We needed people to run all over the place to collect them. They were overwhelmed. We did a call for volunteers. I was very gratified to see 60 HTX officers from all across HTX, coming together to volunteer their own free time. And these were 24/7 operations, so some of them volunteered to do night duty and the next day, they went back to work. That was amazing bonding, to see this group of people rallying behind the team, rallying behind the mission. I thought it was fantastic.

THE IDEAL QUALITIES OF LEADERS

In grooming future leaders, recruiting future leaders for HTX, what are the qualities you look for?

We've spent a fair bit of time thinking through the values we want to see in our future leaders. The HTX leadership team worked a fair bit with the HR team, and we came up with a framework we summarised into five letters: I-D-E-A-L. IDEAL.

Each letter represents a quality. So "I" stands for inspire, "D" is dare to try, "E" is empathise, "A" is aim high, "L" is always learning. We came up with this by asking ourselves what we want to see in our leaders.

We have four layers of hierarchy. So, the total universe of people with supervisory responsibilities – about 400ish. The kind of qualities we want to see in them, and therefore the kind of qualities we want to see percolate down to HTX officers and their future leaders, are summarised in these five qualities.

The way to understand these five qualities is not from the leader's perspective but from the officer's. For instance, inspiring – it's not about how inspiring the leader is in terms of oratory skills but how inspired the staff are themselves. How inspired they are to exceed expectations, to always do their best, to give their all. These are what we want to see our leaders build. Each of these qualities has specific meanings. "Dare to try" is something that we think is very, very important for a science and tech agency. In fact, I think it's something that is the most important piece we want to build in terms of culture. We want to build a culture whereby every HTX officer isn't afraid to speak up, isn't afraid to offer a suggestion, offer an idea, offer a new way of doing things, to not be afraid to try. And trying means maybe you fail. So dare to try, dare to fail.

So please don't come to me and then expect that I have all the answers. No. I need all of you to contribute, to tell me blind spots I may not have thought of. And that's part of the challenge, and I think it's a process.

It's the culture I want to build in HTX. Every officer has their own value to add, especially when it comes to science and tech, things that are very, very specialised.

Do you feel that your career has prepared you for this job?

I think I'm quite fortunate in that at a very early stage in my career, I had the opportunity to lead people. And I had really good role models, bosses who gave me very good advice. In my second year in a Home Team Department, my boss K made me what we call section head of a new team. And then third year into the job, he made me concurrent head of another section. This time I had 30-plus people in the team. I'll always remember two lessons K told me when I first became a supervisor. One is what he called ABC of leadership. He didn't even teach me. He just chucked me articles and said, "You go and read and figure it out by yourself." It is actually exceedingly simple. One article was

about the difference between a manager and a leader. A manager is someone who comes to work every day, brings the team from point A to point B because that is the task that is given to the manager. So every day, he does the necessary. But if you want to be a leader, you've got to go beyond that and think about C, beyond point B. You'd better think how to get from A to B faster, to get from A to B the next day and bring the team to C. One of my early lessons.

Second lesson is equally valuable. K told me that to be a leader, sometimes it's not about talking. It's equally important to sometimes shut your mouth and listen to what your staff tells you. So, I do feel that in a way, I had this preparation to lead the team to C. I saw it as lessons that I learnt to manage teams, to manage people, which I find relevant even today.

In a way, I always thought I was fortunate I had this grounding where I do different types of operational work, staffing work, engineering work. Good mix of different things.

Would you call yourself a technologist, rather than a technocrat?

I was trained as an engineer, but I don't actually consider myself a technologist. If you ask me the nitty gritty details of technology, I'm really not into that space. I've said this many times to my staff – you cannot expect me to know more about your field than you.

I still think of myself as an engineer, but not in a very technical sense of the word. I explained this to my staff at one of the townhalls. Engineer – if you look at the word engineer, it comes from Latin. Its two root words are ingenious, and engender. Meaning engineer – you are ingenious, creator of solutions, so in a way, you are an ingenious problem solver. So that's kind of how I think of myself, as someone who can come up with ideas and solve problems, not necessarily do things myself. And my job here in HTX, I've also described this to my staff before, that I see myself as a chief enabler. CE can stand for chief enabler. I'm here to enable, to enable them to succeed, to remove obstacles. The job of a leader is to grow his people. So that's the way I see myself.

"SUCCESS IS NOT ABOUT WHO HAS THE BEST TECHNOLOGY BUT WHO USES TECHNOLOGY BEST"

Can someone without a science and engineering background run HTX?

I think S&T background will help but it's not really necessary. I think what's equally important, or maybe even more important than this is an understanding of ops tech. MHA – we are a very operational Ministry. We're not really into science and tech research for research's sake. It's really about use of technology. I believe success is not really about who has the best technology, but who uses technology best. I like to quote this example of Apple. Apple is so successful in making the iPhone, the iPod, iPad. Did they invent all this technology? They did not. The tablet was there before. The touchscreen phone – somebody else came up with that. So, it's really not about the best tech, but what Apple was able to do was package it in an attractive and usable form. The design of it, the concept of operations – in our parlance, the CONOPS. You want to design something that even the user doesn't imagine that he needs it. But the minute you produce it, you make it, you invent it, you put it in front of him, he goes, "why didn't I think of it?"

So, whether you really need somebody with a very strong engineering background? Maybe, maybe not. I won't say it's a must but a very good understanding of tech, ops tech, is important.

WOMEN IN STEM

"WE BRING SOMETHING DIFFERENT TO THE TABLE"

You said earlier that the appeal of HTX is that it's not so macho.

I thought it was interesting that of the five PSC [Public Service Commission] scholars we have, four of them are women.

If you look at our statistics, the staffing statistics, the overall population of HTX, unsurprisingly, is about 60-40 male to female. So more males than females. But below the age of 30, the percentages

are flipped. So I do think that we bring something different to the table.

Globally there are fewer women in STEM. Does HTX feel a special responsibility to encourage women to join its workforce and to groom them for leadership positions?

I don't know whether I would call it a special responsibility. But maybe if we can attract more young girls to study, to consider a career in S&T, then it would be a space for HTX to be able to contribute in.

Four of the 15 members of the HTX Board of Directors are women.

We wanted diversity in our board – a diverse spread of experiences. The guidance from Minister was to have a board that is not overly heavy on government officials. And because we needed to put in five Heads of Departments – that is vitally important, because they are the key stakeholders for us – then plus myself and chairman, PS Chew Hock Yong, that's already seven.

Then with Minister's guidance, we went about looking for private sector people with diverse experiences that value add, to give different opinions to the board. So that's how we landed with our directors. As it happened, a good number are women.

HARD CHOICES

"THE THINGS THAT WE DO OURSELVES, WE CAN BE A BIT BOLDER"

What are the hard choices you've had to make?

They are usually to do with people – redeployments to ensure better job fit. Not always pleasant, or easy, but these are things I've had to do.

My other hard choices have to do with balancing. I've talked about how difficult it is trying to overhaul the engine while it's moving. The easiest way to make sure you don't drop balls is to keep everything status quo. So, you take all the Home Team Departments, bring them to HTX, you change the branding, you change the uniform, change the lanyard but you keep them where they are, supporting Home Team Departments, don't touch anything. Sure, balls won't drop. But it also means you're not creating synergy, you're not changing anything.

So that is my balancing act every day. The decisions that come up – we know we have to change, we know we have to change fast. But I also know that if I change too fast, balls start dropping. It's always a balance when to let go, when not to let go, when to insist, "No, this one must change, go back to drawing board and come and show me a better way of doing things, a more synergistic, a more manpower efficient way." Or to close one eye, close two eyes, and say, "Ok lah, this one, in the interest of moving forward, we go."

Almost on a daily basis we are looking at decisions like this, and I'm grateful that these are discussions, conversations that I can have openly with my leadership team. They understand and we take decisions as a collective group.

"No balls dropped" also suggests you're not allowed to have failures, which kind of contradicts what you're trying to do.

Yeah, so it depends. Fail, fail in what, fail how big. There are certain things that cannot fail.

Like what? What cannot fail?

For instance, the flagship programmes. These are huge, mega programmes, billions of dollars involved.

Every Department has at least one flagship programme?

At least one.

But when these projects came to you, maybe the departments had been working on them for a while?

They were at different stages of implementation and conceptualisation. Some were half-cooked, none were completed, some were halfway through implementation, some were still gathering ingredients – they're in different stages. I would

consider those as "cannot fail". But in many other things, new CONOPS, new solutions, new prototypes, new ways of doing things – those that we do ourselves, we can be a bit bolder, be a bit more experimental.

"I WORRY ABOUT MISSING WEAK SIGNALS"

What keeps you up awake at night?

Actually, nothing keeps me awake.

That's what all of you say. How is that possible?

The honest truth is I have no problems sleeping, and partly it's to do with my personal philosophy that everything that I do, I can only do my best and whether I succeed or fail, I have given my best. I remember this concept that was taught to me when I went for a course in Israel. They call it professional optimism. I thought that was a very valuable concept; anything can go wrong, especially in operational work. Your job is to minimise the percentage of failure. You cannot guarantee your boss that 100 per cent you will succeed. Sometimes you can, but very rarely. So, I always believe that, I know I can only do my best. My best means that I make sure that everything I do, I cover all angles. If something fails, higher force conspires against me, and if it fails, it fails. What can I do?

Man proposes, God disposes.

(Laughs.) That's what I mean. But I would say – it's not that nothing troubles me, but what bothers me typically are the large, structural things. We're not done evolving HTX. We're not done reorganising our resources. I talked about gathering the Home Team Departments' science and tech resources. It's not optimal yet, the way we are organised. I won't say it worries me, but that's on my mind a fair bit.

I worry about missing weak signals, things that are happening on the ground, signals that I see or don't see. Cracks that are appearing that I didn't see because it's fog of war, and I'm in the cockpit of the ship, I can't be everywhere? These are things that worry me.

"I WOULD FOCUS MORE ENERGY LOOKING AT PRINCIPLES, VALUES"

What is more important to you, being an effective leader or a moral leader?

I think you really have to be both. The public service generally is quite good at producing effective people. So that usually is a given for senior people. I would say that in my position as CE, if I want to groom the next generation of leaders, I would pay more attention to the second part. Maybe moral is not the right word. When you talk about morals, basically you're talking about values. I would maybe focus more energy looking at principles, the values, which are not so easy to suss out. This is something that I think going forward, I may have to pay more attention to.

What is your personal story?

My personal story? In a lot of my dealings, discussions, I don't really like to talk about myself. I would really rather the story be about HTX. I feel that while I'm here, my job mainly is to rally people, not around me, but around the cause, around the cause of HTX, around the organisation. The values, the culture, the loyalty, the sense of dedication and commitment – it has to be to the organisation, and not to me personally.

I have a story, but I'm not so sure it's really the most important thing. The most important thing is the story of HTX, the why of HTX, the work that we do, how we want HTX to inspire our employees to give their best.

What is your personal mantra?

I quite like this quote from Dwight Eisenhower, which goes something like, "Leadership is the art of making someone do what you want done because he wants to do it." It's about inspiring them to want to do things because they want to do it. It's an idea that when people are inspired, they give more, they give more of themselves to do their best. And how do you get them inspired? It's more effective when it comes from within, rather than being pushed, rather than being motivated by an external force.

FAKE NEWS AND REAL VIOLENCE:

WHY BUILDING SOCIAL MEDIA LITERACY IS A NATIONAL SECURITY IMPERATIVE

Priyank Mathur
Founder and CEO, Mythos Labs

Yes, Fake News Can Kill

On a muggy April evening during the early days of the COVID-19 lockdown in India, an elderly gentleman named Chikne Maharaj Kalpavrukshagiri, his companion and their driver were headed to a funeral in the Indian state of Maharashtra. Unbeknownst to them, a false rumor claiming there was a gang of organ-harvesting thieves driving through the area began to spread like wildfire on WhatsApp. When the three men stopped their car at a local checkpoint, a group of villagers, dangerously on-edge due to the disturbing news they had read on WhatsApp, grew suspicious and began to panic. They assumed these three men must be part of the fictional organ-harvesting gang. The villagers approached the car and started brutally attacking Mr Kalpavrukshagiri and his companions with sticks and axes. The local police was completely overwhelmed, unable to prevent the violent mob of over 115 people from injuring five policemen and beating the three travellers to death.

WhatsApp killings, as they are often called, have claimed over two dozen lives in India since 2017. In neighboring Bangladesh, four people were killed in communal clashes on October 20, 2019, incited by a false rumor that a Hindu man had insulted the Prophet Muhammad on Facebook. A few months earlier, on May 21 – 23, violence at the polls in Indonesia marked the "world's first instance of online disinformation leading to election-related riots" (Ishak, 2019).

As someone who works on countering violent extremism and misinformation, I frequently encounter individuals whose limited understanding of social media makes them vulnerable to manipulation and, in many cases, instruments of violence. A mother of two in East Java, Indonesia, told me she agreed to meet a terrorist recruiter because he "was constantly sending Facebook messages and this was the only way to make him stop". When I told her Facebook has a feature that allows users to block other accounts, she was shocked. A 17-year-old boy from India's Uttar Pradesh admitted he joined a lynch mob because the WhatsApp message instructing him to do so was sent by an account with the username Baba (a local term for father) and he thought that meant the message must be from his father.

As social platforms are increasingly exploited to incite violence and destabilise nations, social media literacy – teaching the world's 4 billion users how to use social media safely and responsibly – is a national security imperative we can no longer afford to ignore.

Social Media Literacy Has Not Kept Pace with the Rapid Growth of Social Media

The number of social media users worldwide has more than tripled since 2010, with 376 million new users added in the past year alone (Chaffey, 2020). However, a constant stream of new features and apps makes even experienced users vulnerable to manipulation. According to one study, a majority of young professionals with experience using social media were unable to discern between real and fake news over 50% of the time (Mindedge, 2018).

Takedowns and Labels are Not Enough

Most attempts to make social media safer focus on removing or labeling dangerous content instead of making users more resilient to it. Facebook employs an army of analysts to remove posts that incite violence. In the aftermath of the

2020 US elections, Twitter navigated the flood of election-related misinformation by labelling over 300,000 tweets as disputed or potentially misleading (Fung, 2020). Though important, such measures are ultimately insufficient. Banned accounts can reappear using aliases and content that was taken down or labelled can be re-posted with slight modifications. Fake news and misinformation are here to stay – instead of pretending we can prevent them, we should build our resilience to them by increasing social media literacy.

All Hands on Screen

Meaningful gains in social media literacy will require a coordinated effort by technology companies, law enforcement and civil society. Companies ought to consider embedding in-app tutorials for first-time users that illustrate how to use the app safely and responsibly, perhaps with a quiz at the end which individuals must pass in order to set up an account. Even the popular video game FIFA requires players – no matter how experienced they may be – to practise moves in a simulation before playing a match.

Law enforcement should partner with community members to launch grassroots social media literacy campaigns. Not only are such programs cost-efficient, they are hyper-localised and relatively easy to evaluate. For example, in March 2018, police officers in India partnered with town criers and village elders across 400 villages – going door-to-door to teach residents how to identify fake news and warn them about the dangers of forwarding hateful messages (Biswas, 2018). The program was deemed effective because since its conclusion, WhatsApp killings in that region have completely stopped, even though they have continued to occur in other parts of the country.

Civil society organisations should conduct training programmes that build the capacity of netizens to recognize and report cyber harassment and bullying. Such training can have an immediate impact, as evidenced in a recent webinar hosted by the UN titled "Can Technology Counter Hate Speech." A young beneficiary of a social media literacy training organised by Mythos Labs and UN Women in Bangladesh recalled how the two-day training taught her to recognize and report hate speech on various social media platforms. Shortly after the training, she was the victim of online harassment on Facebook. Using what she had learned, the teenager reported the comment through proper online channels and Facebook's content moderation team took action against the perpetrator, preventing him from harassing this young woman and others on social media (UN Women, 2020).

Since most low-income netizens limit their internet use to apps that consume low amounts of data, civil society organisations should create social media literacy modules that can be accessed on apps such as WhatsApp or Facebook Lite. For example, using chatbot technology to design a WhatsApp Open Online Course (WOOC) for social media literacy would be an effective way to educate large masses of internet users without significantly adding to their data costs.

Since the minimum age for joining most platforms is under 15, social media literacy should be a mandatory subject in schools. This should include modules on how to identity telltale signs of manipulated content, how to report misinformation on various platforms and how to utilize trusted online resources for fact-checking. Children are likely to be more receptive to such training than adults with hardened political biases.

Perhaps Mr Kalpavrukshagiri and his companions would still be alive if their attackers had recognized the signs of a fake WhatsApp message riddled with typos and written in all caps. If internet users in Bangladesh and Indonesia had been taught how to discern between credible news sources and clickbait, deadly communal clashes and election riots might not have taken place. Those who wish to incite violence and chaos have already invested heavily in learning how to use social media – it is time the rest of us do so as well.

ABOUT THE AUTHOR

Priyank Mathur
is Founder and CEO of Mythos Labs, a company that uses technology and media to counter misinformation and harmful narratives. Mythos Labs has conducted programmes in 12 countries on behalf of clients such as the US Department of State, European Commission and United Nations. Priyank is also host of the current season of the United Nations' ExtremeLives, a docu-series about the lives of terrorists and their victims in Southeast Asia. Previously, Priyank served as a Policy Analyst in the Office of the Secretary at the US Department of Homeland Security (DHS). At DHS, Priyank co-authored the department's inaugural Countering Violent Extremism (CVE) strategy and advised the White House and senior DHS leadership on emerging terrorist threats. Priyank also served as Global Consulting Director at Ogilvy and Mather in New York and as a comedy writer at The Onion. Priyank holds an MBA from MIT Sloan School of Management, as well as an MA and BA in International Relations from Boston University.

REFERENCES

Biswas, Soutik. (2018, September 25). The Indian policewoman who stopped WhatsApp mob killings. *BBC*. Retrieved from https://www.bbc.com/news/world-asia-india-45570274

Chaffey, Dave. (2020, August 3). Global social media research summary August 2020 *Smart Insights*. Retrieved from https://www.smartinsights.com/social-media-marketing/social-media-strategy/new-global-social-media-research/

Fung, Brian. (2020, November 12). Twitter says it labeled over 300,000 tweets around the election. *CNN Business*. Retrieved from https://edition.cnn.com/2020/11/12/tech/twitter-election-labels-misinformation/index.html

Ishak, Yousof. (2019, September 2). Disinformation, Violence and Anti-Chinese Sentiment in Indonesia's 2019 Elections. *ISEAS Perspective*. Retrieved from https://www.iseas.edu.sg/images/pdf/ISEAS_Perspective_2019_67.pdf

MindEdge (2018, May 9). *New MindEdge Critical Thinking Study: Young Professionals Still Struggle to Identify Fake News*. Retrieved from https://www2.mindedge.com/page/news/article/2018.05.09

UN Women (2020, January 6). Webinar: *Can Technology Counter Hate Speech?* Retrieved from https://www.youtube.com/watch?v=GuAUXBbq9kM&feature=emb_logo

NUDGING, BY FINDING THE RIGHT WORDS:

HOW WE SAY IT IS AS IMPORTANT AS WHAT WE SAY

Sabrina Ng
Behavioural Insights Unit, Research & Statistics Division
Ministry of Home Affairs, Singapore

ABSTRACT

Words have power – choose them well and we generate promise, hope, positivity; be careless with them and they can become a most hurtful weapon. In the context of work, our choice of words, or how we frame messages can also make or break an engagement and impact the effectiveness of our initiatives. This paper introduces the concept of message framing, discusses how various frames may be used to better reach out to our target audience, and suggests factors that may influence the effectiveness of frames. It also covers complementary concepts such as personalisation and operational transparency which may be used together with frames to propose messages that are nuanced, relevant and effective. The paper also ends with a discussion on how message frames can be further utilised in the communication efforts of the Home Team.

INTRODUCTION

To make sense of the world, our brains provide a structure and connect the information received to create a picture in our minds that is akin to an invisible frame surrounding our ideas. Without such "frames", we would be overwhelmed by the information around us and would not know what to focus on. Frames break up the vast amount of information that we receive daily into manageable chunks (Carini, 2014; Scheufele and Tewksbury, 2007). In doing so, a lot of the information deemed less relevant, accessible or interesting is automatically filtered out. This has implications for organisations like the Home Team when seeking public attention and mindshare.

Our communication efforts are integral to achieving the Home Team's mission to work as one with the community to keep Singapore safe and secure. This paper discusses how Behavioural Insights (BI) can be tapped to support the Home Team's communication efforts, focusing mainly on message framing but also covering other complementary concepts such as personalisation and operational transparency, with the objective of proposing messages that are nuanced, relevant and effective. The paper will cover examples from elsewhere as well as Home Team applications and will also articulate the considerations for using certain strategies.

MESSAGE FRAMING TO INCREASE RELEVANCE AND APPEAL

In the universe of nudges, we can probably consider message framing to be one of the most ubiquitous. Every piece of information that we see or get in our daily life is framed in some way, albeit some more effectively than others. Even if message framing as a concept is new to you, you are already using it all the time as you navigate through discussions with your family, friends and colleagues.

As the term suggests, message framing aims to bring the content that we want to communicate into focus. We know that people's minds already select and connect information automatically, so we can go with the grain and make our message more salient and likely to be picked up. A key way to achieve this is to ensure that our message is relevant and appealing to the audience.

Frames work on the premise that there can be several ways of looking at an issue, which can then lead the issue to be understood as having very different implications (Chong and Druckman, 2007). The research, however, informs us that the changes need not be drastic – subtle variations in how an issue is presented can produce sometimes large changes in opinion. For instance, what precedes a sentence or how an issue is talked about in alternative phrasings can have profound effects on how it is perceived or understood.

What are the various ways in which we can frame an issue?

It is possible to frame or re-frame a message or situation to bring across a certain perspective in so many ways. Some of the common frames explored in the research are described below:

Positive vs. negative framing

In the context of framing effects in psychology, positive and negative framing refers to the scenario where we present two sides of the same coin – one where a positive slant is used and the other, negative but the content is essentially the same. The old expression about the glass being half empty or half full is a perfect example.

In their seminal study in 1979, psychologists Amos Tversky and Daniel Kahneman found that participants responded very differently depending on how an option was framed. Only 22% of participants chose an option when it was framed as having the impact of losing 400 lives (sure loss), while 72% chose it when it was framed as saving 200 (sure gain). The researchers posited that they responded this way because people are instinctively wired to be attracted to sure gains (think "sure win" lucky draws) and to avoid sure losses. Similar examples that have been used to illustrate framing effects include the yogurt example (20% fat or 80% fat-free) and mortality rate (10% mortality or 90% survival). While the respective set of options present the same facts, people tend to respond better when the positive, rather than the negative attribute is emphasised.

Positive framing can also refer to taking a positive perspective of an issue that may otherwise be seen to be negative. In general, the research suggests that positive framing is helpful. Dolan et al., 2010 suggests that the behaviour shaping of troubled youth is best done through positive incentives, e.g. rewards and encouragement for pro-social/ adaptive behaviour, rather than to impose penalties for bad behaviour. Research on happiness at work also suggests that supervisors, when communicating negative information should consider re-framing the message to place emphasis on what needs to be changed to do better work rather than to put the spotlight on one's incompetence, for better outcomes (Sharot, 2017).

Gain vs. loss

Another key finding from the research on framing is that people dislike losing more than they like winning. Studies have found that the smallest gain that people need to balance a loss is a gain 2.5 times the size of the loss. People are thus very susceptible to frames that tap on their aversion to loss. Hannan et al. (2005) found that employees were significantly more productive when they worked under a penalty contract (base salary of $30, but a penalty of $10 would be imposed if performance targets were not met) vs. those who worked under a bonus contract (base salary of $20, but they would be given a bonus of $10 if performance targets were met). People tended to put in more effort to avoid the penalty than to earn the bonus although they were of the same amount.

That said, it is also noted from the research that a loss frame may not always work better as its effectiveness appears to depend on the context and the characteristics of the person it is influencing. Loss-framed messages have been found to be more effective for "punishment-sensitive" people while gain-framed messages, "reward-oriented" people (Yan et al., 2012; Teng et al., 2019). Loss frames are also found to work better for people involved in an issue while gain frames better attract people who are not involved (Maheswaran and Meyers-Levy, 1990). This has been corroborated by a 2015 study by the Cornell Food & Brand Lab which found doctors to be more influenced by loss-framed health messages, plausibly because they possess the related knowledge and feel a duty to maintain a healthy lifestyle. Conversely, gain-framed messages are more effective for reaching out to the general

public who have less first-hand knowledge of the consequences of their actions, and who may feel that healthy behaviours are a choice rather than a duty. Older and younger respondents may also respond differently; Biroli et al. (2020) found that framing the predicted impact of COVID-19 in terms of lives saved rather than deaths increased reported protective behaviours, but only amongst the older respondents.

Values-based framing

Frames can also be used to engage people's deeply-held values to motivate concern and action. In particular, frames that invoke longstanding cultural values have been found to be very persuasive (Chong, 2000). In a recent example, researchers from the Global Centre for Evidence and Implementation proposed that policymakers nudge citizens to adopt the required preventive behaviours for COVID-19 by finding a way to appeal to people's values and what is "best for all". For instance, we could dissuade citizens from making in-person visits to the elderly by situating the advisory within the value system of the individual. The researchers suggested that the messaging could be along the lines of, "You care for your elderly relatives, and the greatest act of care right now is to keep your distance from them." Such framing aims to align itself with that of people's value systems so that the required change becomes more justified, reasonable and sustainable.

Other common frames

Self-interest, communitarian and challenge frames are often used to encourage pro-social behaviours. Using the objective of encouraging volunteering as an example, a self-interest frame highlights how an individual can benefit from volunteering, the communitarian frame highlights how others in the community benefit, and the challenge frame urges the person to take up the challenge (that is not for all) and volunteer.

While Lim's 2015 study found that non-volunteers responded best to a communitarian frame to consider volunteering, Lee's 2015 study found that a self-interest frame which emphasised career incentives worked better than a communitarian frame in increasing the number of applications for a community health worker position in Zambia, and also attracted higher quality candidates who exerted more effort on the job. A 2015 study by Behavioural Insights Team, the UK company spun off from the Nudge Unit in the British Cabinet Office, found that framing an advertisement as a challenge, and asking potential candidates if they are the type that thrive in challenging environments, was twice as successful in increasing the click through rate of the job advertisement for a teaching position in Somerset compared to using a communitarian frame.

Whillans et al. (2017) also tested an agentic appeal, "what each person can do individually to reduce poverty" against a communitarian frame, "what all of us can do together to reduce poverty", to see which would work better to get people to make a donation. They found that wealthier participants tended to respond better to the agentic frame, which tapped on their ego and emphasised individual impact, while the less wealthy respondents responded better to the communitarian frame. The above studies demonstrate that it could be useful to consider other frames other than the communitarian one to elicit pro-social behaviours. Where applicable, we could also consider tapping on more than one frame, that are complementary, to strengthen our appeal.

It is also useful to note that while we want to incentivise volunteering behaviour, it is important to avoid framing the decision from a social to a monetary one; Heyman and Ariely (2004)'s study found that the provision of monetary incentives had the effect of reducing pro-social behaviour as respondents assumed that incentives are in place because the social norm is to not contribute. Providing monetary compensation can also 'crowd out' intrinsic motivation to contribute, and people may be unwilling to contribute in the future without further incentives (Deci et al., 1999). It may thus be better to give a social reward, e.g. appreciation or recognition, in such a scenario.

Are there factors that affect the persuasiveness of frames?

As mentioned earlier, the effectiveness of frames can vary depending on whom it is applied to and in which context. Studies on the efficacy of framing effects have found the strongest influencer to be people's pre-dispositions towards an issue (Haider-Markel and Joslyn, 2001; Barker, 2005;

Lau and Schlesinger, 2005). For instance, those who have strong opinions on gay-related issues are less receptive to frames that contradict them (Brewer, 2001). The timing of frames is thus important – they can be more powerful if they act as an initial anchor before a strong opinion on an issue has been established. They may also be more effective if they are delivered at strategic moments, e.g. at key milestones when people enter a new life-stage or situation (e.g. during their birthday, pregnancy, when they are moving house, etc.) as people are more willing to make positive changes during a 'fresh start'.

Another important factor that impacts the persuasiveness of frames is the messenger – the weight that people give to information is greatly dependent on the reactions they have to the source of the information (Webb and Sheeran, 2006). Whether one likes or trusts the messenger or source can have a huge impact on how receptive he or she is to the message.

Studies have also found the framing effect to be more prevalent in older adults, plausibly because their cognitive resources may be more limited and may therefore favour information that is presented in a more accessible way.

INCREASING PERSONALISATION TO INCREASE RELEVANCE

Personalisation can also be used to increase the relevance of our messages to our target audience. Drowning in a sea of information, people are more likely to register stimuli that is novel, accessible and simple, and especially salient are stimuli that relate to their personal experiences and circumstances (Dolan et al., 2010). The power of personalisation was demonstrated in a Behavioural Insights Team trial in 2012, where it was found that the response to text message reminders was the most positive when the message began with the recipient's first name. The version of the reminders that included the amount recipients owed to the Government also elicited better response than not including any personalised information at all. In general, the more specific or relevant a message is to the recipient, the more powerful it is likely to be.

When information is personalised, it also signals to the recipient that the messenger understands his needs and has taken the effort to communicate relevant information. Conversely, ineffective personalisation comes about when we segment too broadly, use generic messages and fail to appreciate the recipient's context.

A message can be made more personal by addressing it specifically to the recipient, having a named individual send the message and using personal pronouns such as 'I' and 'we' instead of more generic organisational references (Behavioural Insights Team, 2015). Information irrelevant to the recipient should also be omitted.

INCREASING OPERATIONAL TRANSPARENCY TO ELICIT UNDERSTANDING, COMPLIANCE AND TRUST

In various studies across government and non-government settings, increasing operational transparency – i.e. to provide more insight as to what is going on behind the scenes, our processes or decisions – has been found to increase engagement, satisfaction, support and trust among our stakeholders (Buell, 2019). Drawing from this concept, it is also very important to communicate the rationale for why we want people to do something in our communications. Intuitive as this may sound, it is not something that is always done. Organisations tend to communicate what needs to be done but not necessarily why or how it benefits the person. When we clearly communicate our rationale for the request, people better understand the underlying reason or principles, and the behaviour may be observed not only because it is required but also because it makes sense to do so. Giving people an insight into our thought processes and decisions also serves to build greater understanding and trust in the organisation.

USE OF PICTURES

In 1991, a study by Miniard et al. argued that a picture can be used as an argument when it is congruent with the message (e.g. promoting the benefits of giving up smoking while showing someone in good health). The researchers showed that a picture, like a good argument, influences beliefs and attitudes about the purpose of the message and increases the message's persuasiveness. This was later corroborated by Verlhiac et al. in 2011 when they found that health prevention messages including

pictures of unhealthy mouths better persuaded people to give up smoking, regardless of the framing they received. A recent online experiment conducted by the Behavioural Insights Team also found that bright infographics and minimal text on handwashing posters help to improve the retention of key preventive COVID-19 messages. We can thus consider using pictures if they help with our argument and are appropriate.

HOME TEAM APPLICATIONS OF BEHAVIOURAL INSIGHTS

The Behavioural Insights Unit (BIU) in the Research & Statistics Division of the Ministry of Home Affairs Headquarters has worked with our Home Team Departments, Statutory Boards and MHQ Divisions since 2014 to apply Behavioural Insights to support policy and operational objectives. We also started working with our consultants from the Behavioural Insights Team in 2016.

One of the Home Team's earliest nudging studies carried out in 2014 sought to encourage members of the public to attend the Community Emergency Preparedness Programme (CEPP) after a significant fire incident in a HDB residential block. CEPP, conducted free-of-charge by the Singapore Civil Defence Force, imparts useful skills such as first aid, CPR/AED, and how people can better protect themselves in emergencies such as fire and terrorist attacks. To encourage residents of the block to sign up, we tested two message frames: (i) a self-interest frame which emphasised how residents and their family members would benefit from their attendance at the CEPP; and: (ii) a communitarian frame which emphasised how their community would benefit, especially vulnerable groups like the elderly and young children (see Figure 1). To make our messages more personalised, residents were also informed that we were speaking to them because of the recent fire in their block, and that the CEPP slots were specially set aside for them. Both message frames and the additional personalisation were found to have a huge impact on raising the interest of residents to attend the CEPP (compared to just extending an invite without providing a specific frame), although the communitarian frame was found to work slightly better (Nelson et al., 2016).

Figure 1. Self-interest vs. communitarian frame in CEPP engagement script

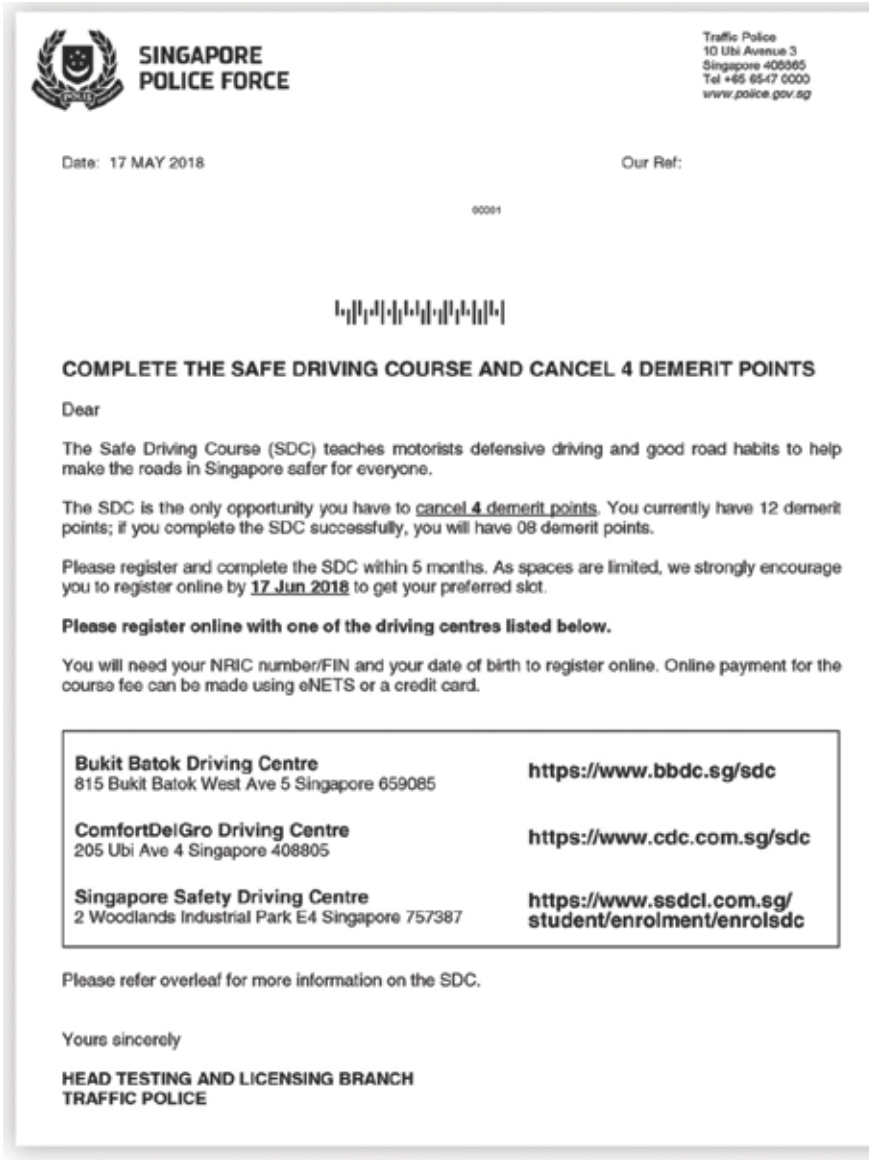
Self-interest frame

We are conducting a door-to-door visit to share with YOU fire safety tips on how you can keep YOU AND YOUR FAMILY safe. We also want to share with YOU information about how YOU can get involved in SCDF's Community Emergency Preparedness Programme. People with greater knowledge of fire safety are more likely to escape fires unharmed. So we really wanted to speak with you on how YOU can better protect YOURSELF AND YOUR FAMILY from the dangers of fire.

Communitarian frame

We are conducting a door-to-door visit to share with RESIDENTS fire safety tips on how they can help keep EVERYONE in the block safe. We also want to share with RESIDENTS information about how EVERYONE can get involved in SCDF's Community Emergency Preparedness Programme. The elderly and young children are more vulnerable to becoming victims of fire. People who live near neighbours with greater knowledge of fire safety were less likely to become victims of fire. So we really wanted to speak with you on how RESIDENTS can better protect THEMSELVES AND THEIR NEIGHBOURS from the dangers of fire.

Message frames were also utilised to encourage eligible motorists to attend the Safe Driving Course (SDC). Extended to those who accumulate eight demerit points and above, the SDC teaches motorists defensive driving and good road habits to help make the roads in Singapore safer for everyone. Both the gain and loss frames were used in the letter to the motorists – the benefits of attending SDC was made salient, i.e. that the course covers useful skills, and four demerit points can be cancelled from the motorist's record upon completion. It also utilised a loss frame, emphasising that this presented a limited opportunity to deduct four demerit points. The letter was also much more personalised – it is now addressed directly to the recipient instead of "Dear Sir/ Madam", and we also listed the number of demerit points that the motorist had and informed him of the number of points he will have following his successful completion of the SDC (see Figure 2). Together, the nudges were helpful in increasing the proportion of motorists who registered for and completed the SDC.



SINGAPORE POLICE FORCE

Traffic Police
10 Ubi Avenue 3
Singapore 408865
Tel +65 6547 0000
www.police.gov.sg

Date: 17 MAY 2018

Our Ref:

00001

COMPLETE THE SAFE DRIVING COURSE AND CANCEL 4 DEMERIT POINTS

Dear

The Safe Driving Course (SDC) teaches motorists defensive driving and good road habits to help make the roads in Singapore safer for everyone.

The SDC is the only opportunity you have to cancel 4 demerit points. You currently have 12 demerit points; if you complete the SDC successfully, you will have 08 demerit points.

Please register and complete the SDC within 5 months. As spaces are limited, we strongly encourage you to register online by **17 Jun 2018** to get your preferred slot.

Please register online with one of the driving centres listed below.

You will need your NRIC number/FIN and your date of birth to register online. Online payment for the course fee can be made using eNETS or a credit card.

Bukit Batok Driving Centre 815 Bukit Batok West Ave 5 Singapore 659085	**https://www.bbdc.sg/sdc**
ComfortDelGro Driving Centre 205 Ubi Ave 4 Singapore 408805	**https://www.cdc.com.sg/sdc**
Singapore Safety Driving Centre 2 Woodlands Industrial Park E4 Singapore 757387	**https://www.ssdcl.com.sg/student/enrolment/enrolsdc**

Please refer overleaf for more information on the SDC.

Yours sincerely

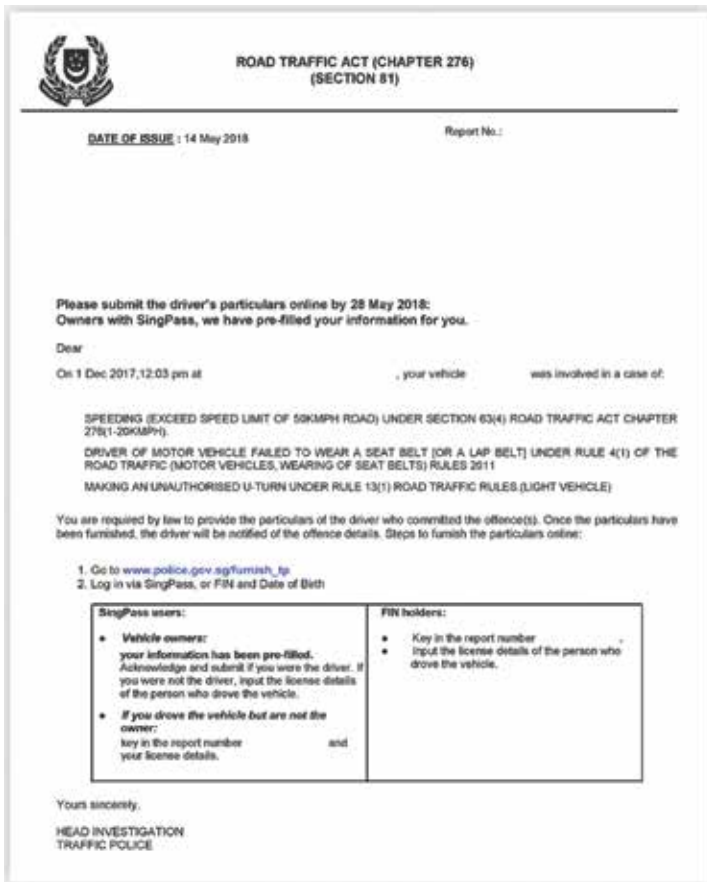
HEAD TESTING AND LICENSING BRANCH
TRAFFIC POLICE

Figure 2. Gain frame, loss frame and personalisation in SDC letter

Figure 3. Loss frame to emphasise certainty of detection and arrest in airport advisories

Being an enforcement agency, much of our work also touches on inducing compliance. We have applied loss frames to a number of our enforcement letters to highlight the penalties involved for non-compliance, e.g. to highlight in the Notice of Traffic Offence that traffic offenders who do not pay their traffic fines on time have to go to court and pay a higher fine, and to inform registered societies that have not been submitting their annual returns that their societies may be deemed to be inactive or defunct if they continue to fail to do so. To deter the misuse of flight boarding passes, we revamped the advisories placed around the airport terminals to emphasise the certainty of detection and arrest for those who enter the transit areas of Changi Airport without the intention to travel, explaining that it is an offence to do so (see Figure 3).

Increasing the level of personalisation has also helped to increase the proportion of vehicle owners who furnish the driver's particulars online following a traffic offence. The precise steps for how SINGPASS and FIN users can submit the drivers' particulars online is included in the revised Notice to Furnish Driver's Particulars (see Figure 4) to make the online option attractive and easy to use for both groups of motorists. For those with SINGPASS, we also additionally informed them in the letter that their information has been pre-filled for them online.



ROAD TRAFFIC ACT (CHAPTER 276)
(SECTION 81)

DATE OF ISSUE : 14 May 2018 Report No.:

Please submit the driver's particulars online by 28 May 2018:
Owners with SingPass, we have pre-filled your information for you.

Dear

On 1 Dec 2017,12:03 pm at , your vehicle was involved in a case of:

SPEEDING (EXCEED SPEED LIMIT OF 50KMPH ROAD) UNDER SECTION 63(4) ROAD TRAFFIC ACT CHAPTER 276(1-20KMPH).

DRIVER OF MOTOR VEHICLE FAILED TO WEAR A SEAT BELT [OR A LAP BELT] UNDER RULE 4(1) OF THE ROAD TRAFFIC (MOTOR VEHICLES, WEARING OF SEAT BELTS) RULES 2011

MAKING AN UNAUTHORISED U-TURN UNDER RULE 13(1) ROAD TRAFFIC RULES (LIGHT VEHICLE)

You are required by law to provide the particulars of the driver who committed the offence(s). Once the particulars have been furnished, the driver will be notified of the offence details. Steps to furnish the particulars online:

1. Go to www.police.gov.sg/furnish_tp
2. Log in via SingPass, or FIN and Date of Birth

SingPass users:	FIN holders:
• ***Vehicle owners:*** **your information has been pre-filled.** Acknowledge and submit if you were the driver. If you were not the driver, input the license details of the person who drove the vehicle. • ***If you drove the vehicle but are not the owner:*** key in the report number and your license details.	• Key in the report number • Input the license details of the person who drove the vehicle.

Yours sincerely,

HEAD INVESTIGATION
TRAFFIC POLICE

Figure 4. High level of personalisation in the "Request for Driver's Particulars" letter

Finally, the concept of positive framing was utilised recently to support changes in our supervision regime for drug supervisees. In 2019, the Central Narcotics Bureau worked with us to prepare for the impact of legislative changes to the duration of drug supervision from two to five years. In order to ensure that new drug supervisees would not be de-motivated by the perceived extension, CNB applied BI principles to craft positively-framed briefing scripts that their officers could refer to when briefing drug supervisees about their reporting conditions.

CONSIDERATIONS AND DISCUSSION

There is a lot of room to continue to apply the insights from the research on message framing to improve outcomes. We know that positive framing of information and negative situations are almost always appreciated. We also know that different groups of people may respond to certain frames differently – suggesting that there is room to cater different nudges to different groups for increased efficacy, e.g. to consider administering gain frames to the elderly since we know that they respond better to them. It may also be useful to combine complementary message frames to strengthen our message, e.g. an appeal to volunteer can start with a communitarian frame but also coupled with a self-interest one (articulating how the individual can also benefit from volunteering), and perhaps also ending off with a challenge or agentic frame for an extra boost! We have done this to some extent in the Home Team by combining gain and loss frames in the SDC letter to encourage the recipient to look at the request from various perspectives to hopefully nudge a positive response.

A number of frames effective for nudging volunteerism could be useful for recruitment as well. For instance, depending on the nature of the job we may be able to utilise the communitarian or self-interest frames. We could then strengthen the base frame with a challenge frame to suggest to potential candidates that the job may not be an easy one but we are inviting those game for a challenging but rewarding career to join us. Similarly, an agentic frame would have the impact of reaching out to people who respond well to the notion of individual contribution and impact, especially for challenging roles. Values-based framing can also be considered in promoting our enforcement-related roles, reaching out to those who respond to ethics or moral framing.

The timing of the frame also matters – frames may have minimal impact if one already has a very strong conflicting view on an issue. It can however be very effective if it is delivered at the right moment. For example, a couple moving into a new home might be much more receptive to equipping their home with fire-fighting equipment as compared to a couple who has lived in their home for 10 years, owing to the "fresh start" effect. The messenger of the information also plays a crucial role as to whether the message is well received, and we may want to choose our messengers carefully.

Finally, we should aim to make our messages as personalised and relevant as possible so that our target audience is more likely to pick them up. It is also good practice to explain our rationale for why we want people to do something, to nudge not only compliance but also motivation to undertake the behaviour, greater understanding and trust.

EVALUATING OUR STRATEGIES, AND CONSIDERING OTHERS

As with all other nudges, we should build in a mechanism to test our frames to evaluate their effectiveness. This is particularly relevant since there are many plausible frames. People also react to frames differently because of their individual differences and also because the context of the issue matters. Testing allows us to find the frame that best reaches out to more people in our target group on a particular issue.

We may also want to consider tapping on other strategies to achieve the desired behaviour. For example, if we wanted to encourage volunteerism in the Home Team, apart from using a message frame, we also need to consider how can we make sign-ups easy to do, and how volunteers can be continually motivated. It is likely that behaviours that are more complex and longer-term in nature will require a bundling of strategies and interventions at various timepoints of a person's journey with us, so we should aim to formulate nudges that are more holistic and enduring.

ABOUT THE AUTHOR

Sabrina Ng
is Deputy Director at the Behavioural Insights Unit of the Research & Statistics Division of the Ministry of Home Affairs. She leads a team that looks at building Behavioural Insights (BI) capabilities in MHA through partnerships with experts, undertaking collaborative studies with Divisions in the Ministry Headquarters, Home Team Departments and Statutory Boards, and conducting evidence-based trials to learn if the BI interventions work. Sabrina joined MHA in 2003 after graduating from the School of Computing at the National University of Singapore. She also obtained a Master's degree in Behavioural Science from the London School of Economics and Political Science in 2019.

REFERENCES

Barker, D. (2005). Values, Frames, and Persuasion in Presidential Nomination Campaigns. *Political Behavior* 27(4), 375-394.

Behavioural Insights Team (2012). *Applying Behavioural Insights to Reduce Fraud, Error and Debt*. London: Cabinet Office, UK

Behavioural Insights Team (2015). *Behavioural Insights and the Somerset Challenge*.

Behavioural Insights Team (2020). *Testing the Efficacy of Coronavirus Messaging*.

Biroli, P., Bosworth, S., Giusta, M. D., Girolamo, A. D., Jaworska, S. & Vollen, J. (2020). *Framing the Predicted Impacts of COVID-19 Prophylactic Measures in Terms of Lives Saved Rather than Deaths is More Effective for Older People*. Bonn: Institute of Labor Economics.

Brewer, P. (2001). Value Words and Lizard Brains: Do Citizens Deliberate About Appeals to Their Core Values? *Political Psychology* 22(1), 45-64.

Buell, R. W. (2019). Operational Transparency. *Harvard Business Review*, March-April 2019, 102-113.

Carini, G. (2014). The Role of Frames and Cultural Values. In *The Bridges Project: New expertise for policy in an age of uncertainty*. Counterpoint. Retrieved from https://counterpoint.uk.com/wp-content/uploads/2018/04/The-Bridges-Project_final-publication1.pdf

Chong, D. (2000). *Rational lives: Norms and values in politics and society*. Chicago, IL: University of Chicago Press.

Chong, D. and Druckman, J.N. (2007). Framing Theory. *Annual Review of Political Science* 10, 103–126.

Cornell Food & Brand Lab (2015, January 29). *Which Health Messages Work?* ScienceDaily. Retrieved from www.sciencedaily.com/releases/2015/01/150129094345.htm

Deci, E., Koestner, R., Ryan, R., & Eisenberg, Nancy. (1999). A Meta-Analytic Review of Experiments Examining the Effects of Extrinsic Rewards on Intrinsic Motivation. *Psychological Bulletin* 125(6), 627-668.

Dolan, Paul, Hallsworth, Michael, Halpern, David, King, Dominic, & Vlaev, Ivo. (2010). *MINDSPACE: Influencing Behaviour for Public Policy*. London: Institute of Government.

Haider-Markel, D., & Joslyn, M. (2001). Gun Policy, Opinion, Tragedy, and Blame Attribution: The Conditional Influence of Issue Frames. *The Journal of Politics* 63(2), 520-543.

Hannan, R. L., Hoffman, V. B., & Moser, D. V. (2005). Bonus versus penalty: does contract frame affect employee effort? *Experimental Business Research* 151-169

Heyman, J. E. & Ariely, D. (2004). Effort for Payment. *Marketing Faculty Publications* 11.

Lau, R., & Schlesinger, M. (2005). Policy Frames, Metaphorical Reasoning, and Support for Public Policies. *Political Psychology* 26(1), 77-114.

Lee, S. (2015). *Three Field Experiments on Incentives for Health Workers*. Doctoral dissertation, Harvard University, Graduate School of Arts & Sciences. Retrieved from http://nrs.harvard.edu/urn-3:HUL.InstRepos:17467500

Lim, D. (2015). *Essays on the Determinants of Prosocial Behavior in Singapore*. Doctoral dissertation, Harvard University, Graduate School of Arts & Sciences. Retrieved from http://nrs.harvard.edu/urn-3:HUL.InstRepos:17467196

Maheswaran, D. & Meyers-Levy, J. (1990). The Influence of Message Framing and Issue Involvement. *Journal of Marketing Research* 27, 361-367.

Mildon, R., Abdo, M. & Lewis, J. (2020, 3 Jun). Reshaping Behaviour and Systems in a Post-COVID Policy Landscape. *Ethos*. Retrieved from https://www.csc.gov.sg/articles/reshaping-behaviour-and-systems-in-a-post-covid-policy-landscape.

Miniard, P. W., Bhatla, S., Lord, K. R., Dickson, P. R., & Unnava, H. R. (1991). Picture-based persuasion processes and the moderating role of involvement. *Journal of consumer research* 18(1), 92-107.

Nelson, L., Ng, S., Kassim, M.Z., Tay, S., Hiscox, M., & Lim, D. (2016). Using Behavioural Insights to Encourage Public Participation in the Community Emergency Preparedness Programme. *Home Team Journal* 6, 40-52.

Scheufele, D., & Tewksbury, D. (2007). Framing, Agenda Setting, and Priming: The Evolution of Three Media Effects Models. *Journal of Communication* 57(1), 9-20.

Sharot, T. (2017). The Influential Mind: *What the Brain Reveals about our Power to Change Others*. New York: Henry Holt and Company.

Teng, L., Zhao, G., Li, F., Liu, L., & Shen. L. (2019). Increasing the Persuasiveness of Anti-Drunk Driving Appeals: The Effect of Negative and Positive Message Framing. *Journal of Business Research* 103, 240-249.

Tversky, A., & Kahneman, D. (1981). The Framing of Decisions and the Psychology of Choice. *Science* 211(4481), 453-458.

Verlhiac, J. F., Chappé, J., & Meyer, T. (2011). Do Threatening Messages Change Intentions to Give Up Tobacco Smoking? The Role of Argument Framing and Pictures of a Healthy Mouth Versus an Unhealthy Mouth. *Journal of Applied Social Psychology* 41(9), 2104-2122.

Webb, T., & Sheeran, P. (2006). Does Changing Behavioral Intentions Engender Behavior Change? A Meta-Analysis of the Experimental Evidence. *Psychological Bulletin* 132(2), 249-268

Whillans, Caruso, & Dunn. (2017). Both selfishness and selflessness start with the self: How wealth shapes responses to charitable appeals. *Journal of Experimental Social Psychology* 70, 242-250.

Yan, C., Dillard, J. P. & Shen, F. (2012). Emotion, Motivation, and the Persuasive Effects of Message Framing. *Journal of Communication* 62, 682-700.

THE TRANSFORMATION OF YELLOW RIBBON SINGAPORE

Ng Hui Ling
Yellow Ribbon Singapore

ABSTRACT

Since the launch of the Yellow Ribbon Project in 2004 to encourage acceptance of ex-offenders in Singapore, surveys have found that Singaporeans are generally willing to foster or reconcile relationships with ex-offenders, and companies are open to hiring them. In turn, recidivism rates have lowered substantially. Nonetheless there are still ex-offenders who struggle with numerous hurdles and lack of social support in their reintegration journey. Without enough assistance, ex-offenders often find themselves isolated and destitute, and some begin to reconsider deviant activities. Meanwhile, modern society continues to evolve technologically. Automation and AI leave countless worried about their future employability. This includes a sizeable population of ex-offenders who, having received little education previously, might not be able to keep up without extra support. In recognition of pending and future challenges, SCORE, a statutory board set up within Singapore's correctional system in 1976 to provide rehabilitation and aftercare services to inmates and ex-offenders, rebranded itself in May 2020 as Yellow Ribbon Singapore (YRSG), a vessel to unite and advance the Yellow Ribbon cause. Together with an extensive network of community and industrial stakeholders, YRSG aims to coordinate tailored support to ex-offenders and lower recidivism rates. Ultimately, the organisation hopes to empower ex-offenders to become agents of change, and inspire the public to build a more inclusive and cohesive society together, to go Beyond Second Chances.

BEYOND SECOND CHANCES FOR EX-OFFENDERS

The Singapore Corporation of Rehabilitative Enterprises (SCORE) was established in 1976 as a statutory board. Together with the Singapore Prison Service (SPS), SCORE worked with like-minded organisations to support inmates' rehabilitation and pave the way for their eventual return to society. Amidst the then widespread prejudice and discrimination against ex-offenders, both institutions launched the Yellow Ribbon Project (YRP) in 2004 to raise awareness, increase acceptance and inspire community action to help ex-offenders reintegrate successfully. The success of the YRP has been key to lowering recidivism rates (which in Singapore, is defined as the percentage of local inmates detained or sentenced to imprisonment or day reporting order for a new offence within two years of their release).

Today, society has become more accepting towards ex-offenders, with good faith that they can be responsible and contributing citizens. This comes with active advocacy by the YRP to raise social awareness, as well as a sense of trust in the extensive rehabilitation programmes conducted by SPS and other aftercare organisations. After the 2019 YRP campaign concluded, a survey was conducted by market research company KANTAR to evaluate its effectiveness. The results showed that more than 90% of the 500 participants believed that ex-offenders, like others in society, "have talents and skills" and could "contribute to society". More than 83% were confident that ex-offenders have a strong work ethic that would make them responsible and cooperative employees. Generally, there was an encouraging 90% of respondents who were willing to support ex-offenders as they reintegrate back into society after their release.

These sentiments towards inmates and ex-offenders cannot be taken for granted. In "The Courage to Believe", a commemorative book published to celebrate the YRP's 10th anniversary in 2014, former Director of Prisons Chua Chin Kiat recognized a strong "culture built on distrust" within the penal system when he took over in 1998. Chua led SPS through an extensive re-visioning exercise, where prison officers collectively agreed that they wished to contribute to the positive rehabilitation of inmates to build a better society (Chua, 2016). They were eager to shed their then role as "instrument[s] of punitive incarceration" (Singapore Prison Service, 2013). But this goal could not be achieved solely through rehabilitation programmes within prison walls. A bridge between prisons and the rest of society had to be created. Recognising that discrimination against ex-offenders is a significant obstacle to their reintegration, the SPS restyled its officers as Captains of Lives, and worked hand-in-hand with SCORE to launch the YRP. It aimed to equip inmates with useful economic skills, to develop in them positive work and social values, to assist in re-integrating them back to society, and to involve their families, the authorities and the community in their rehabilitation.

Since 1998, the recidivism rate has fallen from 44.4% for the cohort of inmates released in 1998 to an all-time low of 22.1% for the cohort released in 2018 (Singapore Prison Service, 2011, 2021). Many factors undoubtedly account for this halving of the 2-year recidivism rate over 20 years, including the deterrence of long prison sentences and prison regime stringency, as well as better economic conditions in Singapore. Inmate rehabilitation has also contributed to reducing re-offending, and, as former Director of Prisons Ng Joo Hee has noted, two "universally accepted" factors are key in preventing re-offending: gainful employment and family ties (Ng, 2010).

Gainful Employment

Since its establishment, SCORE has operated on the basis that gainful employment is critical for successful reintegration to lower recidivism. Employment provides a stable income to meet one's material needs. It also provides a structured routine to one's life as well as a sense of purpose and belonging. The workplace introduces individuals to positive social networks that encourages self-improvement. For repeat offenders who commit crimes for monetary gains, perhaps motivated by impoverished circumstances, or because of negative influences in their lives, gainful employment provides a healthier path to break out of that cycle. Hence, SCORE has been setting up work-related training programmes to prepare inmates to enter the workforce after their release. It engages external vendors to conduct skills training to boost the employability of inmates. It has also improved the management and operation of prison industries, including formulating the concept of rehabilitation through work discipline by having prison workshops mirror actual work conditions outside of prisons. Since then, inmates have been able to hone their vocational skills with some work experience and get ready for the mental and physical demands of employment after their release. The SCORE Bakery is one such example. Operating from Cluster A in the Changi Prison Complex, inmates learn and hone professional baking skills. Today, the bakery produces special goodies for sale during festive events. Indeed, the willingness of Singaporeans to purchase and consume goods produced by inmates is a stark difference from the disdain towards them in the past, a clear sign of social progress.

Following the amendment of the SCORE Act in 1987, SCORE expanded its scope and services, establishing the Job Placement Unit to provide employment assistance to inmates after their release. Employers were invited into prisons to conduct job interviews with inmates. Because of this, inmates were able to secure a job before their release, which helped to ease some anxieties from financial and employment insecurities. As SCORE's placement unit expanded over the years, it introduced job profiling tools to assess

[1]In 1965, SPS started a Prison Industries department so that inmates could learn market-relevant trades. However, Prison Industries faced several constraints such as inadequate manpower and a lack of operational flexibility to meet market demands due to the Government's administrative and financial regulations. SCORE was thus established in 1976 as an independent statutory body focused on enhancing the employability of offenders and preparing them for their eventual reintegration into the national workforce (Wee, 2019).

and match inmates to industry sectors most suitable for them. The results were used to plan for the inmates' skills training in prison. This strategy promoted longer-term job retention, necessary for sustained financial stability. For ex-offenders in the community, SCORE set up the Industrial and Services Cooperative Society (ISCOS) in 1989 to cater to their employment and social needs. ISCOS also reached out to entrepreneurial ex-offenders who were keen to develop small business opportunities.

The successful job retention of ex-offenders depends on the support from employers and the workplace environment. SCORE actively partners with external employers to advocate for second chances and encourage them to hire ex-offenders. It works with Human Resource managers to chart progression plans for ex-offenders, and with ground supervisors to recommend constructive coaching methods. Ex-offenders can thus continue to develop in their jobs, which in turn increases job retention.

Over the years, SCORE has provided skills training to over 200,000 inmates, and helped over 100,000 ex-offenders secure jobs (Tan & Tan, 2020). In 2019, 64% of ex-offenders assisted by SCORE attained 6-month job retention. Over 5,900 employers have registered with SCORE, committed to giving ex-offenders opportunities in the job market. Ex-offenders are given the opportunity to become productive members of society and choose a better path for themselves after their release. In 2020, Sumit Agarwal, a professor from the National University of Singapore, conducted a research study on the effects of SCORE's employment assistance programme on ex-offenders. By studying ex-offenders released from 2010 to 2016 for a two-year post-release period, Agarwal observed that SCORE's employment assistance had, in particular, raised the employment rate of high-risk ex-offenders by 4.5 percentage points, while lowering their recidivism rate by 8.3 percentage points. Overall, SCORE's efforts helped to reduce the "probability of reoffending by 11.95% (effect size), which decreased the recidivism rate by 3.2%". Agarwal's research outcomes affirmed SCORE's mission in boosting the employability of ex-offenders to reduce recidivism rates. (Agarwal, 2021)

Family Ties

Besides employment, ex-offenders need strong family and social support to tide over rough times. SCORE supports this in various ways: it is the secretariat of the YRP, and coordinates the Project's strategic planning, events and fundraising efforts with SPS. It oversees two shelters – New Hope Community Services and HCSA Highpoint – that cater to ex-offenders that struggle with post-release accommodation needs. SCORE is also the secretariat for the Community Action for the Rehabilitation of Ex-offenders (CARE) Network, which is an "alliance of various Social Service Agencies (SSAs) and Government Organisations dedicated to community engagement, coordination of aftercare efforts and enhancing service delivery for ex-offenders and their families" (Yellow Ribbon Singapore, 2019). To date, SCORE maintains active partnership with over 300 community partners.

Social support is not limited to inmates and ex-offenders. The CARE Network is also committed to help their families, who are often hardest hit by the actions and incarceration of their loved ones. For example, in 2014, the Yellow Brick Road programme under the Yellow Ribbon Fund was established to tackle the damaging impact of incarceration on inmates' families and children. It also aims to prevent intergenerational offending by providing offenders' children with various enrichment programmes to foster stronger social-emotional development. Through this, the community provides ample support for offenders' families, so that they in turn can build a conducive environment at home that will later boost the offenders' reintegration (Yellow Ribbon Singapore, 2020).

The successful reintegration of offenders does not just happen within prison walls. Society – both public and private domains – must play their part in building inclusive and conducive environments and give ex-offenders another chance. Ex-offenders too have to take personal responsibility for their rehabilitation and have the determination to overcome the various challenges in their reintegration journey.

CHALLENGES FACED IN ASSISTING EX-OFFENDERS IN A CONSTANTLY CHANGING WORLD

Low Education and Digital Divide

According to the Annual Statistics released by SPS in 2020, as of 31 Dec 2019, 74% of the inmate population in the Drug Rehabilitation Centres have secondary or lower levels of education. For the convicted penal inmate population, the figure increases to 82%. These inmates did not advance their education due to challenging circumstances or personal decisions. As a result, they often find their career options limited to vocational training and jobs within the service industry, or labor-intensive positions. This includes F&B service crew positions, courier and delivery jobs, as well as positions in the cleaning industry. These jobs usually come with lower salaries. Having lower educational qualifications thus put ex-offenders at a disadvantage in a knowledge-based economy.

While SkillsFuture Singapore and Infocomm Media Development Authority (IMDA) have established the Training and Adult Education Industry Digital Plan 2020 to boost the local industrial transformation by helping small and medium-sized enterprises (SMEs) digitalise and automate their work processes, many challenges remain for low skilled workers. For example, the courses offered to bridge the digital divide often require at least some knowledge of technological skills on top of proficiency in literacy and numeracy. Since a significant percentage of inmates have below secondary education, it is unlikely that they can reap the full benefits of these courses. They may be able to catch up if they have substantial employment experience, but that could still be interrupted by incarceration.

Gaps in Society's Support for Offenders

As ex-offenders grapple with their future employability, community support remains vital to prevent recidivism. While Singapore has witnessed a commendable decline in the two-year recidivism rate, the five-year recidivism rate remains rather high, standing at 41% for the 2013 release cohort (Ng, 2019). This suggests that current efforts could be revised to sufficiently address longer-term issues that emerge after the second year of ex-offenders' release, so that they could have a more persistent impact against the risk of re-offending. More research relating to long-term recidivism is recommended.

One possible gap in social support could be the community's perception of ex-offenders. Undeniably, Singaporeans generally practise and express acceptance of ex-offenders. However, it usually comes with the condition that ex-offenders make "better choices" in life from thereon to avoid reoffending. If ex-offenders slip and make "poor choices", especially after crossing the two-year mark after their release, they are harshly criticised and society might even withdraw its support. At the root of our reactions is the misconception that ex-offenders have complete agency over their lives and should know better than to make poor choices.

But this is often not the case. Many ex-offenders have lower educational backgrounds, so the jobs they take up usually pay lower salaries that push them into lower socioeconomic classes. In 2020, REACH Singapore conducted a listening point exercise with offenders at the Lloyd Leas Supervision Centre. According to their responses, one of the top worries of ex-offenders is financial stability. Without a good salary, they struggle to make ends meet and take care of their families. Studies have shown that financial stress reduces an individual's ability to plan for the long-term because of the scarcity mindset:

[2]The Yellow Ribbon Fund was established in 2004 as the country's first charitable fund that provides financial support to (i) rehabilitative and aftercare services for inmates and ex-offenders, (ii) support programmes for inmates and ex-offenders' families, as well as (iii) public awareness programmes to increase public support for the Yellow Ribbon cause (Yellow Ribbon Singapore, 2021).

[3]About 40% of the ex-offenders assisted by YRSG each year are former inmates of the DRCs.

"one's attention gets consumed by immediate problems, and one's best long-term interests are rarely considered", resulting in "inferior choices" (Paulo & Alshahab, 2018). These poor choices include poor financial planning, and resorting to deviant means to get more resources to make ends meet when one is desperate. While this does not justify nor excuse criminal behaviour, we have to acknowledge the difficulties and barriers they face, and provide them with means of addressing these barriers in a systematic and law-abiding manner. This includes giving them better support at work, at home, and in their communities, beyond the second year of their release.

Finally, we ought to remember that a successful reintegration does not stop at stable employment, financial independence, having a healthy lifestyle, and having a pro-social support group. These are essential, but successful reintegration should go one step further and consider the ways that ex-offenders can be empowered to give back to their society. Ex-offenders deserve a chance to leave unique and bright legacies.

SCORE'S FUTURE STRATEGIES AND REBRANDING AS YELLOW RIBBON SINGAPORE

In view of these considerations, SCORE decided to spearhead the next lap of the Yellow Ribbon cause.

For a start, SCORE came to recognise that its name no longer reflects its purpose in society. In a series of public engagements, many members of the public admitted to having no knowledge of SCORE's purpose and work. The name SCORE was also frequently confused with other brands and even gambling. If the organisation wished to continue its efforts and advocacy, its name must be well-known and instinctively associated with the cause.

After rounds of consultation with its beneficiaries, partners and staff, SCORE officially rebranded itself as Yellow Ribbon Singapore (YRSG) in May 2020. In doing so, YRSG reaffirms its aim to champion the cause of Second Chances for ex-offenders. YRSG recognises that it is a vessel to galvanise society, coordinate and unite existing agencies under the Yellow Ribbon umbrella for the larger cause of supporting ex-offenders; it does not presume to subsume the entire cause itself.

YRSG has also established a new Strategic Framework to chart a new direction for the next decade in response to the evolving socio-political and economic climates. In particular, it looks towards the following three frameworks to tackle current gaps and forge a path into the future:

- From Training in Prison to Lifelong Learning & Skills Deepening
- From Job Placement to Long Term Career Development
- From Community Engagement to Collective Impact by Whole of Nation

From Training in Prison to Lifelong Learning & Skills Deepening

It is no longer enough to simply conduct vocational training in prison. Inmates must take charge of their own learning and continue to climb the skills ladder after their release in order to keep up with fast changes in the economy. If they wish to remain employable, they must be adaptable and continue to learn new skills and upskill after their release.

To facilitate this, YRSG plans to expand its current job profiling techniques to include career interest assessments to understand the career ambitions of inmates, as well as the gaps in their skillsets that require training to reach their target careers. YRSG will also expand its current training pathways to ensure that they remain relevant for inmates, regardless of their profiles. It will continue to review its skills training programmes and align them with the national frameworks and initiatives from Workforce Singapore (WSG) and SkillsFuture Singapore. It also looks to partner with WSG and Continuing Education and Training Centres to provide ex-offenders with career conversion programmes.

YRSG is also building a Digital Literacy Masterplan for inmates, which includes developing tiered training pathways for inmates of different technological savviness, following Agarwal's recommendations to enable inmates to "acquire higher cognitive and digital skills progressively" (2021). Outside of training, it is important that inmates have opportunities to use and be exposed to digital tools. YRSG aims to develop a digital ecosystem within prison walls,

by adopting the use of tablets for inmates to access various career resources. This will boost inmates' digital savviness, to help them adapt better in an increasingly digitalised job market.

Beyond the prison cells, YRSG hopes to shape offenders' mindset and attitude towards lifelong learning and career ambition. Recognising the logistical and financial limitations of conducting training courses in prisons, YRSG taps on public resources by arranging for inmates to complete their training in the community. With more resources, inmates can potentially advance their skills beyond what they were able to learn in prison. To ensure that inmates can apply their skills at work and continue to receive upgrading opportunities from their employers, YRSG encourages partner employers to introduce a mentoring system at work to continuously track ex-offenders' progress. Finally, YRSG's dedicated team of career coaches continues to work with ex-offenders after their release. They keep track of their progress at work, and provide timely advice to ex-offenders about advancing their skillsets for better opportunities at work.

From job placement to long term career

The post-release employment landscape for ex-offenders is fast-paced as the economy becomes more digitalised. It is not sufficient for YRSG to ensure placement into jobs prior to their release. YRSG must work with inmates and ex-offenders to chart their long-term career pathways and development goals so that they are able to adapt, change, and thrive in a competitive job market.

This needs to be facilitated upstream: skills training programmes should not be held with short-term goals of immediate employment after release, but consider competencies potentially required by future employers and digitalised industries. Skills training programmes and employment assistance should also be aligned with current Industry Transformation Maps. These efforts aim to help ex-offenders receive the right skills aligned with targeted sectors after their release. Subsequently, it will be easier for them to seek relevant training courses in the community to deepen their competencies.

There should also be a nexus between the skills acquired and jobs secured by ex-offenders. This is necessary to promote career stability and growth opportunities for ex-offenders. To do this, YRSG will establish the "Train and Place" (TAP) and Grow initiative, where YRSG partners various employers and training institutions to set up training academies in prison. Employers can also offer internships, further traineeships, or employment to well-performing ex-offenders. To this end, YRSG signed, in 2019 and 2020, separate agreements with the Singapore Precision Engineering & Technology Association (SPETA), and Mediacorp, to set up training academies for Precision Engineering, and Media skills (Tan & Tan, 2020; Mediacorp, 2020; Wong, 2020). These fields – Precision Engineering, Information and Communications Technology, and Media – have been identified in as industries that will undergo robust transformations and development. Allowing inmates to develop skills in these sectors will give them a competitive footing in the industries after their release.

Next, YRSG intends to develop a throughcare approach to skills and career development. For instance, it will enhance career coaching and placement support, to better advise and support ex-offenders in planning their career paths. The YRSG placement team will ensure that inmates have a good match to secured jobs, based on their learned skills, on top of competitive salaries. Career coaches will also work closely with employers and ex-offenders to advance the latter's competencies and position in the workforce. Beyond that, apprenticeship initiatives will also be introduced to ensure continuity of learned skills in ex-offenders' careers.

In time, YRSG aims to prevent ex-offenders from stagnating in their careers. It will introduce differentiated tiers of career pathways, so that ex-offenders have enough opportunities for career growth.

With these strategies, YRSG hopes to set a good foundation for preparing inmates for the challenges of future economies. Inmates will be equipped with skillsets that are relevant in today's job markets, and opens doors of

opportunities for them in the future. More importantly, inmates have to develop a positive mindset towards lifelong learning and career progression. Inmates who advance in their careers can continue to be financially independent and exposed to prosocial networks, which facilitate their desistance from crime.

From Community Engagement to Collective Impact by Whole of Nation

Besides employment, community support for aftercare is crucial for successful reintegration. More can be done to bring down the five-year recidivism rates. Members of the CARE Network, its partners, as well as ex-offenders have embarked on a strategic review and developed a framework for action to lower the recidivism rate.

To execute the strategies optimally, the CARE Network will invest in enhancing the professional capabilities of aftercare institutions. It looks to develop a competency framework and training roadmap to enhance the capabilities of these institutions. Beyond the professional institutions, it aims to empower the community by supporting ground-up initiatives by Yellow Ribbon community advocates and desistors. Finally, it will champion the Beyond Second Chances movement by providing inmates and ex-offenders with opportunities to give back to society. For instance, inmates have had the opportunity to pay it forward as the country battled with COVID-19 in 2020. They baked treats at the YR Industries Bakery and sent them to frontline workers as a display of their appreciation (Tan & Tan, 2020). Some inmates volunteered for the Mask for Migrants Project to sew reusable masks for migrant workers. Others participated in #CareKitWithLove, producing hand-made mask pouches for beneficiaries of the Rainbow Centre (Yellow Ribbon Singapore, 2020; Tan & Tan, 2020).

YRSG recognises that besides volunteering for good causes, successful desistors are in an excellent position to motivate other ex-offenders, especially since they have braved through the same arduous journey. YRSG aims to identify and empower successful desistors to be mentors for struggling ex-offenders, in hope of motivating the latter group through challenging times.

With strengthened awareness and actions, the community can better support ex-offenders through their financial and emotional challenges at different phases of their reintegration journey. They can better manage their triggers instead of resorting to crime. These strategies also recognise that ex-offenders can progress beyond being mere recipients of second chances. When they are ready, they can also participate in social initiatives to give back to society. For ex-offenders who have struggled with negative labels, these initiatives allow them to create a more positive identity, which adds further motivation to their reintegration.

CONCLUSION

As society continues to advance, YRSG hopes to continue its mission of empowering ex-offenders with skills and career mobility, so that they do not get left behind in an increasingly digitalised global economy. Ex-offenders have to be able to take care of themselves and their loved ones financially, have access to a pro-social support network with their colleagues at work, and lead a structured lifestyle, in order to avoid potential triggers that could arise from the lack thereof of the above. Beyond increasing their skillsets and employability, YRSG recognises the need to galvanise society to increase mindshare of the Yellow Ribbon cause.

We can equip ex-offenders with relevant vocational skills and train their work ethic, but we need employers to practise inclusive hiring and build conducive workplace environments. We can inspire ex-offenders to give back to society, but we rely on our partners for actual opportunities for them to contribute positively. Finally, we can provide them with social support, but often the best support comes from those who have walked their journeys before, for they are in the best position to empathise and inspire others to turn their lives around, just as they did, Beyond Second Chances.

ABOUT THE AUTHOR

Ng Hui Ling
joined YRSG as a Career Coach in 2016 shortly after her graduation from NTU, where she majored in Sociology. She assisted over 200 ex-offenders during her stint, supporting them through the their reintegration journey. For her efforts, Hui Ling was given the SCORE Special Commendation award in 2018. In April 2020, Hui Ling joined Strategy@YR division as an Associate with YRSG's new Research, Policy and Analytics Unit. The newly formed unit is instrumental in YRSG's transformation, spearheading organisational change through digitalisation and research capabilities.

REFERENCES

Agarwal, S. (2021). Yellow Ribbon Singapore's Impact on Inmate Recidivism Rates. *Home Team Journal 10*.

Chua, C. K. (2016). *Leading Reform: Transforming Organisations Through Revolutionary Change* (pp. 19-32). Singapore: Write Editions.

Infocomm Media Development Authority. (2020). *Training and Adult Education Industry Digital Plan*. Retrieved from https://www.imda.gov.sg/programme-listing/smes-go-digital/industry-digital-plans/Training-and-Adult-Education-IDP

Mediacorp. (2020). *Memorandum of Understanding Between Yellow Ribbon Singapore and Mediacorp to Enhance Skills and Career Development of Inmates & Ex-Offenders* [Press release]. Retrieved from https://www.mediacorp.sg/en/corporate/mediacorp-in-the-news/media-releases/memorandum-of-understanding-between-yellow-ribbon-singapore-and-12986462

Ng, C. (2019). 40% of inmates released reoffend in 5 years. *The Straits Times*. Retrieved from https://www.straitstimes.com/singapore/40-of-inmates-released-reoffend-in-5-years

Ng, P. J. H. (2010, March). *Offender Rehabilitation, Community Engagement, and Preventing Re-Offending in Singapore*. Resource Material Series No.80. Tokyo: UNAFEI. Retrieved from https://www.unafei.or.jp/publications/pdf/RS_No80/No80_06VE_Ng.pdf

Paulo, D. A., & Alshahab, S. F. (2018). How poverty tends to trap people into making poor decisions. *Channel News Asia*. Retrieved from https://www.channelnewsasia.com/news/cnainsider/poverty-tends-trap-people-poor-decisions-singapore-class-divide-10965206

Singapore Prison Service. (2013). In *The Courage to Believe: Unlocking Life's Second Chances* (pp. 18-32). Singapore: Singapore Prison Service.

Singapore Prison Service. (2011). *Positive Recidivism Rate a Result of Close Collaboration Between Prisons and its Key Partners* [Press release]. Retrieved from https://www.sps.gov.sg/news-about-us/in-the-news/singapore-prison-service-news-release--positive-recidivism-rate-a-result-of-close-collaboration-between-prisons-and-its-key-partners

Singapore Prison Service. (2020). *Singapore Prison Service Annual Statistics Release for 2019*. Retrieved from https://www.sps.gov.sg/docs/default-source/stats-release/sps-annual-stats-release-for-2019_713kb.pdf

Singapore Prison Service. (2021). *Community-based Rehabilitation to Reduce Re-offending* [Press release]. Retrieved from https://www-sps-gov-sg-admin.cwp.sg/docs/default-source/in-the-news-(news-release)/sps-annual-statistics-release-2020-(pdf-540kb).pdf

Tan, M., & Tan, T. (2020). Beyond Second Chances: From SCORE to Yellow Ribbon Singapore. *Home Team News*. Retrieved from https://www.mha.gov.sg/hometeamnews/on-assignment/ViewArticle/beyond-second-chances-from-score-to-yellow-ribbon-singapore

Wee, M.Y.K. (2019). *Preventing Reoffending in Singapore*. Resource Material Series No.111. Tokyo: UNAFEI. Retrieved from https://www.unafei.or.jp/publications/pdf/RS_No111/No111_09_VE_Keong.pdf

Wong, C. (2020). New training academies to be set up within prisons to help inmates carve careers. *The Straits Times*. Retrieved from https://www.straitstimes.com/singapore/new-training-academies-to-be-set-up-within-prisons-to-help-inmates-carve-careers

Yellow Ribbon Singapore. (2019). *CARE Network*. Retrieved from https://www.yellowribbon.gov.sg/community-engagement/care-network

Yellow Ribbon Singapore. (2020). *Recently, CapitaLand collaborated with the Yellow Ribbon Project on their #CareKitWithLove initiative*. ... [Facebook update]. Retrieved from https://www.facebook.com/yellowribbonsg/posts/10157129125966116

Yellow Ribbon Singapore. (2020). *Yellow Brick Road*. Retrieved from https://www.yellowribbon.gov.sg/yellow-ribbon-fund/programmes/yellow-brick-road

Yellow Ribbon Singapore. (2021) *Yellow Ribbon Fund*. Retrieved from https://safe.menlosecurity.com/https://www.yellowribbon.gov.sg/yellow-ribbon-fund

YELLOW RIBBON SINGAPORE'S IMPACT ON INMATE RECIDIVISM RATES

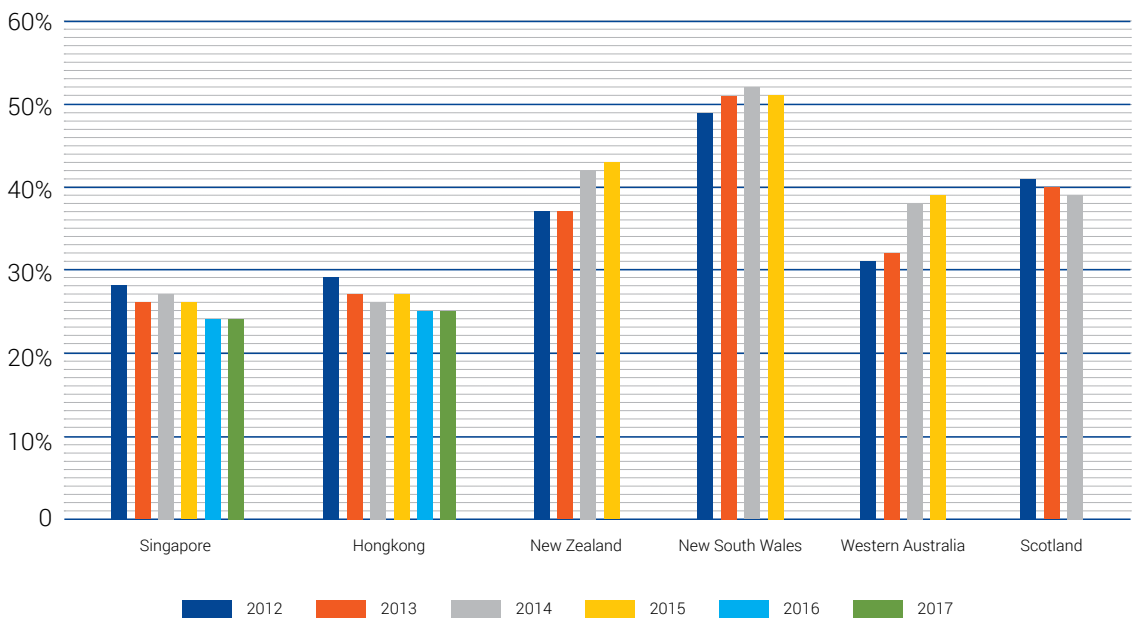
Sumit Agarwal
National University of Singapore

ABSTRACT

This study looks at the impact of Yellow Ribbon Singapore's (YRSG) employment assistance for inmates by quantifying YRSG's value add to society in terms of reducing the recidivism rate, inmates' employment outcomes as well as the potential cost savings and economic returns. A statistical and quantitative methodology was used to estimate the effects of YRSG on the various measures of success based on seven outcomes. The data covered offenders' employment performance within two years after release for the period of 2010 to 2016 in Singapore. The key findings showed that having gone through YRSG employment assistance, i) the recidivism rate was improved, ii) the period of desistance prolonged, iii) the next sentence length shortened, iv) the employment rate improved, v) the time taken to secure a job reduced, vi) the average monthly earnings increased, and vii) the job retention period extended. The findings suggest that YRSG's employment assistance has pronounced positive effects on the recidivism rate and reveal that inmates perform better in the employment market.

INTRODUCTION

Recidivism rate is defined as the percentage of inmates in every cohort released who re-offend and subsequently return to prison within two years. Singapore's recidivism rate remains low and stable over the years, and consistently achieved better results compared to many international counterparts.



Note: CY2015, CY2016 and CY2017 recidivism rates are not available for all countries.

Figure 1. Recidivism Rates

Due to the severe consequences of crimes, it is essential to understand measures that can lower the crime rate and the rate of recidivism. However, related policy guidance is rare, especially for Asian countries. One important reason is the data limitation; we usually require a panel dataset for prisoners' criminal behaviours and demographic factors. In this report, we try to address this question by exploiting a unique dataset from the Singapore Prison Service (SPS) and YRSG, which contains a detailed record of the universe of ex-offenders in Singapore released between 2010 to 2016. We used rich controls and sub-segment analysis to alleviate the selection issues, although even with rich information on inmates, the endogeneity problem may still be of concern as inmates are not randomly sent to prison.

Singapore is well known as one of the safest places around the world. Many people attribute Singapore's low crime rates to its strong arm of the law and severe penalties. What is lesser known is the effort the Singapore government has put into helping inmates' successful reintegration into society after release. Employment is a crucial factor in the successful reintegration of offenders. YRSG's employment assistance aims to help inmates realise their career potential and strengthen their career mobility. Key components of YRSG's employment assistance include: i) job profiling, ii) skills training, iii) job placement ,and iv) job retention support. In this report, we evaluate the effectiveness of YRSG's employment assistance in lowering the reoffending rate and enhancing the employment performance of inmates.

Data Sources and Descriptive Statistics

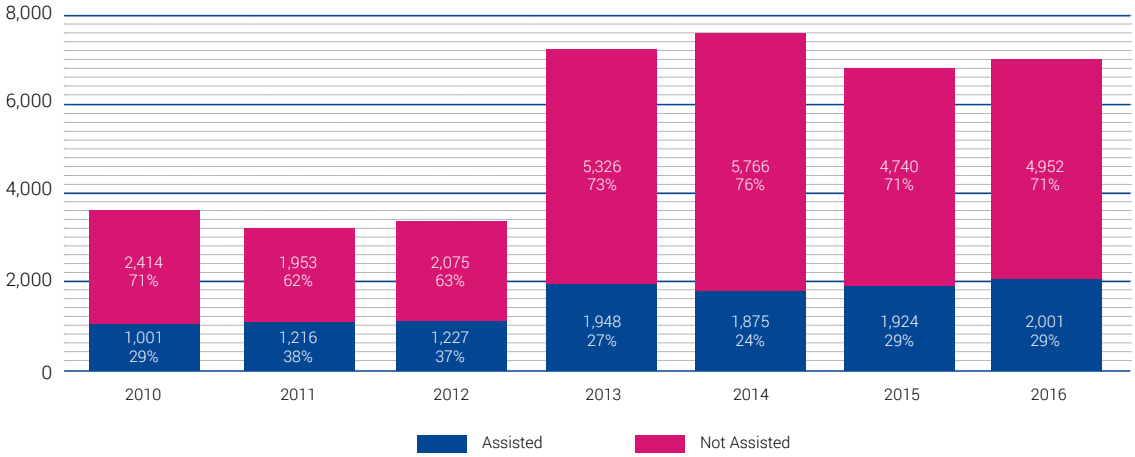
The dataset contains all inmates' employment performance within two years after release from 2010 to 2016, along with their demographic factors. It is a cross-sectional data, tracking ex-offenders' performance for two years after release. If individuals reoffend after two years, they will re-enter the dataset but assigned with a new ID.

Table 1 reports the descriptive statistics of inmates released from prison from 2010 to 2016 in Singapore. Around 90% of inmates are male, 80% lowly-educated with education levels equal to or below secondary school, and at the prime-working-age on average. Three points are noteworthy. First, the YRSG programme participation rate is around 42.1%. It is not a small number but there is still some room for improvement. Second, the average recidivism rate in Singapore is stable at 26.5%, much lower than in many other developed countries, such as 42.2% in New Zealand, 37.8% in Western Australia, 38.9% in Scotland, and so on, according to the data from SPS. Third, most ex-offenders assisted by YRSG (93.8%) successfully secured a job after release, which is vital for them to integrate into society.

Table 1. Data Profile

VARIABLES	(1) N	(2) Mean	(3) SD	(4) min	(5) max
Male=1, Female=0	38,418	0.894	0.308	0	1
Education	38,418	1.861	0.709	0	3
Age at Year of Release	38,418	39.220	11.900	15	86
YRSG programme participation (Y=1, N=0)	38,418	0.421	0.494	0	1
Recidivate (Y=1, N=0)	38,418	0.265	0.442	0	1
Employment (Y=1, N=0)	38,418	0.938	0.241	0	1

Notes: Education is defined as: No formal education=0, Primary=1, Secondary=2, Above secondary=3.
Employment is defined as the individual having at least one record of monthly salary. According to YRSG, zero denotes employment with zero payment.



Note: 11,424 inmates released from 2010-2012 were excluded from the research study as their risk profiles were not classified.

Figure 2. Overall Participation of YRSG's Employment Assistance

Key Trends of Offenders' Participation

In this section, we aim to study the profiles of inmates who tend to participate in YRSG's employment assistance. We first demonstrate how the number of released inmates and the rate of inmates' participation in YRSG employment assistance evolve with time. As shown in Figure 2, the blue bars denote the size and the share of assisted inmates in certain years, while the pink bars represent the statistics for inmates who were not assisted. In 2016, 29% of the released inmates were assisted by YRSG.

We then explored how the inmates assisted by YRSG vary by the demographic factors including risk levels, age, and education levels. If we can better understand their characteristics, specific actions could be designed to increase the participation rate.

First, in Figure 3, we find inmates assisted belong to the moderate risk group (32.2%), followed by the high risk group (25.5%) and the low risk group (25.4%). The SPS uses the Risk-Needs-and-Responsivity (RNR) Model, an internationally recognised model for treatment and assessment of offenders, to assess criminogenic risks and rehabilitation needs of each inmate, and charts appropriate programmes for intervention based on their identified risks and needs (Wee, 2019). Suitable and eligible inmates may be emplaced on SPS's Community-based Programme, where employment is compulsory. YRSG's employment assistance is open to all inmates, regardless of their risk levels.

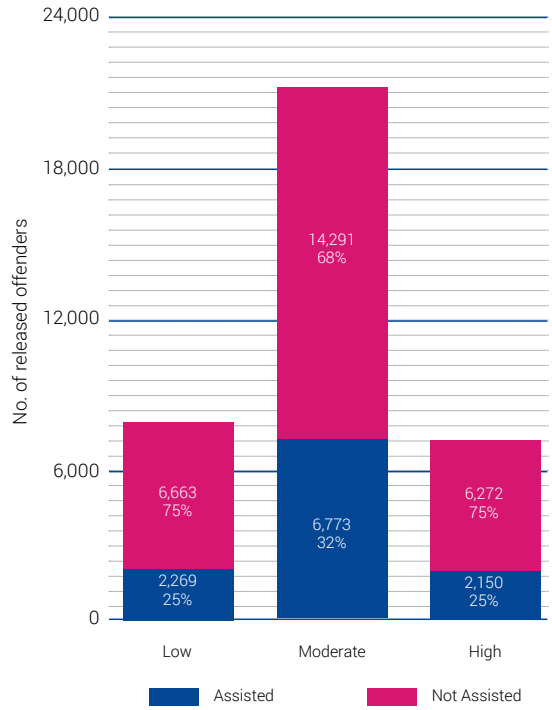


Figure 3. By Risk Level

Regarding the education level of inmates, we find, as shown in Figure 4, that around 60% of those assisted have primary or secondary school education. More inmates with secondary education (32%) have been assisted by YRSG. Finally, in Figure 5, we find that the numbers assisted in different age groups ranging from 20-59 years is about 30% each.

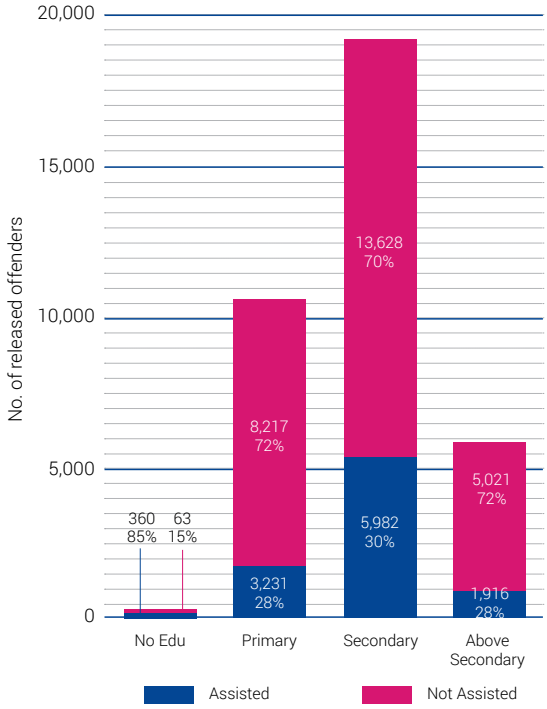


Figure 4. By Education Level

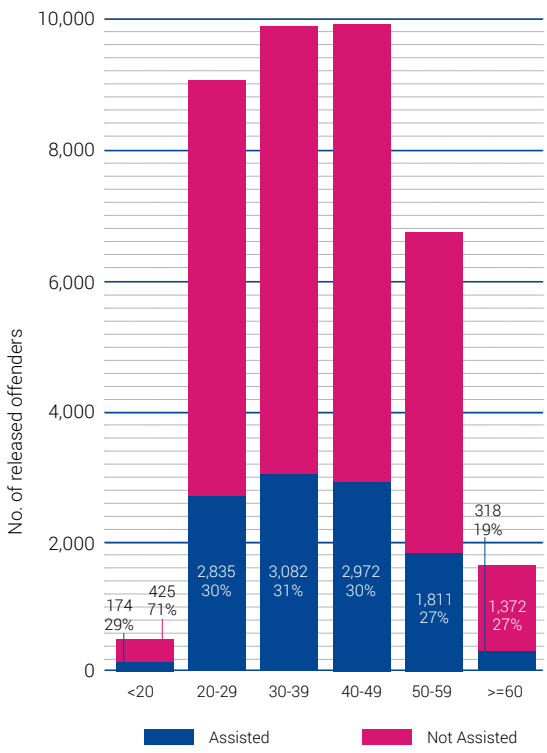


Figure 5. By Age

METHODOLOGY: REGRESSION ANALYSIS

To evaluate the impact of YRSG's employment assistance, we exploit a linear model. Formally, the specification can be written as:

$$Y_i = \beta YRSG_i + \Theta X_i + Y_d + \in_{id}$$

Where Y_i are the recidivism outcomes and the employment outcomes of inmate i, including the recidivism rate, the period of desistance, the next sentence length, the employment rate, the time taken to secure job, the average monthly earnings, and the job retention period. $YRSG_i$ donates the variable of interest, equalling to 1 if inmate i participated in the programme, or otherwise zero. The term X_{id} is a vector of individual i's pre-determined characteristics, including gender, risk level, education and age attainment. Since the employment assistance may change contents across years, we include the year fixed effects, denoted by Y_d. The coefficient of interest is β, which represents the effects of inmates participating in YRSG's employment assistance.

We first estimated the equation using the full sample, and then conducted sub-segment analysis based on the risk levels of inmates.

SUMMARY OF TOPLINE FINDINGS

Through the research study, seven topline findings are observed:

Recidivism Outcomes	
Finding 1	Recidivism rate decreased by **3.2% points**
Finding 2	Period of desistance prolonged by **2.03 months**
Finding 3	Next sentence length shortened by **10.42 months**
Employment Outcomes	
Finding 4	Employment rate improved by **7.2% points**
Finding 5	Time taken to secure job reduced by **0.64 months**
Finding 6	Average monthly salary increased by **$135.24**
Finding 7	Job retention period extended by **0.95 months**

Each topline finding is further elaborated below. The impacts on inmates' risk and education levels were also analysed for each finding.[1]

Finding 1: Recidivism Rate

YRSG's employment assistance has helped to reduce the probability of reoffending by 11.95% (effect size), which decreased the recidivism rate by 3.2%. The impact is largest for inmates of high risk and above secondary level education.

Categories	Recidivism Rate	Impact
Risk	8.3% points lower for High Risk	17.33%
Education	3.5% points lower for Above Secondary	18.65%

Finding 2: Period of Desistance

YRSG's employment assistance has helped to increase the probability of offenders remaining crime and drug free by 16.36% (effect size), which increased the period of desistance by 2.03 months. The impact is largest for inmates of high risk, and primary level education.

Category	Period of Desistance (months)	Impact
Risk	Increased by 2.3 months for High Risk	20.85%
Education	Increased by 2.32 months for Primary Education	19.36%

Finding 3: Next Sentence Length

YRSG's employment assistance has helped to decrease the length of next sentence by 25.55% (effect size), which reduced the next sentence length by 10.42 months. The impact is largest for inmates of low risk and secondary level education.

Category	Next Sentence Length (Months)	Impact
Risk	Reduced by 9.197 months for Low Risk	33.45%
Education	Reduced by 14.89 months for Secondary	37%

Finding 4: Employment Rate

YRSG's employment assistance has helped to increase the inmates' probability of being employed by 7.68% (effect size), which improved the employment rate by 7.2% points. The impact is largest for inmates of low risk and primary level education.

Categories	Employment Rate	Impact
Risk	Improved by 11.7% for Low Risk	12.62%
Education	Improved by 6.3% for Primary	6.83%

Finding 5: Time taken to Secure Job

YRSG's employment assistance has helped to decrease the time taken by inmates to secure jobs by 35.73% (effect size), which reduced the overall time taken to secure job by 0.64 months. The impact is largest for offenders of low risk. The impact is also similar across all education levels.

Category	Time taken to Secure Jobs (Months)	Impact
Risk	Reduced by 1.11 months for Low Risk	65.16%
Education	Reduced by 0.50 months for Primary	33.22%
	Reduced by 0.53 months for Secondary	37.01%
	Reduced by 0.51 months for Above Secondary	38.93%

Finding 6: Average Monthly Salary

YRSG's employment assistance has helped to increase the average monthly earnings of inmates by 13.91% (effect size), which increased the earnings by $135.24. The impact is largest for offenders of high risk, primary level and secondary level education.

Category	Average Monthly Earnings	Impact
Risk	Increased by $104.48 for High Risk	65.16%
Education	Increased by $129.81 for Primary	20.15%
	Increased by $136.87 for Secondary	15.24%

[1]The regression tables for the various findings are available from YRSG. Please write to Wee Zi TAN at corpcomms@yellowribbon.gov.sg.

The finding also highlights the salary gap among risk levels (see table below for the mean monthly salary[2]). Among the risk levels, there is a huge salary gap between low risk and the higher risk levels (both high and moderate risk).

Risk	Low Risk	Moderate Risk	High Risk
	$1,824.13	$807.23	$488.13

Finding 7: Job Retention Period

YRSG's employment assistance has helped to increase inmates' length of employment 4.55% (effect size), which extended the overall job retention period by 0.95 months. The impact is largest for offenders of moderate and low and primary level education.

Category	Job Retention Period (months)	Impact
Risk	Increased by 1.25 months for Moderate Risk	65.16%
	Increased by 1.10 months for Low Risk	5.68%
Education	Increased by 0.85 months for Primary	4.19%

IMPLICATIONS

The findings of this study can help to sharpen YRSG's focus in providing employment interventions for offenders. Three proposed implications are considered:

a. Expanding the numbers of high risk inmates assisted;
b. Future proofing the employability of inmates; and
c. Calculating the estimated social and economic returns

Expand Numbers of High Risk Inmates Assisted

The findings have shown that high risk inmates have benefited from YRSG's employment assistance. The specific impact on high risk inmates is as shown below:

Recidivism Outcomes for High Risk	
Finding 1	Recidivism rate decreased by **8.3% points**
Finding 2	Period of desistance prolonged by **2.30 months**
Finding 3	Next sentence length shortened by **11.76 months**
Employment Outcomes for High Risk	
Finding 4	Employment rate improved by **4.5% points**
Finding 5	Time taken to secure job reduced by **0.35 months**
Finding 6	Average monthly earnings increased by **$104.48**
Finding 7	Job retention period extended by **0.57 months**

The findings have also revealed that YRSG has only assisted a smaller proportion (25%) of high risk inmates released from 2010 to 2016. The recidivism rate of inmates has remained stable at 26.5% in recent years. Targeting a large proportion of high risk inmates for employment assistance will help to reduce the overall recidivism rate in future. YRSG can consider prioritising its resources to expand the number of high risk inmates for employment, over the next few years. To better support this group, YRSG would need to work closely with SPS in developing a throughcare approach and institute a "wrap around" reintegration support to enable high risk inmates to remain gainfully employed.

Future Proofing the Employability of Inmates

The COVID-19 pandemic has triggered an acceleration in digital adoption, amidst restructuring at both economic and industry sector levels. Most Rank-and-File jobs are expected to disappear or be redesigned, with sustained digital innovation. Job seekers with lower academic qualifications will need greater assistance to upskill and remain relevant in the future economy.

[2]The salary data used in this study are derived from administrative sources such as contributions to the Central Provident Fund. Actual salaries may thus be higher.

The majority of the inmates possess academic qualifications of secondary education and below. They will face challenges to reintegrate into the workforce, if they are not assisted to remain abreast with the evolving skills and job nature. Given this, YRSG's current employment assistance needs to move beyond helping offenders secure jobs. To keep up with the shifts in the economy, YRSG's assistance should focus on strengthening the career mobility of inmates through:

a. Developing inmates' career aspirations and identity, so that they can make informed career decisions. Along with this, opportunities to develop careers and continual skills acquisition should be made available for the inmates to adapt and thrive in an evolving job market;

b. Strengthening the nexus with industry sectors to remain abreast with industry developments and identify "future jobs" in growth sectors, where inmates can be trained and placed; and

c. Enabling inmates to acquire higher cognitive and digital skills progressively to remain competitive in the labour force.

Estimated Social and Economic Returns

We conclude this work by conducting a back-of-envelope calculation for Singapore. McCollister, French, and Fang (2010) have reported the potential social costs, both tangible and intangible, for each crime type. Specifically, the social costs for a case of assault, rape, murder, robbery, larceny and burglary are US$66,888, US$240,776, US$9 million, US$42,310, US$3,532 and US$6,462. Based on 2016 data, the average cost weighted by crime rates in Singapore is US$0.22 million per case. Based on our estimates, YRSG employment assistance reduces the recidivism rate by 3.2% per year. According to SPS, the number of inmates released in 2016 was 7,168. The estimated social cost reduced by YRSG per year is thus 7,168*3.2%*US$0.22 million = US$50.5 million (S$69.19 million, at the exchange rate 1.37).

Apart from the social cost savings, we also calculate the incremental economic gains to the society arising from YRSG's effort to secure employment for released inmates. Using data collected during 2010 to 2016 by administrative sources, we derive the average monthly salary per inmate who works to be S$885.17, and thus the estimated economic returns contributed by YRSG per year (based on 2016 released cohort) is 7,168*3.2%*S$885.17*12 = S$2.44 million.

Therefore, the total social and economic return is the sum of S$69.19 million and S$2.44 million, equalling to S$71.63 million. In other words, YRSG adds an estimated incremental value of S$71.63 million to the state per year. This only estimates the direct incremental value. While there is high societal cost savings that cannot be quantified, YRSG is contributing to society beyond its budget allocation.

CONCLUSION

The number of ex-offenders who re-offended within two years of their release has remained low and stable. The overall recidivism rate for the 2016 cohort was then the lowest record in history at 23.7%. This has now been overtaken by the new all-time low of 22.1 per cent for the cohort released in 2018 (SPS, 2021). This achievement is inseparable from the efforts made by SPS and YRSG.

Based on our analysis, we find that YRSG participation has significant impact on released inmates' recidivism and employment outcomes. Overall, we find that the YRSG plays an important role in reducing the recidivism rate in Singapore and helping offenders perform better in the employment market. We acknowledge that these benefits may be partly due to the recovery state from the 2008 financial crisis which resulted in a better employment situation faced by the offenders, but we argue that without YRSG, these positive effects would not have remained strong after the early 2010s.

[3]The crime rates for assault, rape, murder, robbery, larceny and burglary were 46.8%, 16.0%, 1.60%, 0%, 15.4%, and 20.2%, respectively in Singapore in 2016, according to the Singapore Police Force.
[4]Our BOE calculation is based on 2010 US price data and may be subject to inflation, making our costs underestimated.

ABOUT THE AUTHOR

Sumit Agarwal
is Low Tuck Kwong Distinguished Professor of Finance at the Business School and a Professor of Economics and Real Estate at the National University of Singapore. In the past, he has held positions as a Professor of Finance at the Business School, Georgetown University. Before that he was a senior financial economist in the research department at the Federal Reserve Bank of Chicago, and prior to joining the Chicago Fed, he was a senior vice president and credit risk management executive in the Small Business Risk Solutions Group of Bank of America.

Sumit's research interests include issues relating to financial institutions, household finance, behavioural finance, international finance, real estate markets and capital markets. He has published over 90 research articles in journals like the *American Economic Review, Quarterly Journal of Economics, Journal of Political Economy, Journal of Finance, Journal of Financial Economics, Review of Financial Studies, Review of Economics and Statistics , Management Science, Journal of Financial Intermediation, Journal of Money, Credit, and Banking* among others. Additionally, he has co-written three books – *Household Finance: A Functional Approach, Kiasunomics, and Kiasunomics 2* – and also co-edited two collected volumes: *Impact of COVID-19 on Asian Economies and Policy Responses, and Household Credit Usage: Personal Debt and Mortgages*. He writes regular op-eds for *The Straits Times* and has been featured on various media outlets like the BBC, CNBC, and Fox on issues relating to finance, banking, and real estate markets.

Sumit's research is widely cited in leading newspapers and magazines like the *Wall Street Journal, New York Times, The Economist*, and the U.S President's Report to Congress. He also runs a blog on household financial decision making called *Smart Finance*.

REFERENCES

McCollister, K. E., French, M. T., & Fang, H. (2010). The cost of crime to society: New crime-specific estimates for policy and program evaluation. *Drug and alcohol dependence* 108(1-2), 98-109.

Singapore Prison Service (SPS). (2021). *Community-based Rehabilitation to Reduce Re-offending* [Press release]. Retrieved from https://www-sps-gov-sg-admin.cwp.sg/docs/default- source/in-the-news-(news-release)/sps-annual-statistics-release-2020-(pdf-540kb).pdf

Wee, M.Y.K. (2019). *Preventing Reoffending in Singapore.* Resource Material Series No.111. Tokyo: UNAFEI. Retrieved from https://www.unafei.or.jp/publications/pdf/RS_No111/No111_09_VE_Keong.pdf

THE THREE KEY SUCCESS FACTORS OF INNOVATION IN THE SINGAPORE POLICE FORCE

Camille Ang & Du Yan
Singapore Police Force

ABSTRACT

The Singapore Police Force (SPF) has long invested heavily in its people and leveraged technology to reach its vision of "making Singapore the safest place in the world". As an organisation it benchmarks itself against the globally recognised Business Excellence Framework, for which it has won the Singapore Quality Award several times, including certification to its Innovation, People and Service classes since 2003-4, and the pinnacle award for sustained global leadership in policing in 2007 and 2019. These accolades are seen by the SPF leadership as health checks on the Force's continuing commitment to innovation as policing increases in complexity. This article describes the strong sense of purpose shared by SPF officers, the organisation's culture of innovation and its supportive and effective leadership – three factors the SPF considers key to its success in achieving its mission.

INNOVATION IN POLICING

When the Singapore Police Force (SPF) won the country's top internationally benchmarked business excellence award, the Singapore Quality Award (SQA) with Special Commendation, for the second time in 2019, Commissioner of Police Hoong Wee Teck said: "What is effective today is not good enough for tomorrow. We have to continue to learn, innovate and transform to future-proof ourselves. … The Business Excellence Framework is one of the means which we adopt to conduct an organisational health check" (Kan, 2019).

The SPF was among the first public service organisations in Singapore to adopt the Business Excellence framework when it was introduced by Enterprise Singapore in 1994 to help organisations strengthen their management systems and processes to deliver superior performance.[1] The first government department to win the SQA in 2002, the SPF and its leaders saw the Business Excellence framework, with its nine attributes of excellence – leading with vision and integrity, creating value for customers, driving innovation and productivity, developing organisational capability, valuing people and partners, managing with agility, sustaining outstanding results, adopting an integrated perspective, and anticipating the future – as aligned with its vision of being "A Force for the Nation – Making Singapore the Safest Place in the World".

Seeking out best practices from around the world and developing innovative and practical ideas to fight crime has always been integral to policing.

[1]Enterprise Singapore concluded its programme of recognising organisations that meet the robust standards of the Business Enterprise Framework with annual awards, namely Singapore Quality Award (SQA), People Excellence Award, Innovation Excellence Award and Service Excellence Award and the pinnacle SQA with Special Commendation, in 2019. The Business Enterprise Initiative was closed in 2020 as it had "achieved its intent in instilling excellence among organisations", having certified over 2000 organisations in 25 years (Enterprise Singapore, 2020).

For instance, the SPF embarked on a radical transformation in the 1980s when it introduced community policing[2].

Incremental changes are as important. Policing work involves problem solving which requires officers to adopt an inquisitive and innovative mindset with the ability to think on their feet. Investigation officers often have to engage in lateral thinking to gather evidence and solve crime cases. Ground Response Force officers have to be creative to effectively manage and resolve incidents every day. Community Policing officers constantly consider new ideas when engaging the community and stakeholders to solve community safety and security problems. Problem solving is a core component of effective policing efforts and the skill sets and tools to resolve issues have to be integrated into daily work. In its 200 years[3] of keeping Singapore safe, the SPF has worked hard to make innovation part of the SPF DNA, where officers are always encouraged to make changes, however small or simple, to improve and address problems in their workplace.

THREE KEY SUCCESS FACTORS

Innovation in the SPF refers to the creation or improvement of products, processes or services that add value to officers and stakeholders. It is not just limited to the creation of new products. Given that the SPF's primary stakeholders are members of the public, there are always broader implications to everything it does. In an increasingly complex world, innovation is more critical than ever to navigate, adapt and emerge stronger, especially during a global pandemic such as the COVID-19 outbreak that has claimed the lives of more than two million people worldwide in one year.

It is easy and convenient for organisations to be caught up in running day-to-day operations and undermine the importance of emphasising innovation, especially when existing processes and models have worked thus far and are still working well for them (Tan, P. 2020). For the SPF, the innovation journey has been a continuous process. Deliberate actions from all directions and at all levels have helped improve the way it works. This has been made possible by three key success factors: a sense of shared purpose, a culture of innovation, and effective and supportive leadership.

A STRONG SENSE OF PURPOSE

In every organisation, the most valuable and intangible resource is its people. A company is only as good as the people it keeps (Walter, 2013). Similarly, for the SPF, its officers are integral to its success in keeping crime rates among the lowest in the world. It is this sense of purpose, of making Singapore safe and secure for all, that acts as the guiding force to innovate, and empowers the SPF to progress in the different aspects of policing work.

Research has shown that a strong sense of purpose drives employee satisfaction and affects an organisation's ability to transform (Rohman, 2020). With millennials in particular, making a difference is often more important than professional recognition or a pay raise (Raza, 2016).

An organisation without purpose manages people and resources, while an organisation with purpose mobilises people and resources (Hakimi, 2015).

The nature of work in the SPF is rigorous and dynamic. There is no typical or routine day, as the tempo changes very quickly. It is challenging, yet one of the best ways to make a difference to people's lives. Not everyone is suited to policing work, which requires tenacity when dealing with suspects, but demands empathy and the ability to be sensitive when interacting with victims of crime (Leow, 2020). Officers in the SPF are expected to uphold the core values of Courage, Loyalty, Integrity and Fairness and remain dedicated to the mission of keeping Singapore safe and secure. They continue to strive because of their strong sense of shared purpose that ties them to the SPF, which binds all sorts of different people.

[2] Community policing is one of the key thrusts of the SPF's policing strategy to actively involve the community in combating crime and terrorism. From the Neighbourhood Police Post (NPP) to the current Community Policing System (COPS), the community policing models have changed over the decades to adapt to an ever-changing security environment.

[3] The origins of the SPF can be traced to Sir Stamford Raffles' founding of Singapore as a British trading post where the police force was first formed with just 12 men in May 1820.

It is generally believed that the younger generation are more creative, that the longer an employee stays in a job, the higher probability that they will be more resistant to change. Innovation in the SPF has, on the contrary, stem from all age groups. While there are various recognition programmes to encourage and inspire officers, most put in the effort to innovate for the simple extrinsic reason that it will bring about some benefit to people, processes and reinforce the purpose of their work.

The Rangers, a project team from the SPF Training Command, is an example of three officers in their late 40s to 50s who came forward to embark on an innovation project in 2019. The team, comprising firearm instructors, trains and conducts weapons firing sessions for officers daily. After every session, all spent casings from every firearm have to be accounted for by the officers and trainers. As the spent casings are prone to bounce off surfaces in the range, the process of searching and accounting for the spent casings can be time-consuming. There were occasions when more than half an hour would be spent finding the last spent casing hidden between the small gaps of the targetry system. This search for spent casings often delays sessions and affects the schedules of officers and trainers.

The team of instructors came together to brainstorm solutions. They bought several materials, including bubble wrap and crates of boxes, to create different prototypes and tested them during their lunchtime breaks. Their early prototypes were not successful, until one day when the fibre nets from a badminton match inspired Senior Station Inspector Abdul Samad Bin Ab Jalil to share an idea with the team, which was quickly implemented. Since then, with fibre nets installed as deflectors in all the ranges at the Home Team Academy, officers involved in firing sessions have collectively saved more than 800 hours per month – the time they used to expend searching for stray spent casings.

Mrs Cheok-Goh Geok Leng, also in her 50s, is another example. After more than 36 years in the Administration and Finance Department, she picked up Robotic Process Automation (RPA) and coding skills to automate her work processes. She attended a two-day training programme and workshop that taught her to conceptualise and develop her own bots. Although adept at Microsoft Excel, she initially struggled with RPA, but persisted, and has since July 2019 developed four bots that automate the generation of finance reports, journal analysis and file mergers for budget analysis in the SPF.

The work in the SPF may not always be directly related to fighting crime. However, officers understand the meaning behind their work and seek to improve their work environment because of their sense of belonging in the workplace. Organisational health surveys conducted within the SPF have consistently shown that most officers feel that the work they do is meaningful. It is this sense of purpose officers feel that have led them to continuously take ownership of their work and maintain a strong spirit of innovation.

A CULTURE OF INNOVATION

Building a culture does not take place overnight. It is a by-product of many different factors put together to create the desired conditions and environment.

The SPF recognises that structure can influence mindsets and facilitate changes in the ideal direction. It has since been shaping the innovation culture through the innovation framework that has been established and periodically reviewed to strategise and keep up with changing times. The SPF Innovation Framework, as illustrated in Figure 1, is a systematic approach to understanding problems, generating, evaluating and realising innovative ideas. Innovation in the SPF is guided by three key drivers, namely the Leadership Group (LG) steering innovation through platforms like forums and innovation meetings, collaborations with partners who provide their expertise, and officers undertaking projects to seek better ways of doing things. This is supported by innovations resources like dedicated funds and training interventions to equip officers with skillsets and tools to be competent in identifying problems and coming up with solutions to tackle them in a holistic manner. Having focused on innovation since the early days has also built the foundation of a culture of innovation in the SPF which empowers officers to constantly make improvement in the workplace. The combination of drivers and enablers has shaped the innovation process for the SPF to achieve its five

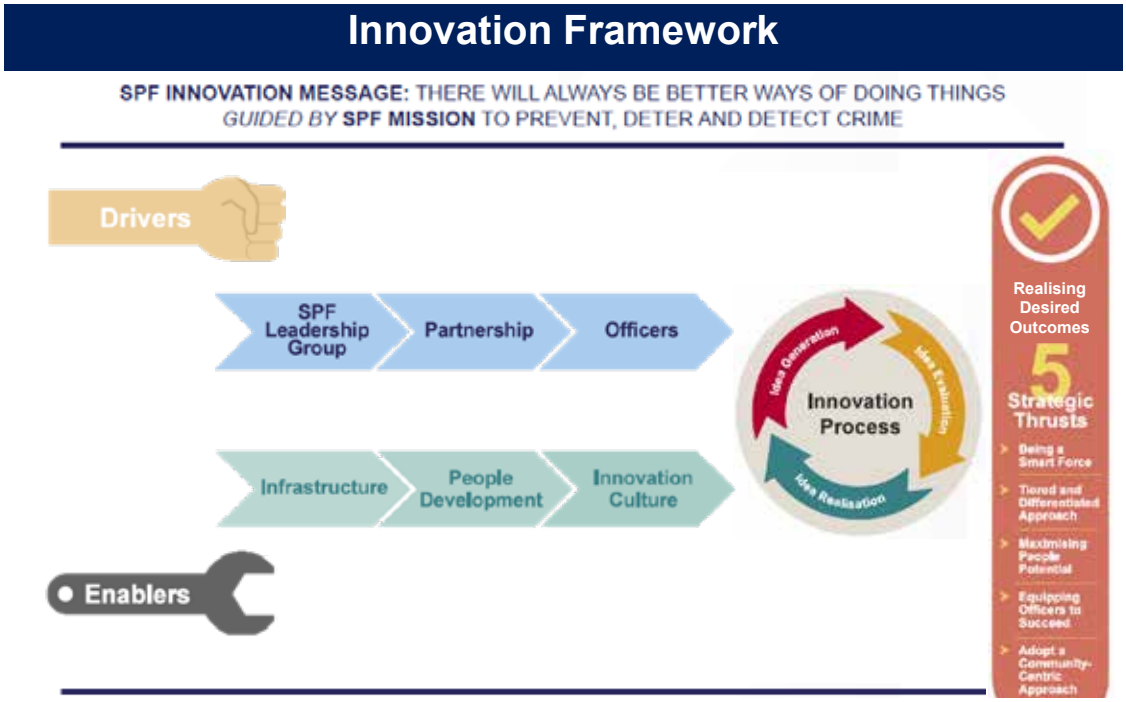


Figure 1. The SPF Innovation Framework

desired outcomes through its five strategic thrusts – leveraging technology and building new capabilities to be a smart force, re-inventing work processes for greater resource optimisation through a tiered and differentiated approach, adopting a community-centric approach to better engage and deliver more convenient and meaningful services, strengthening and maximising the officers' potential and lastly, equipping officers to succeed.

Ideas in the SPF are generated both top-down and bottom-up, and externally from scans and collaboration with partners. As long as an idea creates value, it is considered because the smallest and simplest idea can sometimes be very effective and impactful.

The SPF's innovation culture is also tied very closely to being a pioneer adopter of the Learning Organisation concept of building a culture that supports learning and innovation (Senge, 2006). As a Learning Organisation, the SPF encourages independent thinking and empowers officers to seek better ways of doing things. There are platforms created that allow the opportunity for shared learning, cross-functional feedback and collaboration with each other. One of the most recent platforms that has seen over 71 innovation projects during a four-month period from December 2019 to March 2020 is the Lunch & Learn – the innovation series. Lunch & Learn in the SPF provides innovation project teams with the opportunity to present their innovation ideas to officers from different units and staff authorities in their respective domains, and obtain feedback. Through this platform, there is always something new to learn, whether from the work or personal perspective, as officers also share their own learning experiences and the challenges that they have had to overcome. For instance, at one of the Lunch & Learn sessions, project members of the Anti-Assault Retractable Shield (A.R.T.S) from the Protective Security Command shared their learning journey. Having no prior mechanical or engineering background, the project team spent weeks researching online, watching YouTube videos and experimenting with various materials to build from scratch a customised shield to suit their operating environment. Officers at the session said later that they were inspired by the project team's perseverance and passion.

The journey towards a successful innovation product or process is not always comfortable. It is also not always immediately successful. There

are sometimes days of hair-pulling, frustration and trial and error, before the light at the end of the tunnel appears. Even a failure should be celebrated because of the learning outcomes and experiences that it brings about. This is something that the SPF acknowledges and puts into practice to cultivate a psychologically safe environment for officers to trial their ideas. This threshold for failure and celebration of officers daring to try are what push officers to keep striving for excellence.

Superintendent of Police (Supt) Victor Loo is one such role model who has displayed enthusiasm and passion for making improvements within his workplace. He strongly believes that "innovation is never a destination, but a journey of discovery". Since 2006, he has proactively embarked on more than ten innovation projects. One of the projects he has led is the Internal Communications Management System (ICMS). ICMS is a project that improves internal communications within Jurong Police Division. It leverages technology to provide officers with the most updated information and saves manhours previously expended on putting up manual communication messages. This simple application of existing technology was first sparked when Supt Loo saw commercial shops using such methods for their promotions and sales. He saw it as an opportunity and immediately brought together a team of officers to work on ICMS, which won the Gold award at the national-level Team Excellence Assessment 2019 organised by the Singapore Productivity Association.

While some of his ideas came to fruition, there were other projects and experiments that did not work. Supt Loo did not let failures get to him. He learnt from the experiences, took the feedback and saw each as an opportunity to grow and come back even stronger with every new project. His passion for innovation has been recognised. He has won several innovation awards, including the PS21 Best Ideator Award in 2010 and the Platinum Award under the Champion Category in the Home Team Innovation Awards 2020. These are apex awards that recognise innovative individuals across the Public Sector and Home Team respectively.

Product Innovations

The COVID-19 pandemic that broke out in early 2020 also put the innovation culture of the SPF to the test, especially given the Force's emphasis on deployment of smart technology. The SPF has responded to the crisis by adapting existing technology tools to enhance its operational effectiveness. The deployment of autonomous police robots and Unmanned Aerial Vehicles (UAVs) are examples of such technology tools that help to augment police operations while helping to reduce exposure of frontline officers, keeping them safe.

For example, the Multi-purpose All Terrain Autonomous Robot 2.0 (M.A.T.A.R 2.0) is a home-grown robot developed in collaboration with the Home Team Science and Technology Agency (HTX) and A*Star. Since its first deployment in 2017, the robot has undergone several iterative trials and enhancements, evolving into M.A.T.A.R 3.0 with two variations – one with a Pan-Tilt-Zoom Camera, and the other equipped with a tethered UAV. Both versions allow real-time footage to be live-streamed to the police command centres to aid in sense-making.

With its ability to patrol and navigate routes without supervision, M.A.T.A.R 3.0 is playing an important role in the national response to the pandemic, complementing police officers patrolling the ground. As it is able to perform automated routine tasks, M.A.T.A.R 3.0 has been used to project police presence and was deployed at high risk environments like the COVID-19 isolation facilities (see Figure 2). Its communication feature also means it can remind occupants to adhere to the safe distancing measures (Shah, 2020).

Since the first deployment of UAVs in 2016, the SPF has been exploring the adoption of the latest technologies in its journey to become a smart

Figure 2. M.A.T.A.R 3.0 patrolling the grounds of a COVID-19 isolation facility

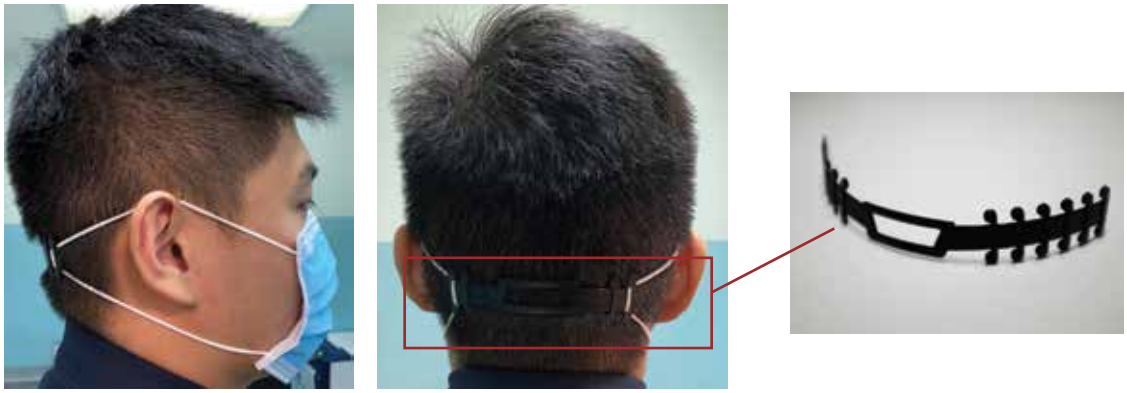


Figure 3. An officer with the customised 3D printed mask ear-guard

force. To support dormitory operations during COVID-19, UAVs have been deployed to conduct aerial surveillance of dormitory perimeters. They have helped to detect anomalies within dormitory compounds and enabled the SPF to coordinate responses to better manage situations (Shah, 2020).

Another area that the SPF has been exploring is 3D printing technology, which is also known as addictive manufacturing. This technology is becoming one of the fastest and cheapest ways to create products because of its affordability and the speed at which it can achieve production.

With mask wearing mandatory outside the home during COVID-19, discomfort from prolonged wearing and securing loose-fitting masks has become an issue for many. In early April 2020, when a team from Tanglin Police Division saw a mask ear-guard designed by a 13-year-old Canadian boy scout that secures masks and relieves pain on the ears from prolonged wearing, they decided to customise it to fit the average Asian head. Using the original design uploaded online, they introduced a curved design conformed to the head contour and with more prongs for customisability. The ear-guards were printed and trialled for use within three days, and later printed in larger numbers for distribution to all the officers in Tanglin Police Division. This low-cost and fast production of the 3D printed mask ear-guards was simple, yet for officers working long hours on the frontline, effective (Figure 3).

Process Innovations

Safe distancing measures have also called for changes in work processes and training while maintaining the same standard of service provided to both internal and external stakeholders.

The Police Smartphone, introduced in 2018, has become pivotal in aiding these process changes, particularly in the exchange of information for training. Designed with a host of custom-built applications, the Police Smartphone allows officers across different units to be more effective in their work. Some of its functions include secured messaging, access to SPF's knowledge management database on-the-go, and sharing of the latest information or training materials through the "Share-It" application.

Even in a pandemic, training remains essential as officers have to be equipped with the latest policy changes and knowledge. With Home-Based-Learning now the norm, there is a need to ensure that officers still have access to relevant information and materials while remaining in a safe environment. Instead of the usual face-to-face training, trainers now leverage the "Share-It" application in the Police Smartphone to disseminate training materials. Trainers have also converted their training materials to simple videos and animations to help officers understand and learn better. As part of the validation of the learning, quizzes are also prepared and uploaded onto the same platform to provide officers with a more seamless experience. This change in process has been made possible with the Police Smartphone as not all officers are equipped with a laptop, but all are equipped with the phone.

With the stepping up of enforcement efforts to ensure safe distancing, SPF has also received calls on related cases. A team of officers from Ang Mo Kio Police Division had earlier designed and

developed a mobile application called F-Connect that allows officers to obtain, literally at their fingertips, relevant contact details of agencies like the Housing and Development Board, and Health Sciences Authority, and individuals like locksmiths. As the Whole-Of-Government response to the pandemic grew, the team enhanced the application to include additional contact details of agencies responsible for different aspects. This quick change helps officers from the Ang Mo Kio Police Division inform relevant agencies of COVID-19 related cases within three clicks of their Police Smartphone. This is a vast improvement from the previous process whereby officers had to rely on the Police Operations Command Centre (POCC) or even trawl through the internet for the information.

In the area of investigations, the SPF also worked with external stakeholders to adopt new processes to ensure that investigation processes comply with the need to minimise interpersonal contact during COVID-19. The SPF worked with the Attorney-General's Chambers (AGC) on a media file sharing platform where Investigation Officers (IOs) no longer need to physically dispatch DVDs containing media evidence to the AGC. Instead, they can upload the media evidence to the platform and Deputy Public Prosecutors (DPPs) are also able to access the media evidence seamlessly through their work computers. The operationalisation of the media file sharing platform has facilitated telecommuting arrangements for both IOs and DPPs and reduced manual processes which might put both parties at risk of viral infection. It is also a substantive step towards digitalisation of the investigation process.

EFFECTIVE AND SUPPORTIVE LEADERSHIP

The third ingredient for the SPF's successful innovation journey is effective leadership. This is a necessary requirement; having purposefully driven officers and an innovative culture without effective leadership is like attempting to construct a building with resources, but no foundation to stabilise and maintain the structure (Fisher, 2018).

Leaders play a very crucial role. They set the tone and culture, create and plan, secure and work within resources, motivate employees to work together, and guide them towards achieving a specific goal (Ramos, 2020). Leaders work with the employees, even when the odds are against them. Leadership, it can be said, is a process of social influence which maximises the efforts of others towards the achievement of a greater good (Ramos, 2020).

In the SPF, the LG adopts a Collective Leadership model which underscores collective ownership at the strategic level. At every opportunity and in every area, the SPF identifies members of its LG as drivers of excellence. Innovation, for instance, is driven by the Director of the Planning & Organisation (P&O) who, as the Innovation Champion, oversees and ensures that key decisions and deliberations are documented and acted upon. The role of the Innovation Champion is also to make innovation thrive within the SPF. Accordingly, the Director of P&O participates directly in platforms that allow him to connect with and understand better the needs of the officers, which is beneficial for deriving strategies to be used. This act of walking the ground also helps to gauge true sentiments and build rapport.

At the unit level, the Deputy Director or Deputy Commander are appointed Innovation Advocates. They are essential change agents who help to bridge strategic directions with ground-up innovations, thus enhancing an individual project's potential and value. At the same time, they help in communicating changes, managing challenges and being a mentor to the unit officers.

Together, the Innovation Champion and Innovation Advocates form a strong pillar of support and serve as role models for officers. They also ensure that effective and relatable communication is used in various channels and platforms to maintain healthy and lasting working relationships. These means using trendy, personalised contents in bite sizes in Electronic Direct Mails, Workplace by Facebook, dialogue sessions and townhalls, the idea being to engage and reach out to as many as possible within the SPF.

Innovate@Foxtrot (iF) is an example of what a unit with a strong innovation culture can produce. Started in January 2019 in the Ang Mo Kio Police Division by its then Commander as Digitalisation@Foxtrot, iF seeks to digitally transform the workplace and processes from the ground-up. The aim is to achieve better outcomes efficiently with the adoption of the lean start-up process. The lean start-up is a methodology that favours experimentation over elaborate planning, customer

feedback over intuition, and iterative design over traditional "big design up front" development (Blank, 2013). iF consists of passionate officers who volunteer to join the effort, united by the common goal of making a difference. Within iF, officers are organised into different domains based on their interests and skillsets.

As part of their training, iF officers learn about the lean start-up methodology and participate in learning visits to comprehend the qualities of the innovative spirit and best practices from different organisations. They are also given the opportunity to attend their preferred courses to upgrade their skillsets. These new skillsets and knowledge become relevant when they have to tackle problems in their respective domains. Since the start of iF, three projects have been implemented within Ang Mo Kio Police Division, including the F-Connect application described earlier, which has received positive feedback from other officers.

The unique trait of the iF is the strong support of the unit leaders, who act as role models focused on achieving real impact with speed. At the inception of iF, the then unit leaders participated in the learning visits with their officers to upskill together. They guided officers during the weekly meetings and introduced the 10-weeks rule where the entire process from formulating the problem statement to coming up with a Minimum Viable Product (MVP) – a product with enough features to be usable and receive feedback – must be completed within 10 weeks. Officers have since been encouraged to come up with simple MVPs, which can even be in the form of sketches on pieces of paper. This is part of the process to swiftly tackle problems to identify the feasibility of ideas, without the extensive use of resources. The level of commitment and willingness to challenge the status quo by the leaders of Ang Mo Kio Police Division are reasons for the success of the iF in cultivating a psychologically safe innovation culture.

Since the sharing of iF at an internal platform, other units like Central Police Division and Tanglin Police Division have been inspired by their success to start similar initiatives to empower their officers and create a unique identity and innovation culture. iF continues to inspire and empower officers within the Ang Mo Kio Police Division as the team has grown from 25 to 61 officers within one year. They are currently working on 25 projects.

STAYING AHEAD, RELEVANT AND FUTURE-READY

With an increasingly diverse socio-political landscape, augmented by the potential of information exchange in cyberspace for misinformation, polarisation and dissent, the breadth and depth of public expectations of the SPF have increased and will continue to increase. But one thing remains certain, as organisations apply the lessons learnt to build resilience, they have to readily transform and innovate to adapt to paradigm shifts (Higgins & Bianzino, 2020). The relevance and success of the SPF depends on its most valued assets, its people. Similarly, the factors for SPF's continued success in its innovation journey are centred on its people – their strong sense of shared purpose, embraced a culture of innovation, and the support of effective leaders.

ABOUT THE AUTHORS

Camille Ang
graduated from the National University of Singapore with a Bachelor of Science in Statistics degree. She joined the Singapore Police Force in 2013 and has served as an Investigation Officer in Ang Mo Kio Police Division and Team Leader in Pasir Ris Neighbourhood Police Centre. She is currently a Planning Officer in the Organisation Development Division of the Planning & Organisation Department. Her work entails reviewing, proposing and implementing strategies to promote and drive innovation in the Singapore Police Force.

ABOUT THE AUTHORS

Du Yan
graduated from the National University of Singapore with a Bachelor of Business Administration in Accountancy (Honours) degree. He is a Police National Serviceman who has been serving in the Training Command and Planning and Organisation Department since 2012. He is currently an Investment Banking Analyst with Evercore.

REFERENCES

Blank, S. (2013). Why the Lean Start-Up Changes Everything. Retrieved from https://hbr.org/2013/05/why-the-lean-start-up-changes-everything

Enterprise Singapore. (2020). *Business Excellence Framework*. Retrieved from https://www.enterprisesg.gov.sg/quality-standards/-/media/4fe1494a03584afd82a66fd9a97d0ea9.ashx

Fisher, J. (2018, January 17). Creating an innovation culture through effective leadership. Retrieved from https://ideadrop.co/innovation-and-leadership/

Gash, T & Hobbs, R. (2018). Policing 4.0, Deciding the Future of Policing in the UK. *Deloitte UK Future of Policing*, 1-43.

Higgins, D. and Bianzino, N M. (2020, October 12). Tech Should Enable Change, Not Drive It. *Harvard Business Review*. Retrieved from hbr.org/2020/10/tech-should-enable-change-not-drive-it

Kan, Frances. (2019, October 15). Keeping a tight lid on crime. *The Business Times*. Retrieved from https://www.businesstimes.com.sg/hub/business-excellence-2019/keeping-a-tight-lid-on-crime

Leow, A. (2019). Keeping Singapore Secure. *Brightsparks*, 1. Retrieved from https://brightsparks.com.sg/magazine/February-2019/feature/spf/keeping-singapore-secure.php

Ng, C. (2020, May 28). COVID-19 crimes: How some are adapting and finding new ways to scam, cheat and profit. *The Straits Times*. Retrieved from https://www.straitstimes.com/singapore/courts-crime/covid-19-crimes

Ramos, T. (2020). Effective Leadership: Why It's Important And How It's Achieved. Retrieved from https://blog.runrun.it/en/effective-leadership/

Raza, A. (2016, December 12). Why a Purpose-Driven Mission is Key to Motivating Millennials. Retrieved from https://www.entrepreneur.com/article/284857

Rohman, J. (2020, February 6). Why purpose is important to your business. Retrieved from https://www.bluebeyondconsulting.com/2020/02/why-purpose-is-important-to-your-business/

Senge, Peter M. (2006). *The Fifth Discipline*. Random House Business Books.

Shah, R. (2020). Fighting COVID-19 with Police Patrol Robots and Drones. *Police Life Magazine*, 2020(4).

Tan, P. (2020, April 29). COVID-19 and its lesson for innovation. Retrieved from https://cmp.smu.edu.sg/article/covid-19-and-its-lessons-innovation

Walter, E. (2013, December 11). Your Company Is Only As Extraordinary As Your People. Retrieved from https://forbes.com/sites/ekaterinawalter/2013/12/11/your-company-is-only-as-extraordinary-as-your-people/#52eb26f655d5

INDIAN POLICE & ITS INVOLVEMENT IN INTELLIGENCE:

HISTORY AND CURRENT CHALLENGES

Vappala Balachandran
Retired Special Secretary, Cabinet Secretariat
Government of India

ABSTRACT

The Indian police service has a long tradition of being used for various non-police duties. Intelligence collection was formally added to a growing list of municipal duties after the 1857 military uprising. Although many observers complained then that the East India Company had failed to feel the pulse of the Indian people and had destroyed the "native authority" by not respecting India's religious rights and customs, the then British government decided to entrust the subtle responsibility of internal intelligence to the Indian police in December 1887 with the formation of the Indian Intelligence Bureau. This wrong model was followed even after Indian independence and not changed when in most other democratic countries, separate agencies were set up to deal with domestic and foreign intelligence, internal security and counter-intelligence. The Intelligence Bureau may be the oldest such organisation in the world, but its historical law and order orientation, entrenched by a staffing policy of recruiting the senior echelons only from the police, continues to contribute to India's intelligence problems. This pattern is adopted in Indian foreign intelligence too. This essay is adapted from a forthcoming book by the author, a retired senior Indian intelligence officer, titled *Intelligence Over Centuries: From Canaan (13th Century BC) To Galwan (21st Century AD) – Achievements and Failures.*

THE WELL-SPRING OF INDIAN INTELLIGENCE (AND FAILURES)

Kargil, 26/11, Pulwama, Galwan – were these intelligence failures by India's intelligence agencies? Could prior intelligence have prevented the 1999 Kargil War with Pakistan, the 2008 terrorist attacks in Mumbai, the 2019 suicide bombing of a military convoy in Pulwama, the 2020 Galwan Valley clash with Chinese troops? The Indian public believes these crises to be failures on the part of the country's intelligence agencies because this is what various official and unofficial inquiries concluded. It would be more accurate, however, to describe these tragic incidents as failures of intelligence management. This is because security intelligence is generated on parallel tracks by major central agencies, including military intelligence, as well as various units run by customs, state police, and paramilitary outfits. Raw intelligence becomes policy for action only after an alchemical process of collation, analysis, dissemination, arbitration, policy adjudication, and decision-making. Gaps in information are plugged by 'arbitration', whereby the merit of each intelligence input is carefully assessed, and a further collection process is set in motion. The final position is then presented to the decision makers for action. Any inter-space in this process will lead to a situation in which intelligence, including technical pointers already available in some form with some wing of the government, does not result in policy or action. This leads to an impression of 'intelligence failure' (Balachandran, 2020).

In researching the history of intelligence achievements and failures in India, I have come to the conclusion that Indian Central intelligence management and its local application failed key tests such as 26/11 and Pulwama[1] because the wrong model was adopted when the Indian

Intelligence Bureau was set up in 1887 as a responsibility of the Indian Police, and never corrected. This goes back to the long tradition of using the police for various non-police duties because the ruling class, except perhaps during the Maurya empire (321- 185 BC), did not have any other civil arm for coercive enforcement. British colonial rule not only followed tradition, it also entrenched it; 21 extra responsibilities including municipal duties were assigned to the police when the first police law was codified in 1861. This practice was continued after Indian independence in 1947 by the Indian states. Fourteen non-police responsibilities like health and municipal duties were entrusted to the police in Bombay State in 1951.

At the same time, unlike the "Bobby" system in Britain where the police were required to gain the confidence of the community, Indian police assumed a military colour and distanced itself from the local public when the East India Company introduced the Irish Constabulary model in 1843. The British Government confirmed this model when it took over administration after the 1857 military uprising in India. The British House of Commons debates on this uprising saw many voices complaining that the Company had failed to feel the pulse of the Indian people. Benjamin Disraeli, then Opposition member, blamed the East India Company for destroying the "native authority" by not respecting India's religious rights and customs. It was expected that Whitehall would entrust the subtle responsibility of internal intelligence to some other agency than the police who were engaged in suppressing freedom movements in India. Unfortunately, Whitehall approved the proposal of the Indian Viceroy to entrust this responsibility to the Police on 23 December 1887, which led to the formation of the Indian Intelligence Bureau.

This model was followed after Indian independence and even when most other democratic countries later moved towards having separate agencies deal with domestic and foreign intelligence, internal security and counter-intelligence, it was only later that a new staffing policy for foreign intelligence, based on the models of the MI6 in the United Kingdom, and the CIA in the United States, was tried out successfully. However even this is changing, affecting the quality of intelligence with its law and order orientation as set up by its former colonial government, and recruited almost exclusively from the Indian Police Service.

A BRIEF HISTORY OF POLICING IN ANCIENT INDIA

Early Vedic literature (1500-1200 BCE) refers to "Rajan" (tribal chief) who was expected to employ "Spasu" (spies) to keep watch over enemies and the conduct of his people, who were punished when they did wrong. It mentions "Sendni", leader of the army ("send"), foot soldiers known as "Patti" and warriors known as "Rathins", who used chariots for battle. But there is no mention of the police. Later Vedic literature talks about "Jivagrib" in Rig Veda and "Ugras" in Upanishads, who could be police officials reporting to a village official called "Adhikrita" (Majumdar & Dutta, 1985). Their duties presumably included enforcing laws such as the Code of Manu (1250 BCE) which prescribed severe punishments like mutilation for breaches of the law (Shah,1993).

During the Maurya period (321-185 BC), "Prasasta" was the police chief. References were also found in the Ashoka period to "Pradeshata" who combined police and magisterial powers (Kumar, 2012). It was not very clear whether spies were under these police chiefs. In some documents, the designation of "Mahamatyapasarpa" was used to refer to the official in charge of the spies.

Some have described the Maurya empire as a "police state" because police responsibilities, including secret duties, were performed by many other departments. Chanakya (also known as Kautilya), the ancient Indian teacher and advisor to the first Mauryan emperor and his son, referred in his political treatise, the Arthashastra, to different types of spies: "idlers" who appeared

[1]Prior to the 26/11 attacks, the Indian Intelligence Bureau (IB) and the National Security Council had the opportunity to pull up the Maharashtra government for not taking preventive steps even after initiating 16 advance intelligence alerts. In the case of the Pulwama bombing, the Central Reserve Police Force and local police were grossly negligent (as was the local Intelligence Bureau) in organising the long convoy without adequate protection when IB had already issued several threat alerts.

as vagabonds, astrologers and palmists who were able to gain the confidence of people; nurses, cooks, prostitutes and mendicants who would have access to different levels. They were all paid from the government treasury. Despite such widespread spying, care was taken not to interfere with the normal lives of law-abiding citizens. Great importance was paid to the security of the king. There were separate judges for civil infringements, and police magistrates (Shah,1993).

As eminent British historian Vincent Arthur Smith noted in 1907: "The Government relied on a highly organized system of espionage, pervading every department of the administration and every class of the population…. The courtesans, indeed, were regarded as court officials…. Cipher writing was used by the spies and carrier pigeons were employed to carry secret intelligence. The Intelligence Department was controlled by five 'Institutes of Espionage' in which the reports were checked and verified."

Some historians have held that the decline of the Maurya empire started during the later period of Ashoka the Great's reign when his idealism, non-violence and internationalism interfered with strict domestic vigilance. The army and intelligence system stagnated, leading to domestic strife and external interference (Shah, 1993).

In time, rural policemen in villages became part of the traditional service provided, like barbers or musicians, except that they were compensated with land grants. There are records to show that police were also used to intimidate the public by surveillance. This is evident from some orders issued to the police by the kings to exempt Brahmins and scholars from their surveillance visits (Sharma, 2006).

John Mathai, independent India's second Finance Minister who wrote an illuminating book for the London School of Economics in 1915 on the management of traditional Indian villages, described the village headman's role as administering the village, settling disputes, assisting the police and collecting revenue. He also described two types of watchmen: The duty of the "superior watchmen" was to gather information on crimes and to escort persons travelling from one village to another, while the "inferior watchmen" guarded the crops and performed other services. Village policing had been given primary importance going as far back as the Chola period in the 3rd Century BC, but these village policemen never enjoyed respect. Mathai wrote: "In the ancient village community, the headman had the principal direction of the arrangements for watch and ward. His chief executive assistant was the village watchman, who stood to him practically in the relation of a personal servant. As a rule, he was one of the menial castes, often given to criminal habits, who lived on the outskirts of the village and performed general service for the community…. [including] the sanitary duties which he discharged in addition to his police functions."

This led to corruption of the village police. The *Arthashastra* revealed that even during the Maurya period, wild tribes known as *Aranyachara* were used to protect the interior of the kingdom (Mathai, 1915). When the Mughuls came to power in the 16th century, they introduced no new arrangements for the prevention and detection of crime, which "remained, as from times immemorial, under the headman of the village and his subordinate watchmen". In the cities and towns, however, all policing was the responsibility of the chief they called Kotwal and his staff. Emperor Akbar also added intelligence collection to his duties. *Ain-i-Akbari*, a 16th century document of his rule, lists eight duties for the Kotwal, including "employing spies from among vagabonds to gather information about the affairs of neighbouring villages and the income and expenditure of the various classes of people" (Majumdar & Dutta, 1985).

In the rural areas, the practice of using criminal tribes to augment village policemen in maintaining security continued during the Maratha period (1674-1772). Individual villagers too began engaging robbers to secure them against outside criminals, especially during political upheavals in the 17th and 18th centuries.

When the British East India Company gained control of practically the whole of India after the 3rd Anglo-Maratha War in 1818, their administrators adopted the Maratha system of administration. Police corruption became rampant. Legendary "Thug hunter" William Henry Sleeman described in 1893 how the Thanadars

(Station House Officers) worked in princely states: "It is a common practice with Thānadārs all over the country to connive at the residence within their jurisdiction of gangs of robbers, on the condition that they shall not rob within those limits, and shall give them a share of what they bring back from their distant expeditions."

POLICING DURING BRITISH RULE (1818-1947)

The *Imperial Gazetteer of India* (1909) wrote that while the Mughuls made no change in the system of village police, "the duty of supervising them was entrusted to the revenue officers, who were also magistrates" (Meyer, 1909). This, the 1902-03 Police Commission concluded, was why the indigenous police system that was derived from the days of Emperor Akbar was not able to secure public peace and enable proper investigation or to suppress crime. The Commission added that the Indian police system was very similar to that of Saxon England: both were organized on the basis of land tenure.

Just as King Alfred's *Thane* (a noble warrior who wore a chain mail like a medieval knight) was required to produce the offender or to satisfy the claim, so the Zamindar in India was bound to apprehend all disturbers of public peace and to restore the stolen property or make good its value. Over the years the system became very corrupt. "Both village watchmen and the heads of villages, and even the higher officials connived at crime and harboured offenders in return for a share of the booty." However the changes introduced by the British – replacing Zamindars with magistrates of the districts assisted by Darogas and peons – did not also improve the system. In cities, Kotwals were retained. After these "reforms", crime soared and gangs of dacoits roamed all over the country.

A professional police system by way of an organised, centrally directed police had been started in India with the appointment of the first Inspector General of Police (IGP) in Bengal in 1808 for the divisions of Calcutta, Dacca and Murshidabad. The IGP had country-wide jurisdiction in British India for suppression of gangs and restoring peace although his basic title was Magistrate of the 24 Parganas. He recruited intelligence agents (called "goyendas"), a system which was later adopted by Col. Sleeman in his drive against the Thugs. After seeing its success, the British extended the system to Patna, Bihar and Bareilly divisions. After some time, this system also came into disrepute when the goyendas started committing violent robberies. In 1829 this system was abolished and police control was reverted to Collector-Magistrate in each district with Divisional Revenue Commissioners overseeing their work.

Even these changes did not improve the situation. The subordinates became corrupt and inefficient, resulting in increased crime. The Darogahas (Company Police) were also corrupt. Whenever they visited villages with their entourage, the expenses for food were to be met by the villages. Each local watchman had to pay the Darogaha a yearly bribe of Rs. 3 (Dash, 2006). The 1832 British House of Commons Select Committee on the East India Company wanted changes to be made. Ideas were floated regarding professional policing with a Superintendent-General placed in each province.

In 1843 Sind was annexed by the British. Commander-in-Chief Sir Charles Napier set up the first professional military police system in Sind based on the Irish Constabulary model. He utilized a part of his army to do police functions. In 1853 Sir Georgia Clerk, Governor of Bombay, copied that system in Bombay after visiting Sindh. In each district a Superintendent of Police (SP) was appointed as chief of a professional police department assisted by a native police officer for each Tehsil or township (Kak, 1962). The SP was generally considered as subordinate to the district magistrate. A Commissioner of Police was appointed for the state and he also doubled up as Inspector of Prisons. Similar changes were made in the Punjab after its annexation in 1849, and in Madras in 1859. During the 1857 Uprising, the Punjab military police was of great use to the British in its suppression.

The British Government took over the administration of India after the 1857 Uprising. A Police Commission was appointed in 1860 to reorganize the police administration in British India with a view to cutting costs and increasing efficiency. This Commission recommended abolition of the military police as a separate organisation, and the constitution of a single homogeneous force of civil constabulary for

police duties. The general management of the force in each province was entrusted to an Inspector-General to ensure uniformity for the whole of India. The police in each district would be under a District Superintendent, who, in large districts, would have an Assistant District Superintendent, both Europeans. The subordinate force consisted of Inspectors, head constables, sergeants and constables. A head constable was put in charge of a police station and the Inspector for a group of stations. The seeds of the present Indian police system were thus laid in 1861 by the Police Act (*Police Commission Report*, 1860).

The 1902-03 Police Commission was not impressed with this system: "Everywhere they went, the Commission heard the bitterest complaints of the corruption of the police. These complaints were made not by non-officials only, but also by officials of all classes including Magistrates and police officers, both European and Native." They found that this corrupt system flourished when low paid constables were given investigating powers. Supervision by Inspectors was ineffective. "In more than one province the Commission have had before them teachers who said that they could not encourage good lads to go into the police service, and parents who confessed that they had to remove their sons from appointments in it so as to keep them straight" (*Indian Police Commission 1902-03*).

THE IMPACT OF THE 1857 UPRISING ON POLICING

Historians are still debating the origins of the 1857 Uprising. In its aftermath, some British officials decided it was a "mutiny" by extremist Muslims in the Company's army to restore Mughul rule by installing Bahadur Shah Zafar as the King. This was disputed by enlightened British politicians. Even today, it is commonly assumed that the trigger for the 1857 incidents was the introduction by the British of new cartridges for the new Enfield Rifles that were greased with cow and pig fat. This is not entirely correct. Signs of resentment among the native troops under the East India Company had erupted even in 1806 in Madras for various reasons, including their uniform. Then British Governor of Madras Sir William Bentinick had introduced a new uniform with hats with leather cockades instead of turbans. This led to the "Vellore Mutiny". As British historian Mike Dash explained: "The order had been widely regarded as anathema in a country where a hat was the symbol of a Christian convert and leather was not only an abomination to all Hindus but an object of suspicion to Muslim soldiers, who thought that the material in question might be pigskin rather than cowhide" (Dash, 2006). The mutineers seized the Vellore Fort and killed or wounded 200 British troops. Bentinick was recalled to England, although he made a re-appearance in Calcutta as Governor-General in 1828.

Meanwhile calls for religious, nationalist and social reforms had started to rise in India. This trend was indirectly helped by the Company's efforts to spread English education through the country. That era also saw the rise of social reformers like Raja Ram Mohan Roy, Ishwar Chandra Vidyasagar, Jyotirao Phule, religious leaders such as Sri Ramakrishna Paramahamsa, Arya Samaj founder Dayananda Saraswati, and freedom fighters like Bal Gangadhar Tilak, who were very influential in this new awakening. That era also saw indigenous people rising in violent protests like the Kol rebellion in Central India (1829-1839) and Santhal rebellion (1855-56) which were brutally put down by British troops.

The 1857 Uprising which lasted 1 year and 6 months (from 10 May 1857 to 1 November 1858) was a very long resistance movement which started from Meerut, a garrison town now in Uttar Pradesh, quite near New Delhi. It ended with the defeat of the combined rebel army at Gwalior in present-day Madhya Pradesh on 20 June 1858. The exact causes are still in dispute. The British believed that it was a Wahhabi conspiracy to restore Mughal rule. This was because the very first act of the rebels was to reach Delhi from Meerut and declare the 81-year old Bahadur Shah Zafar as the Emperor of Hindustan.

However, the House of Commons debate on this incident saw many voices complaining that the East India Company had failed to feel the pulse of the Indian people. Till then the Company did not have any civil intelligence agency on an all-India basis. Benjamin Disraeli, then Opposition member, blamed the East India

Company for destroying the "native authority" by not respecting India's religious rights and customs. At a Parliament sitting on July 27, 1857, he said that the revolt was more than a mere mutiny of Indian troops. He blamed the Company's administration policies, imposition of property settlement and the aggressive Christian missionaries for disrupting the Indian society, thereby creating an environment conducive to revolt or resistance (Anand, 2019).

Later British scholars agreed with him. The late Prof Christopher Bayly wrote in his book, *Empire and Information: Intelligence Gathering and Social Communication*, that the primary reason for intelligence failure before 1857 was the inability of the Company administration to understand India since "colonial knowledge was derived from a considerable extent from indigenous knowledge, albeit torn out of context and distorted by fear and prejudice" (Bayly, 1996, cited by Roque, 2016).

WHY A CIVIL INTELLIGENCE SERVICE WAS SET UP UNDER THE INDIAN POLICE

Three major security and political developments compelled the British to use Sleeman's national police for collecting political and security intelligence on an all-India basis. The first was the 1857 Uprising and the second was the assassination of Viceroy Lord Mayo in the Andamans Penal Settlement, Port Blair, on 8 February 1872 by Sher Ali Afridi, a former soldier from Khyber Agency. The third reason was the formation of the Indian National Congress on 28 December 1885.

Till 1857 India was ruled by the East India Company which had left the security of British India and British officials to the army. In the absence of a dependable intelligence service, varying reports on the army's discipline and loyalty were presented to the Governor General and to Whitehall in London. One senior official was found to have given different assessments at different points of time. These came to light during the House of Commons debate on what led to the Insurrection in 1857.

On 27th November 1849, then commander-in-chief Sir Charles Napier sent an assessment to the Governor General giving a glowing tribute to the Indian soldiers: "This is a vast army, and it is in a good state of discipline, complete in its equipments, full of high courage, and a high military spirit reigns through all ranks." He said that three distinct Queen's armies in Bengal, Madras and Bombay had 300,000 fighting men and 400 pieces of artillery, ready to war. "Our service is extremely popular and the troops faithful to the proverb" (Napier, 1849).

The same officer changed his opinion in less than a year. On 15 June 1850 he wrote another assessment giving a dismal assessment on the Bengal Army. However, he blamed the British officers for the "deficiency of discipline, especially those of the higher ranks". He also said that the soldiers were far too often sent on civil duties and were not relieved (Napier, 1850).

Meanwhile a number of political assassinations shook the empire. The motives were either religious or political. In September 1853, Col Frederick Makeson, Commissioner of Peshawar, was stabbed to death. Acting Calcutta Chief Justice Norman was similarly killed in Calcutta on 20 September 1871. On 8 February 1872, Viceroy Lord Mayo was stabbed to death while he was visiting the penal settlement in the Andamans in the Bay of Bengal. On 22 June 1897, W C Rand, Plague Commissioner, and his military escort were shot dead in Poona by the "Chapekar Brothers", who were described as revolutionaries and followers of noted Congress leader Bal Gangadhar Tilak. On 1 July 1909, William H Curzon Wyllie, then ADC to Secretary of State for India Lord George Hamilton, was shot dead in London by revolutionary Madan Lal Dhingra.

Australian scholar Helen James calls the Lord Mayo assassination "the First Jihad" (James, 2009). The assailant Shere Ali, an Afridi-Pathan tribesman, was a 'loyal' British Cavalry trooper from Peshawar. He was convicted for a murder and was serving his sentence in the Andamans, the prisoner settlement. He was influenced by some "Wahhabi" prisoners who were serving their sentences for preaching jihad from mosques in Patna and Delhi during the 1857 Uprising.

Soon after Lord Mayo's killing, Viceroy Northbrook, Mayo's successor (1872-76), felt the need for "a detective police for political purposes" and asked the "Thugee and Dacoity Department" to

handle the assignment. This department was a very successful national police system for criminal-security intelligence and operations set up by Col William Sleeman in 1829. Sleeman, who was promoted to General Superintendent in 1835 to coordinate a dozen superintendents in India in collating and disseminating intelligence on Thug across an area of Indian territory that was larger than the United Kingdom, had mostly suppressed the Thughee menace by the time he was appointed in 1848 as the Resident of Oudh, the most coveted post for a political officer of the Bengal Presidency. After his departure, his *Thagi Daftar* (the Thug Office) was used for pan-India crime work to deal with other criminal gangs.

By 1887, Whitehall was sufficiently concerned about internal security that the Secretary of State for India, Viscount Cross, wrote a secret dispatch on 25th March to the Viceroy on the "collection of secret and political intelligence in India". The Marquess of Dufferin, who had assumed charge as Viceroy on 13 December 1884, wrote a secret reply on 15 November 1887 suggesting the use of the office and manpower of the Thughee and Dacoity Department to curtail cost. He also said that he intended to utilize in British India the services of the police force and, in Native States, the Political Officers for collection of intelligence on political, social and religious movements. A small office was set up with the Central Government called Central Special Branch to coordinate collection through the states.

Cross gave his approval on 23 December 1887. Thus 1887 is officially considered the founding year of the Indian Intelligence Bureau (IB). To commemorate the IB's 125th anniversary in 2012, the Indian Police Journal brought out a special issue that contained a facsimile of the then classified correspondence between Dufferin and Cross.

Dufferin underscored the secrecy of the communications, as "it would not do for the native press to get it into their heads, that we were about to establish a Third Section after the Russian pattern." He was referring to the Third Section of His Imperial Majesty's Own Chancellery in Imperial Russia's secret police which was replaced by Okharna in 1880.

Researchers have since found deliberate attempts to hide the creation of a central intelligence agency to avoid public criticism. As Dash (2006) has observed: "As late as the latter years of the Second World War, the Government of India's intelligence agency – then based at Simla – was popularly known as the *Thagi Daftar*, the Thug Office."

As a result, the creation and working of the new intelligence organisation was camouflaged within the police in a two-tier system. That was also the reason why the police in India are still manning the intelligence services whereas this practice does not exist in most other democratic countries.

However, this did not work smoothly. D E McCracken, stationed at Shimla in charge of the Thugee Department, failed to produce any worthwhile intelligence except for a few reports. There were practical problems in motivating the police even in British States for which the Inspectors General had to be approached daily, and the Residents in princely states.

Meanwhile the 1901-02 Police Commission recommended the setting up of a Criminal Investigation Department (CID) in each province, under a Deputy Inspector General of Police, for "collating and distributing information regarding organised crime and to assist in investigation of crimes when they are of special character".

To implement this, the centre abolished the Thugee Department and merged the Central Special Branch with the proposed Central CID, renaming it Central Criminal Intelligence Department (DCI). Harold A Stuart, the Inspector General of Police of the Madras Presidency, was appointed Director of the Central Criminal Intelligence with McCracken as Deputy Director on April, 19th, 1904 (Indian Police Department, 1904-6). The existing staff of the Thughee department was absorbed in the DCI.

HOW INTELLIGENCE BUREAU BECAME A POLICE ORGANISATION

As a result Indian intelligence grew as a law & order intelligence organisation with occasional forays into foreign domains. Meanwhile Great Britain continued to look after strategic collection, including watching over the Indian

freedom struggle incited from abroad.

There was yet another reason which became public knowledge only in 1997 when British secret records were declassified. A "shadowy organisation" named "Indian Political Intelligence" (IPI) was formed in 1921 within the Public and Judicial Department of the India Office in London, which was responsible for the internal and external security of British India. The expression "shadowy" was given by Jill Geber of the British Library, Oriental & India Office Collection (Geber, 1997). The idea for this agency was mooted in 1909 when anarchist and subversive activities erupted in England and in Bengal and Punjab. The assassination of William Hutt Curzon Wyllie in London on 1 July 1909 by Madanlal Dhingra was the immediate reason. At that time, armed revolutionary activities were spreading in India.

The British government strongly suspected foreign hands, especially German, Turkish and Afghan governments, in stoking rebellion by Indians. On 2 August 1914 an "Intelligence Bureau for the East" was opened as part of the German Auswartiges Amt (Foreign Office) under Baron Max von Oppenheim to help rebel movements in South Asia against the British Empire. The activities of the Ghadar movement from Canada and their frequent travels to India made Charles Cleveland, the then Director of Central Intelligence write to London for help as he was not getting cooperation from the State CIDs (Popplewell, 1995).

In 1910 Major John Arnold Wallinger, a senior Indian Police officer was deputed to London to watch global Indian subversive links. This was the nucleus of the IPI. In 1915 another Indian Police officer named Philip C Vickery joined him. John Wallinger retired in April 1926 when Vickery took over as head of IPI in October 1926. British, European, and American operations were run by them from London with the help of Scotland Yard and MI6. Indian operations were run by the Director of the Intelligence Bureau.

This went on till Indian independence in 1947. The files were transferred to London when T G Sanjevi Pillai took over as the first Indian Director Intelligence Bureau in August 1947. The rump of IPI was merged with OS4 branch of the British Security Service (MI5). These files were declassified in London only in 1997.

STAFFING INTELLIGENCE

In most other democratic countries, intelligence agencies recruit their own staff and do not depend upon the police as the feeder service. This is based on operational considerations when intelligence needs low profile execution of their charter. For example, in the UK and US, intelligence agencies do their own recruitment of personnel.

Indeed, Canada believes that there is a clash between the responsibilities of the police and intelligence. From 1868 to the 1980s, the Royal Canadian Mounted Police (RCMP) and its earlier incarnation, Western Frontier Constabulary, handled national intelligence functions. However various controversies centered on excesses by RCMP forced the Canadian Government to set up two national commissions which recommended divesting RCMP of its role in national security intelligence and establishing a civilian intelligence agency under parliamentary control.

The 1969 Mackenzie Commission recommended that police and intelligence functions be separated. "We feel, in short, that the professional security service officer is quite different from the professional policeman and that this difference should be reflected in recruiting methods, in training and career patterns and in organisational structures" (Mackenzie Commission, 1969). However, this was not implemented.

The McDonald Commission was constituted by the Pierre Trudeau government in 1977 to look into certain illegal activities by the RCMP in the wake of the kidnapping and killing of Quebec minister Pierre Laporte in 1970 by the Quebec Liberation Front. It was alleged that despite prior information, the RCMP failed to prevent the kidnapping. Stung by the criticism, the RCMP carried out certain illegal activities to prevent disturbances prior to the 1976 Summer Olympics in Montreal. Concluded the McDonald Commission in its 1980 report: "Law enforcement and security work are incompatible." As a result the Canadian Security & Intelligence Service

Act was passed in 1984, creating a new civilian agency, the Canadian Security & Intelligence Service (CSIS).

In India when Prime Minister Indira Gandhi asked R N Kao to establish a professional foreign intelligence agency, she specifically asked him not to set it up on the lines of a central police organisation but to man it as a multi-disciplinary body to tackle the complexities of coverage of strategic intelligence in the areas of defence, foreign, economic and scientific developments so as to help the policy makers. Consequently, attempts were made to recruit talents from different streams available within the government in addition to recruiting direct entrants to a new service to form the core of the future senior management.

Prime Minister Gandhi did not mean to deride the police work but was right that foreign intelligence needed something more than police skills. Police is a hierarchical and transparent organisation, accountable to law and society for their actions. Foreign intelligence is a secret multi-specialty responsibility requiring special skills to do unconventional work abroad in hostile surroundings.

Intelligence tradecraft is also based on deniability and subterfuge. The Indian Police Service Civil list, on the other hand, is a public document. Unfortunately the policy of recruiting widely established by the late Kao was breached after 2004 with the induction of more and more police officers in a revolving door pattern, leaving them no time to gain subject or area expertise.

My own experience running the old Bombay Special Branch (SB) between 1973 and 1976 informs me that a typical law and order mindset might also not be suitable for domestic or foreign security operations. In the early 1970s, any textile, railway or municipal strike in the city would have nationwide repercussions. Every Chief Minister of the State insisted that I had to brief him every morning. This is because unlike the regular police in Bombay who considered politicians, trade unions and religious bodies as opponents of law and order, those of us in the SB used to consider them as "assets". We would intervene tactically and settle many strikes or religious disputes.

Some intelligence agencies try to get officers for short tours from other government departments on what is called "deputation". India practises this. This is not advisable at all. To quote Allen Dulles, the father of modern American intelligence: "A sizable turnover of short term employees is dangerous because it means that working methods, identities of key personnel and certain projects in progress will have been exposed in some measure to persons not yet sufficiently indoctrinated in the habits of security to judge when they are talking out of turn and when they are not" (Dulles, 1963).

ABOUT THE AUTHOR

Vappala Balachandran
is an Indian national security intelligence specialist. He worked as a police officer in Maharashtra in the 1960s and early 70s, and subsequently for the Cabinet Secretariat of the Government of India, where he retired as Special Secretary. After the terrorist attacks in Mumbai in November 2008, he was appointed by the Government of Maharashtra to the two-men "High Level Committee" to inquire into the police response. He is the author of three books, two on national security and intelligence management, and one on the life of ACN Nambiar, a well-known Indian anti-colonial warrior. Balachandran writes regularly on security and strategic subjects for Indian and foreign publications.

REFERENCES

Anand, Arun. (2019, June 3). The war of 1857 was much more than just a sepoy mutiny or a peasant revolt. *Hindustan Times*. Retrieved from https://www.hindustantimes.com/analysis/the-war-of-1857-was-much-more-than-just-a-sepoy-mutiny-or-a-peasant-revolt/story-V9SrPi87YKMGJzL3O9TniN.html

Balachandran, Vappala. (2020, June 15). Was Galwan Valley Clash Failure of Intelligence Management or a Decision Making Debacle? *Outlook India*. Retrieved from https://www.outlookindia.com/website/story/opinion-was-galwan-valley-clash-failure-of-intelligence-management-or-a-decision-making-debacle/355418

Bayly, Christopher. (1996). *Empire and Information: Intelligence Gathering and Social Communication in India, 1780-1870*. Cambridge: Cambridge University Press.

Dash, Mike. (2006). *Thug: The True Story of India's Murderous Cult*. London: Granta Books.

Dulles, Allen. (1963). *The Craft of Intelligence*. Boulder: Westview Press.

Geber, Jill. (1997). *Indian Political Intelligence Files Released For Research*. Paper presented at the 58th Conference of SALG, the British Library, Oriental & India Office Collections, 28 November 1997. SAALG Newsletter 45. Retrieved from http://vll-minos.bl.uk/reshelp/bldept/apac/saalg/issue1.pdf

Indian Police Commission 1902-03. Retrieved from https://police.py.gov.in/Police%20Commission%20reports/THE%20INDIAN%20POLICE%20COMMISSION%201902-03.pdf

Indian Police Department. (1904-6). *Abolition of the Thagi and Dakaiti Department and the Central Special Branch and constitution of the Central Criminal Intelligence Department, with Mr. H.A. Stuart, C.S.I., I.C.S., and Mr. D.E. McCracken as Deputy Director*. Retrieved from https://abhilekh-patal.in/jspui/handle/123456789/2753998

Indian Police Journal LIX(4). (2012, October – December). Retrieved from https://bprd.nic.in/WriteReadData/userfiles/file/1601846638-October%20December%202012.pdf

James, Helen. (2009, July). The Assassination Of Lord Mayo: The 'First' *Jihad? International Journal of Asia Pacific Studies* 5(2). Retrieved from http://ijaps.usm.my/wp-content/uploads/2012/06/HelenJames_LordMayoAssassination.pdf

Kak, HN. (1962, January-March). Decentralization of police administration. *Indian Journal of Public Administration* VIII(1).

Kumar, Manjesh. (2012). *The Mauryan State: A Political Theory Perspective*. Thesis Submitted to the University of Delhi for the Degree of Doctor of Philosophy in Political Science. Retrieved from http://hdl.handle.net/10603/31776

McDonald Commission. (1980). Reports of Commission of Inquiry Concerning Certain Activities of the Royal Canadian Mounted Police (1979-1981). Retrieved from https://secretlaw.omeka.net/items/show/71

Mackenzie Commission. (1969). *Report Of The Royal Commission On Security*. Retrieved from https://secretlaw.omeka.net/items/show/70

Majumdar, Roy Chaudhry, & Dutta, KK. (1985). *An Advanced History of India*. New Delhi: Macmillan India.

Mathai, John (1915). *Village Government in British India*. London: TF Unwin. Retrieved from https://archive.org/details/cu31924022949428

Meyer, William Stevenson, Richard Burn, James Sutherland Cotton, & Herbert Hope Risley. (1909). *The Imperial Gazetteer of India, Vol 4: The Indian Empire, Administrative*. Oxford: Clarendon Press. Retrieved from https://dsal.uchicago.edu/reference/gazetteer/toc.html?volume=4

Napier, Charles. (1849). *A General Report on the Military State of India, 27 November 1949*. Extracts printed by the House of Commons, 1857. Retrieved from http://www.csas.ed.ac.uk/mutiny/confpapers/NapiertoWellington1849.pdf

Napier, Charles. (1850). *A Letter from General Sir CJ Napier to the Duke of Wellington, dated Simla*, 15 June 1950. Extract printed by the House of Commons, 1857. Retrieved from http://www.csas.ed.ac.uk/mutiny/confpapers/NapiertoWellington1850.pdf

Popplewell, Richard James. (1995). *Intelligence and Imperial Defence: British Intelligence and the Defence of the Indian Empire 1904-1924*. London: Frank Cass & Co.

Police Commission Report 1860. Retrieved from https://police.py.gov.in/Police%20Commission%20reports/Police%20commission%20report%201860.pdf

Roque, Ricardo. (2016, December 8). Review of *Empire and Information: Intelligence Gathering and Social Communication in India*, 1780-1870 by Christopher Bayly. Reviews in History. Retrieved from https://reviews.history.ac.uk/review/2032

Shah, Giriraj (1993). *Image Makers: An Attitudinal Study of Indian Police*. New Delhi: Abhinav Publications.

Sharma, Kuldip (2006). *Heaven's Light Our Guide: The Genesis of Indian Police*. New Delhi: Macmillan India.

Sleeman, WH. (1893). *Rambles and Recollections of an Indian Official*. Revised Annotated Edition by Vincent A Smith (1915). London: Humphrey Milford, Oxford University Press. Retrieved from https://www.gutenberg.org/files/15483/15483-h/15483-h.htm#cont

Smith, Vincent A. (1907). *The Early History Of India: From 600 B.C to the Muhammadan Conquest, Second Edition. Oxford: Clarendon Press*. Retrieved from https://archive.org/details/in.ernet.dli.2015.283157

UNCOVERING THE WORKINGS OF CREDIT-FOR-SEX SCAMS

Ng Jing Wen, Misir Carolyn, Jansen Ang, Hong Jingmin, & Ong Shuyan
Police Psychological Services Department, Singapore Police Force

ABSTRACT

In a credit-for-sex scam, victims meet attractive women on online dating or messaging apps and send them money in exchange for sexual services that do not materialize. Despite seeing an alarming increase in the number of cases from 2018 to 2020, academic research on credit-for-sex scams remains scarce. Hence, this paper aims to shed light on the stages of credit-for-sex scams, compare the credit-for-sex scams across the world, and investigate the psychosocial factors influencing the offenders and victims of credit-for-sex scams. A comprehensive literature review reveals that credit-for-sex scams are clustered in Asia and are largely syndicated. According to the fraud diamond theory, when faced with financial or non-financial pressures, individuals with a big ego, high Machiavellianism, antisocial tendencies, and proficient coercion and persuasion skills are more likely to commit credit-for-sex scams when they see an opportunity to do so, and are also able to rationalise their unethical behaviour. On the other hand, as the routine activity theory suggests, in the absence of capable guardians, an individual who possesses the suitable demographic characteristics, personality traits and cognitive vulnerabilities, and exhibits any vulnerable online routine behaviour is likely to fall victim to credit-for-sex scams. To address this growing issue of credit-for-sex scams, a victim-centric approach should be taken. In particular, there is a need to teach the public simple steps that they can take to reduce their chances of falling for such scams.

BACKGROUND

Year after year, Singapore manages to continually clinch the title as one of the safest cities in the world according to the Safe Cities Index (Economist Intelligence Unit, 2019). However, from 2018 to 2019, the overall crime rate in Singapore increased by 6.3% (Loh, 2020). The culprit behind this rise? Scams. In particular, the number of reported scam cases surged by 53.5% from 2018 to 2019. If not for scams, overall crime would have actually fallen by 4.6% in 2019 (Loh, 2020).

The rise in the number of cyber scam cases in Singapore over the years can be attributed to several reasons. Firstly, with Singapore having the highest smartphone penetration in the Asia Pacific Region (Clapp, 2019) and the second highest internet penetration rate in Southeast Asia (Müller, 2020), it is not surprising that technology-enabled crimes have surged over the past few years (Neo, 2019). Fuelled by advancements in technology, scams have evolved over the years, migrating from the offline environment to online platforms, leveraging on the anonymity and global connectivity that the Internet affords to target a larger pool of victims at a low cost (Daud, 2019; Hafidz, 2019). Furthermore, scammers constantly and rapidly modify their tactics to trick more victims as well as evade detection by the police, be it through innovating novel and "diverse scams [that] are tailored to prey on a wide range of vulnerabilities" (Lee, 2016b), changing their modus operandi (Pindrop, n.d.; Zack, 2020), or by utilising alternative untraceable payment methods (Bisson, 2019). Given that most Singaporeans are bilingual (Lee, 2016a), language is also not a barrier for international cybercriminals (Phoebe, 2017). All of these factors combined make Singapore the perfect breeding ground for cyber scams. As Singapore progresses towards achieving its vision of becoming a Smart Nation, using technology to

improve the daily lives of Singaporeans and to support the operations of businesses (Ng, 2019), it is only natural for individuals to encounter more cyber-attacks (Phoebe, 2017).

Among the various types of scams, credit-for-sex scams is one of the top concerns in Singapore. In a typical credit-for-sex scam, the scammer "befriends [the] victim through social media platforms, … talks the victim into buying them a purchase or gift card… in exchange for a meet-up, date or sexual favours" that do not materialise (Scam Alert, n.d.-a). Credit-for-sex scams have seen the most alarming rise in the number of cases, from 533 reported cases in 2018 to 1,065 cases in 2019, an increase of 99.8% (Loh, 2020). The total financial loss of the victims also increased from $1.5 million in 2018 (Wong, 2019) to $2.8 million in 2019 (Singapore Police Force, 2020a). These statistics highlight the prevalence and severity of the problem of credit-for-sex scams, emphasising the need for urgent intervention.

OBJECTIVES

Despite the fact that credit-for-sex scams are increasingly rampant in Singapore, thus far, little academic research has been conducted on this type of cybercrime as it has only emerged recently with the advent and growing popularity of new technology and applications. Hence, this research paper aims to:

1) Outline a process model of credit-for-sex scams,
2) Compare the credit-for-sex scams in Singapore and other countries to gain insights into how the scam and scammers operate similarly and differently,
3) Investigate the psychosocial factors influencing the offenders and victims of credit-for-sex scams to aid the generation of scam prevention strategies, and
4) Provide recommendations on crime prevention strategies for credit-for-sex scams.

METHODOLOGY

A comprehensive literature review of the existing research on credit-for-sex scams was conducted to gather information and data for this paper.

Literature Review

To establish the extent of the problem of credit-for-sex scams in the global arena, an exhaustive search was conducted via Google, Google Scholar, and the NTU Library Database. The following search terms were used: "credit-for-sex scam", "sex-for-credit scam", "WeChat sex scam", "Locanto sex scam", "Skokka sex scam" "Tinder sex scam", "Michat sex scam", "Craigslist sex scam", "Line sex scam", "Whatsapp sex scam", "Instagram sex scam", "Twitter sex scam", "Alipay scam", "sex-for-hire scam", "compensated dating scam", "fake escort services scam", "fake prostitute scam", "sham prostitution", "internet prostitution scam", "companionship scam", "paid sex scam", "enjo-kōsai scam", "pose as female prostitute", "offer of sex for money", and "gift card scam".

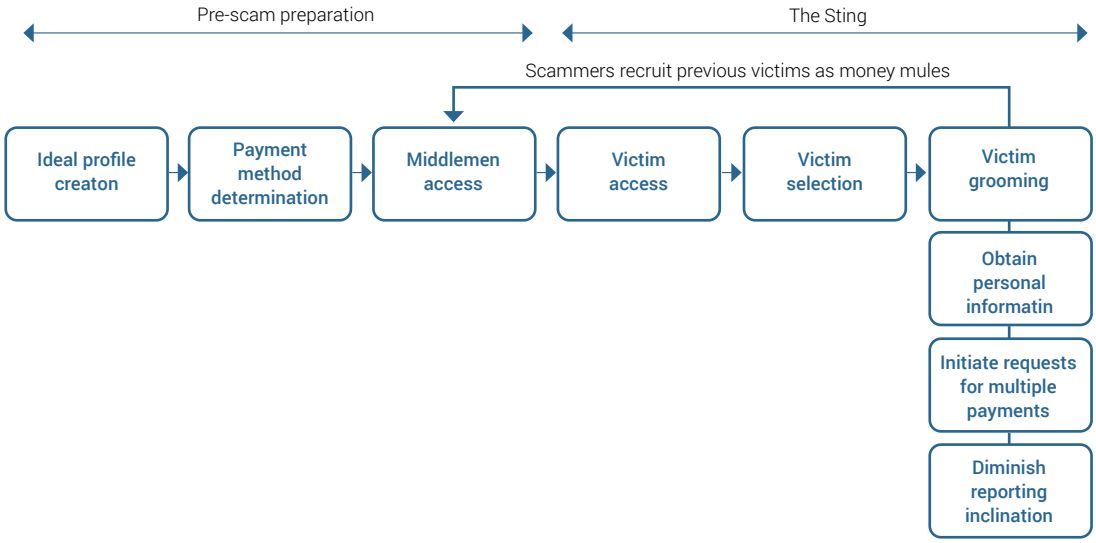
To understand the psychosocial factors influencing the offenders and victims of credit-for-sex scams, various search terms were used, including "the psychology of credit-for-sex scams", "why people commit credit-for-sex scams", "persuasive techniques credit-for-sex scammers use", "inside the mind of a credit-for-sex scammer", "why people fall for credit-for-sex scams", and "victimology of credit-for-sex scams". The search results of these queries revealed that academic research on credit-for-sex scams is scant. Hence, academic papers and books on cyber scams and frauds in general were consulted.

These general findings from the reviews were then applied specifically to credit-for-sex scams. Actual case examples of credit-for-sex scams were obtained from various sources. In particular, anecdotes from the victims of credit-for-sex scams in Singapore were retrieved from the National Crime Prevention Council's Scam Alert website, whereas anecdotes from the victims of credit-for-sex scams in other countries were retrieved from numerous websites and news articles.

THE MODEL OF CREDIT-FOR-SEX SCAMS

As summarised in Figure 1 below, the model of credit-for-sex scams proposed in this paper is split into two phases, each containing three

Figure 1. The Proposed Model of Credit-for-Sex Scams



stages. This model draws from Whitty (2013)'s Scammers Persuasive Techniques Model for online romance scams.

Phase 1: Pre-Scam Preparation

In the first phase, which is the pre-scam preparation phase, credit-for-sex scammers prepare their fraud package.

Stage 1: Ideal Profile Creation

Scammers begin by creating fake ideal profiles on various social networking platforms, particularly dating and online messaging apps and classified websites, using photographs of attractive, scantily clothed women (Alkathib, 2016; Chung, 2015; Jun, 2019; Ng, 2015a; Pan, 2018; Postmedia News, 2015; Pui, 2017; Sur, 2019; Wei, 2019). In Singapore, the most popular communication platform currently used by credit-for-sex scammers is Tinder, with 23% of scammers using it as the platform to conduct their scams (Scam Alert, n.d.-b). WeChat and MiChat tie in second place, each with 13% of scammers using their platforms (Scam Alert, n.d.-b). Lastly, Line and Locanto tie in fourth place, each with 8% of scammers using them (Scam Alert, n.d.-b).

Scammers often create multiple fraudulent profiles to target a larger pool of victims and consequently, maximise the profitability of their fraud. For instance, a scammer in Singapore created two fake accounts on Locanto (Chua, 2019), which only requires an email address and a password to sign up. In China, an offender purchased multiple unregistered WeChat accounts on the Internet at a cost ranging from S$6 to S$14 (Wei, 2019).

Stage 2: Payment Method Determination

Next, scammers decide which payment method to use. They may take into account accessibility, familiarity, difficulty of tracing, and ease of selling when making this decision. In Singapore, the most common payment modes requested by scammers in the first half of 2020 were Alipay, iTunes gift cards, Google Play gift cards, WeChat, Razer, and MyCard (Scam Alert, n.d.-b). Alternatively, some scammers may also collect payment via a physical meet-up (Hussain, 2018), "bank-transfer, including via 'Paynow' or 'Paylah', or remittance services such as Western Union" (Singapore Police Force, 2020a).

The payment methods preferred by credit-for-sex scammers seem to have changed over the years. In the past, Money Online (MOL), an e-payment platform, and the remittance service Moneygram were used (Inseasia, 2015). Some victims were asked to leave their ATM cards in public places and reveal their PIN to the scammers; the cards would be picked up by middlemen who would then withdraw the funds from the victims' bank accounts (Neo, 2015).

Now, victims are often asked to purchase gift cards or online credits (e.g., iTunes card). The relative advantages of paying using gift cards and online credits may explain why past methods of leaving ATM cards in public places are now obsolete. These payment methods are easily accessible and easy to use, therefore removing any barriers to making payment since victims are less likely to go through with the payment when they find the whole affair too troublesome (Toh, 2016). Such cards can often be found in 24-hour convenience stores which are readily present in every neighbourhood. In the case of gift cards, scammers can easily resell these cards to receive their profits as there is a market full of ready buyers. While some victims may be reluctant to leave their ATM cards in public spaces, they are less likely to be suspicious if asked to pay using gift cards and online credits as that mirrors a legitimate transaction between a prostitute and an interested customer.

Some scammers also use various sources on the Internet to familiarise themselves with the payment process for their preferred method in Singapore (Alkathib, 2016) so that they can easily provide step-by-step instructions to victims who are unfamiliar with the payment method, thereby increasing the success of the scam. Predictably, the platforms used will likely continue to evolve based on their popularity among users as well as to prevent detection by the authorities.

Stage 3: Middlemen Access

During the last stage of preparation, credit-for-sex scammers establish contact with middlemen in an attempt to evade detection by the police (Koh, 2017; Lam, 2017; Neo, 2015; Singapore Police Force, 2015; Singapore Police Force, 2020b; Macau Post Daily, 2020b; Yiu, 2019). Scammers recruit accomplices who aid in money laundering by providing them a fee for every transaction (Yiu, 2019). Hence, those looking for an income stream or an additional source of income may choose to act as runners for credit-for-sex scammers (Yiu, 2019).

Additionally, credit-for-sex scammers may also recruit other abetters. These include people who sell unregistered WeChat accounts and those who provide location-changing services on WeChat for a fee (Wei, 2019). This helps to widen the reach of the scammers, allowing them to gain access to more victims and enhance the lucrativeness of their fraud.

Phase 2: The Sting

Stage 4: Victim Access

Using the fake profiles that they have created, credit-for-sex scammers gain access to their victims through online social networking platforms. In some cases, the scammers wait for the victims to take the bait and contact them, while in other cases, the scammers approach the victims themselves (Singapore Police Force, 2020a).

Some functions within these networking platforms can facilitate victim access. For example, both scammers and victims on WeChat can use the 'people nearby' function to find and converse with people who are located within a 1000m radius from their location (Chung, 2015; Pui, 2017). Using multiple profiles with photographs of different women and changing one's location on communication platforms can also allow credit-for-sex scammers to gain access to a larger pool of victims (Wei, 2019).

Stage 5: Victim Selection

Credit-for-sex scammers do not use any particular criteria to select potential victims. Rather, they establish contact with as many individuals as possible to increase the profitability of their scam. However, one key exception is that only males are targeted by the scammers. Again, several functions built within communication platforms facilitate this selection process, such as the gender filter on the 'people nearby' function on WeChat (Yeung, 2017).

Additionally, according to one Singaporean victim's account (Scam Alert, 2020b), during the phone call with the scammer who was posing as the prostitute's agent, he was asked whether he had any friends or family in the police. Hence, connections with the police might be a possible exclusion criterion that some scammers use.

Stage 6: Victim Grooming

After accessing, selecting, and establishing contact with the victims, credit-for-sex scammers offer their victims sexual services at a low cost that is often below the market rate (Chung, 2015; Daily Express, 2018; Express News

Service, 2015; Ng, 2015a; Postmedia News, 2015; Macau Post Daily, 2002b; Wei, 2019). In sexual abuse literature, grooming refers to "the process by which a child is befriended by a would-be abuser in an attempt to gain the child's confidence and trust, enabling the abuser to get the child to acquiesce to abusive activity" (Gillespie, 2002, p. 411). Similarly, in credit-for-sex scams, scammers groom their victims by persistently texting and calling them, posing as the prostitute's agent, and threatening to physically harm the victims, for three purposes: to convince their victims to reveal their personal information, persuade them to make multiple payments, and reduce their inclination to make police reports.

Obtain personal information. Scammers gather personal information on the victims by pretexting, a form of social engineering where people lie to convince the victim to give up valuable information (Fruhlinger, 2020). The scammers persistently text the victims to get them to share their address, phone number, and pictures of the victim's identity card (Lo, 2018a; Pan, 2018; Phoebe, 2017; Scam Alert, 2020b). Table 1 summarises the personal information commonly requested by the scammers, explains why the requests seem reasonable to the victims, and the scammer's purpose for obtaining the information.

Initiate requests for multiple payments. The scammers request the victims to make advance payment for the services and other payments under the pretexts of deposit fee, registration and administrative fee (Wong, 2019), protection fee (Ng, 2015a), and so on. Should the victims start refusing to pay, the scammers will deploy bait and switch tactics and claim to be gangsters as well as use the personal information previously collected to threaten the victim into making more payments (Chung, 2015; Daily Express, 2018; Lo, 2018a; Pan, 2018; Postmedia news, 2015; Macau Post Daily, 2020a; Wei, 2019; Wong, 2019). These scammers continually text the victims or repeatedly call the victims while posing as the prostitute's agent to coerce them into making payment (Wong, 2020).

Diminish reporting inclination. The threats also serve as a warning not to report the scammers to the police. Additionally, when the victims threaten to make a police report, some scammers may claim that they have connections to the police and that the police will protect them (Ng, 2015a), thereby making the victim less inclined to file a police report since they think it is a futile act.

The grooming process of credit-for-sex scams is typically brief, lasting for as short as a day (Alkathib, 2015) and the longest up to a week

Table 1. Personal Information Commonly Requested, from the Perspectives of the Victims and the Scammers

Personal Information	Why the Requests are Reasonable	Scammer's Purpose for Obtaining Information
Address	Find a convenient location to meet	Find the nearest AXS machine or convenience store to direct the victim to Used to threaten the victim to make additional payments
Phone number	For the agent to contact them to provide further instructions (Scam Alert, 2020b)	Contact the victim to provide further instructions Used to threaten the victim to make additional payments
National Identity Card	Verify identity that they are not undercover police (Daily Express, 2018; Lo, 2018a; Phoebe, 2017)	Used to threaten the victim to make additional payments

(Wong, 2019). After the payments are made, the scammers typically become uncontactable.

Finally, at the end of the scam, scammers may also recruit previous victims as accomplices for future scams. In Singapore, several victims of credit-for-sex scams eventually became accomplices of credit-for-sex scammers (Alkathib, 2015; Koh, 2017; Neo, 2015). After failing to receive the sexual services that they paid for, these victims requested a refund (Alkathib, 2015; Koh, 2017; Neo, 2015). The scammers complied but sent the victims more money than they had initially paid (Koh, 2017). The victims were then asked whether they were interested in making "regular transactions in return for a small commission" (Alkathib, 2015). Motivated to recover their prior losses, many victims agree to aid in money laundering. Eventually, the victims became "involved in a cycle of transfers in which they would receive illegal monies, which they were required to transfer in Alipay credits to the syndicate and allowed to keep the remainder" (Koh, 2017).

COMPARISON OF THE CREDIT-FOR-SEX SCAMS IN SINGAPORE AND OTHER COUNTRIES

Credit-for-sex scams are referred to as 'compensated dating scams' in Hong Kong, Macao, and Taiwan, where it is defined as "a disguised form of prostitution in which one person pays another for companionship and often sex" (Baron, 2016; Lo, 2018b; Macau Post Daily, 2020b). According to Baron (2016), this phenomenon of compensated dating, or 援助交际 (yuanzhu jiaoji) in Mandarin, which is derived from the Japanese term enjo-kōsai, surfaced in Taiwan in the late 1990s. Other common expressions for credit-for-sex scams include "fake prostitute scam" (Jun, 2019), "sex-for-hire scam" (Milkovits, 2015), and "fake escort services scam" (DNA, 2015).

A horizon scan shows that credit-for-sex scams have been reported in Vancouver and Richmond in Canada (Postmedia News, 2015), Providence in United States (Milkovits, 2015), Australia (Chung, 2015), Lebanon (Civil Society Knowledge Centre, 2017), India (Deccan Chronicle, 2018), China (Wei, 2019), Taiwan (Baron, 2016; Pan, 2018), Macao (Macau Post Daily, 2020a), Hong Kong (Lo, 2018a; Lo, 2018b), Indonesia (Yeung, 2017), Malaysia (Pui, 2017), and Singapore (Loh, 2020). Overall, it seems that "while there are a variety of … ruses [of a sexual or romantic nature] in Western countries, … one particular card trick seems to be unique to East [and Southeast] Asia" (Baron, 2016), and that is credit-for-sex scams.

Similarities Across Countries

Credit-for-sex scams across the world generally follow the model proposed in this paper. Most scammers create fake ideal profiles on online social networking platforms, target only male victims, and promise sexual services after advance payment via gift cards and online credits. They also use unsuspecting accomplices to help them to conceal the true origins of their money to evade police detection. Finally, scammers also request the victim to reveal their personal information as well as make threats of violence and threats to tarnish the victim's reputation in order to extort more money from them.

It is interesting to note that most of the countries and cities where credit-for-sex scams have been reported have a large Chinese population. To illustrate, Singapore, Malaysia, Hong Kong, Macao, Taiwan, and China are countries with large Chinese populations, and Richmond and Vancouver in Canada, and Canberra in Australia have vibrant Chinese communities as well. Furthermore, the victims of credit-for-sex scams in most countries are ethnic Chinese (Baron, 2016; Chung, 2015; Jun, 2019; Lo, 2018a; Lo, 2018b; Postmedia News, 2015; Taipei Times, 2008; Macau Post Daily, 2020a, Macau Post Daily, 2020b, Toh, 2016; Yiu, 2019).

Differences Between Countries

While most credit-for-sex scammers across the world use online communication platforms to gain access to and establish contact with their victims as well as to receive their profits through online third-party online payment platforms, the actual platforms used for credit-for-sex scams differ across countries. This suggests that the scammers tailor the scams to each country so as to increase their success and profitability. For instance, credit-for-sex scammers in India have used classified advertisement websites that show

up easily when individuals look for female escort services (Deccan Chronicle, 2018). On the other hand, WeChat is often the main channel used by scammers in countries and cities with a large Chinese population due to its popularity among the ethnic Chinese (Chung, 2015; Postmedia News, 2015).

In terms of payment methods, due to the differing accessibility and familiarity of the average individual with the different modes of payment in each country, credit-for-sex scammers utilise different payment modes for different countries. For example, scammers in Taiwan use MyCard as the main payment method as it can be conveniently purchased at convenience stores (Baron, 2016). On the other hand, the Alipay payment method available at all AXS machines located island-wide in Singapore, or on the online e-payment platform, has led scammers to choose to receive their fraudulent pay checks through Alipay in the past (AXS, n.d.).

As for the language medium, scammers tailor their language to their victims. Thus in India, scammers use Hindi to communicate with their victims (Sur, 2019), whereas in countries with predominantly Chinese victims, they use Mandarin (Chung, 2015; Dimsumdaily Hong Kong, 2018; Postmedia news, 2015; Wong, 2020).

Implications

The fact that credit-for-sex scams are predominantly clustered in Asia suggests that transnational organised criminal syndicates that are based in Asia may the culprits behind these scams. Initial investigations in Singapore have revealed that credit-for-sex scammers are based overseas (Ng, 2015b). Additionally, accomplices based in mainland China have been found to be laundering the money obtained from credit-for-sex scams conducted in Macao (Macau Post Daily, 2020b).

Furthermore, given that the countries and cities that face the problem of credit-for-sex scams have large Chinese populations, and that many victims across the world are from a Chinese descent, there is reason to believe that a large percentage of offenders behind credit-for-sex scams are based in China. Several credit-for-sex scams in Singapore, Hong Kong, Macau, and mainland China have been linked to crime syndicates based in China (Chew, 2016; Jun, 2019; Lo, 2018b; Ng, 2015b; South China Morning Post, 2012; Macau Post Daily, 2020b; Yiu, 2019). The Syndicated Fraud Branch of the Singapore Police Force Commercial Affairs Department (CAD) believes that the scammers targeting residents in the Republic are mostly Chinese nationals based in China (Alkathib, 2015, 2016).

Transnational organised criminal syndicates are especially successful in their scamming activities for various reasons. By targeting victims in other countries, they can reduce their chances of getting arrested (The Star, 2019). Additionally, being part of a transnational organised criminal syndicate means the scammers have access to a well-connected and vast network of operators and brokers spread all across Asia, allowing them to gather intelligence and execute plans with greater success and with a higher profit (Vlassis & Williams, 2013,). Yet, by gathering intelligence on the common communication platforms used by locals to solicit prostitutes and the online payment methods that locals are most familiar with, credit-for-sex scammers are able to customise the scam to the local context and pretend to be locals (Button & Cross, 2017). In addition, while scammers behind the credit-for-sex scams in Singapore have traditionally used Chinese-sounding monikers to target Chinese-speaking victims, more scammers have been using English monikers recently (Yahoo News Singapore, 2017). Victims are thus less likely to suspect that they are being scammed.

Transnational syndicates also evade police detection by using money mules, who help "actual members of the syndicate avoid detection and apprehension by allowing the syndicate to distance itself from the offences" (Koh, 2017) and by "conceal[ing] the origins of their illegally obtained money" (i.e., money laundering) (Yiu, 2019).

Apart from transnational syndicates, domestic gangs and local offenders who operate in silos are also responsible for a portion of the credit-for-sex scams in each country. Some Singaporeans have been found guilty of scamming other Singaporeans through credit-for-sex scams

(Chua, 2019; Hussain, 2018; Singapore Police Force, 2019). However, the scammers based in Singapore may adopt a different modus operandi from those located in other countries. For instance, two Singaporean scammers met up with their victims to collect the fees (Hussain, 2018).

Similarly, the criminal groups behind the majority of the credit-for-sex scams in India are from India. As mentioned previously, India is one of the only countries where most of the victims are not ethnically Chinese, and the scammers in India use fluent Hindi to converse with their victims (Sur, 2019). The Cyber Crime Police in India have confirmed that "these [criminal] groups are usually run from places like Gurugram" (Sur, 2019). Other Indian officials have also claimed that many credit-for-sex scam cases are linked to criminals in Mumbai, Kolkata and Delhi (Romeo, 2019).

Overall, a horizon scan of the credit-for-sex scam cases across the world shows that the extent of this problem is largely contained within Asia, especially countries with a large Chinese population. Across the globe, the model of credit-for-sex scams holds for every country, but slight differences exist in terms of the communication platforms, payment methods, and language medium used as the scammers tailor the scam to each country's context. The evidence indicates that credit-for-sex scams are predominantly syndicated and are based in Asia, especially China. Nevertheless, individual offenders and local gangs may also be the culprits behind some credit-for-sex scams, and this is especially so for the case of India.

THE ROLE OF TECHNOLOGY IN CREDIT-FOR-SEX SCAMS

Technology plays an important role in facilitating credit-for-sex scams. Specifically, two key types of technology are used: online communication platforms and third-party online payment platforms. As summarised in Table 2, a myriad of factors work together to make it easier for scammers to carry out their scam successfully.

Global Connectivity

The physical distance afforded by technology serves as an advantage for offenders as it allows them to gain access to a larger pool of victims while escaping detection by the authorities and at the same time establish a strong network of operators and money mules across various countries (Button & Cross, 2017; Vlassis & Williams, 2013). However, it is a major drawback for the victims of credit-for-sex

Table 2. The Role of Technology in Credit-for-Sex Scams

Factor	Role	
	Offenders	Victims
Global connectivity	• Gain access to larger pool of victims • Establish strong syndicate networks across various countries to gain intelligence • Less likely to be arrested due to jurisdictional issues and the use of money mules	• Harder to confront scammers due to physical distance
Resource bank	• Gain access to resources necessary to carry out the scam	
Dissociative anonymity	• Easier to hide real identity and fake an identity to bait victims and avoid police detection • Do not feel the need to take responsibility for their actions	
Physical invisibility	• Courage to do things they would not have done in real life • Easier to lie • Harder to empathize with victims	• More likely to believe scammers' lies • More likely to disclose personal information

scams. Since the scammers are located overseas, it is much more challenging for the victims to establish contact with the offenders and confront them to ask for their money back (Button & Cross, 2017). Thus, technology works to the advantage of the scammers and the disadvantage of the victims.

Resource Bank

The Internet is a huge resource bank, allowing scammers to find information on how to use a certain payment method and the location of bill-payment machines and convenience stores online, allowing them to guide their victims through the payment process during the scam (Alkathib, 2016).

The Online Disinhibition Effect

Suler (2004) was one of the first few researchers who noted and attempted to explain the phenomenon whereby people were more willing to self-disclose and felt less restrained when communicating online than when communicating offline. Terming it as the 'online disinhibition effect', Suler attributed this phenomenon to the interaction of six factors: dissociative anonymity, invisibility, asynchronicity, solipsistic introjection, dissociative imagination, and minimization of authority (see Figure 2). Dissociative anonymity and invisibility are especially applicable to credit-for-sex scams.

Dissociative Anonymity

As the online arena affords a place where individuals can remain anonymous, it makes it easier for individuals to hide their real identity as well as to alter their identity (Suler, 2004). In the case of credit-for-sex scams, offenders are able to easily conceal their real identity and fake an identity as an attractive female to bait victims and avoid detection by the police. This dissociative anonymity also allows the individual to separate their online behaviour from their real-life identity (Suler, 2004), explaining why scammers do not feel the need to take responsibility for their behaviour.

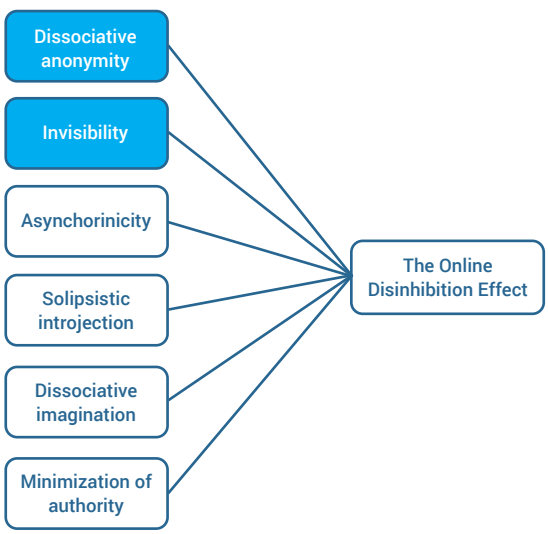


Figure 2. The Online Disinhibition Effect

Invisibility

As the communication platforms that credit-for-sex scammers use are text-driven, people cannot see or hear each other. As Suler (2004) posits, this invisibility gives people the courage to do things that they otherwise would not do in real life, such as scamming others. Without having to face the victim in real life, credit-for-sex scammers can also easily lie to their victims without revealing any nonverbal cues that suggest that they are lying (University of British Columbia, 2009). Hence, communicating in an online environment prevents individuals from being able to identify the non-verbal cues that would normally raise suspicions (Cross, 2018), making it easier for scammers to lie and for victims to believe the scammers' lies. Consequently, in online environments, people develop 'hyperpersonal relationships', which are relationships that develop faster and more intensely online than in real life (Walther, 1996). With the fake identity that they have strategically created, credit-for-sex scammers appear more socially desirable and trustworthy to the victims (Walther, 1996), which explains why victims are more likely to disclose their personal information to the scammers.

Additionally, this invisibility also makes it harder for the scammers to empathise with their victims as they are unable to see the social cues and reactions that inform them of the victims' emotions (Duffield & Grabosky, 2001; Soltes, 2016). The lack of social cues also reduces an individual's adherence to social norms (Duffield & Grabosky, 2001). Overall, as Soltes (2016) puts it, "usually, a gut feeling that something will be harmful is enough of a deterrence to commit the crime, but when the harm is distant or abstract this internal alarm does not always go off".

All in, the global connectivity, resources, dissociative anonymity, and physical invisibility that technology affords make it easier for scammers, even those with a conscience, to successfully carry out their scams without getting caught.

PSYCHOSOCIAL FACTORS INFLUENCING OFFENDERS OF CREDIT-FOR-SEX SCAMS

While technology facilitates the conduct of credit-for-sex scams, several psychological and social factors motivate individuals to commit the scam in the first place as well as ensure the success of the scam.

The Fraud Diamond Model in the Context of Credit-for-Sex Scams

The fraud diamond model, proposed by Wolfe and Hermanson (2004), and based on Cressey's (1950) fraud triangle model, is the most widely recognized model that details the factors affecting one's likelihood of committing fraud. According to the fraud diamond model, when *capable* people with the necessary traits and abilities to pull off a scam successfully are *pressured* to commit a fraud and identify an *opportunity* to do so, they are motivated to commit the fraud and thereafter *rationalise* their unethical behaviour (Wolfe & Hermanson, 2004). These four factors – pressure, opportunity, capability, and rationalisation – influence the likelihood of an individual to commit fraud. While the fraud triangle and diamond models have only been applied to corporate fraud (Kassem & Higson, 2012) and e-commerce fraud (Lustosa, 2016), it can also be applied to explain credit-for-sex scams. Table 3 elaborates on the fraud diamond model in the context of credit-for-sex scams.

Table 3. The Role of the Factors in the Fraud Diamond Model in Increasing One's Likelihood of Committing Credit-for-Sex Scams

Factors of the Fraud Diamond	Description	Elaboration and Evidence in Credit-for-Sex Scams
Pressure: individuals must be motivated or incentivised to commit scams	• Personal financial pressures: – Legitimate financial needs: sudden financial problem, debt (Kassem & Higson, 2012) – Perceived or self-induced: sustain costly habits, desire for additional income stream	• A polytechnic student in Singapore confessed that he "needed the money to sustain [his] lifestyle," where he "spent… money on cigarettes, alcohol and clothes, and patronised night clubs every weekend" (Chua, 2019). • An Institute of Technical Education (ITE) student in Singapore who was responsible for a credit-for-sex scam claimed that "he needed money as he was still studying" (Hussain, 2018).
	• External financial pressures: meagre income	• A scan of the literature reporting the occupation of credit-for-sex scammers shows that most of the jobs that the offenders hold likely provide only a low to modest income, such as a security agency worker (DNA, 2015), a mechanic (DNA, 2015), and a salesman (Macau Post Daily, 2020b).
	• External non-financial pressures: peer pressure	• ITE student T "was approached by his friend SP to cheat a victim in a sex scam" (Hussain, 2018). Besides the financial incentives that motivated him to commit the scam, he may also have felt compelled to join in the scam out of loyalty.

Factors of the Fraud Diamond	Description	Elaboration and Evidence in Credit-for-Sex Scams
Pressure: individuals must be motivated or incentivised to commit scams	• Personal non-financial pressures: see 'Capability'	
Capability: individuals must possess the personality traits and skills necessary to commit scams	• Personality traits: – Big ego and high confidence in not getting caught (Wolfe & Hermanson, 2004): inaccuracies in cost-benefit analyses of immoral behaviour (Gîrla & Rub, 2016), narcissistic and driven to succeed at all costs (Allan, 2003) – High Machiavellianism: willing to manipulate and deceive others to achieve their goals (Utami et al., 2019) – Antisocial tendencies like sociopathy: belief that societal rules do not apply to them, less able to empathise with victims (Watts, 2019)	
	• Skills and abilities – Tech-savvy – Intelligent, coercion skills (Wolfe & Hermanson, 2004) – Social skills to build rapport with accomplices (Peachey, 2015) – Lie effectively and consistently (Wolfe & Hermanson, 2004) – Cope well with stress as they have to worry about potentially being caught on a daily basis (Wolfe & Hermanson, 2004)	• Tech-savvy: The fact that increasing numbers of young people are committing cyber fraud can be attributed to "the post-90s and post-00s generation [being] more skilled in the use of mobile phones and network information technology as compared to the older generation" (Yiu, 2019). • Intelligent and persuasive: One of the offenders in mainland China was an undergraduate student in law school (Wei, 2019), who is likely to be knowledgeable about the law and highly skilled in reasoning and manipulation.
	• Network of connections: Being part of a transnational organised criminal syndicate or a neighbourhood full of experienced scammers provides individuals with the network of connections necessary for the success of the scam.	• A scammer in mainland China learnt how to commit credit-for-sex scams from the people in his town before he started operating by himself (Wei, 2019). He was also able to establish connections with people who were selling unregistered WeChat accounts as well as those who possessed the software for changing locations on WeChat (Wei, 2019), all of which allowed him to gain access to more victims.

Factors of the Fraud Diamond	Description	Elaboration and Evidence in Credit-for-Sex Scams
Capability: individuals must possess the personality traits and skills necessary to commit scams	• Media: The media may allow scammers to hatch the idea of committing scams.	• In Singapore, a polytechnic student who saw a warning on credit-for-sex scams on Locanto hatched the idea to scam others this way to relieve his financial pressures (Chua, 2019).
Opportunity: individuals must perceive an opportunity to make massive profits from scams without getting caught	• Weak law enforcement: – With such a low probability of getting arrested, the financial rewards of credit-for-sex scams will naturally accumulate over time and entice people to become credit-for-sex scammers. – According to the broken windows theory, when people see visible signs of disorder and crime in the environment, they assume that there is no real authority and are more likely to engage in unethical behaviour as well (Kelling & Wilson, 1982).	• Most culprits behind the credit-for-sex scams in Singapore are located elsewhere within the Asia region where there is generally weak law enforcement. • The prevalence of credit-for-sex scammers in a town in mainland China inspired one scammer to follow suit and scam people as well (Wei, 2019).
	• Barriers to reporting the scam: – Limited ability of the police to arrest criminals: technology makes it harder for police officers to identify the scammers, and jurisdictional issues limit their ability to arrest offenders, so victims view the reporting of the scam as a futile and troublesome act. – Nature of the crime: scam victims are generally stigmatised as foolish by the public, so many feel ashamed to report they are victims of a scam (Eisenberg, 2016), and the fact that sex is such a personal topic deters victims from sharing their sexually charged conversations and experiences with the police (Button & Cross, 2017).	• Limited ability of the police to arrest criminals: A victim of a credit-for-sex scam in Australia was unwilling to report his encounter to the police, saying that "I did [not] think [the police] would do anything anyway. They won't catch the guy" (Chung, 2015). • Nature of the crime: A victim of a credit-for-sex scam in Singapore confessed that he was scared that his parents would find out about him searching and paying for sexual services (Ng, 2015a).

Factors of the Fraud Diamond	Description	Elaboration and Evidence in Credit-for-Sex Scams
Rationalisation: before performing the unethical act of scamming that will likely contradict their sense of morality, scammers are likely to experience a mental discomfort termed as cognitive dissonance (Festinger, 1957).	• Scammers may rationalise their immoral behaviour using various techniques of neutralisation (Satar, 2019) • Denial of responsibility: Offender pushes blame from himself to other people or external situational forces beyond control and takes on a victim stance (Sykes & Matza, 1957) • Denial of injury: Offender claims that the scam did not cause any damage to the victim (Sykes & Matza, 1957) • Denial of the victim: Offender thinks that victim deserved to be scammed (Sykes & Matza, 1957) • Appeal to higher loyalties: Offender argues that they must go against the law to benefit their family and friends (Sykes & Matza, 1957) • Metaphor of ledger: Offender believes that past, current, or future good behaviour will bank up 'ethical credit' and can compensate for current unethical behaviour (Klockars, 1974) • Dispersal of blame: Offender acknowledges that they are to blame for the scam, but dilutes the degree of their responsibility by sharing it with other scammers (Thompson, 1980)	
	• Cognitive errors also aid the unconscious justification of the unethical act. • Cheater's high or duping delight: rather than feel a sense of guilt for deceiving others, offenders are rewarded with positive feelings and a sense of accomplishment (Ekman, 1981). • Criminal spin: after having completed one minor credit-for-sex scam and gotten away with it, scammers continue to test the limits by committing more scams and extorting more money from victims (Ronel, 2011). • Cut-off thinking error: scammers' strong desire to perform the scam will eventually corrode and cut-off their inhibitions, such as the potential punishments they may face (Samenow & Yochleson, 2017).	

Overall, as the fraud diamond model suggests, individuals who are capable of committing scams, are pressured to do so, and see the opportunity to do so, are more likely to commit credit-for-sex scams and consequently rationalise their scamming behaviour as less immoral.

THE VICTIMOLOGY IN CREDIT-FOR-SEX SCAMS

Routine Activity Theory

According to the routine activity theory, the presence of a suitable target, the absence of capable guardianship, and the presence of motivated offenders create an opportunity for crime to occur (Cohen & Felson, 1979). In the context of credit-for-sex scams, we can then posit that scammers, motivated by various personal or external, financial or non-financial pressures, gain access to suitable targets on various online platforms that lack the necessary security measures to catch offenders. They have an opportunity for crime because their targets do not engage in online guardianship behaviours that lower their risk of falling for scams (see Figure 3).

Several factors also influence the suitability of an individual in becoming a target of scammers (see Table 4).

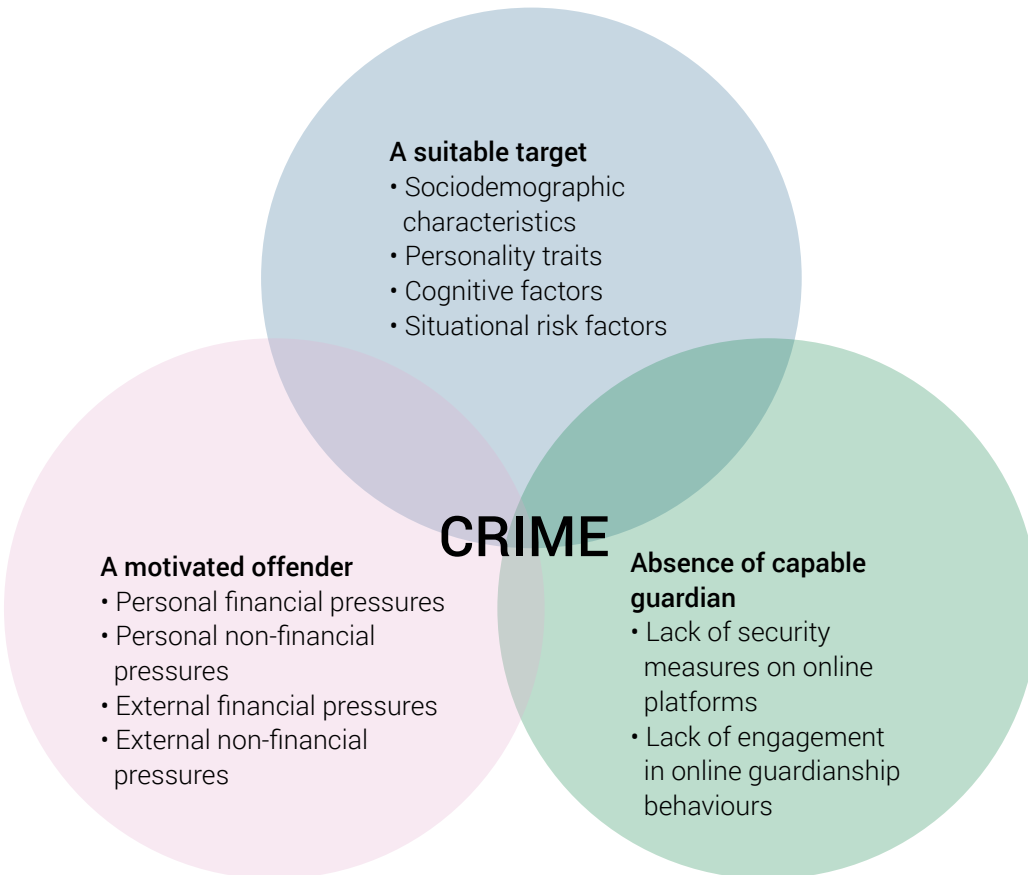


Figure 3. Routine Activity Theory in the Context of Credit-for-Sex Scams

Note. Adapted from Social Change and Crime Rate Trends: A Routine Activity Approach by Cohen & Felson, 1979.

Table 4. The Routine Activity Theory in the Context of Credit-for-Sex Scams

Category	Offender Factors	Victim Factors	Evidence in Credit-for-Sex Scams
Socio-demographic characteristics		• Range in age from very young to very old (Chong, 2020)	
		• Male – Compared to women, males have higher sex drive, are willing to take more risks and incur more costs for sex, rarely refusing sex (Baumeister, 2010) – Especially those with unfulfilled sexual desires	• One male victim in Singapore was in a shaky marriage with his wife and sought sexual services online (Alkathib, 2015). • One male victim wanted to experience sex for the first time and sought prostitutes online (Alkathib, 2015).
		• Technologically literate	
		• Range from ignorant to highly intelligent – Most scam victims are gullible and uncritical about scams (Titus & Gover, 2001) – Well-educated people may be overconfident in their ability to recognize scams and believe that they are invulnerable, consequently being less vigilant when using social networking sites (Whitty, 2019)	
Personality traits		• Low self-esteem – More likely to pay to conquer prostitutes to boost their ego (Tan, 2016) – More likely to submit to other's requests (Gudjonsson et al., 2002)	
		• Behavioural impulsivity – Respond to pushes to respond quickly without checking the facts (Whitty, 2019) – Easily pulled into sensational narratives (Whitty, 2019)	• Victims are easily pulled into the sensational narrative that an attractive woman desires to have sex with him, and thus respond quickly to requests for personal information and money without questioning the motives of the scammer

Category	Offender Factors	Victim Factors	Evidence in Credit-for-Sex Scams
Cognitive vulnerabilities	• Employ the visceral cue of sexual desire: use provocative photographs of attractive females (Burnett, 2018) • Employ the visceral cue of fear: verbally aggressive when victims refuse to continue paying (Ng, 2015a; Wong, 2020), use of threats including video evidence of them supposedly harming previous clients (Wong, 2019; Wong, 2020)	• Visceral processing: process messages rapidly and emotionally, rely on intuitive feelings instead of careful assessment of situation to guide behaviour (Lea et al., 2009; Norman, 2002), make snap judgments (Ng, 2015b)	• One victim in Singapore admitted that he was not thinking and simply accepted the requests for money even though he did not have much money (Wong, 2019). • A victim in Singapore confessed that he "was very afraid [that] the boss might do something to [him]", which was why he bought more Alipay credits out of fear (Ng, 2015a).
	• Principle of liking: people comply more often to people who they like (Cialdini, 2007)		• Scammers use "terms of endearment or flattery" when conversing with their victims (Ng, 2015b). • A scammer spent a week forging a trusting relationship with the victim, sending "voice messages whispering sweet nothings" to make sure that the victim established a liking for the scammer before finally offering the sexual services at a cost (Wong, 2019).
	• Principle of reciprocity: a person who receives a favour from another person will feel obligated to reciprocate and return the favour (Fehr & Gächter, 2000)		• Some scammers use the door-in-the-face technique: they first charge a high cost for the sexual services and expect rejection, then after getting rejected, offer to make a compromise by lowering the amount requested (Lee, 2019; Scam Alert, 2020b). • In one scam in Singapore, the scammer offered to make a compromise by helping to pay a portion of the victim's membership fee for the escort service (Ng, 2015b), making the victim feel obligated to reciprocate and pay the rest of the membership fee.

Category	Offender Factors	Victim Factors	Evidence in Credit-for-Sex Scams
Cognitive vulnerabilities	• Social responsibility norm: people will help others in need even without expectation of gaining something in return (Jhangiani et al., 2014)		• Scammers often pose as pitiful students in need of money (Baron, 2016; Chung, 2015; Ng, 2015a; Ng, 2015b; Lo, 2018a; Lo, 2018b; Postmedia News, 2015; Wong, 2019). • In one scam in Singapore, the scammer claimed that "she was working as a social escort to earn enough money for her younger brother's education", then subsequently said that she did not like her next customer and "begged [the victim] to help her by taking over the appointment" (Ng, 2015b).
	• Principle of authority: people have a higher tendency to follow the instructions of knowledgeable experts (Cialdini, 2007)		• By posing as the prostitute's agent while making the phone call to the victim, a scammer assumes a position of an authority figure with much experience in dealing with clients interested in procuring sexual services.
	• Principle of consistency: people experience a mental discomfort known as cognitive dissonance when their beliefs are inconsistent with their behaviours or when their current behaviours are inconsistent with their past behaviours, and they are motivated to reduce this tension (Cialdini, 2007; Festinger, 1957)		• After making the first advance payment and not receiving the sexual services, victims may start to be suspicious that they are being scammed. Because it is impossible for the victims to undo their actions, they suspend their instinct that is warning them against making additional payments and instead, change their belief that they are being scammed. Victims may convince themselves that the reasons for the advance payment are reasonable. • Scammers farm a commitment in their victims using the foot-in-the-door technique (Freedman & Fraser, 1966): scammers first make a small request to their victims (Freedman & Fraser, 1966), as evident by how the costs for the sexual services are usually below the market rate of prostitutes in Geylang (Ng, 2015a; Scam Alert, 2019). After the victims make the first payment, the scammers then present them with requests for larger sums of money.

Category	Offender Factors	Victim Factors	Evidence in Credit-for-Sex Scams
Cognitive vulnerabilities		• Optimism bias: overestimate favourable outcomes and underestimate likelihood of experiencing negative events (Sharot, 2011) – Especially since Singapore has a low crime rate (Tang, 2019; Yap, 2020) – Especially prevalent in intelligent people and younger people (Sreenivasan & Weinberger, 2019)	
		• Halo effect: tendency for positive impressions formed in one area to positively influence opinion in another (Nisbett & Wilson, 1977)	• By posing as attractive females, the scammers prey on people's subconscious association of physical attractiveness with sound morals, consequently increasing victims' compliance with the scammers' requests.
		• Confirmation bias: interpret evidence in ways that confirm one's belief (Nickerson, 1998) • Cut-off thinking error: cut off inhibiting thoughts that prevent them from performing the actions needed to reach one's goal	• Victims enter a tunnel vision, where they focus only on evidence that confirms their belief that the deal is legitimate and not a scam. In particular, they may think that these clandestine transactions are normal given that the girl is engaging in an illegal act (Ong, 2016). On the other hand, victims ignore warning signs, such as requests for additional payment and requests for personal information.
		• Sunk cost fallacy: investment of money, effort or time increases one's tendency to continue a course of action (Arkes & Blumer, 1985) • Prospect theory: people are loss-averse because the pain from losing a sum of money is much greater than the joy felt when gaining the same amount (Kahneman & Tversky, 1979)	• As a victim in Australia recounted, "I was reluctant to [pay additional fees for the safety deposit], but I was already $200 down, so I did what he said anyway" (Chung, 2015). • Another victim in Singapore said, "since I was already there [at the AXS machine], I wanted to pay and meet [the girl]" (Ng, 2015a).

Category	Offender Factors	Victim Factors	Evidence in Credit-for-Sex Scams
Cognitive vulnerabilities		• Near-miss effect: an individual who experiences the near miss of almost winning sees it as a positive sign and continues their course of action with a stronger belief in future success (Reid, 1986)	
Situational risk factors		• Online routine activities: younger, more educated, and more impulsive people are more likely to engage in online routine activities that expose them to cyber fraud (Whitty, 2019)	• In credit-for-sex scams, these activities include frequently using online dating applications and visiting classified websites, routinely seeking paid sexual services online, and habitually disclosing personal information to strangers online.

IMPLICATIONS

As the exploration in this paper of the psychosocial factors that increase offender likelihood and victim vulnerability show, both the offenders and victims of credit-for-sex scams play an equally critical role in contributing to the success of credit-for-sex scams. Thus, psychosocial factors influencing both scammers and victims should be taken into account when developing crime prevention strategies for credit-for-sex scams.

From the fraud diamond model, the elimination of any of the four factors contributing to offending behaviour will prevent the occurrence of credit-for-sex scams (Cressey, 1950; Wolfe and Hermanson, 2004). Since it is difficult, if not impossible, to eliminate the factors of pressure, capability, and rationalisation as they are internal to the offenders and largely beyond external influence (Yilmaz, 2018), credit-for-sex scam prevention strategies should attempt to reduce the opportunities to commit the scam without getting caught.

Under the routine activity theory, the suitability of individuals in becoming a target of credit-for-sex scams can be reduced by addressing the factors of personality traits, cognitive factors, and situational risk factors. Furthermore, the number and capability of online guardians should be enhanced. The majority of credit-for-sex scam prevention strategies should thus be victim-centric in nature.

RECOMMENDATIONS

While current credit-for-sex scam prevention posters educate the public on the tell-tale signs of such scams, they do not provide suggestions for concrete actions that individuals can easily take to prevent themselves from becoming the next victims. Thus, to further reduce the number of such cases, the Singapore Police Force could improve public education by increasing awareness of the simple steps that people can take to protect themselves (see Table 5). These tips can be shared through a video format. In particular, the video should first show how the scam plays out through a victim's point of view. Next, various victims can share their emotions and thoughts throughout the entire experience so as to reduce the stigma associated with being a victim of a scam. Victims of various demographic backgrounds should be used to highlight the fact that anyone can fall for a scam, thereby reducing the optimism bias that most Singaporeans hold. These victims can then elaborate on the tell-tale signs of credit-for-sex scams while recommending tips for how to stay safe while using social networking sites.

Current credit-for-sex scam posters are mainly written in English. Given that many credit-for-sex scam victims communicated with their scammers in Mandarin, it is important to produce Chinese versions of scam-prevention materials as well, be they posters or videos.

Table 5. Steps That Can be Taken to Protect Oneself Against Credit-for-Sex Scams

Risk factors	Protective actions
Use of online social networking sites to procure sexual services	• Refrain from procuring sexual services online via dating apps or classified websites • Exhibit enhanced vigilance if procuring sexual services online • Choose to pay via cash in real life rather than through gift cards and bank transfers
Submitting to requests to provide personal information	• Do not share personal information such as address, phone number, and National Identity card with strangers that they meet online
Submitting to requests to download apps that hack one's contacts	• Do not download dubious apps requested by strangers that they meet online
Gender, intelligence and young age that leads to an optimism bias, being tech-savvy	• Males, especially those who are intelligent, tech-savvy, and young should be aware of their heightened risks for being a target of credit-for-sex scams and falling for them, and accordingly, take greater precaution when procuring sexual services online
Ignorant about scams	• Visit the Scam Alert website to learn about the tell-tale signs of credit-for-sex scams, including the manner in which scammers approach their victims, get them to divulge their personal information, convince them to make multiple payments using persuasive techniques, all of which will better allow them to be able to spot a credit-for-sex scam should they encounter one
Lack of awareness of scammers' persuasive techniques	• Do not make payments for sexual services simply because of flattery, pitiful acts, low costs, and (false) threats • Instead, be vigilant when encountering people who provide sexual services at a low cost as low initial payments may eventually snowball to become huge losses
Cut-off thinking error	• Make it a habit to always question the intentions of strangers online, even if they are in a high state of arousal and eager to receive sexual services, and even if these strangers are attractive • Make it a habit to engage in counterfactual thinking, in other words, think of alternative negative outcomes that might occur besides the positive outcome of receiving sexual services that they think they will achieve
Sunk cost fallacy	• Do not make additional payments if the request is not fulfilled by the first payment
Behavioural impulsivity	• Recognize sensational narratives, in particular, understand the low probability of an attractive women offering sexual services for a low cost • Refrain from responding quickly to requests for personal information, instead stop to think and assess the situation for signs of a credit-for-sex scam

Additionally, current public education on scams are conducted via large-scale stand-alone campaigns. To improve public education, regular smaller-scale scam prevention efforts could be considered instead. Since individuals of all age groups may fall victim to credit-for-sex scams, effective public education will need to target males not only through the dating apps and classified websites used by credit-for-sex scammers, but also utilise various male-appealing platforms that are popular amongst the different age groups. For the younger generation, these contemporary platforms may include Instagram, TikTok, and YouTube. To attract and hold the attention of the younger audience, fun and creative formats such as using memes, games or quizzes on Instagram story filters, and videos of people tricking credit-for-sex scammers can be used to capture attention (i.e., eyeballs). For the older generation, platforms such as Whatsapp, Facebook, the television, and the radio can be used to educate them on credit-for-sex scams.

Ultimately, since most of these platforms are visual in nature, scam prevention messages need to be communicated in a concise and visually engaging manner. This is especially so since people often scroll through these platforms mindlessly as a form of entertainment. Furthermore, victims of cyber scams are typically impulsive, hence "information [needs] to be written succinctly so that users can easily and quickly digest the details needed to change their behaviours" (Whitty, 2019, p. 289).

LIMITATIONS AND FUTURE WORK

Given the lack of academic research on credit-for-sex scams, this paper has relied on the information and data gathered from academic research on general cyber scams and used the credit-for-sex scams reported in news articles or obtained from anecdotes to showcase how these findings apply to credit-for-sex scams in particular. There are several limitations to this method. Firstly, the news articles reporting on credit-for-sex scams may not have included all the crucial details of the case, as evident from the missing information in several categories such as the language medium used, the race of the victims, and whether the scammers collected personal information from the victims. Similarly, the anecdotes of victims of credit-for-sex scams are often short and lack critical information, which may be in part due to the word limit on Scam Alert. The reliability of these anecdotes also cannot be ascertained as these stories are shared anonymously on Scam Alert. Furthermore, since not all cases of credit-for-sex scam cases are reported by the media or shared online by the victims, the information obtained from these sources may not be completely representative of all credit-for-sex scam cases, and subsequently, the findings of this paper may not be fully generalisable. The recommendations put forth are thus generic and conceptual in nature, and would need to be contextualised to any local enforcement work. Nevertheless, the authors are confident this paper provides a good starting point on which future studies can reference and build upon.

Future work can seek to build on the model of credit-for-sex scams offered in this paper as well as corroborate or disprove the findings of this paper. Information should also be obtained from more reliable sources, such as Statements of Facts recorded by the police as well as interviews with victims of credit-for-sex scams. More effective empirical-based crime prevention strategies can then be recommended to put a stop to the pervasive issue of credit-for-sex scams.

CONCLUSION

In recent years, the number of scam cases in Singapore has been rising at a concerning rate. Among all the cyber scams, credit-for-sex scams emerged as one of the top problems plaguing Singapore in 2019. In the absence of academic research on credit-for-sex scams, this paper has used literature review to generate findings on the psychosocial factors influencing offenders and victims of credit-for-sex scams so as to recommend empirically based crime prevention strategies. In particular, it offers a two phase, six-staged model to show the workings of credit-for-sex scams. A comparison of such cases across the world also shows that this type of scam is largely concentrated in the Asia region and is especially prevalent in countries and cities with a large Chinese population. The culprits behind credit-for-sex scams are largely transnational organised criminal syndicates based in Asia, especially in China. The difficulty in shutting down and prosecuting such transnational syndicates suggests that a more victim-centric approach is necessary to prevent such crimes.

ABOUT THE AUTHORS

Ng Jing Wen
is a 3rd year psychology student from Nanyang Technological University who completed an internship at the Singapore Police Psychological Services Department in 2020 under the supervision of Ms Carolyn Misir, where she conducted a literature review on the topic of credit-for-sex scams and provided practical recommendations to the Singapore Police Force.

Carolyn Misir
is a principal psychologist in the Operations and Forensic Psychology Division (OFP) of the Singapore Police Psychological Services Department, which supports police operations, crime investigations, victim support and police intelligence through offence research and profiling projects as well as direct consultations with units in high profile on-going cases. Carolyn oversees the crime related areas of the work in OFP while concurrently building deep domain expertise and research in the areas of investigative and criminal psychology.

Jansen Ang
is a Senior Principal Psychologist with the Ministry of Home Affairs in Singapore. Trained as a Forensic Psychologist at the University of Surrey in the United Kingdom, he holds various appointments within the Home Team. At Ministry Headquarters, he is the Deputy Chief Psychologist responsible for Crisis Operations and Research of the psychologists serving in the Police, Narcotics, Civil Defence, Prisons, Immigration and Checkpoints Authority, and the Home Team Academy. He is also responsible for the Home Team's psychological response in times of national crises and disasters as well as the coordination of psychological research to support Home Team needs. Additionally, he oversees the deployment of the Human Emergency Assistance Response Team (HEART). In the Singapore Police Force, Jansen is the Director of the Police Psychological Services Department (PPSD) which provides psychological services to police officers, police operations and investigations as well as supports organisational excellence in the police. He is also the Police representative on the National CARE Management Committee that is the body responsible for managing the psychological impact arising from national crises and incidents. An Associate Professor (Adjunct) at the Nanyang Technological University in Singapore, he lectures on the psychology of crisis stress management at the College of Humanities and Social Sciences. His current research interests are in the area of organised crime profiling as well as the development of services to support law enforcement officers and operations.

Hong Jingmin
is a psychologist with the Operations and Forensic Psychology Division of the Police Psychological Services Department, which supports police operations, crime investigations, and police intelligence through research and consultations with units. Her research interests include scams and crime prevention. Specifically, she examines the psychology of scam compliance from both the offender and victim's perspectives.

ABOUT THE AUTHORS

Ong Shuyan
is a Research Analyst with the Singapore Police Force, Police Psychological Services Division, supporting the Operations and Forensic Psychology (OFP) Division. Her research interests focus on scams, in particular, understanding the psychological principles involved in various scams. She presented her findings on Internet Love Scams in Singapore at the 4th Asian Conference of Criminal and Operations Psychology 2019. She is also a Victim Care Officer who actively volunteers to provide emotional support to victims of crime.

REFERENCES

Alkathib, S. (2015, October 26). Credit-for-sex scams up 10-fold. *The New Paper*. Retrieved from https://www.tnp.sg/news/singapore/credit-sex-scams-10-fold

Alkathib, S. (2016, February 29). *Taking on the credit-for-sex syndicate*. AsiaOne. Retrieved from https://www.asiaone.com/singapore/taking-credit-sex-syndicate

Allan, R. (2003). Fraud-The human face of fraud: Understanding the suspect is vital to any investigation. *CA Magazine-Chartered Accountant* 136(4), 39-40.

Arkes, H. R., & Blumer, C. (1985). The psychology of sunk cost. *Organizational behavior and human decision processes* 35(1), 124-140. https://doi.org/10.1016/0749-5978(85)90049-4

AXS. (n.d.). *AXS Station*. Retrieved from http://www.axs.com.sg/axsStation.php

Baron, J. (2016, December 7). On the Cards: Taiwan's Dating App Scam of Choice. *The News Lens*. Retrieved from https://international.thenewslens.com/article/56198

Baumeister, R. F. (2010, December 8). The Reality of the Male Sex Drive. *Psychology Today*. Retrieved from https://www.psychologytoday.com/sg/blog/cultural-animal/201012/the-reality-the-male-sex-drive

Bisson, D. (2019, October 9). New Sextortion Scam Uses Alternative Cryptocurrencies to Evade Detection. *Security Boulevard*. Retrieved from https://securityboulevard.com/2019/10/new-sextortion-scam-uses-alternative-cryptocurrencies-to-evade-detection/

Burnett, D. (2018, January 25). How 'provocative clothes' affect the brain – and why it's no excuse for assault. *The Guardian*. Retrieved from https://www.theguardian.com/science/brain-flapping/2018/jan/25/how-provocative-clothes-affect-the-brain-and-why-its-no-excuse-for-assault

Button, M., & Cross, C. (2017). *Cyber frauds, scams and their victims*. Taylor & Francis.

Chew, H. M. (2016, January 22). Chinese police arrest 43 in syndicate targeting Singapore men in credit-for-sex scams. *The Straits Times*. Retrieved from https://www.straitstimes.com/singapore/courts-crime/chinese-police-arrest-43-in-syndicate-targeting-singapore-men-in-credit-for

Chong, C. (2020, May 2). 20 credit-for-sex scam victims fined for breaching safe distancing measures. *The Straits Times*. Retrieved from https://www.straitstimes.com/singapore/20-credit-for-sex-scam-victims-fined-for-breaching-safe-distancing-measures

Chua, A. (2019, January 28). Polytechnic student admits to posing as women online to cheat victims into paying for sex. *Today*. Retrieved from https://www.todayonline.com/singapore/polytechnic-student-admits-posing-women-online-cheat-victims-paying-sex?cid=h3_referral_inarticlelinks_03092019_todayonline

Chung, F. (2015, June 13). 'I was thinking with my penis': Chinese sex scam hits Australian National University. *News.com.au*. Retrieved from https://www.news.com.au/finance/money/costs/i-was-thinking-with-my-penis-chinese-sex-scam-hits-australian-national-university/news-story/10646398df6a75fca8880257bb76c6ea

Cialdini, R. B., Vincent, J. E., Lewis, S. K., Catalan, J., Wheeler, D., & Darby, B. L. (1975). Reciprocal concessions procedure for inducing compliance: The door-in-the-face technique. *Journal of Personality and Social Psychology 31*(2), 206–215. https://doi.org/10.1037/h0076284

Cialdini, R. B. (2007). *Influence: The psychology of persuasion* (Vol. 55). New York: Collins.

Civil Society Knowledge Centre. (2017, October 2). *2 busted in phone credit for sex scam*. Retrieved from https://civilsociety-centre.org/sir/2-busted-phone-credit-sex-scam

Clapp, R. (2019, March). Singapore tops APAC for smartphone penetration. *WARC*. Retrieved from https://www.warc.com/content/paywall/article/warc-datapoints/singapore_tops_apac_for_smartphone_penetration/125723#:~:text=Singapore%20records%20the%20highest%20smartphone,over%20one%2Dhalf%20in%20Japan.

Cohen, L., & Felson, M. (1979). Social Change and Crime Rate Trends: A Routine Activity Approach. *American Sociological Revie*, 44(4), 588-608. https://dx.doi.org/10.2307/2094589

Cressey, D. R. (1950). The criminal violation of financial trust. *American Sociological Review 15*(6), 738-743. https://doi.org/10.2307/2086606

Cross, C. (2018, August 17). How to get away with fraud: the successful techniques of scamming. *The Conversation*. Retrieved from https://theconversation.com/how-to-get-away-with-fraud-the-successful-techniques-of-scamming-99523

Daily Express. (2018, June 19). *Sex scam leaves young man poorer by RM5,000*. Retrieved from http://dailyexpress.com.my/news.cfm?NewsID=125177

Daud, S. (2019, July 31). *Why scammers still succeed in tricking S'poreans to part with their money*. Mothership. Retrieved from https://mothership.sg/2019/07/online-scams-phishing-one-click/

Deccan Chronicle. (2018, September 26). *Hyderabad: Crime cell warns against escort services*. Retrieved from https://www.deccanchronicle.com/nation/crime/260918/hyderabad-crime-cell-warns-against-escort-services.html

Devlin, K. (2008, August 13). Humans 'naturally prefer pretty people'. *The Telegraph*. Retrieved from https://www.telegraph.co.uk/news/uknews/2551882/Humans-naturally-prefer-pretty-people.html

Dimsumdaily Hong Kong. (2018, December 21). *A local blogger exposed a bitcoin scam using sex as front to scam men*. Retrieved from https://www.dimsumdaily.hk/a-local-blogger-exposed-a-bitcoin-scam/

DNA. (2015, April 4). *Bogus online escort services racket busted; 3 arrested*. Retrieved from https://www.dnaindia.com/mumbai/report-bogus-online-escort-services-racket-busted-3-arrested-2074480

Duffield, G. M., & Grabosky, P. N. (2001). *The psychology of fraud* (Vol. 199). Canberra: Australian Institute of Criminology.

Economist Intelligence Unit. (2019). *Safe Cities Index 2019*. Retrieved from https://safecities.economist.com/wp-content/uploads/2019/08/Aug-5-ENG-NEC-Safe-Cities-2019-270x210-19-screen.pdf

Eisenberg, R. (2016, July 26). Surprise! Millennials More Likely To Be Scam Victims Than Boomers. *Forbes*. Retrieved from https://www.forbes.com/sites/nextavenue/2016/07/26/surprise-millennials-more-likely-to-be-scam-victims-than-boomers/?sh=35f10d43685c

Enoch, J. S. (2008, July 28). Love's Labor Looted: Internet Dating Scams Can Get Expensive. *Consumer Affairs*. Retrieved from https://www.consumeraffairs.com/news04/2008/07/eharmony.html

Express News Service. (2015, April 4). Three held for duping people by promising 'escort services'. *The Indian Express*. Retrieved from https://indianexpress.com/article/cities/mumbai/three-held-for-duping-people-by-promising-escort-services/

Fehr, E., & Gächter, S. (2000). Fairness and retaliation: The economics of reciprocity. *Journal of economic perspectives* 14(3), 159-181. https://doi.org/10.1257/jep.14.3.159

Festinger, L. (1957). *A theory of cognitive dissonance* (Vol. 2). Stanford University Press.

Freedman, J. L., & Fraser, S. C. (1966). Compliance without pressure: The foot-in-the-door technique. *Journal of Personality and Social Psychology* 4(2), 195–202. https://doi.org/10.1037/h0023552

Fruhlinger, J. (2020, June 4). What is pretexting? Definition, examples and prevention. *CSO*. Retrieved from https://www.csoonline.com/article/3546299/what-is-pretexting-definition-examples-and-prevention.html

Gillespie, A. (2002). Child Protection on the Internet—Challenges for Criminal Law. *Child and Family Law Quarterly* 14, 411–425.

Gîrla, L., & Rub, J. (2016). Correlation between risk-taking and risk-averting behavior during the white-collar crime perpetrating: empirical findings for Moldova and Israel. *Studia Universitatis Moldaviae-Ştiinţe Sociale* 8(98), 156-169.

Gudjonsson, G. H., Sigurdsson, J. F., Brynjólfsdóttir, B., & Hreinsdottir, H. (2002). The relationship of compliance with anxiety, self-esteem, paranoid thinking and anger. *Psychology, Crime and Law* 8(2), 145-153. https://doi.org/10.1080/10683160208415003

Hafidz, H. (2019, November 27). *Crime Files: Internet Love Scam Syndicate*. Singapore Police Force. Retrieved from https://www.police.gov.sg/media-room/features/crime-files

Hussain, A. (2018, November 7). Sex scam: bogus teenage 'pimp' found guilty of cheating. *Yahoo News Singapore*. Retrieved from https://sg.news.yahoo.com/sex-scam-bogus-teenage-pimp-found-guilty-cheating-121649879.html

Inseasia. (2015, December 22). *Breaking Singaporean News: Singaporean men victims of sex scam*. Retrieved from http://www.inseasia.com/2015/12/singaporean-men-victims-sex-scam/

Jhangiani, R., Tarry, H., & Stangor, C. (2014). *Principles of social psychology-1st international edition.*

Jun, M. (2019, February 24). Chinese police detain 42 suspects over fake prostitutes scam on WeChat. *South China Morning Post*. Retrieved from https://www.scmp.com/news/china/society/article/2187475/chinese-police-detain-42-suspects-over-fake-prostitutes-scam

Kahneman, D., & Tversky, A. (1979). Prospect Theory: An Analysis of Decision Under Risk, *Econometrica* 47, 263-291. http://www.jstor.org/stable/1914185?origin=JSTOR-pdf

Kassem, R., & Higson, A. (2012). The new fraud triangle model. *Journal of emerging trends in economics and management sciences* 3(3), 191-195. https://hdl.handle.net/10520/EJC132216

Kelling, G. L., & Wilson, J. Q. (1982, March). *Broken Windows*. The Atlantic. Retrieved from https://www.theatlantic.com/magazine/archive/1982/03/broken-windows/304465/

Klockars, C. B. (1974). *The professional fence*. New York: Free Press

Koh, W. T. (2017, October 9). Two victims of credit-for-sex scheme turned collaborators jailed. *Yahoo News Singapore*. Retrieved from https://sg.news.yahoo.com/two-victims-credit-sex-scheme-turned-collaborators-jailed-093901073.html

Lam, L. (2017, July 10). 3 men arrested for credit-for-sex scams which cost victims $88,000. The Straits Times. Retrieved from https://www.straitstimes.com/singapore/3-men-arrested-for-credit-for-sex-scams-which-cost-victims-88000

Lea, S. E., Fischer, P., & Evans, K. M. (2009). The psychology of scams: Provoking and committing errors of judgement. Office of Fair Trading. Retrieved from http://hdl.handle.net/10871/20958

Lee, P. (2016a, March 10). English most common home language in Singapore, bilingualism also up: Government survey. *The Straits Times*. Retrieved from https://www.straitstimes.com/singapore/english-most-common-home-language-in-singapore-bilingualism-also-up-government-survey

Lee, S. (2019, March 7). Malaysian looking for cheap sex falls victim to scam; loses $10 and his handphone. *AsiaOne*. Retrieved from https://www.asiaone.com/malaysia/malaysian-looking-cheap-sex-falls-victim-scam-loses-10-and-his-handphone

Lee, V. (2016b, July 3). Smart, but scammed. *C3A*. Retrieved from https://www.c3a.org.sg/Learning_contect.do?id=34846

Lo, C. (2018a, July 17). Hong Kong men look for sex on WeChat, end up scammed out of HK$10 million in six months. *South China Morning Post*. Retrieved from https://www.scmp.com/news/hong-kong/hong-kong-law-and-crime/article/2155505/hong-kong-men-look-sex-wechat-end-scammed-out

Lo, C. (2018b, December 14). Hong Kong men swindled out of nearly US$2.56 million in honeypot scams this year. *South China Morning Post*. Retrieved from https://www.scmp.com/news/hong-kong/law-and-crime/article/2178043/hong-kong-men-swindled-out-nearly-us256-million

Loh, M. (2020, February 6). For second year in a row, a surge in scam cases drives Singapore's crime rate higher. *Today*. Retrieved from https://www.todayonline.com/singapore/second-year-row-surge-scam-cases-drives-singapores-crime-rate-higher

Lustosa, B. (2016, October 11). Why do fraud levels vary by country? *The Paypers*. Retrieved from https://thepaypers.com/expert-opinion/why-do-fraud-levels-vary-by-country--766481

Macau Post Daily. (2020a, April 23). *Local man falls victim to credit-for-sex scam — again*. Retrieved from https://www.macaupostdaily.com/article8155.html

Macau Post Daily. (2020b, May 8). *Police nab duo for 1st online dating scam gang run by locals*. Retrieved from https://www.macaupostdaily.com/article8260.html

Mahmud, A. H. (2020, February 5). Why scam cases continue to rise and what is being done about them. *Channel News Asia.* Retrieved from https://www.channelnewsasia.com/news/singapore/singapore-scam-cases-on-the-rise-crime-rate-12395936

Milkovits, A. (2015, July 7). Sex-for-hire scam reported as fraud to Providence police. *Providence Journal.* Retrieved from https://www.providencejournal.com/article/20150707/NEWS/150709558

Müller, J. (2020, March 11). *Internet usage in Singapore – Statistics & Facts*. Statista. Retrieved from https://www.statista.com/topics/5852/internet-usage-in-singapore/

Neo, C. C. (2015, June 19). 'Credits for sex' scam: Malaysian first to be charged. *Today*. Retrieved from https://www.todayonline.com/singapore/credits-sex-scam-malaysian-first-be-charged

Neo, R. W. (2019, February 21). Singapore's overall crime rate goes up, pushed by surge in scams. *Today.* Retrieved from https://www.todayonline.com/singapore/singapores-overall-crime-rate-goes-pushed-surge-scams

Ng, C. K. (2019, August 8). *Digital Government, Smart Nation: Pursuing Singapore's Tech Imperative. Civil Service College*. Retrieved from https://www.csc.gov.sg/articles/digital-government-smart-nation-pursuing-singapore's-tech-imperative

Ng, G. (2015a, April 20). Hundreds of local men fell for sex scam and lost thousands. *AsiaOne*. Retrieved from https://www.asiaone.com/singapore/hundreds-local-men-fell-sex-scam-and-lost-thousands

Ng, G. (2015b, April 25). Why victims fall for credits-for-sex scams. *The New Paper*. Retrieved from https://www.tnp.sg/news/singapore/why-victims-fall-credits-sex-scams

Nickerson, R. S. (1998). *Confirmation bias: A ubiquitous phenomenon in many guises. Review of general psychology 2*(2), 175-220. https://doi.org/10.1037/1089-2680.2.2.175

Nisbett, R. E., & Wilson, T. D. (1977). The halo effect: Evidence for unconscious alteration of judgments. *Journal of Personality and Social Psychology* 35(4), 250–256. https://doi.org/10.1037/0022-3514.35.4.250

Norman, D. (2002). Emotion & design: attractive things work better. *interactions 9*(4), 36-42. https://doi.org/10.1145/543434.543435

Ong, R. (2016, December 5). 5 Awful Money Scams Singaporeans Keep Falling For. *SingSaver*. Retrieved from https://www.singsaver.com.sg/blog/5-awful-money-scams-singaporeans-keep-falling-for

Pan, J. (2018, July 24). Students targeted by date scams. *Taipei Times*. Retrieved from https://www.taipeitimes.com/News/taiwan/archives/2018/07/24/2003697281

Peachey, P. (2015, October 17). Fraudsters are most likely to be 'impulsive, well-educated and over 40'. *Independent.* Retrieved from https://www.independent.co.uk/news/uk/crime/fraudsters-are-most-likely-to-be-impulsive-well-educated-and-over-40-a6698401.html

Phoebe. (2017, March 26). Chinese love scams: Preying on Singapore's most vulnerable people. *ASEAN Today.* Retrieved from https://www.aseantoday.com/2017/03/chinese-love-scams-preying-on-singapores-most-vulnerable-people/

Pindrop. (n.d.). *IRS Phone Scammers Shift Tactics.* https://www.pindrop.com/blog/irs-phone-scammers-shift-tactics/

Postmedia News. (2015, April 23). 'Sex-for-credit' scam hitting Chinese students in Vancouver through social networking app WeChat. *National Post*. Retrieved from https://nationalpost.com/news/canada/sex-for-credit-scam-hitting-chinese-students-in-vancouver-through-social-networking-app-wechat

Pui, F. (2017, April 10). Malaysian Guy Gets Scammed by Pretty Girl When Using WeChat's "People Nearby" Function. *World of Buzz*. Retrieved from https://worldofbuzz.com/malaysian-guy-gets-scammed-pretty-girl-using-wechats-people-nearby-function/

Reid, R. L. (1986). The psychology of the near miss. *Journal of gambling behavior* 2(1), 32-39. https://doi.org/10.1007/BF01019932

Romeo, C. (2019, July 1). Do not fall for 'ad baits' online. *Telangana Today.* Retrieved from https://telanganatoday.com/do-not-fall-for-ad-baits-online

Ronel, N. (2011). Criminal behavior, criminal mind: Being caught in a "criminal spin". *International Journal of Offender Therapy and Comparative Criminology 55*(8), 1208-1233.

Samenow, & Yochleson. (2017, November 18). *36 Thinking Errors summarized from Criminal Personalities.* Retrieved from https://www.foundationstexas.com/wp-content/uploads/2018/03/ThinkingErrorsList.pdf

Satar, A. (2019, September 7). Inside the mind of a Fraudster. *New Straits Times*. Retrieved from https://www.nst.com.my/opinion/columnists/2019/09/519569/inside-mind-fraudster

Scam Alert. (n.d.-a). *What is a Credit-for-Sex Scam?* Retrieved from https://www.scamalert.sg/scam-details/credit-for-sex-scam

Scam Alert. (n.d.-b). *Let's Fight Scams.* Retrieved from https://www.scamalert.sg/

Scam Alert. (2019, November 25). Be Vigilant and Don't Fall Prey to Credit-for-Sex Scam. Retrieved from https://www.scamalert.sg/stories-details/Story-25Nov2019150545PM

Scam Alert. (2020a, March 10). *I Lost $700 to Credit-for-Sex Scam*. Retrieved from https://www.scamalert.sg/stories-details/Story-10Mar2020000826AM

Scam Alert. (2020b, March 19). *Spotting a Credit-for-Sex Scam!* Retrieved from https://www.scamalert.sg/stories-details/Story-19Mar2020224423PM

Schildmann, J. D. (2014, March 1). *Why do scams succeed?* Retrieved from https://schildmannjurgen.wordpress.com/2014/03/01/why-do-scams-succeed/

Sharot, T. (2011). The optimism bias. *Current biology 21*(23), R941-R945. https://doi.org/10.1016/j.cub.2011.10.030

Singapore Police Force. (2015, October 21). *Officers Nab Man Involved in Sex Scam*. Retrieved from https://www.facebook.com/singaporepoliceforce/posts/officers-nab-man-involved-in-sex-scam-spfpridein-june-2015-commercial-affairs-de/10154376518599408/

Singapore Police Force. (2019, September 16). *Two Arrested for Series of Credit-for-Sex Scams*. Retrieved from https://www.police.gov.sg/Media-Room/News/20190916_ARREST_Two_Arrested_For_Series_Of_Credit_For_Sex_Scams_L

Singapore Police Force. (2020a, February 20). *Police Advisory on Scams Involving Payment for Sexual Services.* Retrieved from https://www.police.gov.sg/media-room/news/20200220_others_police_advisory_on_scams_involving_payment_for_sexual_services

Singapore Police Force. (2020b, June 10). *Man Arrested for Suspected Involvement in Money-Laundering Linked to Series of Sexual Service Scam.* Retrieved from https://www.police.gov.sg/Media-Room/News/20200610_ARREST_G_MAN_ARRESTED_FOR_SUSPECTED_INVOLVEMENT_IN_MONEY_LAUNDERING

Soltes, E. (2016, December 14). The Psychology of White-Collar Criminals. *The Atlantic*. Retrieved from https://www.theatlantic.com/business/archive/2016/12/pyschology-white-collar-criminal/503408/

South China Morning Post. (2012, May 18.). *Sex hunters fall victim to new paid-dating scam*. https://www.scmp.com/article/1001280/sex-hunters-fall-victim-new-paid-dating-scam

Sreenivasan, S., & Weinberger, L. E. (2019, August 26). Are You Susceptible to Being a Victim of Consumer Fraud? *Psychology Today*. Retrieved from https://www.psychologytoday.com/sg/blog/emotional-nourishment/201908/are-you-susceptible-being-victim-consumer-fraud

Suler, J. (2004). The online disinhibition effect. *Cyberpsychology & behavior* 7(3), 321-326.

Sur, A. (2019, May 15). Fraud escort services now on social media. *New Indian Express*. Retrieved from https://www.newindianexpress.com/cities/hyderabad/2019/may/15/fraud-escort-services-now-on-social-media-1977097.html

Sutherland, E. (1947). *Principles of Criminology*. Philadelphia, PA: J.B. Lippincott Company.

Sykes, G. M., & Matza, D. (1957). Techniques of neutralization: A theory of delinquency. *American sociological review 22*(6), 664-670. https://www.doi.org/10.2307/2089195

Taipei Times. (2008, July 27). *Engineer swindled in bizarre Internet prostitution scam*. Retrieved from https://www.taipeitimes.com/News/taiwan/archives/2008/07/27/2003418650

Tan, T. (2016, April 10). Allure of paid sex for teenage boys. *The Straits Times*. Retrieved from https://www.straitstimes.com/singapore/allure-of-paid-sex-for-teenage-boys

Tang, L. (2019, October 7). The Big Read: Plump pickings for scammers? Trusting, unsuspecting Singaporeans need to raise their guard. *Channel News Asia.* Retrieved from https://www.channelnewsasia.com/news/singapore/scams-trusting-unsuspecting-singaporeans-need-raise-guard-11972748

Tannenbaum, M. B., Hepler, J., Zimmerman, R. S., Saul, L., Jacobs, S., Wilson, K., & Albarracín, D. (2015). Appealing to fear: A meta-analysis of fear appeal effectiveness and theories. *Psychological bulletin 141*(6), 1178-1204. https://psycnet.apa.org/doi/10.1037/a0039729

The Star. (2019, December 11). Dozens more Chinese arrested in Malaysia's Ipoh for online scam. *South China Morning Post*. Retrieved from https://www.scmp.com/news/asia/southeast-asia/article/3041604/dozens-more-chinese-arrested-malaysias-ipoh-online-scam

Thompson, D. F. (1980). Moral responsibility of public officials: The problem of many hands. *American Political Science Review 74*(4), 905-916. https://doi.org/10.2307/1954312

Titus, R. M., & Gover, A. R. (2001). Personal fraud: The victims and the scams. *Crime Prevention Studies* 12, 133-152.

Toh, E. M. (2016, June 15). Lured by sex, saved by a 7-Eleven pamphlet. *Today*. Retrieved from https://www.todayonline.com/singapore/lured-sex-saved-7-eleven-pamphlet

University of British Columbia. (2009, May 5). Why People Are Better At Lying Online Than Telling A Lie Face-to-face. *ScienceDaily*. Retrieved from www.sciencedaily.com/releases/2009/05/090503203738.htm

Utami, I., Astiti, Y. W., & Mohamed, N. (2019). Fraud Intention and Machiavellianism: An Experimental Study of Fraud Triangle. *International Journal of Financial Research 10*(5), 269-279. https://doi.org/10.5430/ijfr.v10n5p269

Vlassis, D., & Williams, P. (Ed.). (2013). *Combating Transnational Crime: Concepts, Activities and Responses.* Routledge.

Walther, J. B. (1996). Computer-mediated communication: Impersonal, interpersonal, and hyperpersonal interaction. *Communication research 23*(1), 3-43.

Watts, S. (2019, March 21). Why Do Some People Commit Fraud? Psychologists Say It's Complicated. *Forbes.* Retrieved from https://www.forbes.com/sites/sarahwatts/2019/03/21/the-psychology-behind-scamming/#2114c2723447

Wei, J. M. (2019, July 22). 温州破获特大微信招嫖诈骗案：软件修改定位，嫌疑人多90后. The Paper. Retrieved from https://www.thepaper.cn/newsDetail_forward_3972222

Whitty, M. T. (2013). The scammers persuasive techniques model: Development of a stage model to explain the online dating romance scam. *British Journal of Criminology 53*(4), 665-684. https://doi.org/10.1093/bjc/azt009

Whitty, M. T. (2019). Predicting susceptibility to cyber-fraud victimhood. *Journal of Financial Crime 26*(1), 277-292. http://dx.doi.org/10.1108/JFC-10-2017-0095

Wolfe, D. T., & Hermanson, D. R. (2004). The fraud diamond: Considering the four elements of fraud. *CPA Journal 74*(12), 38-42.

Wong, K. (2020, May 8). S'pore police bait credit-for-sex scammer to expose their scare tactics. *Mothership*. Retrieved from https://mothership.sg/2020/05/singapore-police-bait-credit-for-sex-scammer/

Wong, P. T. (2019, September 4). Sweet young love, or scam? Man, 22, deletes dating apps after almost falling prey to credit-for-sex ruse. *Today*. Retrieved from https://www.todayonline.com/singapore/sweet-young-love-or-scam-man-22-deletes-dating-apps-after-almost-falling-prey-credit-sex

Yahoo News Singapore. (2017, March 22). *$304,000 lost to credit-for-sex scammers in 2017*. Retrieved from https://sg.news.yahoo.com/304000-lost-to-credit-for-sex-scammers-in-2017-030455109.html

Yap, R. (2020, February 7). S'poreans get scammed because they don't think they'll ever fall victim: S'pore police psychologist. *Mothership*. Retrieved from https://mothership.sg/2020/02/how-to-avoid-scams-singapore-police/

Yeo, J. (2020, May 13). Male teenager, 18, arrested for scamming man, 24, of S$5,869 for 'sexual services'. *Mothership*. Retrieved from https://mothership.sg/2020/05/teenager-scam-sexual-services/

Yeung, K. (2017, January 30). Online Dating Deception. *Indonesia Expat*. Retrieved from https://indonesiaexpat.biz/outreach/scams-in-the-city/online-dating-deception/

Yilmaz, G. (2018, January 23). Why Ordinary People Commit Fraud: From Fraud Triangle to Fraud Diamond. *Daily Mail*. Retrieved from https://www.linkedin.com/pulse/why-ordinary-people-commit-fraud-from-triangle-g%C3%B6khan

Yiu, D. (2019, July 22). Police arrest 472 in WeChat prostitution, fraud probe. *Asia Times*. Retrieved from https://asiatimes.com/2019/07/police-arrest-472-in-wechat-prostitution-fraud-probe/

Zack, J. (2020, April 13). Cops: Scammers using new tactics to trick victims. *The Star*. Retrieved from https://www.thestar.com.my/news/nation/2020/04/13/cops-scammers-using-new-tactics-to-trick-victims

EVOLUTION OF ISLAMIC STATE NARRATIVES AMID THE COVID-19 PANDEMIC

Nur Aziemah Azman
S. Rajaratnam School of International Studies
Nanyang Technological University, Singapore

ABSTRACT

The COVID-19 pandemic has beset global populations, reordered the priorities of nations and disrupted international cooperation. Taking advantage of the crisis, the Islamic State (IS) has produced and disseminated propaganda content that has evolved from emphasising certain narratives to calling for action. In February 2020, as COVID-19 infections mounted in China and Iran, IS proclaimed the epidemic to be 'divine retribution' for the two nations, China for its treatment of Muslims in the country, and Iran for its apostasy, hypocrisy and ingratitude. Weeks later as the outbreak was declared a pandemic, IS provided further advice and views on the crisis, and called for action in a bid to exploit the disorder and vulnerabilities of its "enemy" and to remain relevant as governments divert their attention to tackling COVID-19. As the pandemic rages on, IS operations in the Middle East, Africa, and Asia persist, as have IS-inspired attacks around the world. Will the terrorist group be able to continue to survive and thrive in this intra-pandemic environment? This article explores the evolution of IS narratives surrounding the pandemic and its impact on IS as a global network and its future.

PRE-COVID-19: A RESURGENT ISLAMIC STATE

The defeat of the Islamic State (IS) in Baghuz, Syria, in March 2019 and the loss of its so-called caliphate status were initially believed to be the beginning of the end for the group. Seven months on, the death of IS leader Abu Bakr Al-Baghdadi in a raid by US special forces in October 2019 was a definite setback but not a fatal blow for the group. A few days after his demise, followed by the killing of IS spokesperson Abul Hasan Al-Muhajir in an airstrike, IS appointed Abu Ibrahim Al-Hashimi Al-Qurasyi aka Amir Mohammed Abdul Rahman Al-Mawli Al-Salbi as the new "caliph" (Chulov & Rasool, 2020) and Abu Hamzah Al-Qurasyi to replace Al-Muhajir (Al-Qurasyi, 2019). Despite the various setbacks, IS has proven to be far from defeated. Having adopted a decentralised command structure and networks, the group continues to conduct and claim attacks within and beyond Iraq and Syria.

In the Middle East, the resurgence of IS seems inevitable, thanks to the situation on the ground in Syria and Iraq. Tensions in northern Syria continues; hostilities between Turkey and the Assad regime reached a boiling point when the former announced the launch of a major counteroffensive against the Syrian government (Gall, 2020). The deployment of pro-regime fighters and the Syrian Democratic Forces to the frontlines could be advantageous for IS is it seeks to rebuild its capabilities in other parts of Syria. Meanwhile in Iraq, ongoing popular protests and tensions between Iran and the US may have prompted the redeployment of Hashd Al-Sha'bi (Popular Mobilisation Units) militias from northern and western Iraq to the country's central and southern regions. This may allow IS to operate more freely in northern and western Iraq, regions where the group is mostly concentrated in and strongest at (US Department of Defense, 2020). The killing of Iranian General Qassem Soleimani by the US has prompted Iraq to call for the expulsion of about 5,000 U.S. troops from its soil, troops that are leading the coalition fighting IS. While the US has refused to withdraw, arguing that its continued presence in Iraq is imperative to dampen IS efforts

to resurge, there is no guarantee that the US will be able to stay for long; Iraqis want the US to leave (Vanden Heuvel, 2020).

Further underscoring the fact that IS is far from beaten is the group's growing and evolving threat in Africa. IS has had an active presence across the continent, namely in the north, west, and east Africa for years. Moreover, in 2019, the military capability of IS affiliates in west and central Africa and the Sinai Peninsula surpassed that of its residual core in the Levant (Rolbiecki, Van Ostaeyen & Winter, 2020). This has been evident from the activities of IS in West Africa Province (ISWAP) in north-eastern Nigeria, where militants have been engaging in attacks that have exceeded the scale and complexity of those being deployed by their counterparts in Syria and Iraq (Rolbiecki et al., 2020). The ISWAP, which is a splinter group of Boko Haram, has succeeded in taking control of hundreds of square miles of territory, forming its territorial base on the banks and islands of Lake Chad, and waging a guerrilla war across north-eastern Nigeria and elsewhere on the lake's periphery (International Crisis Group, 2019). In addition, IS also formally recognized a new "wilayah" or province known as the Islamic State in Central Africa Province (ISCAP), which mainly has presence in the Democratic Republic of Congo and Mozambique, in 2019 (Beevor & Berger, 2020). This further underscores IS' growing power and influence in the region.

In South Asia, IS' increasing presence was highlighted by the 2019 Sri Lanka Easter bombings that killed more than 250 people (Dearden, 2019), and the group's subsequent recognition of Wilayah Al-Hind (India) and Wilayah Pakistan in May 2019 (Postings, 2019a), thereby splitting up its Khurasan province in an effort to restructure its "wilayat" and project an unwavering presence and undefeated image. Past IS attacks conducted in Pakistan and India-controlled Kashmir had been attributed to its Khurasan affiliate. Henceforth IS Khurasan activities are to concentrate on Afghanistan. Meanwhile in Southeast Asia, pro-IS groups continue to carry out attacks and inspire others to do so as well. The number of IS fighters, suicide bombers, organised training programmes, and propaganda videos originating from the region has grown steadily in recent years (Abuza & Clarke, 2019). In the Philippines, the IS-linked Abu Sayyaf Group as well as the Bangsamoro Islamic Freedom Fighters (BIFF) are still very active, despite continued military crackdowns. In June 2019, two suicide bombers linked to the IS-aligned faction of the Abu Sayyaf Group struck a checkpoint outside a military camp in Indanan, Sulu, killing the perpetrators, three soldiers and three civilians (Fonbuena, 2019). The BIFF, on the other hand, launched a grenade attack near a Catholic church in December 2019 (Sarmiento, 2019). In Indonesia, while the overall threat of terrorism seems to be lower than that of the Philippines, IS-affiliated group Jamaah Ansharut Daulah (JAD) remains a potent threat. In October 2019, a member of JAD stabbed and injured Indonesian Security Minister Wiranto in the city of Pandegland in West Java (Chew, 2019).

As evident in the developments mentioned above, IS as a global terrorist outfit was still considerably active and showing signs of resurgence before the outbreak of COVID-19. It demonstrated its ability to maintain the image of an undefeated and resilient organisation, carrying out attacks and propaganda activities. With the arrival of COVID-19, how is IS sustaining its relevance and ensuring that it will outlast the pandemic?

IS AMID COVID-19: PROMOTING NARRATIVES OF RESILIENCE

Propaganda has always played a significant role in IS' effort to shape perceptions, manipulate cognitions, and direct the behaviour of its audience (Jowett & O'Donnell, 2012). The messages and narratives propagated by IS offer "an alternative form of rationality deeply rooted in culture, which can be used to interpret and frame local events and to strategically encourage particular kinds of personal action" (Corman, 2011 p. 42). For IS, during its heyday, the narrative of expansion, conquests and utopianism dominated its media output. Propaganda content such as photographic reports and videos depicting military operations, battlefield victories, military parades as well as excerpts from daily life such as public services, education, implementation of hudud punishments and other shariah-based criminal laws, dispensation of zakat (tax) and others related to IS governance on the ground, were regularly and abundantly produced and released daily by IS provincial media entities.

The loss of its physical territory has not diminished IS' determination to corral remnants of its sympathisers worldwide. The group harnesses narratives that assert it will not be defeated; it will

continue to remain and expand. This helps to assure IS supporters and sympathisers of its strength, longevity and continued existence, so that they will not lose hope and continue to support and fight for the group. IS therefore continues to publish its main propaganda materials, i.e. photographic reports, statements, videos and the Al-Naba' weekly newsletter. Although the volume of these materials has decreased, the group still manages to be consistent in its release schedule. While the narratives that showcase IS' resilience persist, the arrival of COVID-19 has led to narratives that are usually overlooked or less relevant.

COVID-19: Divine Retribution

From the onset of the COVID-19 outbreak in December 2019, the pro-IS community online has been active in sharing news, developments and conspiracies surrounding the disease. These are punctuated by the community's conviction that COVID-19 is divine retribution against China. The narrative of divine retribution can be traced back to the concept of reward and punishment (*al-thawab wa al-'iqab*) in Islam, whereby when good moral behaviour – the basis of a successful Islamic life – become difficult for a believer to achieve, the motivation of reward and punishment helps (Nazri et al., 2011). It implies reward for pious deeds and punishment for impious actions. However, the concept of reward and punishment that consequently gives rise to the idea of divine retribution is not exclusive to Islam but to other religions such as Christianity and Judaism as well (Saleam & Moustafa, 2016). While some sections of the wider Muslim community that are not necessarily extremist might have also believed COVID-19 to be divine retribution, Islamist jihadists tend to deeply hold the belief that disasters, natural or man-made, are God's retribution upon the *kuffar* (infidels), apostates, and polytheists more avidly than most Muslims. This is especially so when the infidels, apostates and polytheists are alleged or known to have committed crimes against Muslims.

While IS did not initially comment on the COVID-19 outbreak, news and developments regarding the epidemic were included in the 218th and 219th issues of Al-Naba' weekly newsletter. In February 2020, more than a month after the outbreak, IS finally asserted that COVID-19 was divine retribution against infidels, initially and specifically against China ("Indeed the Vengeance of your Lord is Severe", 2020) and later extended to Iran and the West. In the case of Iran, despite the lack of sympathy shown for Shiite Muslims in the editorial of Al-Naba' ("Lost are those you invoke except for Him", 2020), IS did express hope for repentance, redemption and salvation for Shiites, while also homing in on the perceived hypocrisy and ingratitude of Shiites as the cause for God's retribution. This narrative not only reinforces anti-China and anti-Shiite sentiments, but also targets Muslims whom IS deems to be hypocrites and disbelievers in general, which IS' spokesperson Abu Hamzah Al-Qurasyi reiterated in an audio speech in May 2020 (Al-Qurasyi, 2020). IS then issued so-called Shariah guidelines for Muslims on dealing with epidemics, emphasising that people should adhere to them. The advisory included "realistic prevention methods and how to avoid diseases", which involved instructions such as covering the mouth when yawning and sneezing, handwashing, and avoiding entering or leaving infected places ("Shar'ii Guidelines to Deal with Epidemics", 2020; Figure 1). Echoing its first commentary on God's retribution upon China, IS also noted that God's torment has mostly struck "idolatrous" nations, praying that God will increase

Figure 1. "Shar'ii Guidelines to Deal with Epidemics"

his torment on the disbelievers and keep the faithful safe ("The Crusaders' Worst Nightmare", 2020). The group advised Muslims not to pity the disbelievers and apostates. It instead urged Muslims to exploit current opportunities to continue working to free Muslim prisoners. IS also called for the intensification of pressure on the enemy with any means possible, asserting that performing jihad is the best guarantee of protection from the epidemic.

Based on the above content released in the few months following the onset of COVID-19, the official line adopted by IS regarding the pandemic is two-fold. The first, highlighted at the start of the outbreak, concerns Muslims in general, advising them to continue exercising measures that will help protect them from the virus. The second concerns the "mujahideen", who are encouraged to exploit current opportunities to continue and intensify operations and put pressure on their enemy. IS, its affiliates and supporters have indeed taken advantage of the pandemic and ramped up attacks across Iraq and Syria (Hanna, 2020), gone on the offensive in Africa (Vines, 2020; Jalloh, 2020) and Southeast Asia (Banlaoi, 2020), and nearly succeeded in carrying out attacks in Germany (Joscelyn, 2020). Although these activities might not be entirely attributed to the pandemic, they demonstrate IS' opportunistic streak and its ability to adapt in a crisis. The wave of attacks in France in October 2020, while not necessarily related to the pandemic, is an example of IS being opportunistic and riding on the incidents to incite more lone-wolf attacks in the West targeting their enemies ("Make it easy and not difficult", 2020; "And Fight the Leaders of the Infidels", 2020).

War of Attrition: Reinforcing 'Baqiyah wa Tatamaddad' (Remaining and Expanding)

One of the narratives that IS continues to stress following the loss of its caliphate and throughout the pandemic, is that it will outlive its enemies through a war of attrition. Deceased IS spokesman Abul Hasan Al-Muhajir, in an audio speech released in March 2019, noted and affirmed the guerilla tactics employed by IS fighters, saying that "if the Islamic State loses some towns and cities in some of its wilayat, Allah grants its conquest in other wilayat in imbalanced hit-and-run battles in which they drag the enemy with all that he owns" (Al-Muhajir, 2019). This strategy was reinforced by the late "caliph" himself, Abu Bakr Al-Baghdadi, in his April 2019 video appearance. Al-Baghdadi asserted that IS' battle is to bleed the enemy in a long fight, affirming that the mujahidin "have shown their enemies that they are capable of holding the reins of initiative, knowing that the battle today with their enemies is a battle of attrition" (Al-Baghdadi, 2019).

This war of attrition narrative and IS' "reins of initiative" reinforce the group's slogan *baqiyah wa tatamaddad* (remaining and expanding), which continues to be relevant for the group and its followers, as IS persists in highlighting its unwavering presence. The *baqiyah* part of the slogan continues to be affirmed through IS' consistent production, dissemination, and publicising of operational propaganda by the group's base in Iraq and Syria, and its affiliates around the world. IS' spokesperson Abu Hamzah Al-Qurasyi, in an audio speech released in January 2020 (Al-Qurasyi, 2020), reiterated the narrative of endurance and resilience in the face of hardship and strategic setbacks. As the group wages a protracted resistance, Al-Qurasyi restated the need for patience and called for a focus on clandestine activity to "spread influence" throughout the Coalition's areas of operation. The statement is in line with the low-level activity under the resurgence model that IS adopted shortly before the fall of the physical caliphate in March 2019 (US Department of Defense, 2020). In May 2020, Al-Qurasyi in his second audio speech that year (Al-Qurasyi, 2020), boasted of IS' staying power, citing the group's offensives in Iraq and Syria, and highlighting its momentum there where the number of attacks doubled in two months ("IS Militants Step Up Attack", 2020).

Further reinforcing and solidifying its *baqiyah* slogan, IS continued to assert its war of attrition narrative with the third and fourth series of its "Battle of Attrition" campaign in May and July 2020 respectively. The self-proclaimed military campaign, which was first launched in June 2019, inspired violence by IS affiliates in Iraq, Syria, Egypt, Somalia, West Africa and the Philippines. According to IS, the campaign in May saw 228 attacks in 12 'provinces' ("Battle of Attrition 3", 2020; Figure 2), while the one in July saw 136 attacks in 11 'provinces' ("Battle of Attrition 4", 2020). Although IS' fourth 'Battle of Attrition' campaign has ended, operations carried out in various IS "provinces"

Figure 2. Al-Naba' infographics on the third Battle of Attrition campaign

continue to be reported in official statements and Al-Naba' newsletter to supplement and amplify the war of attrition narrative.

While IS has demonstrated through its consistent propaganda that it is *baqiyah* (remaining), the *tatamaddad* (expanding) part of its slogan does not appear to be entirely applicable given the current status of IS. For a time, following its defeat in March 2019, the narrative of expansion did continue to hold true, as could be seen in IS' acknowledgement of new wilayat in statements and other media content. The group has reframed the caliphate as an overarching global state rather than one that is based solely in Iraq and Syria. However, since mid-2019, there has been no acknowledgement of new wilayat. Nevertheless, IS found fertile ground in Africa for its effort to expand its presence across the continent, given that it has been consolidating its African affiliates even before its defeat in Baghuz. IS' recognition of the Democratic Republic of Congo (DRC) in April 2019 (Postings, 2019b), and later the inclusion of Mozambique as parts of its Wilayah Central Africa or Islamic State in Central African Province (ISCAP) shows its expansion efforts (Beevor & Berger, 2019). Since then, IS' media campaign around ISCAP has been extremely active. In April 2020, an infographic released in Al-Naba' newsletter gave statistics on IS operations conducted from late January to early March, with a total of 13 operations conducted in Mozambique and the DRC ("Harvest of the Soldiers of the Caliphate", 2020). ISCAP's alleged successes in Mozambique were even touted in an Al-Naba's editorial in July ("The Crusaders Risked Their Investments", 2020). Although IS does not currently have control of even 1% of African territory, it has continued to provide training, funding, and theological guidance to its so-called wilayat in sub-Saharan Africa, namely the Islamic State in West Africa Province (ISWAP) and ISCAP (Zenn, 2020).

"Set Free the Captives"

Aside from divine retribution, another narrative that IS has highlighted in the past but did not then promote is the narrative of setting captives free, which is usually carried out by attacking prisons and inciting prison riots – cornerstones of jihadi operational strategy. Jihadi groups target prisons as sites for attacks to free operatives and leaders from detention, restore their force size, and to create propaganda wins against their enemies. This narrative persists to this day and has been increasingly highlighted and amplified post IS' territorial defeat and during the ongoing pandemic. The editorial of 226th issue of Al-Naba' heavily implied that the "mujahideen" should focus their jihad on freeing the Uighurs from China's concentration camps and those in the Syrian refugee camps and detention centres ("The Crusaders' Worst Nightmare", 2020).

Meanwhile in August 2020, IS Khurasan launched an attack on Nangarhar central prison in Jalalabad, Afghanistan. It freed hundreds of prisoners after a 20-hour gun battle, leaving 29 people dead and officials scrambling to recapture hundreds of prisoners, including many from the IS and the Taliban ("Islamic State Group Claims Deadly Attack", 2020). Lauded by IS, the attack was highlighted in the 246th issue of Al-Naba's editorial, stressing the importance of freeing prisoners; it also referred to secret deals with and payoffs to prison guards ("O Soldiers of the Caliphate", 2020). The editorial also shared three other methods that

IS employs to release prisoners or relieve them of harsh treatment and punishment. In October, IS also claimed responsibility for an attack on a prison in the DRC that resulted in at least 1,300 prisoners escaping (Ives & Kwai, 2020). IS has repeatedly reminded its followers that their detained "brothers and sisters" should not be forgotten. Prison attacks such as the one in Jalalabad send a clear message to followers who have been captured that their brethren in IS will not abandon them. Such messages are intended to boost morale, especially after the group has suffered multiple setbacks.

Online Jihad: A Way to Maintain Presence

IS, having been moulded into a virtual organisation, knows that its loss of territory does not diminish or even eliminate its presence as long as its online and media jihad efforts persist. In the online sphere, pro-IS online jihadist communities remain resilient, consistent, and persistent in supporting IS media operations, from dissemination of official content to creating various kinds of media products. Given that IS official media arms have produced significantly fewer media contents such as videos and publications, there is now a void that pro-IS media entities and supporters online help to fill. These freelancers produce propaganda content that has a specific focus or cater to the local context of the online community or a target audience instead of merely recycling IS official content. An example of media products produced by such entities is *The Voice of Hind*, an English language monthly magazine series published by a pro-IS media entity called Al-Qitaal Media Centre that focuses on India. One of its notable issues is a "lockdown special" edition that encouraged steps to "annihilate the disbelievers" including stabbing people with scissors and expending "less effort" by spreading COVID-19 ("Down with the Believers, 2020). Another example are posters designed and created by the Al-Battar Media Foundation. The entity creates and disseminates posters that highlight points made in IS official media releases such as audios and videos featuring key IS figures, thus strengthening the echo chamber of the pro-IS community.

Media entities such as Al-Qitaal and Al-Battar have no known formal ties to IS. They have continued to grow, operating within independent network structures and creating presence on various platforms. Meanwhile, there are other media entities such as Ash-Shaff Media and Iqra' Media Foundation that produce a mix of contents based on nationality and language such as Indonesian, English, French, Russian, German, Spanish and Dutch. The contents include regular news updates concerning IS and references to ongoing events and debates in the respective countries. This way, community members can relate more to cultural and national specificity and proximity, rather than ideas of the global caliphate with strong authority leadership (Krona, 2020).

The virtual caliphate has emerged as an amplified version of IS' state-building project through the lens of its propaganda. The online environment, however, is no longer a place for IS to only amplify its brand but for IS followers and supporters to exercise more agency, to form independent entities based on the original concept of the "Islamic State" (Azman, 2021). This is possible with the fragmentation of platforms and a decentralised communication strategy where IS and its followers are active on various online platforms. Since the Europol takedown of terrorist propaganda on Telegram in November 2019 (Europol, 2019), IS and its supporters have further scattered and spread their activities on various other smaller encrypted messaging platforms such as Rocketchat, Hoop, and Threema, possibly due to increased activity, creativity, and persistence among supporters and not necessarily the will of or directed from the leadership of IS (Krona, 2020).

CONCLUSION

Before the outbreak of COVID-19, developments in the Levant, Africa, and Asia indicated that IS as a terrorist group was significantly operational and demonstrating signs of resurging. Following the arrival of COVID-19 and the subsequent drawdown of US forces in Iraq and Syria, as well as the reduction of frontline deployed forces, police and local security patrols, security gaps have been exacerbated, allowing IS to operate more freely, conduct prison breaks, carry out more sophisticated attacks, and smuggle fighters across borders (Dent, 2020). Unsurprisingly, IS attacks in Iraq and Syria have greatly increased in 2020, demonstrating the group's capacity and eagerness to retake territory, populations, and resources. Beyond the Levant, IS affiliates around the world have sustained and even increased

operations, especially in the case of ISCAP and ISWAP. These affiliates' degree of autonomy and presence of sleeper cells in various countries and regions of the world have enabled IS to operate unabated. For Southeast Asia, while the violence perpetrated in the region has been sporadic and uncoordinated, it further drives home that IS has shifted away from its initial preoccupation with state-building to a decentralised, global insurgency strategy.

IS' propaganda will continue to peddle themes and narratives that exhibit its resiliency, adaptability and opportunistic mark, especially in a world still shaken by a pandemic. In the virtual world, the group's propaganda content continues to proliferate despite efforts to combat its spread (Criezis, 2020). The increased usage of social media and encrypted messaging platforms, such as the reported surge in Facebook usage during the pandemic lockdown (Matney, 2020), means that people are spending more time online, which could potentially increase their chances of interacting with terrorist propaganda (Bell, 2020). As the online environment enables IS to continue to recruit, inspire, and instruct, it decreases the need for recruiter boots on the ground and the need to travel to training camps, serving as a force multiplier for IS.

Amidst the pandemic, IS' ability to maintain the image of a resilient organisation has been possible thanks to not only the continued presence of drivers of violence as well as lacunas in security and governance that enable the group's operations to persist, but also its propaganda activities online and the narratives it has been promoting. The detrimental effects of the pandemic would likely fuel and amplify IS' narratives of resilience and endurance, as well as its ideological outreach. COVID-19 has caused increased economic hardship and growing social insecurity throughout the Middle East and Africa, as well as other parts of the world. This could set the stage for significant domestic unrest and broaden the potential for radicalisation, hence the possibility of affected countries and the international community at large facing a COVID-19-driven surge of extremism in the near future (Berman, 2020). With or without the pandemic, IS is far from dying. Regardless of setbacks, as long as drivers and enablers of violence, extremism and radicalisation persist, the threat of IS is here to stay.

ABOUT THE AUTHOR

Nur Aziemah Azman
is an Associate Research Fellow at the International Centre for Political Violence and Terrorism Research (ICPVTR) at the S. Rajaratnam School of International Studies (RSIS), Nanyang Technological University (NTU), Singapore. As ICPVTR's Informatics team lead, she monitors, translates, and analyses content in Arabic extremist websites and social media platforms with a focus on Islamic State propaganda and narratives online. She graduated from Al-Azhar University in Egypt with a BA in Islamic and Arabic Studies, majoring in Arabic Language and Literature. She holds a MSc in Arabic-English Translation and Computer-assisted Translation Tools from Heriot-Watt University in Edinburgh, UK. She has travelled to Yemen, Indonesia and East Africa (Kenya, Ethiopia and Somaliland) for research on extremism and terrorism.

REFERENCES

Al-Baghdadi, Abu Bakr. (2019, April 30). In the Hospitality of the *Amirul Mu'minin. Al-Furqan Media Foundation* [Video].

Al-Muhajir, Abul Hasan. (2019, March 19). He was True to God, so God was True to Him. *Al-Furqan Media Foundation* [Audio speech].

Al-Qurasyi, Abu Hamzah. (2019, October 31). And He Who Fulfills That Which He Has Promised Allah, He (Allah) Will Give Him A Great Reward [Audio speech]. *Al-Furqan Media Foundation*.

Al-Qurasyi, Abu Hamzah. (2020, January 27). Allah Destroyed Them, And A Similar Fate Awaits the Disbelievers [Audio speech]. *Al-Furqan Media Foundation*.

Al-Qurasyi, Abu Hamzah. (2020, May 28). And the Disbelievers Will Know Who Gets the Good End. [Audio speech]. *Al-Furqan Media Foundation*.

Azman, Nur Aziemah. (2021). The Islamic State (IS): Maintaining Resilience in a Post-Caliphate, Pandemic Environment. *Counter Terrorist Trends and Analyses (CTTA)* 13(1), 106-111. Retrieved from https://www.rsis.edu.sg/wp-content/uploads/2021/01/CTTA-January-2021.pdf

Banlaoi, Rommel C. (2020, August 10). Threats of violent extremism and terrorism in the Philippines amidst the COVID-19 pandemic. *Philippine Institute for Peace, Violence and Terrorism Research (PIPVTR)*. Retrieved from https://pipvtr.org/2020/08/10/threats-of-violent-extremism-and-terrorism-in-the-philippines-amidst-the-covid-19-pandemic/

Battle of Attrition 3. (2020, May 29). *Al-Naba' Newsletter*, issue no. 236, 16.

Battle of Attrition 4. (2020, August 7). *Al-Naba' Newsletter*, issue no. 246, 12.

Beevor, Eleanor, and Berger, Flore. (2020, June 2). ISIS militants pose growing threat across Africa. *International Institute for Strategic Studies (IISS)*. Retrieved from https://www.iiss.org/blogs/analysis/2020/06/csdp-isis-militants-africa

Bell, Stewart. (2020, June 25). Coronavirus: UN report warns pandemic has created 'captive audience' for terrorist groups. *Global News*. Retrieved from https://globalnews.ca/news/7106831/coronavirus-un-terrorist-groups/

Berman, Ilan. (2020, August 28). ISIS is using the COVID distraction to re-arm and regroup. *USA Today*. Retrieved from https://www.usatoday.com/story/opinion/2020/08/28/isis-did-not-disappear-and-now-its-poised-rise-again-amidst-instability-column/5644397002/

Chew, Amy. (2019, October 10). Indonesian security minister Wiranto stabbed by ISIS-linked radicals: police. *South China Morning Post*. Retrieved from https://www.scmp.com/news/asia/southeast-asia/article/3032328/indonesian-security-minister-wiranto-stabbed-during-visit

Chulov, Martin and Mohammed Rasool. (2020, January 20). ISIS founding member confirmed by spies as group's new leader. *The Guardian.* Retrieved from https://www.theguardian.com/world/2020/jan/20/isis-leader-confirmed-amir-mohammed-abdul-rahman-al-mawli-al-salbi

Corman, Steven R. (2011). Understanding the Role of Narrative in Extremist Strategic Communication. In Fenstermacher, Laurie and Todd Leventhal (Eds.), *Countering Violent Extremism: Scientific Methods and Strategies*. Washington, DC: NSI Inc.

Criezis, Meili. (2020, July 30). Telegram's anti-IS campaign: effectiveness, perspectives, and policy suggestions. *Global Network on Extremism and Technology*. Retrieved from https://gnet-research.org/2020/07/30/telegrams-anti-is-campaign-effectiveness-perspectives-and-policy-suggestions/

Dearden, Lizzie. (2020, April 23). Sri Lanka bombings: ISIS claims responsibility for deadly church and hotel attacks on Easter Sunday. *The Independent*. Retrieved from https://www.independent.co.uk/news/world/asia/sri-lanka-bombings-isis-terror-church-attack-easter-islamic-state-a8882231.html

Dent, Elizabeth. (2020). US Policy and the Resurgence of ISIS in Iraq and Syria. *Middle East Institute,* Policy Report 1-11. Retrieved from https://www.mei.edu/sites/default/files/2020-10/US%20Policy%20and%20the%20Resurgence%20of%20ISIS%20in%20Iraq%20and%20Syria%20%20.pdf

Down with the Disbelievers. (2020, May 29). *The Voice of Hind: Lockdown Special*, 14-16.

Europol. (2019, November 25). *Europol and Telegram take on terrorist propaganda online*. Retrieved from https://www.europol.europa.eu/newsroom/news/europol-and-telegram-take-terrorist-propaganda-online

Fonbuena, Carmela. (2019, June 28). 8 killed, 22 wounded in attack on military camp in Sulu. *Rappler*. Retrieved from https://www.rappler.com/nation/bombing-western-mindanao-command-indanan-sulu-june-28-2019

Gall, Carlotta. (2020, March 1). Turkey declares major offensive against Syrian government. *The New York Times*. Retrieved from https://www.nytimes.com/2020/03/01/world/middleeast/turkey-syria-assault.html

Hanna, Andrew. (2020, June 8). *ISIS offensive exploits pandemic*. Washington DC: The Wilson Center. Retrieved from https://www.wilsoncenter.org/article/isis-offensive-exploits-pandemic

Harvest of the Soldiers of the Caliphate in Central Africa. (2020, April 3). *Al-Naba' Newsletter*, issue no. 228, 2.

Indeed, the vengeance of your Lord is severe. (2020, February 7). *Al-Naba' Newsletter*, issue no. 220, 3.

IS militants step up attack against Iraqi security forces. (2020, May 5). *BBC News*. Retrieved from https://www.bbc.com/news/world-middle-east-52535842

Islamic State group claims deadly attack on Afghanistan prison. (2020, August 3). *BBC News*. Retrieved from https://www.bbc.com/news/world-asia-53633450

International Crisis Group. (2020). *Facing the Challenge of the Islamic State in West Africa Province*. Africa Report No. 273. Retrieved from https://www.crisisgroup.org/africa/west-africa/nigeria/273-facing-challenge-islamic-state-west-africa-province

Ives, Mike and Kwai, Isabella. (2020, October 20). 1300 prisoners escaped from Congo jail after an attack claimed by ISIS. *The New York Times*. Retrieved from https://www.nytimes.com/2020/10/20/world/africa/congo-jail-attack-prisoners-freed.html

Jalloh, Abu Bakar. (2020, April 9). Increased terror attacks in Africa amid Coronavirus pandemic. *DW News*. Retrieved from https://www.dw.com/en/increased-terror-attacks-in-africa-amid-coronavirus-pandemic/a-53066398

Joscelyn, Thomas. (2020, April 22). Germany disrupts ISIS plot targeting US military. Washington, DC. Foundation for Defense of Democracies. Retrieved from https://www.fdd.org/analysis/2020/04/22/germany-disrupts-isis-plot-for-us-military/

Jowett, G. S., and O'Donnell, V. (2012). *Propaganda and Persuasion*. Los Angeles: Sage.

Krona, Michael. (2020, October 21). *Revisiting the ecosystem of Islamic State's 'virtual Caliphate'*. London: Global Network on Extremism and Technology. Retrieved from https://gnet-research.org/2020/10/21/revisiting-the-ecosystem-of-islamic-states-virtual-caliphate/

Lost are those you invoke except for Him. (2020, February 19). *Al-Naba' Newsletter* issue no. 223, 3.

Matney, Lucas. (2020, April 30). The lockdown is driving people to Facebook. *Tech Crunch*. Retrieved from https://techcrunch.com/2020/04/29/the-quarantine-is-driving-record-usage-growth-at-facebook/

Nazri, M.L.N.Z., Ahmad, M., Yusoff, A.M., Mohd Amin, F., Mat Ishak, M.B., Mohd Nor, M.R., Sidik, M.A., Mohd Khambali Hambali, K., and Suliaman, I. (2011). The Concept of Rewards and Punishments in Religion: A Special Reference to Kitab Al-Adab of Sahih Bukhari. *World Journal of Islamic History and Civilization* 1(4), 249-254. Retrieved from http://idosi.org/wjihc/wjihc1%284%2911/5.pdf

O Soldiers of the Caliphate, Break Prisons…Break Prisons. (2020, August 7). *Al-Naba' Newsletter*, issue no. 246, 3.

Postings, Robert. (2019a, May 15). ISIS announces new India and Pakistan Provinces, casually breaking up Khorasan. The Defense Post. Retrieved from https://www.thedefensepost.com/2019/05/15/islamic-state-pakistan-province-al-hind/

Postings, Robert. (2019b, April 30). Islamic State recognizes new Central Africa Province, deepening ties with DR Congo militants", *The Defense Post*. Retrieved from https://www.thedefensepost.com/2019/04/30/islamic-state-new-central-africa-province/

Rolbiecki, Tomas, Van Ostaeyen, Pieter, and Winter, Charlie. (2020). The Islamic State's Strategic Trajectory in Africa: Key Takeaways from its Attack Claims. *CTC Sentinel* 13(8), 31-40. Retrieved from https://ctc.usma.edu/the-islamic-states-strategic-trajectory-in-africa-key-takeaways-from-its-attack-claims/

Rubin, Alissa J. and Schmitt, Eric. (2020, January 15). US military resumes operations with Iraq. *The New York Times*. Retrieved from https://www.nytimes.com/2020/01/15/world/middleeast/us-military-iraq.html

Saleam, James and Moustafa, Ahmed A. (2016). The Influence of Divine Rewards and Punishments on Religious Prosociality. *Frontiers in Psychology* 7(1149), 1-8. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4971023/

Sarmiento, Bong. (2019, December 30). ISIS terror risk to rise in south Philippines. *Asia Times*. Retreived from https://asiatimes.com/2019/12/isis-terror-risk-to-rise-in-south-philippines/

Shar'ii guidelines to deal with epidemics. (2020, March 12). *Al-Naba' Newsletter* issue no. 225, 3.

The Crusaders' worst nightmare. (2020, March 20). *Al-Naba' Newsletter* issue no. 226, 3.

The Crusaders Risked Their Investments in Mozambique. (2020, July 3). *Al-Naba' Newsletter*, Issue no. 241, 3.

US Department of Defense. (2020). *Operation Inherent Resolve: Lead Inspector General Report to the United States Congress, January 1 - March 31, 2020*. Retrieved from https://www.stateoig.gov/system/files/lig_oir_q2_mar2020_gold_508_0513.pdf

Vanden Heuvel, Katrina. (2020, February 4). It's time to leave Iraq once and for all. *The Washington Post*. Retrieved from https://www.washingtonpost.com/opinions/2020/02/04/its-time-leave-iraq-once-all/

Vines, Alex. (2020, April 1). *Why the insurgency in northern Mozambique has got worse*. London: Chatham House. Retrieved from https://www.chathamhouse.org/2020/04/why-insurgency-northern-mozambique-has-got-worse

Zenn, Jacob. (2020, May 26). *ISIS in Africa: The Caliphate's next frontier*. Washington DC: Center for Global Policy. Retrieved from https://cgpolicy.org/articles/isis-in-africa-the-caliphates-next-frontier/

DISRUPTING INDONESIA'S VIOLENT EXTREMISM ONLINE ECOSYSTEM:

BEST PRACTICES FROM RUNNING A COMMUNITY WEBSITE

Noor Huda Ismail
S. Rajaratnam School of International Studies
Nanyang Technological University

ABSTRACT

Extremist groups in Indonesia exploit online communication platforms to create hype about a fantasy that violent armed struggle against the "enemies of Islam" is a "jihad" that requires urgent participation. Manipulative extremist recruiters prey on bored young people, many of whom are stuck indoors, frustrated and worried about their future. These at-risk people tend to spend their time online rather than offline and enjoy being "liked" on Facebook. Preventing their online radicalisation is why I set up a community website – www.ruangobrol.id – as a countering violent extremism (CVE) digital community platform. My experience running ruangobrol.id over the last two years shows that to disrupt the online ecosystem that sustains Indonesia's violent extremism organisations, we have to invest in a systematic initiative by combining three best practices: First, aim high – target the at-risk group that is hardest to persuade because they are motivated to accept extremist narratives both online and offline that serve their personal interests. People searching for love or a specific meaning of manhood, for example, have a tendency "to find arguments in favour of conclusions they want to believe to be stronger than arguments for conclusions they do not want to believe" – a process Kunda (1990) calls "motivated reasoning" – and are often resistant to most CVE efforts. Second, use the right tools – devise personal narratives of "credible voices", such as those of reformed terrorists, that connect with the target audience through emotional appeals rather than narrowly focused rebuttals about ideology that seek only to persuade (Atran, 2015). In other words, create content and provoke constructive discussion around issues related to violent extremism and its prevention with these "credible voices". Third, measure – make sure the campaign is reaching its target audience by using various indicators to measure its constructive impact and making tactical changes as required. In this article, I demonstrate that a coordinated effort between three unlikely parties – 1) content creators who are "credible voices" because they are reformed extremists who have themselves been through CVE communication workshops, 2) tech companies like Facebook, and 3) social enterprise initiatives run by former journalists – can substantially boost the awareness, engagement, and impact of counter-narrative campaigns by non-government organisations.

IT'S NOT JUST ABOUT IDEOLOGY

United Nations Security Council Resolution 2129 (2013) notes that there is an evolving nexus between terrorism and information and communications technologies, particularly the Internet, and the use of such technologies to commit and facilitate terrorist acts and facilitate such actions through their use to incite, recruit, fund or plan terrorist acts.

In the Indonesian context, since the declaration of the Islamic State of Iraq and Syria (ISIS) in 2014, digital media has played an important role in radicalising at-risk groups, especially youths and women. To capture this phenomenon, in 2015, I produced and directed a documentary film, *Jihad Selfie*, about the life of a bright student from Aceh, Tengku Akbar Maulana, who had received a scholarship from the Turkish government to further

his high school studies at Imam Khatib School in Kayseri, Turkey. While pursuing his academic and spiritual development in Turkey, which shares a long border with Syria, Akbar was exposed to daily news about the civil war in Syria from mainstream and social media. Two of his Indonesian friends crossed the border to serve under "the Caliphate" and posted photos online, boasting about their experiences, including handling weapons, donning military garb and eating horse meat. As a teenager, Akbar was attracted to the action and fashion his friends painted online. He started developing a desire to join them, anticipating a fascinating life of manhood and martyrdom. I met him serendipitously at a *kebab* shop in Kayseri, Turkey, while he was waiting for a school friend who had promised to cross the border into Syria with him. In that meeting, I encountered for the first time the dynamic process of online and offline radicalisation.

In another documentary film that I also produced in 2017, *Pengantin* (The Bride), I interviewed two Indonesian domestic helpers in Hong Kong and Taiwan who had been recruited by Indonesian ISIS supporters through social media. Being in foreign lands with a job that offers little opportunities for public interaction and socialisation, loneliness is a normal and natural consequence. Both helpers went online to connect with the outside world, seeking company, comfort and affection. They found "love" online, but were in fact being courted by predatory radicals and extremists in the cyber realm, recruiting and readying them to be suicide bombers. For example, having been radicalised online and chosen a husband from her pro-ISIS Telegram group in 2015, Ika Puspitasari, a radicalised Indonesian helper in Hong Kong, wanted to finance a terrorist operation back home. She identified talented bomb-makers through Facebook and Telegram. Luckily, her plans faltered when her husband was arrested.

The two documentary films demonstrate the following trends:

First, the potential audience for violent extremist propaganda in Indonesia has evolved beyond the traditional recruitment pools such as *pesantrens* (Islamic boarding schools) and small *pengajian* (study groups). The Internet's accessibility, speed, anonymity, and inexpensiveness have allowed for the decentralisation of extremist preaching.

Second, those with offline psychological issues such as teenagers like Akbar searching for manhood, and female migrant workers in Hong Kong and Taiwan dealing with feelings of loneliness, connect with online violent extremist propaganda because it helps them create an online collective identity through the "echo-chamber" phenomenon, a condition that helps reinforce individual grievances and ideology and provides the intent and capability to commit acts of terrorism.

Third, terrorism is rooted in a belief in an extreme ideology. If we want to prevent acts of terror from happening again, we should strive to prevent the young from being won over by the messages of extremists. However, if we place a heavy emphasis on ideological beliefs, especially ideology derived from overseas, as the primary source of radicalisation and leave out other well-evidenced explanations for behavioural change, such as identification with a group, socialisation and the effect of civil conflicts, we run the risk of missing the opportunity to explore myriad ways of disrupting the violent extremism online ecosystems.

In 2013, a CVE study conducted by a group of former intelligence and counterterrorism officials observed that "while governments across the world have had many notable successes against extremist and terrorist groups, … in one key area they have fallen short: in countering the narratives that inspire individuals to join such groups in the first place. This is costly. For as long as extremist narratives continue to inspire new recruits to join movements, the battle will continue for generations to come" (QIASS, 2013). The extremist narratives have always been online, but the problem has grown. Yet we appear no closer to answering this question – how far and in what ways can government, social media companies and civil society disrupt the violent extremism online ecosystem?

Existing government policies to prevent the further spread of online extremist propaganda are to simply remove or block them (Costa 2015). While this approach helps to reduce the distribution of the propaganda temporarily, it does nothing to address the root causes of demand that is driven by structural and religious grievances and theological exhortations. Is there an alternative way

to disrupt violent extremism online ecosystems by proactively preventing or countering its appeal through engagement with individuals and communities that are flirting with the ideology? Will counter-narratives work with at-risk individuals with "motivated reasoning"? These are individuals who are not just seeking out and interpreting information in a way that reinforces their pre-existing beliefs while ignoring or rejecting information that casts doubt upon their beliefs (what psychologists call "confirmation bias"), but are also able to *reason* their way to conclusions that agree with their worldview, while critiquing information they do not wish to accept. This is a phenomenon known as "motivated reasoning", which Kunda (1990) defines as the "tendency to find arguments in favor of conclusions we want to believe to be stronger than arguments for conclusions we do not want to believe." He also notes that "people motivated to arrive at a particular conclusion attempt to be rational and to construct a justification of their desired conclusion that would persuade a dispassionate observer. They draw the desired conclusion only if they can muster up the evidence necessary to support it." And yet, in reality, their motivations make them more likely to discredit information they do not wish to believe. Thus Akbar Maulana, a scholarship student in Turkey, fascinated by visions of masculine heroism conjured by friends who had joined ISIS, convinced himself that it would be more noble to die a martyr on the battlefield than to ignore Islamic teaching – that he needed his parents' blessings to go to Syria because, as he told a friend trying to recruit him for ISIS, "the blessings of God depends on the blessings of your parents".

Cases like Akbar and Ika Puspitasari show us that extremist narratives tap into more than ideological beliefs, that they tap into the psychological needs of their target audience and ring true because they offer them something they want and can justify to themselves.

OVERVIEW OF THE RUANGOBROL.ID PROJECT

If extremists have successfully employed social media to spread their messages on Facebook, Twitter and YouTube, we should also be countering them on social media. We can look at how creative extremists use technology to spread their ideology by monitoring their videos and reading their tweets and online posts. However, even with credible counter narratives, our interventions will not be effective with at-risk audiences with "motivated reasoning" if we do not also take into account the significance of offline contact in the radicalisation process. Thus, when I set up the Ruangobrol.id community platform, I decided that it would also hold offline activities to increase the chances that its online content will resonate with the very communities they are meant to influence. The offline engagement with targeted communities also provides a real and intimate intervention with "credible voices".

Reducing the Backlash from Extremists with "Motivated Reasoning"

The idea of having CVE digital ecosystem development is grounded in the social psychological theory of "motivated reasoning" that argues that individuals who are strongly committed to specific causes tend to avoid contact with information or people who can change their commitment. It also means that overtly attacking or denigrating the opposing group in interventions can antagonise individuals who identify with that group, making them less receptive to persuasion, and pushing group supporters to the more extreme fringe. With this understanding in mind, the Ruangobrol.id project tries to reduce the backlash from the target audience who are more likely to confirm their "prior beliefs" in processing information, especially from an outside group. Therefore, Ruangobrol.id employs reformed terrorists as a "credible voice" in anticipation of that backlash. I am mindful that there are burning security questions that must be answered here, such as: How do you find them? What kind of criteria do you use to consider an individual a " credible voice"? Once you find them, how do you ensure they are not just hibernating, biding their time before future involvement in terrorism? While they may not be directly involved in any terrorism, might they be secretly advising recruits to act on their behalf?

Sim (2013) has warned that working with former terrorists is a "delicate art" akin to walking a tightrope. Part of the reason is that terrorist recidivism is still a perennial issue in Indonesia. In a recent report, the Institute for Policy Analysis of Conflict (IPAC) stated that the recidivism rate for 825 convicted terrorists released between 2002 and the end of May

2020 was 11.39 percent. Their concerns are legitimate. However, I have been helping former terrorists integrate into society peacefully for years through a foundation that I established in 2008, the Institute for International Peace Building. My efforts to integrate them, inspired by Horgan's 2009 accounts of why some terrorists walked away from their groups, is not based on a strict binary division between the radical and the mundane, but on a more fluid and qualitative measure of the extent to which former members of violent groups are prone to re-engage in violence. We have to look at disengagement along a continuum because while someone might disengage in the sense of a reduction or cessation in the use of violence as a method, it does not mean that individual has abandoned his or her violent ideological beliefs and connections with extremist groups.

My first step in dealing with former terrorists is to employ them in my social enterprise, a restaurant called Dapoer Bistik Solo. This "social intervention" aims to get them to interact with people whom they would not typically meet, such as non-Muslim women. These new positive social interactions of meeting and interacting with various people make it harder for the jihadists to lure them back. Gradually, these formers are steered away from violence through their own efforts and the support they receive from others, including the Indonesian government.

With their experiences as former members of Jemaah Islamiyah (JI), they have the credibility to challenge and debunk narratives that promote terrorism as an honourable and exciting life path. It is in this context that I call the graduates of my integration programme, "credible voices". As the anthropologist Scott Atran (2015) says, "there is no shortage of credible voices ready to engage globally."

Choosing "Credible Voices"

My first credible voices were Mahmudi Hariono alias Yusuf, a JI member from East Java who was recruited for military training with the Moro Islamic Liberation Front in the southern Philippines in early 2000 (Romadhoni, 2020), and Jack Harun, the former right-hand man of the late Noordin M Top, a Malaysian JI member who masterminded several terrorist attacks in Indonesia (Zebua, 2020).

Having two credible voices onboard the Ruangobrol.id project was a good start because they recommended other reformed terrorists to join us. This technique is akin to the Multi-Level Marketing Approach of encouraging members to recruit other members. I also welcomed Arif Tuban when he was released in 2018, to join my workshops (Hadirin, 2019). Arif, who ran one of the first extremist websites in Indonesia, learned about Ruangobrol.id from Kharis Hadirin, a reformed JI member whose main job with the project is to identify and look after newly released terrorist convicts like Arif.

To provide gender balance in the initiative, I asked 19 year old Nurshadrina Khairadhania (also known as Dhania) to work with me. From Batam, Dhania joined ISIS in Syria with her family in early 2015. They managed to escape from ISIS captivity in August 2017. Working closely with the Indonesian Foreign Ministry, I helped them evacuate from Iraq.

In a series of interviews for my documentary film, *Seeking The Imam* (2020), Dhania said that the mundane daily regime of junior high school carved an emptiness in her heart, then "grey-washed" her spirit before creating a vacuum in her soul. Starved of attention and guidance from her parents, she began feeding off cyberspace, following the life stories of other people, when she stumbled across the accounts of girls who had joined ISIS. After her escape from Syria and return to Indonesia, she wanted to be part of the Ruangobrol.id project to teach others not to make the same mistakes as her.

I believe that using the personal stories of these credible voices can be effective in reducing backlash from the "motivated reasoning" audience for the following reasons:

1. As formers, they have some degree of legitimacy because of their connections and understanding of the context of violent extremism. That context includes, among other things, social dynamics and grievances, local means of communication and the recruitment tactics of violent extremist organisations.

2. They can provide insider knowledge of the dynamics inside their former networks, especially the group aesthetics and culture. They can, for example, identify the subtle differences between: 1) those who are attracted to the ISIS narrative which has a strong focus on promoting camaraderie and group identity which appeals to young Muslims largely ignorant of their religion, and 2) Al-Qaeda inspired groups like Jamaah Islamiyah (JI) that tends to portray itself as a more ideologically mature and religiously authoritative group.

3. Their personal stories can generate more emotional appeal than narrowly focused ideological arguments that seek to persuade through rebuttal. In the "post-trust" environment, objective facts are less influential in shaping public opinion than appeals to emotion and personal belief (Oxford Languages, n.d.). Thus, the use of generic counter-narrative slogans such as "Terrorism is un-Islamic" or "Islam is a religion of peace" do not resonate well, especially among potential recruits such as youths who need authentic personal stories and down-to-earth and realistic references that they can easily relate to.

Some observers often make overgeneralisations, conflating religious piety with religious intolerance and violence. We thus need to get moral support from grassroots Muslim organisations, especially if we are to encourage these credible voices to expose the hypocrisy of extremists who lay claim to true Islamic piety. I therefore invited 10 ustadz (male religious teachers) and 10 ustadzah (female religious teachers) from the two largest Islamic organisations in Indonesia – Nahdhatul Ulama[1] and Muhammadiyah[2] - to attend a CVE communication workshop I organised in March 2018.

This CVE workshop was designed to teach participants to produce CVE narratives on social media and existing conventional channels of communications such as TV, radio, newspapers, and magazines, to disrupt the violent extremism online ecosystem. The use of religious teachers and reformed terrorists as credible voices for CVE purposes is driven by the understanding that they have insights and knowledge, but they are often not well trained as effective communicators on social media. More importantly, they often do not have a platform to voice their compelling stories.

STARTING AN INTERACTIVE WEBSITE

Community ownership of CVE issues is vital for maintaining the longevity of a project. Therefore, during the last day of the communication workshop we ran in March 2008, I encouraged all the participants to think about having a platform to stay in touch. Finally, they agreed to create a website called "Ruangobrol", an Indonesian term meaning chat room. The website, they suggested, would serve as an interactive platform for the workshop's graduates to educate those at-risk groups through their personal stories. In addition, the website would be equipped with a chat facility to gather information from the grassroots.

To keep the momentum going, I also asked the participants to upgrade the platform's role as an alternative online platform into an organiser of a series of popular discussions related to issues on radicalism and terrorism. In other words, the project would combine both online and offline strategy in this CVE space. The "Theory of Change" that I urged them to adopt was straightforward:

> *By publishing engaging content on PVE/CVE issues at least two times in a week, organising offline discussions on PVE/CVE issues at least six times a year, conducting regular research*

[1]Nahdlatul Ulama is a traditionalist Sunni Islam movement in Indonesia that follows the Shafi'i school of jurisprudence. NU was established on January 31, 1926 in Surabaya as a response to the rise of Wahabism in Saudi Arabia and Islamic modernism in Indonesia.

[2]Since its establishment in 1912, Muhammadiyah has adopted a reformist platform mixing religious and secular education, primarily as a way to promote the upward mobility of Muslims in a 'modern' community and to purify Indonesian Islam of local syncretic practices.

and analysis on PVE/CVE issues, and producing a short video on PVE/CVE, Ruangobrol.id as community platform will improve public awareness on radicalisation and terrorism which may increase public participation in efforts to prevent radical content in media.

Know Your Audience

In its first strategic move, the Ruangobrol.id project team identified the target audience and its dynamics so that we will know if behaviour change occurs in the targeted group. This behavioural change could be individual, such as in critical thinking, or civic behaviours such as appreciation of differences in views and understanding of the world. Accordingly, the project managers regularly monitor Google Analytics. The result of this monitoring will advise us on the contents or themes that resonate with the target audience.

In the year ending 2020, the audience of the Ruangobrol.id website is as shown in Figure 1. Of the half of viewers whose age is stated, almost 30 per cent are in the 18 to 34 year old range. The number of male and female viewers is roughly similar.

However, as radicalisation is not gender neutral – men and women experience the process of radicalisation differently – the team decided on two approaches:

1. To produce gendered personal and straightforward contents that resonate with millennials and which respond to trending social media issues, such as tips on getting a Korean boyfriend.
2. To insert digital literacy messaging into the stories, such how to do safe online dating.

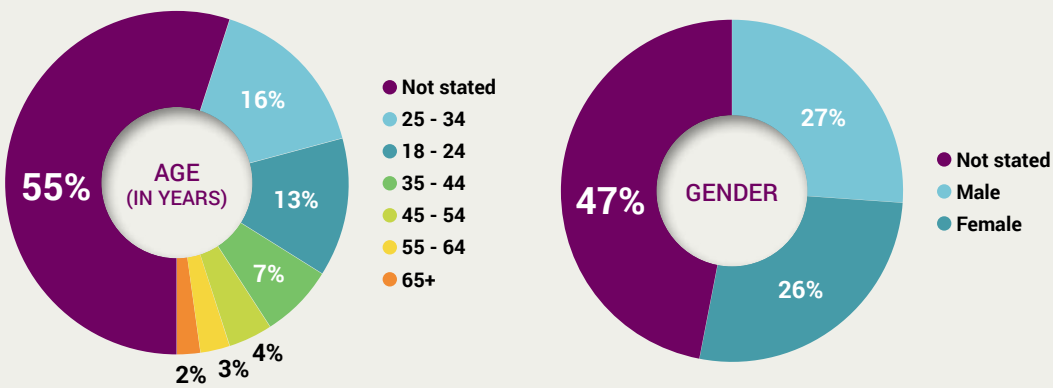
We anticipated that these two approaches would grab the attention of our young audience.

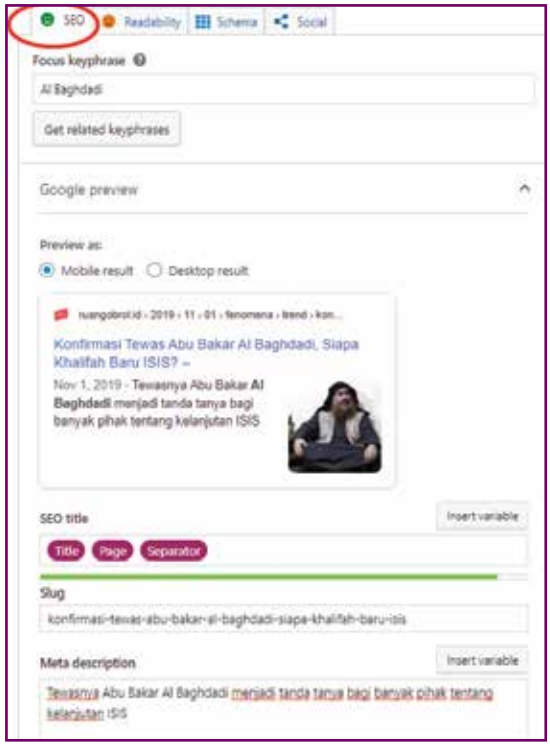
Content Creation and the Use of Search Engine Optimiser (SEO)

As a community-based website, Ruangobrol.id has to keep evolving. It has to adapt to the development of radicalism issues and the mood of the audience. Hence, in September 2019, the team began to use a new plugin called Yoast SEO (search engine optimiser). SEO is the process of optimising online content that allows the search engine to put the content as a top result for searches of a specific keyword. For this to work, each content creator has to think of a popular topic, modify the title and adjust the first paragraph.

This strategy helped to increase the traffic to Ruangobrol.id, especially from users who search on Google. In addition, using insights from Google Trend (see Figure 2), the team was able to increase its effectiveness in using YOAST.

Figure 1. Age and Gender of Ruangobrol.id audience





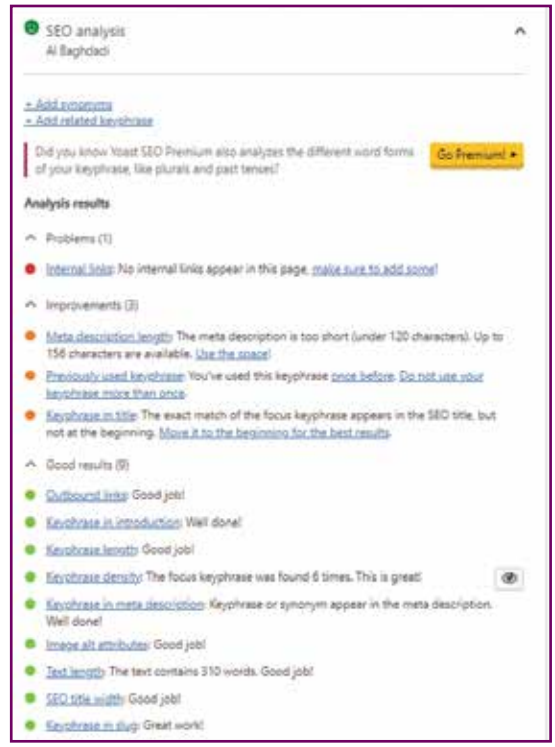


Figure 2. Google Trend Analysis Results from Use of SEO

As a provider of alternative narratives on radicalism and terrorism, it is important to create content that is easy to digest, emphasising the personal narrative of a credible voice. Complicated and "serious" content is not suitable for Ruangobrol's millennial audience. Starting in August 2019, the team developed a specific strategy in content creation. Every week, the team creates a table of simple themes for the week's content production. These themes are the team's interpretations of big and serious themes such as radicalism, peace, conflict, etc. The implementation of this strategy helped Ruangobrol.id produce more than 800 articles in one year. The strategy also boosted the viewership of Ruangobrol.id articles. The consistency of its content production also placed Ruangobrol.id in a better position in Alexa Rank (see Figure 3) than say, the National Counter Terrorism Agency BNPT's website damailahindonesiaku.com, which is not ranked in Alexa because its site traffic is too low.

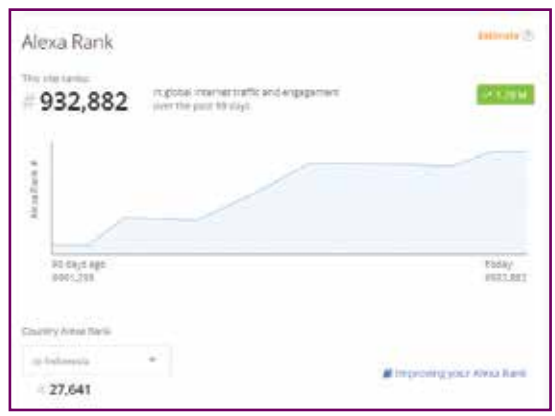


Figure 3. Alexa Rank of Ruangobrol.id over a period of three months (May – June 2020)

Use of the Chat Facility

The Ruangobrol.id website is equipped with a chat facility. We use social media to promote the benefits of using it. The number of individuals who reach out to our team each month to discuss their concerns have ranged from 2 to 21. Although the numbers seem small, the information gleaned has been interesting and the team has been able to follow up on specific cases. For example, a woman named Yulia Rachmawati complained that the Indonesian Police Counter Terrorism unit Densus 88 had captured her relative and began engaging in conversation with a Ruangobrol team member when he explained the legal process to her (see Figure 4). This chat is concrete evidence that the website can have a direct impact on the targeted audience.

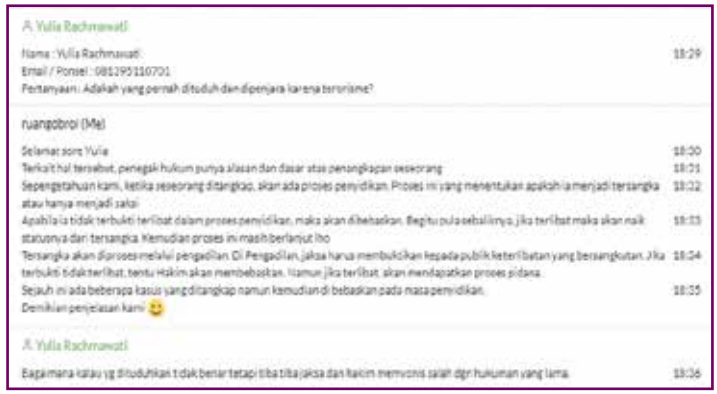


Figure 4. Extract of Chat between Yulia Rachmawati and Ruangobrol team member

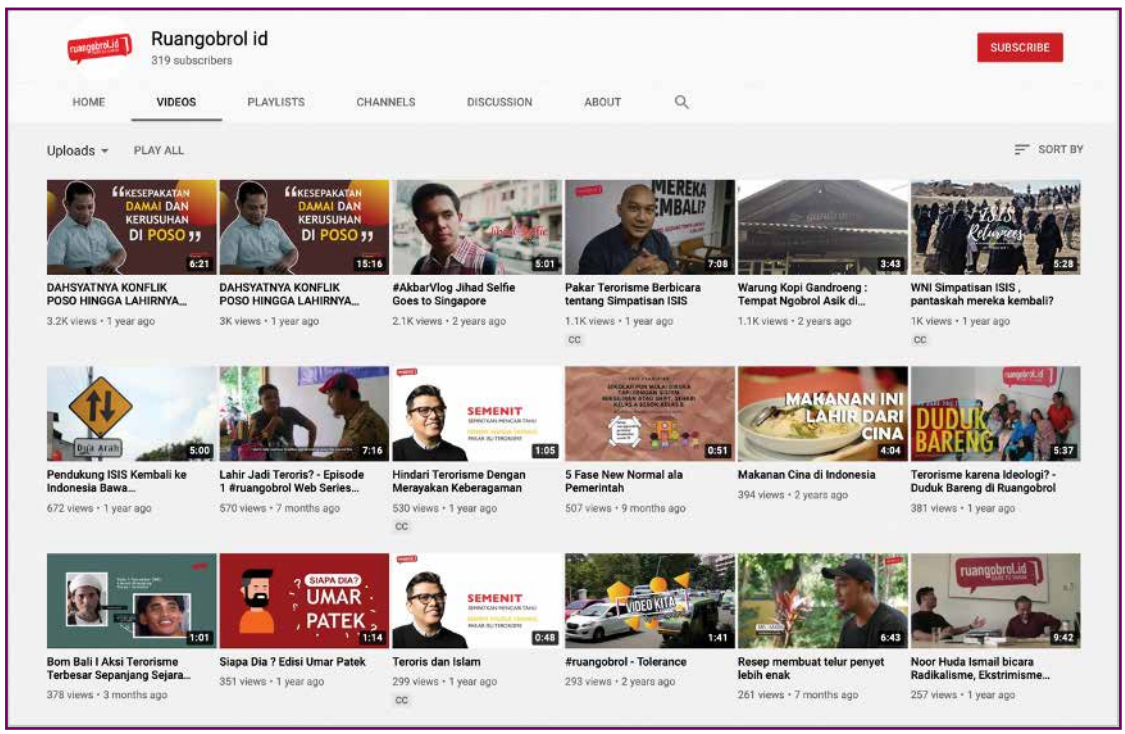


Figure 5. Partial List of Most Popular Videos on the Ruangobrol.id Channel on YouTube

Ruangobrol's chat facility also received private messages from an Indonesian woman in a Syrian refugee camp. Through this direct contact, we managed to earn her trust and gained much useful engagement, including her willingness to write for our website. Our website was also contacted by three families of other Indonesians now in a camp in Idlib, Syria. A family member asked us for advice because his family was accused of associating with terrorists. A father shared his concern that his daughter, who always locked herself in her room, was becoming radicalised. This father had read articles on Ruangobrol.id written by one of our reformed terrorists.

A Dedicated YouTube Channel

To widen our outreach, we also started a Ruangobrol.id YouTube channel to which we add new content every week. Creating videos has the advantage of allowing the team to discuss radicalism in a more detailed manner while being more 'entertaining'. In its first year, Ruangobrol.id uploaded over 90 videos on YouTube, using various formats to maximise available resources and our network. One of our top videos is a video-log made by Akbar Maulana while in Singapore in 2019 to take part in a discussion on *Jihad Selfie* (see Figure 5).

In producing videos for YouTube, the team includes three important groups of people: local communities, credible voices, and experts. The interactions with and appreciation of the local community is important to show the public that civil society is concerned and can play an important role in promoting peace and in CVE efforts. We also hope that such videos will lead to new collaborations.

The involvement of credible voices is crucial. They are the messengers of our alternative narratives, to which their first-hand experiences add credibility. Ruangobrol.id therefore creates space for them to speak up and share their experiences, especially about the lies of ISIS. Videos featuring former terrorists are thus promoted on social media to increase audience interaction. The Ruangobrol team also conducts research and experimentation on message delivery to maximise the impact of the credible voices.

Last but not least, the experts, like Indonesian researcher Nava Nuraniah who has studied and can explain how extremist groups exploit social media, play a vital role in giving weight to our messaging. Their analysis helps the audience to understand the core issues. The objective of the Ruangobrol.id YouTube channel is to give a proper and fair explanation of radicalism. The experts help us achieve this objective.

PROMOTING RUANGOBROL.ID ON SOCIAL MEDIA

More than half of the population of Indonesia (around 150 million people out of over 260 million) are on social media. The average Indonesian spends 3 hours and 26 minutes logged on to social media every day compared to the global average of 2 hours and 22 minutes (Kemp, 2021). We thus decided that social media platforms should be the primary vehicle to promote Ruangobrol.id as a website and its contents. Through Facebook and other platforms such as Instagram and Twitter, the team interacts with our target audience. To strengthen the Ruangobrol.id presence, we also paid for promotion.

Promotion is always useful in increasing traffic, whether on social media or to the website. Figure 6 shows the impact of paid promotion on traffic to the Ruangobrol.id website – the spikes in June and October 2019 followed paid promotions on Facebook for specific Ruangobrol.id events at a cost of $5-10 per event. Since the website was then still not well known, we followed up with paid promotions from January to October 2020 and saw spikes in viewership in March and April 2020.

However, advertising comes with a price. The more we pay to promote the website, the more visitors we get. However, it is not an organic process. We therefore decided not to be dependent on paid promotion, but to use it strategically. In 2020, the team created a persona to post exciting articles from Ruangobrol.id on Facebook, along with engaging captions. As Figures 6 and 7 show, organic traffic to Ruangobrol.id began spiking in February 2020, indicating that the Facebook persona was having an impact soon after its introduction. It also indicates that the team's consistency in posting high quality content on social media is attracting viewers.

FACEBOOK'S "REDIRECT INITIATIVE"

On 9 October 2020, Facebook selected Ruangobrol.id for the tech company's "Redirect Initiative". This initiative seeks to "combat violent extremism by redirecting hate and violence- related search terms towards resources, education and outreach groups that can help" (Facebook Counterspeech website). What it means is that when people search on Facebook for terms related to jihadism in Indonesia, they are directed to Ruangobrol.id. As shown in Figure 8, when someone searches for "thagut", a term commonly used by Indonesian extremist organisations to refer to the government and police as evil oppressors, that person is directed to Ruangobrol.id with the message: "Keep our community safe. Some of these keywords can sometimes be linked to dangerous individuals or groups. Facebook works with organizations that can help prevent the spread of hatred and violence in the real world. Learn more at ruangobrol.id."

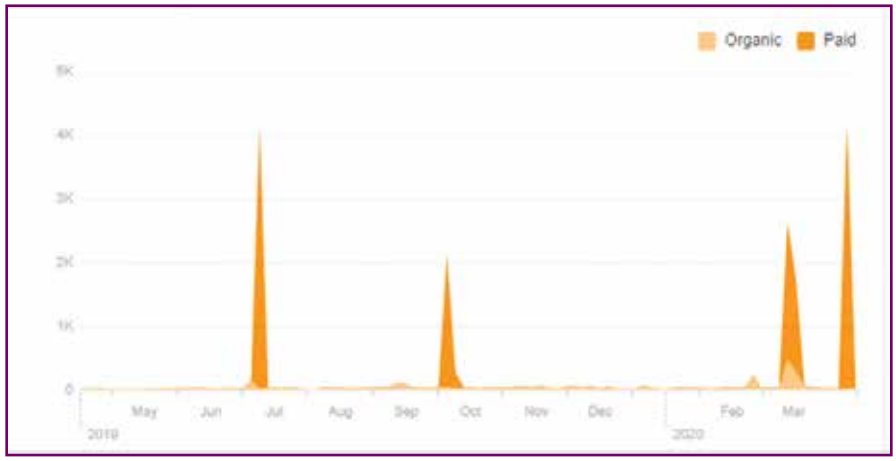


Figure 6. Impact of Paid Promotion on Traffic to Ruangobrol.id

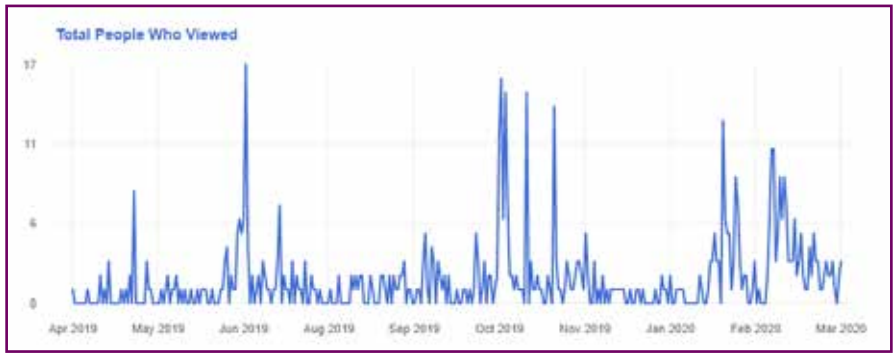


Figure 7. Ruangobrol.id Viewership numbers from April 2019 to March 2020

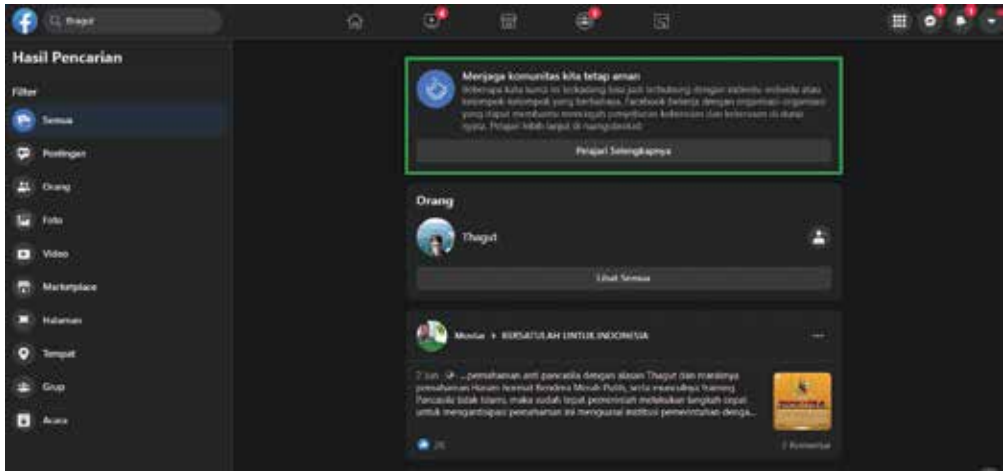


Figure 8. Search Results on Facebook for "thagut"

As part of our collaboration with Facebook, we provided a list of keywords used by Indonesian jihadists. Facebook informed us two weeks later that 48,000 people had searched for the keywords during that two-week span.

Facebook is hugely popular in Indonesia, and while the company's mechanisms have become better at spotting and removing extremist accounts, the platform remains, for the Ruangobrol.id project, a productive environment for identifying potential 'clients'. Our team at Ruangobrol looks at a combination of what an individual posts, their friend lists and the way they engage with discussions on other posts. Referencing an ISIS magazine or video is considered solid evidence of extremist views.

We classify such individuals into four categories: Red (potentially dangerous); Orange (already quite extreme); Yellow (becoming more involved); and Green (mostly just curious). We then attempt to connect with those who are between green and a darkish yellow, initiating contact by praising an argument they made, or asking to learn from them.

STRENGTHENING ONLINE IMPACT THROUGH OFFLINE ACTIVITIES

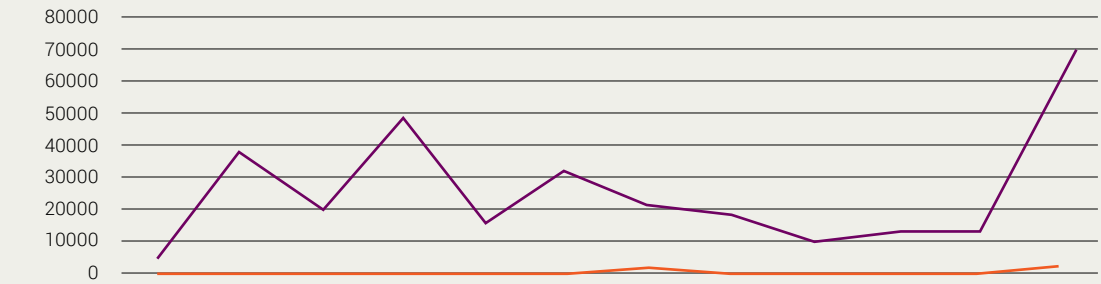
To maintain and to strengthen the online presence of Ruangobrol.id, we also carried out discussions offline. At such events, Ruangobrol.id would invite various stakeholders to provide feedback on issues that are topical and relevant to the public's interest. For example, in July 2019, Ruangobrol, in collaboration with *Tempo Magazine*, a well-respected and national magazine in Indonesia, organised an event in the *Tempo* office to discuss the repatriation of Indonesian citizens from Syria (see photo below). Speakers included the Head of BNPT, politicians from Commission I of the Indonesian Parliament, and officials from the Ministry of Social Affairs, Ministry of Law and Human Rights, and the Coordinating Ministry of Politics, Law and Security, and *Tempo* journalist, Hussein Abri, who had covered the issue in Syria. In the audience were students, the general public, researchers and journalists.

Given the importance of the topic, Ruangobrol.id also used paid promotion to boost awareness of the event on YouTube. It resulted in thousands of viewers tuning in, as well as extensive coverage by the national media. The Ruangobrol team also live tweeted the event. As Figure 9 shows, engagement with Ruangobrol on Twitter increases whenever it stages physical events, such as in May 2019, July 2019, and March 2020.

MEASURING THE IMPACT OF RUANGOBROL.ID

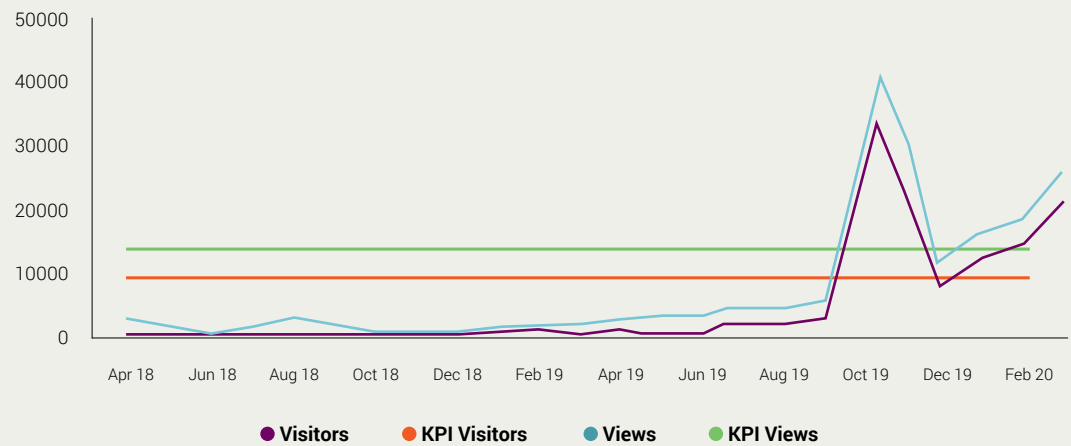
When we set up Ruangobrol.id, we established benchmarks for visitors and views, our KPIs so to speak. Since April 2019, there has been a gradual increase in visitors and views as the team used

Figure 9. Engagements with Ruangobrol.id on Twitter



	Apr 19	May 19	Jun 19	Jul 19	Aug 19	Sep 19	Oct 19	Nov 19	Dec 19	Jan 19	Feb 19	Mar 19
Tweets	33	85	127	133	120	130	68	52	19	16	36	218
Impressions	3851	37100	19100	45400	14700	29900	21000	18600	10200	12000	12200	70600
Profile Visit	91	194	267	486	88	355	913	150	73	90	325	842

Figure 10. Traffic to Ruangobrol.id

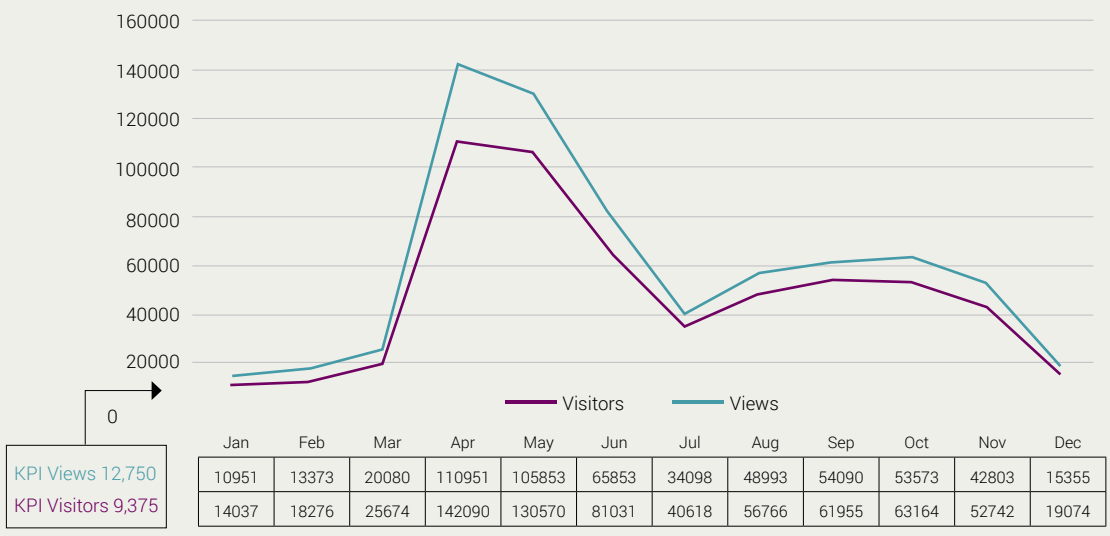


search engine optimiser to develop content themes based on Google trends. In September 2019, we exceeded our KPIs of 9,375 visitors and 12,750 views. As Figure 10 shows, there was also a significant spike in visitors and views in October 2019, when the number of visitors shot up to almost 35,000.

By monitoring traffic, the team also found an interesting development. One article, *Vagabond Episode 16: Bin dan Kepentingan Politik yang Belum Selesai* ("Vagabond Episode 16: Intelligence Agency and Unfinished Political Interests"), has been attracting new visitors to Ruangobrol.id long after its original publication in November 2019. The article does not directly discuss the issue of radicalisation; it is a review of a Korean drama series. The team had decided to create contents featuring Korea because we know that most millennials are fans of Korean culture. In the Google search engine, this Vagabond article remains in fourth place when people search for information on this Korean drama series.

Tapping into trending discussions and popular culture (K-Pop or K-Drama) is thus an effective way to attract traffic to Ruangobrol.id. In November 2019, when a story suggesting a

Figure 11. Ruangobrol.id Viewership Statistics in 2020



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
KPI Views 12,750	10951	13373	20080	110951	105853	65853	34098	48993	54090	53573	42803	15355
KPI Visitors 9,375	14037	18276	25674	142090	130570	81031	40618	56766	61955	63164	52742	19074

scandal involving the owner of Ammar TV, a popular Indonesian da'wah channel on YouTube, went viral, the Ruangobrol team produced an article titled *Layangan Putus Bikin Ammar TV Hilang 11 Juta Subscriber* ("Ammar TV lost 11 million subscribers due to Broken Kite"). It attracted more than 4,000 viewers to Ruangobrol.id.

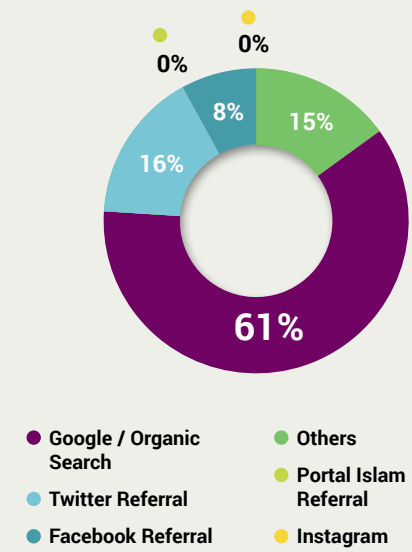
These findings suggest that a community website like Ruangobrol.id can keep traction through three major themes: Terrorism (mostly when an incident happens), K-pop or K-Culture, and whatever is trending on Google.

Since then our viewership numbers in 2020 have exceeded all our KPIs, as Figure 11 shows.

Source of Visitors

This has become increasingly apparent in the second year of Ruangobrol.id, when the majority of visitors to the website arrived via Google search as opposed to a 'referral' from Facebook or Twitter, as Figure 12 shows. Regular uploading of a new article every day helps the website to be visible in Google search. In addition, several viral articles from Ruangobrol.id are also helping the public to find the website.

Figure 12. Source of Visitors to Ruangobrol.id in 2020 by Search Engines



Monitoring by Google Analytics also shows us that visitors to Ruangobrol.id come from all over Indonesia, as well as from abroad (Figure 13).

Figure 13. Locations of Ruangobrol.id Visitors

JAKARTA	SURABAYA	BANDUNG	MEDAN	DEPOK	MAKASSAR
45.291	23.455	7.529	6.495	5.408	5.346
(NOT SET)	SURAKARTA	SEMARANG	PALEMBANG	BEKASI	PEKANBARU
12.536	2.683	2.369	2.320	1.851	1.544
BATAM	DENPASAR	YOGYAKARTA	TANGERANG	SOUTH TANGERANG	MALANG
1.382	1.340	1.143	1.083	1.074	1.073
SAMARINDA	UNITED STATES	SINGAPORE	MALAYSIA	AUSTRALIA	JAPAN
1.004	2.897	788	785	332	176
GERMANY	INDIA	TAIWAN	UK	NETHERLANDS	HONGKONG
171	156	139	136	128	123
SAUDI ARABIA	SYRIA	THAILAND	VIETNAM	TURKEY	SOUTH KOREA
87	85	85	60	56	53

CONCLUSION

Running a community website in Indonesia for over two years has shown me that there is an opportunity to deal with the problem of online radicalisation, and that the solution may come from an unlikely community – reformed terrorists and even disenchanted ISIS fighters. They can also be valuable sources of intelligence, some having returned disillusioned from jihad elsewhere. These former fighters should be encouraged to deter others from joining jihad abroad, to share their stories through the same media that others are using to promote ISIS.

History has shown that purely hard-line approaches to returning jihadis fighters usually backfire. Many of al-Qaeda's leaders found themselves in Egyptian prisons after returning from Afghanistan in the 1990s. The tough treatment of fundamentalists by Arab dictators and monarchs in the past set the stage for future security threats.

In the end, there are few good solutions. But the worst would be a hard-line response that compromises the principles of justice and human rights that mark a free society. If that happens, we will only be providing the likes of ISIS with the jihadists' dream vision of an ongoing fight between the global soldiers of their so-called caliphate, and a hypocritical, avenging West.

Having "credible voices" alone is not enough. We must be able to curate a narrative that will be appealing to youths who spend most of their time online on social media. Through the Ruangobrol.id initiative, we learned that each social media platform has different strengths and weaknesses for disseminating content to particular at-risk audiences across the radicalisation spectrum, from upstream (with

almost no signs of radicalisation) to downstream (more signs of radicalisation).

More can be done to scale this pilot initiative by generating more data to help understand the impact and explore the possibility of identifying and redirecting at-risk audiences searching for toxic materials online. The initiative shows that this resource intensive experiment can make headway, but due to the nature of the work, progress is piecemeal – especially when you are learning as you go.

Initiatives like ruangobrol.id that push the boundaries should be encouraged. "Say-no-to-terrorism" memes usually do not disrupt the flow of recruitment online. Thus, a combination of online and offline social interventions needs to be implemented with a more rigorous monitoring and evaluation programme, but the field remains fundamentally experimental.

ABOUT THE AUTHOR

Noor Huda Ismail
joined the S Rajaratnam School of International Studies at the Nanyang Technological University as a Visiting Fellow after completing his PhD at Monash University, Melbourne, on an Australian Award Scholarship. In 2005, he was awarded the United Kingdom's Chevening Scholarship to pursue a Master's degree at St Andrew's University, Scotland. While conducting fieldwork in Northern Ireland, he had an epiphany after meeting with a local activist trying to integrate former terrorists into society. On his return to Indonesia in 2008, he established the Institute for International Peace Building to help the social rehabilitation and re-integration of convicted Indonesian terrorists by employing them upon their release in social enterprises such as Dapoer Bistik Solo, a cafe he set up in Central Java. In 2013, he was elected an Ashoka Fellow by the Washington DC-based Ashoka foundation for being a leading social entrepreneur championing innovative new ideas that transform society. A writer and former journalist who has written several books and commentaries for leading newspapers, Ismail is also a documentary producer whose works include *Jihad Selfie, Pengantin* (The Bride), *Seeking The Imam*, and *Cubs of the Caliphate*.

Ismail's work has been informed by a personal background that allows him to obtain an insider-outsider perspective. Born in Yogyakarta in Indonesia, and brought up by a Muslim father who was raised in a Catholic family, and a mother whose father was a puppet master and told him Hindu stories, Ismail was sent to the al-Mukmin Islamic boarding school in Solo, Central Java, when he was 12 to become a 'good Muslim'. His parents did not know then that since its founding in 1972, the school, better known as Ngruki, had become an important fount for the cultural formation of militants and promoted the radical ideology of Darul Islam (DI) espoused by two of its founders, Abdullah Sungkar and Abu Bakar Ba'asyir. After graduating from Ngruki, Ismail remained affiliated with DI but left the movement when an internal split in 1993 led to the birth of Jamaah Islamiyah. He continued his studies at Gadjah Mada University and the State Islamic University in Yogjakarta, Central Java. Working as a special correspondent for the *Washington Post* from 2002-2005, he was shocked to discover that his Ngruki roommate was one of the Bali bombers. Since then, the question of why a regular individual and Indonesian citizen would become involved in terrorism has been a very personal one for him.

REFERENCES

Atran, Scott. (2015, December 7). Recommendations to the UN Security Council Committee on Counter Terrorism. *The Journal of Political Risk*. Retrieved from https://www.jpolrisk.com/response-to-a-request-for-recommendations-to-the-un-security-council-committee-on-counter-terrorism/

Costa, A. B. D. (2016, January 16). Indonesia blocks radical websites after deadly militant attack in capital. *Reuters*. Retrieved from https://fr.reuters.com/article/indonesia-blast-idUKKCN0UU0B7

Facebook. (n.d.). *Counterspeech*. Retrieved from https://counterspeech.fb.com/en/initiatives/redirect/

Hadirin, K. (2019, January 28). Kisah Perjalanan Hidup Seorang Arif Tuban. *RuangObrol*. Retrieved from https://ruangobrol.id/2019/01/28/fenomena/kisah-perjalanan-hidup-seorang-arif-tuban/

Horgan, John. (2009). *Walking away from terrorism: Accounts of disengagement from radical and extremist movements*. New York: Routledge.

Institute for Policy Analysis of Conflict. (2020). *Terrorism, Recidivism and Planned Releases in Indonesia* (IPAC Report No. 66). Retrieved from http://file.understandingconflict.org/file/2020/09/Report_66_ipac.pdf

Kemp, Simon. (2021, January 27). *Digital 2021: The Latest Insights into the 'State of Digital'*. Retrieved from https://wearesocial.com/blog/2021/01/digital-2021-the-latest-insights-into-the-state-of-digital

Kunda, Ziva. (1990). The case for motivated reasoning. *Psychological Bulletin* 108(3), 480-98.

Oxford Languages. (n.d.) *Word of the Year 2016*. Retrieved from https://languages.oup.com/word-of-the-year/2016/

Qatar International Academy for Security Studies (QIASS). (2013.). *Countering Violent Extremism: The Counter-Narrative Study*. Retrieved from https://qiass.org/wp-content/uploads/2016/05/CVE-Counter-Narrative-Study.pdf

Romadhoni, B. A. (2020, October 20). Kisah Yusuf, Eks Napiter Kini Memilih Jalan Hidup Sebagai Pengusaha. *Suara Jawa Tengah*. Retrieved from https://jateng.suara.com/read/2020/10/20/161000/kisah-yusuf-eks-napiter-kini-memilih-jalan-hidup-sebagai-pengusaha

Sim, Susan. (2013, February 21). The Delicate Art of Using Terrorist Dropouts. *The Wall Street Journal*. Retrieved from https://www.wsj.com/articles/SB10001424127887323549204578317634060276050

United Nations Security Council. (2013). *Threats to international peace and security caused by terrorist acts*. Resolution 2129 (2013).

Yusuf. (2020, August 27). Hingga 10 Agustus Kominfo Tangani 1.082 Hoaks Covid-19 di Berbagai Platform. *Ditjen Aptika*. Retrieved from https://aptika.kominfo.go.id/2020/08/hingga-10-agustus-kominfo-tangani-1-082-hoaks-covid-19-di-berbagai-platform/

Zebua, D. J. (2020, July 5). *Cerita Jack Harun, Mantan Anak Buah Noordin M Top yang Kini Suarakan Pancasila*. KOMPAS. Retrieved from https://regional.kompas.com/read/2020/07/05/12031681/cerita-jack-harun-mantan-anak-buah-noordin-m-top-yang-kini-suarakan

THE CONUNDRUM OF SAVING OTHERS:

IDENTIFYING FACTORS THAT INFLUENCE RESPONDING IN TIMES OF EMERGENCIES VIA THE MYRESPONDER SMARTPHONE APPLICATION

Verity Er, Yasmine Wong, Neo Loo Seng, Eu Juan Lih, Gabriel Ong, Majeed Khader
Home Team Behavioural Sciences Centre, Ministry of Home Affairs, Singapore

Ng Wei Ming
Emergency Department, Ng Teng Fong General Hospital, Singapore

Carl Ross De Souza
Singapore Civil Defence Force, Ministry of Home Affairs, Singapore

Ng Yih Yng
Home Team Medical Services Division, Ministry of Home Affairs, Singapore

Marcus Ong Eng Hock
Department of Emergency Medicine, Singapore General Hospital, Singapore

ABSTRACT

This study aims to identify the factors that reduce the likelihood of community members responding to emergencies (i.e., cardiac arrest cases or small fires) before the arrival of paramedics in Singapore, specifically via the myResponder mobile application that was developed by the Singapore Civil Defence Force to save lives. A total of three focus group discussions were conducted with a total of 31 participants who subscribed to the myResponder app. Participants were asked about their impressions and degree of usage of the app, as well as their reasons for not responding to a call for help via the app. Responses were thematically coded, and five factors were found: (i) not seeing the value of being a first responder; (ii) having unaddressed concerns about responding; (iii) the perception that others have a negative perception of them as responders; (iv) fear of experiencing psychological distress from responding; and (v) fear of incurring personal loss. Implications for enhancing responding rates for the myResponder application are also discussed in the article.

CROWD-SOURCING EMERGENCY AID

While first responders and traditional emergency management systems remain indispensable, citizen participation strengthens the capacity of communities to mitigate the repercussions of and facilitate the recovery from both natural and man-made disasters (Scifo & Salman, 2015). More often than not, ordinary members of the public are the first source of aid to victims when emergencies occur, due to their proximity to the crisis site (Prati et al., 2012). Therefore, interventions carried out by nearby citizens before the arrival of emergency services are both timely and critical (Whittaker et al., 2015). Goto et al. (2016) have found that on top of a short response time by emergency medical services (EMS), early assistance rendered by the public, such as administering bystander cardiopulmonary resuscitation (CPR) and defibrillation, is also an important determinant of survival for out of hospital cardiac arrests. Furthermore, Hasselqvist-Ax et al. (2015) report that the rate of survival is more than twice as

high among patients who receive bystander CPR before the arrival of EMS providers compared with those who do not. These findings underscore the significance of citizen participation in emergency response plans, and the necessity for governments and crisis management organisations to integrate the help of ordinary citizens in emergency management and recovery plans.

With the advancement of technology, crowd-sourcing tools and social media have been increasingly utilised to enhance emergency response, primarily due to their ability to tap on the vast potential of the larger community to partake in disaster relief efforts. The aftermath of the Haiti earthquake in 2010, for example, marked the "tipping point in the use of social media" (United Nations Foundation, 2012). When victims and affected citizens started to tag tweets and images from the disaster onto *Ushahidi*, a crisis mapping platform, they helped to streamline the process of allocating resources to the different disaster sites (Scifo & Salman, 2015). This unprecedented phenomenon has been labelled "digital volunteerism" as it illustrates how the combination of technology and citizen participation can help increase the efficacy of emergency services, as demonstrated in the aftermath of the Haiti earthquake (Starbird, 2011).

This concept of digital volunteerism highlights the advantages of utilising technology to gather help from the community. With the proliferation of mobile applications, many initiatives of this nature have been developed and utilised in several countries. Some examples include the Good Smartphone-Activated Medic (GoodSAM) application developed in the United Kingdom and the Murgency application developed by a San Franciso-based tech company in the United States. Both the GoodSAM and the Murgency mobile applications serve to alert potential responders in the vicinity of crises. This tying of the emergency dispatcher system to a mobile platform can help to increase the likelihood of prompt assistance being rendered to victims, thereby significantly increasing their chances of survival. It may also cultivate a cultural norm of helping, which can help build psychological resilience in the society in the long run.

Psychological Barriers to Helping

The existing literature finds that several psychological factors contribute to the likelihood of someone exhibiting helping behaviours. For instance, the willingness to intervene in a crisis may depend on the way potential responders perceive their ability to help. Dobbie et al. (2018) have discovered that, compared to their younger counterparts, older people tend to be less confident in CPR with or without the guidance of an emergency call handler; an older person is therefore less likely to intervene in an emergency. This is because a common psychological barrier to helping involves perceiving one's actions to be unhelpful to the crisis (Fernandez et al., 2006).

On the other hand, research by Basil et al. (2006) suggest that a person's decision to engage in helping behaviours is driven by the need to relieve oneself from strong emotions such as fear, anxiety or sympathy when faced with an emergency situation. The more emotionally straining the task of helping is, the bigger the desire to eradicate those feelings, hence increasing the likelihood of helping (Schwartz & Clausen, 1970). People also tend to help when they feel that they have a duty to add value to society by behaving in a way that is beneficial to the larger community, as postulated by the norm of social responsibility (De Groot & Steg, 2009).

Similarly, Baruh et al. (2014) observe that when people are prepared to deal with emergencies, their ability to respond before the official response organisations arrive is not only improved, but they are also able to work better with each other and the authorities. It is also noteworthy that the bystander effect is unlikely to occur in dangerous situations where people are cognizant of the potential negative consequences if they do not intervene, as observed in a series of experimental studies conducted by Fischer et al. (2006). However, it is also important to note that research studies on the bystander effect have long posited that the presence of other bystanders decreases the likelihood of a person helping another. When witnessing someone in need during times of emergencies, the motivation to intervene decreases when one perceives that there many other bystanders who are available (Hortensius & de Gelder, 2014) or are more qualified to

render assistance (Fischer et al., 2011), leading to one's unwillingness to help to avoid offering unwarranted assistance.

Therefore, it is evident that for responding rates to increase, or to at least raise the likelihood of responding to calls for help, it is necessary to understand the psychological factors preventing people from going forth to help. Without this knowledge, systematic initiatives to increase helping behaviours, particularly in times of emergencies, such as crowd-sourcing apps and its affiliates may be rendered ineffective.

THE PRESENT STUDY

This study aims to study the inhibiting factors of responding to emergencies via a help-sourcing mobile application called the myResponder application – a form of digital volunteerism – among Singaporeans. Recognising the importance of early intervention in saving the lives of people who have experienced out-of-hospital cardiac arrest (OHCA), the Singapore Civil Defence Force (SCDF) launched the myResponder app in 2015 in a concerted effort to further engage and empower the community (Ng et al., 2020). The introduction of the app serves to facilitate the community's transition from a concerned bystander to an active responder. This development echoes the recommendation of the Global Resuscitation Alliance to improve cardiac arrest survival rates by using smart technologies to extend CPR and public access defibrillation programmes, as well as to notify volunteer responders of a nearby cardiac arrest and identify the location of the nearest automated external defibrillator (AED) (Global Resuscitation Alliance, 2017).

The American Heart Association has similarly acknowledged that mobile apps have the potential to improve OHCA response. Working towards SCDF's vision of a Nation of Lifesavers by 2025, SCDF partnered GovTech to develop myResponder, an app that leverages a smartphone's geolocation technology as Singapore has one of the highest smartphone penetration rates in the world. Since 70 per cent of all OHCA occur within residential estates, the myResponder app serves to notify registered users of cardiac arrests in their vicinity, thereby allowing members of the public to attend to victims before the arrival of paramedics. (The app also began issuing alerts of minor rubbish chute and bin fires in 2018.) Since its launch in April 2015, the myResponder app has been downloaded more than 143,000 times, and has a network of around 4,800 active community first responders (CFRs). In 2019, when the SCDF sent out alerts for 3,917 suspected cardiac arrest cases, 1,366 CFRs responded to the incidents (SCDF, 2020). Might it be possible to improve on this response rate of 35 per cent achieved in 2019?[1]

While utilising digital volunteerism in crisis response is prevalent operationally, there are relatively fewer studies that have examined the psychological factors involved in decision making during a crisis in the Singapore context. Hence, this study aims to build on the existing research of crisis response by examining the mediating psychological mechanisms underlying the decision to respond or not amongst the myResponder users. Specifically, this study aims to find the conditions that have or would have inhibited people from responding to emergencies by conducting Focus Group Discussions with users of the app. The insights gleaned from this study will be used to find ways to increase helping behaviours in times of emergencies.

METHODS

Research Design

Due to the exploratory nature of this study, a qualitative approach was taken to gather data. Three rounds of focus group discussions (FGDs) were conducted to obtain details about the opinions and experiences of respondents and non-respondents of the myResponder app. A total of three FGDs were conducted for this study. Data collection stopped after the third FGD

[1]Following the outbreak of COVID-19 in 2020, the SCDF stopped activating community first responders through the myResponder app although its 995 operations centre continued to advise callers to perform dispatcher assisted CPR (Ng et al, 2020).

when theoretical saturation was reached (see Krueger, 1994). The FGDs were conducted over four months, from August to November 2018.

Compared to structured interviews, FGDs can generate more information yet offer informational depth on a similar level to that of structured interviews, which is necessary in order to make sense of the huge variety of motivations and inhibitions of responding amongst the participants. FGDs also facilitate the exchange of information and opinions between participants as opposed to "simply reacting to the questions and language of an interviewer in a one-to-one situation" (Conover et al., 1991), thereby increasing the chances of new, unexpected findings stemming from participants' exchange of views (Onwuegbuzie et al., 2009). Moreover, FGDs have been widely used since the 1980s across various disciplines, ranging from the social sciences to marketing to healthcare (Nyumba et al., 2018; Smithson, 2000), making it an appropriate research methodology for this issue.

Participants

There was a total of 31 participants who took part in the focus group discussions, with 10 participants in FGD 1, 11 participants in FGD 2, and 10 participants in FGD 3. The participants consisted of a total of 3 females, and 28 males, and the age of participants ranged from 17 to 45 years old. The number of participants per FGD was kept to a maximum of 11, and this was considered optimal as it is large enough to generate a wide range of insights and yet small enough that the discussion group does not fragment into smaller units of discussion (see Nyumba et al., 2018).

All interviewees were members of the community and were subscribers of the myResponder app who had responded or did not respond to emergencies. Participants were recruited via phone calls or short messaging services (SMS) and were interviewed in a group setting. All the FGDs were facilitated by a single interviewer, who was unaware whether the interviewees were respondents or non-respondents of the app. All the FGDs discussed two main questions: (i) What are the factors that have inhibited or would have inhibited responding to calls for help via the app? and (ii) What would have increased the likelihood of responding? Before the commencement of the FGD, participants were briefed on the purpose of the research, confidentiality assurances, and the freedom to withdraw from the study. Informed consent was obtained from all the participants before the FGDs began, and a debrief session was held after each FGD. The FGDs were audio-recorded, and verbatim transcripts were used for data analysis.

Analysis

Data analysis was carried out by four coders and was done in multiple stages. Principles from thematic analysis guided the process of analysis. After familiarising themselves with the data, the coders read through the transcripts closely and analysed them for preliminary codes. The codes were then collated to form general, broader themes – and relevant sub-themes – as the coders eliminated, combined and subdivided the coding categories previously identified (Nyumba et al., 2018). This process was guided by pattern recognition (Fereday & Muir-Cochrane, 2006), and coders also came up with more general themes that connected one code to another. Any disagreements amongst coders were resolved via further debates and discussion. In the final phase, the themes were reviewed in an iterative process by re-reading the transcripts to ensure all relevant data had been coded and to confirm that the codes fit into the allocated themes. Furthermore, a frequency count of the occurrence of the themes – i.e., the number of times a particular theme was brought up in the FGDs – was carried out. This approach supplemented qualitative data with numerical counts, which adds richness to the data by providing information on the level of consensus/dissent with regards to a particular theme (Onwuegbuzie et al., 2009).

RESULTS

Thematic analysis of the FGDs identified five themes that illustrated the conditions that discouraged responding. A thematic map showing the main themes of inhibitions are shown in Figure 1.

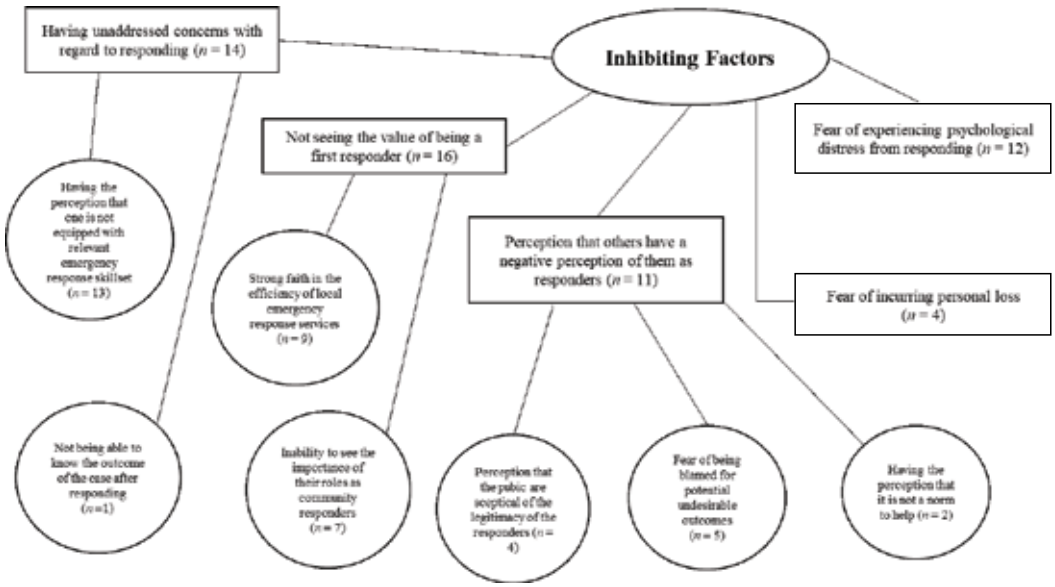


Figure 1. Main Themes of Inhibitions to Responding

Not Seeing the Value of Being a First Responder (n = 16)

Participants reflected that feeling a sense of insignificance at the scene of crisis during previous attempts to respond, or having a perception that their help would not be of value, inhibited their response. This sense of insignificance was found to be rooted in two sub-themes.

A strong faith in the efficiency of local emergency response services

Some participants revealed an expectation that the authorities would respond to account for their inhibition. For example, one responder said that "the few recent ones I did not accept because by the time I could have gotten to their home, SCDF would have responded". Similarly, another participant said, "I have faith in the SCDF … I know even if I do not respond, they will still respond in due time". Participants were thus not motivated to respond because they expected the authorities to respond regardless of their presence at the scene.

The inability to see the importance of their roles as community responders

Some participants also did not see the importance of their roles as community first-responders. One participant said that "we do not play a pivotal role in making the fate of the person … even if we did respond … we are more of an assistant role". Similarly, another participant said, "… even if I respond, it is only to give early care". These quotes suggest a perceived notion that their inputs as responders were less critical relative to the response provided by emergency response services.

Having Unaddressed Concerns with Regard to Responding (n = 14)

Participants reported that having a sense of uncertainty decreased their inclination to respond. Specifically, the sense of uncertainty stemmed from two concerns.

Having the perception that one is not equipped with the relevant emergency response skillset

Due to a prevailing perception that responding to the cases through the myResponder app required a specific skillset, participants said that the uncertainty over whether they possessed the relevant emergency-response skillset inhibited them from responding. The most commonly cited skillset is CPR. One participant said that the "first thing I will think is 'do I remember how to do CPR?'", while another similarly said, "sometimes we have people who know CPR, but they do not know the proper procedure". This uncertainty over the possession of relevant skillsets prevents

individuals from responding because they are unsure whether they will be able to contribute to improving the situation.

Conversely, some participants said that being certain they had the necessary skills motivated them to respond. For example, one respondent said, "because I am trained … if I can help then I will just help". Similarly, another responder said it boiled down to the "can help why not attitude" and that "not a lot of people have the skills and the knowledge to do so … so if you can help why not?" Furthermore, some responders said that they responded because the act was familiar to them, thus granting them a certain level of confidence in the act of responding. A responder shared that having previously responded to a case, in the next few cases, "there was just that sense of calm … like no more crying before and after, it is just that sense of calm". This sense of psychological assurance helped them overcome potential mental barriers that they had experienced previously when handling cases. This observation suggests that participants feel that it is only natural to respond through the myResponder app, when they are proficient in the relevant emergency response skillset.

Not being able to know the outcome of the case after responding

Due to limitations posed by privacy protection legislation in Singapore, responders are not able to find out the outcome of the case they respond to. This uncertainty surrounding the outcome of the case appears to pose as an inhibiting factor for future response. One responder said "is there any way that you can see whether after you have attended a case is there any way where you can see that they survived? Or is considered confidential? Because I want to know …".

Perception that Others have a Negative Perception of them as Responders (n = 11)

Some individuals did not respond because they felt that others would have a negative image of them should they respond. This negative perception creates an environment that is not conducive for response and can be surmised by three sub-themes.

Perception that the public are sceptical of the legitimacy of the responders

Some perceived the public to be sceptical of their legitimacy as actual responders when they responded. This is an inhibiting factor for future response. One responder said, "I told them that I am a trained CPR and AED personnel, I am able to help … some of them will still hesitate a bit". Another responder cited a hypothetical situation, saying "will the relative [of the victim] allow me to enter to help … they will ask you like … 'who are you?'".

Fear of being blamed for potential undesirable outcomes

Some participants also expressed their fear of being blamed for undesirable outcomes by the public as an inhibiting factor. For example, one responder said that while responding to the emergency, "people might think you are doing something wrong, especially if you are not in uniform". The fear of being blamed for any potential undesirable outcomes may serve to create inertia for future response. Another participant referred to a concern that "you are not sure if you get judged for what you do".

Having the perception that it is not a norm to help

Lastly, participants perceived that in Singapore, it is not the norm to help. One participant said that "I think overall it is more of a cultural issue in Singapore … a lot of people are busy and do not want to learn [CPR]". Another responder noted that when people arrived at the scene, "no one helped … and no one kind of assisted … people were just standing there using their phones and taking videos". Thus, they felt that they would be acting out of what was expected of them should they respond.

Fear of Experiencing Psychological Distress from Responding (n = 12)

Individuals may be hesitant to respond in the future because they have been traumatised previously. This fear of psychological distress can occur as a result of their exposure to an actual emergency case, and during emergency response training. For example, a responder said when responding to a victim, "rigour mortis had set in … there was blood everywhere … he was vomiting blood I guess before he passed on … my

friend was quite traumatised, and we had nobody to talk to except for the two of us". One participant suggested being traumatised after a training session, saying "one of the courses [CPR course], I was a bit traumatised".

Fear of Incurring Personal Loss (n = 4)

The fear of incurring personal loss as a consequence of responding is one of the factors that inhibited response. Some individuals said that they did not respond because they were concerned that their safety might be compromised when they respond to cases. For example, one participant said, "what if the person has some disease which is infectious … that is actually a real thing, and that is a real problem". Besides, one participant cited concerns over insurance liability as responders are not insured through the app. The participant said "what if you get injured? What will happen? Are we covered?".

DISCUSSION

Of the five themes identified in this study, two appear to be most salient in inhibiting responding to emergencies in the community: the presence of unaddressed concerns about responding, and a devaluation of the idea of rendering help. While the analysis of the data has focused on inhibitions, we note that participants also cite the reverse to be true, where the absence of inhibiting factors conversely result in a higher motivation to respond. These findings provide considerable insights into the bystander effect, serving as further evidence for studies that have identified conditions that may potentially inhibit helping behaviours. However, certain aspects of the findings in this study differ from earlier published studies, particularly those on the real-world bystander effect, plausibly because this study has been carried out in the context of digital volunteerism where help from the community is gathered online by utilising technology, and in our case, a mobile application.

Our results share several similarities with Fernandez et al.'s (2006) finding that a common psychological barrier to helping is the perception that one's assistance is irrelevant or futile to the person in need of help. In our study, participants said that they are not likely to intervene when they think that they do not have the relevant skillset to respond to a cardiac arrest (e.g., administering CPR, operating the AED). Similarly, participants who have responded did so because they felt that they were able to contribute to the betterment of the situation as they are equipped with the competencies that are useful in emergency response.

Specifically, our analysis suggests that those who have the impression that the sole purpose of responding is to either render CPR or to operate the AED are largely hindered from responding, but those who are able to recognise that helping behaviours are not necessarily restricted to these two actions are more likely to intervene. These responders possess the flexibility to see that their help is still valuable even if there is already someone at the scene attending to the case (e.g., providing psychological first aid to family members, helping paramedics move victims onto the ambulance). This observation reflects the importance of the ability of the myResponder app users to see the value of one's help beyond having tangible skills to alleviate physical injuries and to interpret responding as a multifaceted act. Similarly, our findings are consistent with what Baruh et al. (2014) have observed about the considerations that a person usually takes before deciding to help. As anticipated, our findings demonstrate that when people are prepared, or at least feel prepared, to deal with a crisis, their tendency to intervene will increase.

Interestingly, unlike other research carried out in this area, this study finds that participants take into account how they think others will perceive them in deciding whether to respond to an emergency or not. As in the sections mentioned above, our study reveals that participants are less willing to render assistance when they (i) perceive the recipients of their help are sceptical of their legitimacy as responders, (ii) are afraid of being blamed by the victim or victim's family members for any undesirable outcomes, or (iii) carry the perception that it is not a norm in Singapore to help. Likewise, it becomes a motivation when participants perceive that others are receptive towards their help – e.g., family members welcoming them into the house without suspicion.

This idea that receptivity of one's help results in prosocial behaviour alludes to earlier research studies that have shown significant links between gratitude and appreciation, as well as prosocial behaviours. For instance, Barlett and DeSteno (2006) demonstrate that gratitude serves to nurture social relationships by encouraging reciprocal

prosocial behaviour between the individual expressing gratitude and the recipient of gratitude. Extrapolating this finding to the present study, the receptivity of help registered as a display of positive emotions by the victim or family members of the victim can guide and encourage future responding behaviours among community first responders.

There are two limitations of interest. Firstly, the small number of participants is by no means representative of the larger corpus of myResponder subscribers. An additional limitation stems from the presence of other mediating variables such as age, occupation of app users, and gender, which are not accounted for in this study. In light of this, future research could attempt to validate the present results with a larger sample and to establish whether psychological inhibitors vary with age, type of emergencies or other mediating factors.

These limitations notwithstanding, the present study does present itself as a worthwhile endeavour to further our insights on improving community responses towards emergencies. To effectively increase the likelihood of responding via the myResponder and other similar applications, initiatives to increase responding should focus on providing information within the early phases of activating help to alleviate any unaddressed concerns that may hinder potential responders from stepping forward. There is also a need to increase the awareness of the roles played by community responders, by reinforcing the importance of mobilising the community in times of emergencies, emphasising the necessity of interventions during the first few critical minutes of a cardiac arrest, and educating app users that they can still respond to a call for help even if they are not trained in life-saving skills.

ABOUT THE AUTHORS

Verity Er
was a Behavioural Sciences Research Analyst at the Home Team Behavioural Sciences Centre (HTBSC) from 2016 to 2020. She was involved in research projects studying phenomena in the aftermath of crises such as Islamophobia and hate incidents, and their effects on the psychological resilience and social cohesion of Singapore. Her research also sought to understand crisis response behaviours during and after emergencies and she has written on the importance of raising Psychological First Aid literacy in the community to hone Singapore's crisis preparedness. Verity graduated with a Bachelor of Arts in Psychology (Magna Cum Laude) in 2016 and went on to complete her Master of Science in Applied Psychology in 2019. She is also an active member of the Home Team Volunteers Network where she has served as a Victim Care Officer since 2017.

Yasmine Wong
graduated with a Bachelor of Arts and Social Sciences (Philosophy and Politics, First Class Honours) from the University of Manchester and holds a Master of Science in Political Sociology from the London School of Economics and Political Science (LSE). She was previously a Behavioural Sciences Research Analyst with the Home Team Behavioural Sciences Centre (HTBSC) under the Resilience, Safety and Security Psychology branch, where she studied social behaviour online, with a focus on cyber vigilantism, social movements, and fake news and its social impacts. Yasmine is currently a Senior Analyst with the Centre of Excellence for National Security (CENS) of the S. Rajaratnam School of International Studies (RSIS), Nanyang Technological University (NTU), Singapore. Her present research focuses on issues pertaining to social resilience, social cohesion and inter-group relations, with an interest in offline and online xenophobia and inter-race relations in Singapore.

ABOUT THE AUTHORS

Neo Loo Seng
was a former Principal Behavioural Sciences Research Analyst with the Home Team Behavioural Sciences Centre at the Ministry of Home Affairs, Singapore.

Eu Juan Lih
graduated with a Bachelor of Arts in Psychology (Distinction) from the Nanyang Technological University and joined the Home Team Behavioural Sciences Centre (HTBSC) as a Behavioural Sciences Research Analyst in 2018, where he was involved in various research studies aimed at enhancing Singapore's societal resilience. Currently a Clinical Research Coordinator at Tan Tock Seng Hospital, he is studying the challenges faced by healthcare workers in caring for stroke patients, and conducting evaluations on the effectiveness of post-stroke mood screening programmes, as well as providing counselling services to neuropsychiatric patients.

Gabriel Ong
is a Principal Psychologist and Senior Assistant Director with the Resilience, Safety and Security Psychology Branch of the Home Team Behavioural Sciences Centre (HTBSC). His primary roles at the HTBSC include overseeing research on issues such as social and community resilience in order to support policy and operations on issues of national security. Concurrently Deputy Director of the Psychological and Correctional Rehabilitation Division (PCRD) of the Singapore Prison Service, he also oversees correctional research, programme design and evaluation, and operational psychology, in order to inform and ensure the formulation of evidence-based correctional policies and practices. A clinical psychologist by training, Gabriel is also an adjunct lecturer with the Nanyang Technological University, Singapore.

Majeed Khader
is the Chief Psychologist of the Ministry of Home Affairs, and Director of the Home Team Behavioural Sciences Centre. He plays a key role in directing and guiding research, training, and operational support of various behavioural sciences domains.

Ng Wei Ming
is an emergency physician from Ng Teng Fong General Hospital. He is also a consultant with the Unit for Pre-Hospital Emergency Care, Ministry of Health. He has a strong interest in Singapore's emergency medical system, and is actively involved in developing technological solutions for improving the standard of emergency medical care. He is also active in various portfolios in clinical, education, research, and admin at hospital level.

ABOUT THE AUTHORS

Carl Ross de Souza
began his career in the Singapore Civil Defence Force as a Fire Rota Commander. In his current posting in the Emergency Medical Services (EMS) department, he oversees various EMS projects, include management of the myResponder app and the implementation of Body Worn Cameras for paramedics.

Ng Yih Yng
is an emergency and public health physician with the Tan Tock Seng Hospital and concurrently the Home Team Chief Medical Officer of the Ministry of Home Affairs. While Chief Medical Officer of the Singapore Civil Defence Force from 2012-2018, he conceptualised the myResponder app in 2014, one of the earliest citizen-centric apps built by Govtech when launched in 2015. He currently leads the digital and smart health office of Tan Tock Seng Hospital and the Central Health region as an associate clinical director of the Ng Teng Fong Centre for Health Innovation. He has published over 60 local, regional and international peer-reviewed scientific articles and lectures at scientific conferences about public health and emergency medicine and is an adjunct assistant professor of the Lee Kong Chian NTU School of Medicine, Prehospital Emergency Research Centre of Duke-NUS and the Saw Swee Hock School of Public Health.

Marcus Ong Eng Hock
is a Senior Consultant, Director of Research, and Clinician Scientist at the Department of Emergency Medicine in Singapore General Hospital. He is also the Director of HSR Singhealth; Professor and Director, Health Services and Systems Research, Duke-NUS Medical School; Medical Director, Unit for Prehospital Emergency Care; Senior Consultant, Ministry of Health, Hospital Services Division; and Chairman of the Pan Asian Resuscitation Outcomes Study. Marcus is extensively involved in national and international research related to pre-hospital emergency care, health services research, and medical devices. His research addresses issues such as out-of-hospital cardiac arrest, improvement of ambulance deployment, acute myocardial infarction care and emergency care. He has patented inventions using Heart Rate Variability for risk prediction of acutely ill patients and cooling solutions for therapeutic hypothermia. He has been awarded multiple national research grants and has accumulated over $47 million in research grants for his studies which include geospatial diseases mapping, clinical drug trials, resuscitation and cardiovascular sciences, pre-hospital emergency care, and biomedical engineering. He has published 250 papers in both local and international journals.

REFERENCES

Baruh, L., Papadimitriou, A., Günel, Z., Bal, H. M., Salman, Y., Scifo, S., & Çildaş, B. (2014). *Final report on citizens' involvement in emergency communication*. Retrieved from http://www.cosmic-project.eu/sites/default/files/deliverables/D4.1.2.pdf.

Basciano, S. (2019, March 15). Man has responded to more than 20 emergencies on MyResponder app. *The New Paper*. Retrieved from https://www.tnp.sg/news/singapore/man-has-responded-more-20-emergencies-myresponder-app

Basil, D. Z., Ridgway, N. M., & Basil, M. D. (2006). Guilt appeals: The mediating effect of responsibility. *Psychology & Marketing 23*(12), 1035-1054.

Conover, P. J., Crewe, I. M., & Searing, D. D. (1991). The nature of citizenship in the United States and Great Britain: Empirical comments on theoretical themes. *The Journal of Politics 53*(3), 800-832.

De Groot, J. I., & Steg, L. (2009). Morality and prosocial behavior: The role of awareness, responsibility, and norms in the norm activation model. *The Journal of Social Psychology 149*(4), 425-449.

Dobbie, F., MacKintosh, A. M., Clegg, G., Stirzaker, R., & Bauld, L. (2018). Attitudes towards bystander cardiopulmonary resuscitation: results from a cross-sectional general population survey. *PloS one 13*(3).

Fereday, J., & Muir-Cochrane, E. (2006). Demonstrating rigor using thematic analysis: A hybrid approach of inductive and deductive coding and theme development. *International Journal of Qualitative Methods 5*(1), 80-92.

Fernandez, L. S., Barbera, J. A., & Van Dorp, J. R. (2006). Strategies for managing volunteers during incident response: A systems approach. *Homeland Security Affairs 2*(3).

Fischer, P., Greitemeyer, T., Pollozek, F., & Frey, D. (2006). The unresponsive bystander: Are bystanders more responsive in dangerous emergencies? *European Journal of Social Psychology 36*(2), 267-278.

Fischer, P., Krueger, J.I., Greitemeyer, T., Vogrincic, C., Kastenmüller, A., Frey, D., Heene, M., Wicher, M., Kainbacher, M. (2011). The bystander-effect: a meta-analytic review on bystander intervention in dangerous and non-dangerous emergencies. *Psychological Bulletin 137*(4), 517–537.

Global Resuscitation Alliance. (2017). *Ten programs*. Retrieved from https://www.globalresuscitationalliance.org/ten-programs/

Goto, Y., Funada, A., & Goto, Y. (2016). Relationship between the duration of cardiopulmonary resuscitation and favorable neurological outcomes after out of hospital cardiac arrest: a prospective, nationwide, population based cohort study. *Journal of the American Heart Association 5*(3).

Hasselqvist-Ax, I., Riva, G., Herlitz, J., Rosenqvist, M., Hollenberg, J., Nordberg, P., ... & Karlsson, T. (2015). Early cardiopulmonary resuscitation in out-of-hospital cardiac arrest. *New England Journal of Medicine 372*(24), 2307-2315.

Hortensius, R., & de Gelder, B. (2014). The neural basis of the bystander effect – The influence of group size on neural activity when witnessing an emergency. *Neuroimage 93*(1), 53-58.

Krueger, R. A. (1994). *Focus groups: A practical guide for applied research* (2nd Ed.). CA: Sage.

Ng, Q.X., Lee, E.Z.H., Tay, J.A.M., and Arulanandam, S. (2020, October 19). Impact of COVID-19 "circuit-breaker" measures on emergency medical services utilisation and out of hospital cardiac arrest outcomes in Singapore. Emergency Medicine Australasia. Advance online publication https://doi.org/10.1111/1742-6723.13668

Ng, W. M., De Souza, C. R., Pek, P. P., Shahidah, N., Ng, Y. Y., Arulanandam, S., White, A. E., Leong, B. S., & Ong, M. E. H. (2020). myResponder smartphone application to crowd-source basic life support for out-of-hospital cardiac arrest: The Singapore experience. *Prehospital Emergency Care* 1-9.

Nyumba, T., Wilson, K., Derrick, C. J., & Mukherjee, N. (2018). The use of focus group discussion methodology: Insights from two decades of application in conservation. *Methods in Ecology and evolution 9*(1), 20-32.

Onwuegbuzie, A. J., Dickinson, W. B., Leech, N. L., & Zoran, A. G. (2009). A qualitative framework for collecting and analysing data in focus group research. *International Journal of Qualitative Methods 8*(3), 1-21.

Prati, G., Catufi, V., & Pietrantoni, L. (2012). Emotional and behavioural reactions to tremors of the Umbria Marche earthquake. *Disasters 36*(3), 439-451.

Schwartz, S. H., & Clausen, G. T. (1970). Responsibility, norms, and helping in an emergency. *Journal of Personality and Social Psychology 16*(2), 299-310.

Scifo, S., & Salman, Y. (2015). Citizens' involvement in emergency preparedness and response: a comparative analysis of media strategies and online presence in Turkey, Italy and Germany. *Interactions: Studies in Communication & Culture 6*(2), 179-198.

Singapore Civil Defence Force (SCDF). (2020). *Fire, Emergency Medical Services and Enforcement Statistics 2019* [Press Release]. Retrieved from https://www.scdf.gov.sg/docs/default-source/scdf-library/amb-fire-inspection-statistics/scdf-annual-statistics-2019.pdf

Smithson, J. (2000). Using and analysing focus groups: limitations and possibilities. *International Journal of Social Research Methodology 3*(2), 103-119.

Starbird, K. (2011). *Digital volunteerism during disaster: Crowd-sourcing information processing*. University of Colorado ATLAS Institute.

Sun, D. (2015). You can save lives with SCDF app. *The New Paper*. Retrieved from https://www.tnp.sg/news/singapore/you-can-help-save-lives-scdf-app

United Nations Foundation. (2012). *Disaster relief 2.0.: The future of information sharing in humanitarian emergencies*. Retrieved from https://hhi.harvard.edu/sites/default/files/publications/disaster-relief-2.0.pdf

Whittaker, J., McLennan, B., & Handmer, J. (2015). A review of informal volunteerism in emergencies and disasters: Definition, opportunities and challenges. *International Journal of Disaster Risk Reductio*, 13, 358-368.

THE BSC BRIEF
BEHAVIOURAL INSIGHTS FOR THE HOME TEAM

SPEAKING TO WITNESSES, INFORMANTS AND PATIENTS:

PSYCHOLOGICAL TACTICS FOR PANDEMIC CONTACT TRACING

Karthigan Subramaniam & Stephanie Chan
Home Team Behavioural Sciences Centre

ABSTRACT

Contact tracing – the identification and follow-up of persons who may have come into contact with an infected person – has been documented to be effective in reducing uncontrollable transmission in past epidemics, in particular SARS and smallpox. Singapore has historically had very strong epidemiological surveillance and contact-tracing capacity and has won international praise for its approach in managing the COVID-19 pandemic through rigorous multi-agency contact tracing processes and quarantine efforts. This brief focuses on the questioning aspect of traditional contact tracing, which relies heavily on the recall memory of patients and that of the people the patients come into contact with. Some of the challenges faced by contact tracers include frustrated contacts and patients who are unable to remember all of their whereabouts and contacts. To affirm and enhance questioning and memory recall techniques used by contact tracers and activity mappers, this paper highlights techniques that are scientifically supported by psychology.

SINGAPORE'S COVID-19 CONTACT TRACING EFFORTS

The World Health Organization defines contact tracing as the identification and follow-up of persons who may have come into contact with an infected person (WHO, 2017). Previously conducted scientific research shows that contact tracing is an effective measure for the control of emerging epidemics; it has been proven to be effective in reducing the uncontrollable transmission of SARS and smallpox (Klinkenberg et al., 2006).

In Singapore, the Ministry of Health (MOH) relies on quick and effective contract tracing as a critical tool in containing the COVID-19 pandemic in the Republic. Once someone tests positive for COVID-19, MOH, supported by various agencies including the Singapore Police Force (SPF), begins the work of contact tracing to detect and isolate their close contacts, who are either placed under quarantine or put on health surveillance (Yeo, 2020; Ministry of Health, 2020). The activity mapping, and meticulous identification of close contacts of a confirmed case was initially carried out through a manual contact tracing process that is now augmented by digital tools like SafeEntry and TraceTogether. In early 2020, a study carried out by Harvard University estimated that Singapore was detecting three times the number of COVID-19 cases as compared to other countries. The study attributed Singapore's efficiency in case detection to the nation's "strong epidemiological surveillance" and rigorous multi-agency contact tracing processes (Niehus et al., 2020). This ability to quickly ring-fence and identify possible cases is important given the strong emphasis by the World Health Organisation that timely contact tracing is pivotal in containing the spread of COVID-19 (Coffrini, 2020).

The use of police officers in contact tracing is distinctive to Singapore (Vaswani, 2020). Minister for Law and Home Affairs K Shanmugam

has noted that contact tracing involves "a lot of careful investigative work" and that "in a place like Singapore with its frequency of movement and the frequency of contacts – a case in any city – that this is not an easy task". Describing the role of police officers in the contact tracing process, Minister Shanmugam added: "MOH will do the first cut in terms of interviewing the patient and identifying some data and then pass this over, and these officers then run through the whole investigation process" (Mohan, 2020).

Scope and Purpose of Brief

This brief focuses on the questioning aspect of traditional contact tracing. Contact tracing relies heavily on the recall and memory of patients and that of the people that they come into contact with. In addition, information might be obtained from patients' next-of-kin or third parties (e.g., hotel management staff, taxi drivers) to provide a more holistic picture of a patient's recent whereabouts (Sagar, 2020). Some challenges faced by contact tracers during interactions include frustrated contacts and patients being unable to remember all their contacts ("'Drop everything, scramble'", 2020; Kok, 2020).

Data for this brief was gathered from sources such as print media, and articles from professional journals on investigative interviewing and memory, and also draws from other research reports written for the Home Team by the Home Team Behavioural Sciences Centre (HTBSC). This brief aims to highlight questioning techniques that are scientifically supported, so as to affirm and enhance current questioning and memory recall techniques being used in contact tracing efforts.

FOUR OPERATIONAL TACTICS FROM THE PSYCHOLOGY OF INVESTIGATIVE INTERVIEWING & DECEPTION DETECTION

Operational Tactic #1: Build Rapport

Rapport building is one of the key skills utilised by contact tracers to obtain sufficient necessary information with minimal resistance and maximum cooperation (Vrij et al., 2017). In professional circles, rapport is defined as "a working relationship between operator and source based on a mutually shared understanding of each other's goals and needs, which can lead to useful, actionable intelligence or information" (Kelly et al., 2013).

The benefits of rapport building are numerous (Chin, 2017), including: greater responsiveness and cooperation (Bull & Soukara, 2010), richer details (Collins et al., 2002), and voluntary admittance of criminal behaviour (Holmberg & Christianson, 2002). In the context of contact tracing, members of the public are supposedly more cooperative than criminal suspects. Yet, it is human nature to want to see oneself in a positive light, and that might lead to reluctance to admit wrong-doing (Whitbourne, 2017)

When carried out properly, rapport building can allow contact tracers to defuse tense situations, overcome reluctance, and gain cooperation from witnesses, informants, and patients. Rapport building can be achieved via three ways: lowering psychological barriers, modelling calm behaviours, and engaging in active listening.

Lowering Psychological Barriers

It is important to lower psychological barriers at the start of any interaction. Reluctance and initial hesitation are barriers raised as a form of psychological protection in response to anxiety about an uncertain situation (Grupe & Nitschke, 2013).

> Tip 1: Contact tracers should introduce themselves and also ask the member of the public how he or she would like to be addressed.
> Tip 2: Contact tracers should provide a succinct, one-sentence summary of the purpose of the interaction.

Modelling of Preferred Behaviours

This works best when encountering members of the public who express their anxiety and frustration in the face of uncertainty. Modelling calm behaviours throughout an interaction assists in de-escalating tension (Richter, 2006).

> Tip 1: Contact tracers can model calm behaviours verbally by using a slightly lower tone of voice and speaking at a pace comfortable to the listener.

Tip 2: Contact tracers can proactively ask the member of the public to tell them what is upsetting him or her. For example, to ask, "you sound upset, can I ask what is making you worried?"

Engaging in Active Listening

Active listening is not just about passively listening when a person is speaking or simply acknowledging what the member of the public has just said (Weger et al., 2014). Rather, active listening consists of techniques to build empathy and trust, and to resolve conflicts (Thompson, 2013). This results in more positive outcomes.

Tip 1: Contact tracers can use simple actions and words from time to time to display interest. For example, to say, "mhh", or "I see", and to nod at appropriate pauses in the interaction.

Tip 2: Contact tracers can also use verbal responses to display their attention. For example, to summarise key information provided by the member of the public when concluding an interaction.

Operational Tactic #2: Smart Interviewing

Although the stakes are different in contact tracing as compared to an eyewitness interview, it is still vital for contact tracers to verify the information provided by close contacts to establish their whereabouts and interactions accurately and as quickly as possible. Research has shown that the quality and length of interviewee response is very much dependent on how questions are phrased (Oxburgh et al., 2010). On the contrary, ineffective questioning techniques tend to create barriers, stifle the flow of information and hinder efforts in getting accurate information (Sandoval, 2003). The best way to carry out smart interviewing is to perceive the questioning process as a "funnelling" process that strategically sharpens the focus on essential information.

Thinking of the Questioning Process as a Funnel

Strategic questioning improves the process of gathering and verifying information.

Tip 1: Contact tracers should start their questioning with broad, open-ended inquiries designed to obtain as much information as possible. For example, to ask, "tell me everything you have done in the past two days."

Tip 2: Contact tracers should follow-up broad inquiries with direct and specific closed questions, especially if specific details were omitted or if open-ended questions did not provide sufficient information (Snook & Keating, 2011). For example, to ask, "Where did you go after work yesterday?"

Operational Tactic #3: Enhance Memory Recall

Similar to interviewing, contact tracing involves memory recall. However, the belief that memory operates like a video recorder is woefully inaccurate (Simons & Chabris, 2011). Instead, memory is a dynamic and reconstructive process that is susceptible to error and distortion (Schacter, 1999). In fact, over 40 years of research has documented that eyewitness memory is fallible (Conway, 2012).

Given the fallibility of memory, it is vital that contact tracers understand how memory works and the ways in which errors and omissions arise in order to get the most accurate and reliable information. Often during an interview, interviewees cannot retrieve a piece of information from memory and research seems to suggest that the problem with memory failure tends to be due to a problem of retrieval rather than a loss of the information completely.

Professor Lorraine Hope from the University of Portsmouth (2018) has highlighted that one of the reasons a cooperative source might respond with either "I don't know" or "I don't remember" could be a difficulty with separating out a single specific instance when distinguishing between similar events (e.g. member of public trying to recall a particular taxi journey despite taking a taxi daily over a month). In such instances, she suggests two methods that might assist discrimination between repeated events: self-generated cues and the timeline technique.

Encouraging Self-generated Cues

These cues capitalise on the associative nature of memory and act to prompt the most salient details from memory (Kontogianni et al., 2018).

Tip 1: Contact tracers can trigger the memory of patients or close contacts by giving them a

simple instruction: "Tell me the first six things that come to mind when you think about [person/event]".

Tip 2: Contact tracers who are dealing simultaneously with several patients or close contacts can amend the aforementioned instruction to request the individuals to "write down the first six things that come to mind when you think about [person/event]".

Tip 3: Contact tracers can explain to the members of the public that by focusing on each item, this will help them to remember better.

Employing Timeline Technique

The timeline technique helps contacts to recall events from a particular time period in sequence, identify individuals involved, and link those individuals with their actions (Hope et al., 2013). This technique works best for obtaining rich and detailed information from confirmed COVID-19 cases.

Tip 1: Contact tracers can aid memory recall by using a 'timeline' to provide a structure for remembering and reporting their movements and interactions in the past two weeks.

Combining the Timeline Technique with Self-generated Cues Approach

The Timeline Technique can be used with a cooperative interviewee in any interview where the goal, similar to contact tracing, is to elicit information that the interviewee may have over a period of time (Hope et al., 2013). As such, the timeline technique, in conjunction with self-generated cues can be used by contact tracers to enhance recall for both unique and repeated events.

Operational Tactic #4: Assess for the Truth

Assessing truthfulness is another skill contact tracers need to determine if the information provided by a witness, informant or patient is reliable. The Criteria-Based Content Analysis (CBCA) is a 19-criteria tool used to assess the truthfulness of a statement based on a range of truth indicators (Hauch et al., 2017; Steller & Kohnken, 1989 as cited in Amado et al., 2016). Developed to assist in judicial decisions regarding the truthfulness of child witnesses in cases of child sexual offenses (Roma et al., 2011), CBCA has been deemed useful in broader settings involving adult populations (Amado et al., 2015). In fact, its truth indicators can distinguish between an actual memory of a self-experienced event and a fabricated event by adult populations (Amado et al., 2016), although, to date, there is no empirical evidence of a total score cut-off, nor is there theoretical justification to assess on all criteria.

Four of the original CBCA criteria are particularly indicative of truthfulness in a statement (Amado et al., 2016). Whilst they do not directly determine if a person is lying, the CBCA criteria can assist in decision-making on the accuracy of information. The top four indicators are: quantity of details, logical structure, unstructured production, and conversation reproductions.

Look out for	Tips for Assessing Truthfulness
Quantity of Details	Tip 1: Contact tracers should assess whether the information contains details. For example, to look for voluntary mention of details of persons, attire, events attended, and a description of the surrounding location.
Logical Structure	Tip 2: Contact tracers should assess, based on the details provided and knowledge of the local area, whether the information provided makes logical sense. For example, when a member of public narrates a journey, the stated mode of transport, costs, and the duration of travel has to be realistic.
Unstructured Production	Tip 3: Contact tracers should look out for memory recalls that include digressions and/or a jumbled sequence of order. This truth indicator is likely to be present in non-scripted statements. For example, a short explanation for the choice of route avoided and personal journey preferences.
Conversation Reproductions	Tip 4: Contact tracers should look out for memory recalls that include word-for-word conversations that took place. For example, narrating a few sentences of a conversation that took place at a lunch meeting.

FUTURE DIRECTIONS AND RECOMMENDATIONS FOR THE HOME TEAM

Acknowledge the Value of Contact Tracing Skill Set

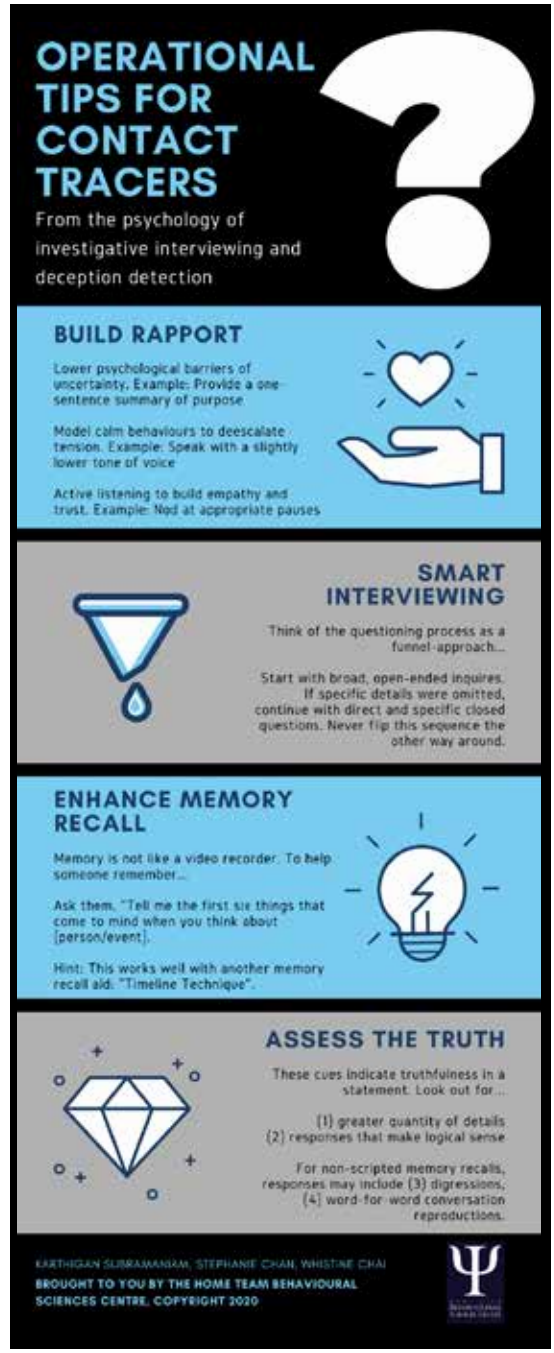
The effort of tracing individuals with limited information requires a set of skills. For police investigators involved in contact tracing efforts, the various investigative skills (i.e. profiling, interviewing, negotiation and persuasion, and deception detection) are transferable to contact tracing efforts. Whilst pandemics such as COVID-19 may not happen often, there is value in developing the skill set of contact tracers (including those from MOH and SPF) in these areas, given the broad applicability of such skills to their line of work and beyond. The Home Team should consider training their officers or providing them with exposure in such domains to hone their investigative skills.

Tap on Digital and Technological Platforms

Contact tracing efforts can also be boosted by tapping on digital and technological platforms. One such COVID-19 initiative by the Singapore government would be SafeEntry, a national digital check-in system that captures individuals' arrival and departure timings at various venues (e.g. offices, schools, malls) (Yip, 2020). By doing so, it records details that enables contact tracers to locate close contacts of infected cases quickly and prevent the formation of new clusters.

Another initiative would be the mobile application TraceTogether, which was developed by the Government Technology Agency (GovTech) in collaboration with MOH (Baharudin & Wong, 2020). The app facilitates contact tracing efforts by enabling contact tracers to inform and isolate users who are close contacts of COVID-19 cases more quickly, which would be more effective in reducing the risk of local transmission. Available also as a user-friendly TraceTogether token, it is a form of wearable technology for those who do not have smart phones, such as the elderly, or have issues with using the app on their phones (Lee, 2020).

Additionally, while police officers do tap on other digital resources such as CCTV systems (e.g. POLCAM), the profiling of social media accounts of patients who have been tested positive for COVID-19 might be beneficial in identifying close contacts whom they may be unable to recall. Although resource- and time-intensive in nature, this might be necessary for unique and urgent cases.



CONCLUSION

Contact tracing plays a crucial role in Singapore's strategy to limit local transmission of COVID-19. Effective and rapid contact tracing enables faster identification of people-at-risk and the resultant quarantine of confirmed cases will limit the spread locally. Significant psychological contributions in the field of investigative interviewing, memory, and deception detection can be applied to enhance the questioning skills in contact tracing. The four operational tactics – build rapport, enhance memory recall, assess the truth, and smart interviewing – can assist contact tracing officers to improve the speed and accuracy of information gathering during emerging epidemics (i.e. the fight against COVID-19).

ABOUT THE AUTHORS

Karthigan Subramaniam
is a Psychologist with the Crime, Investigation and Forensic Psychology Branch of the Home Team Behavioural Sciences Centre (HTBSC) at the Ministry of Home Affairs. Karthigan's research interests and expertise fall within the area of investigative interviewing, with particular focus on rapport, interviewing techniques, information elicitation, memory and the interviewing of vulnerable victims and witnesses. He also conducts training for law enforcement officers in investigative interviewing and forensic psychology. Karthigan obtained a Summa Cum Laude undergraduate degree in Psychology from the University at Buffalo, State University of New York, and is also a member of the Phi Beta Kappa Honors Society.

Stephanie Chan
is a Senior Psychologist with the Home Team Behavioural Sciences Centre (HTBSC) of the Ministry of Home Affairs. Stephanie's current research interest is in crime and forensic psychology, particularly in the law enforcement context. Her primary research area focuses on the psychology of detecting deception and deceptive intent, as this has operational applications for cyber detection, police investigation, border control, and people profiling purposes. To that end, she has also conducted several training workshops on deception detection for law enforcement investigative officers. The research findings of her empirical studies have been presented and shared with non-governmental researchers at local and international conferences. In addition to her work on deception detection, Stephanie has also undertaken research in the criminal law enforcement context, including the understanding of cyber-harassment, (illegal) marriages of convenience, risky sexual online behaviours, and house-breaking crime. She also provides psychology-based support to the Crisis Negotiation Unit that responds to local crisis and hostage situations. Stephanie is a member of the British Psychological Society, and she holds a MSc in Forensic Psychology from the University of Leicester in the United Kingdom.

The authors would like to thank Director HTBSC, Dr Majeed Khader; Senior Assistant Director, Ms Whistine Chai; and Senior Assistant Director, Mr Jeffery Chin, for their continuous guidance, support and encouragement.

The **Home Team Behavioural Sciences Centre** (HTBSC) was established in 2005 to use behavioural sciences to support the Home Team's operational work. HTBSC strives to be a path-finding centre of excellence for behavioural sciences research and training in the areas of crime, safety, and security. The centre serves to equip Home Team (HT) officers with the knowledge and skills to deal with issues relating to human behaviours, so as to complement their operational effectiveness as well as enhance their efficiency. Key specialised psychological research branches of the HTBSC include:

- Crime, Investigation and Forensic Psychology (CIFP)
- Operations and Leadership Psychology (OLP)
- Extremism and Terrorism Psychology (ETP)
- Resilience and Safety Psychology (RSP)

With time, HTBSC seeks to be a nexus connecting HT departments, academia and international experts, to offer a dynamic fusion of ideas and practical solutions for HT officers striving to make Singapore a secure home.

REFERENCES

Amado, B. G., Arce, R., & Farina, F. (2015). Undeutsch hypothesis and Criteria Based Content Analysis: A meta-analytic review. *The European Journal of Psychology Applied to Legal Context 7*, 3-12. http://dx.doi.org/10.1016/j.ejpal.2014.11.002

Amado, B. G., Arce, R., Farina, F., & Vilarina, M. (2016). Criteria-Based Content Analysis (CBCA) reality criteria in adults: A meta-analytic review. *International Journal of Clinical and Health Psychology 16*, 201-210. http://dx.doi.org/10.1016/j.ijchp.2016.01.002

Baharudin, H. & Wong, L. (2020, March 20). Coronavirus: Singapore develops smartphone app for efficient contact tracing. *The Straits Times*. Retrieved from https://www.straitstimes.com/singapore/coronavirus-singapore-develops-smartphone-app-for-efficient-contact-tracing

Bull, R., & Soukara, S. (2010). Four studies of what really happens in police interviews. In G. D. Lassiter & C. A. Messinere (Eds.), *Decade of behavior: Police interrogations and false confessions: Current research, practice, and policy recommendations* (pp. 81-95). American Psychological Association. https://doi.org/10.1037/12085-005.

Chin, J. (2017). *Rapport Building in Suspect Interview*. Singapore: Home Team Behavioural Sciences Centre.

Coffrini, F. (2020, March 16). World Health Organization says some nations aren't running enough coronavirus tests: "Test every suspected case". *CNBC*. Retrieved from https://www.cnbc.com/2020/03/16/who-says-some-nations-arent-running-enough-coronavirus-tests-test-every-suspected-case.html

Collins, R., Lincoln, R., & Frank, M. G. (2002). The effect of rapport in forensic interviewing. *Psychiatry, Psychology and Law*, 9, 69-78. https://doi.org/10.1375/132187102760196916

Conway, M. A. (2012). Ten things the law and others should know about human memory. In L. Nadel & W. Sinnott-Armstrong (Eds.), *Memory and law* (pp. 359–372). Oxford University Press. http://dx.doi.org/10.1093/acprof:oso/9780199920754.003.0014

'Drop everything, scramble': Singapore's contact tracers fight COVID-19. (2020, March 13). *CNA*. Retrieved from https://www.channelnewsasia.com/news/singapore/coronavirus-contact-tracing-close-contacts-quarantine-covid-19-12535754

GovTech (n.d.) *Responding to COVID-19 with Tech*. Retrieved from https://www.tech.gov.sg/products-and-services/responding-to-covid-19-with-tech/

Grupe, D. W., & Nitschke, J. B. (2013). Uncertainty and anticipation in anxiety: An integrated neurobiological and psychological perspective. *Nature Reviews Neuroscience 14*, 488-501. https://doi.org/10.1038/nrn3524.

Hauch, V., Sporer, S. L., Masip, J., & Blandon-Gitlin, I. (2017). Can credibility criteria be assessed reliably? A meta-analysis of criteria-based content analysis. *Psychological Assessment 29*, 819-834. http://dx.doi.org/10.1037/pas0000426

Holmberg, U., & Christianson, S. A. (2002). Murders' and sexual offenders' experiences of police interviews and their inclination to admit or deny crimes. *Behavioral Sciences & The Law 20*, 31-45. https://doi.org/10.1002/bsl.470.

Hope, L. (2018) *What Sources mean when they say 'I don't know' or 'I don't remember'* [Poster]. Retrieved from https://crestresearch.ac.uk/resources/i-dont-know-memory-retrieval/

Hope, L., Mullis, R. & Gabbert, F. (2013) Who? What? When? Using a timeline technique to facilitate recall of a complex event. *Journal of Applied Research in Memory and Cognition*, 2, 20-24.

Infectious Diseases Act (1976, Part VIII, cl. 65). Retrieved from https://sso.agc.gov.sg/Act/IDA1976

Kelly, C. E., Miller, J. C., Redlich, A. D., & Kleinman, S. M. (2013). A taxonomy of interrogation methods. *Psychology, Public Policy, and Law 19*, 165-178. https://doi.org/10.1037/a0030310.

Klinkenberg, D., Fraser, C., & Heesterbeek, H. (2006). The effectiveness of contact tracing in emerging epidemics. PLos One. https://doi.org/10.1371/journal.pone.0000012

Kok, Y. (2020, February 10). Contact tracing begins with mapping out virus patient's movements. *The New Paper*. Retrieved from https://www.tnp.sg/news/singapore/contact-tracing-begins-mapping-out-virus-patients-movements

Kontogianni, F., Hope, L., Taylor, P. J., Vrij, A., & Gabbert, F. (2018). The benefits of a self-generated cue mnemonic for timeline interviewing. *Journal of Applied Research in Memory and Cognition 7*(3), 454-461. https://doi.org/10.1016/j.jarmac.2018.03.006

Lee, L. (2020, September 15). Explainer: How the TraceTogether token works, where to collect it. *Today*. Retrieved from https://www.todayonline.com/singapore/explainer-how-tracetogether-token-works-where-collect-it

Ministry of Health (2020, April 14). 25 *more cases discharged; 334 new cases of COVID-19 infection confirmed* [Press release]. Retrieved from https://www.moh.gov.sg/news-highlights/details/ 25-more-cases-discharged-334-new-cases-of-covid-19-infection-confirmed

Mohan, M. (2020, February 11). 'Painstaking' contact tracing work by SPF led to discovery of possible cluster at Payar Lebar church: Shanmugam. *CNA*. Retrieved from https://www.channelnewsasia.com/news/singapore/coronavirus-singapore-police-contact-tracing-shanmugam-12422668

Niehus, R., De Salazar, P. M., Taylor, A., & Lipsitch, M. (2020). Quantifying bias of COVID-19 prevalence and severity estimates in Wuhan, China that depend on reported cases in international travelers. *medRxiv*. Preprint available at https://doi.org/10.1101/2020.02.13.20022707

Oxburgh, G. E., Myklebust, T., & Grant, T. (2010). The question of question types in police interviews: a review of the literature from a psychological and linguistic perspective. *International Journal of Speech, Language & the Law 17*(1). https://doi.org/10.1558/ijsll.v17i1.45

Richter, D. (2006). Nonphysical conflict management and deescalation. In D. Richter & R. Whittington (Eds.), *Violence in Mental Health Settings* (pp. 125-144). New York, NY: Springer.

Roma, P., Martini, P. S. Sabatello, U., Tatarelli, R., & Ferracuti, S. (2011). Validity of Criteria-Based Content Analysis (CBCA) at trial in free-narrative interviews. *Child Abuse & Neglect 35*, 613-620. http://doi.org/10.1016/j.chiabu.2011.04.004

Sagar, M. (2020, March 17). The importance of contact tracing in Singapore and the role technology plays. *Open Gov*. Retrieved from https://www.opengovasia.com/the-importance-of-contact-tracing-in-singapore-and-the-role-technology-plays/

Sandoval, V. A. (2003). Strategies to avoid interview contamination. *FBI Law Enforcement Bulletin* 72, 1-13.

Schacter, D. L. (1999). The seven sins of memory. Insights from psychology and cognitive neuroscience. *American Psychologist 54*, 182–203. http://dx.doi.org/10.1037/0003-066X.54.3.1

Simons, D. J., & Chabris, C. F. (2011). What people believe about how memory works: A representative survey of the U.S. population. *Plos ONE 6*(8), e22757. http://dx.doi.org/10.1371/journal.pone.0022757

Snook, B., & Keating, K. (2011). A field study of adult witness interviewing practices in a Canadian police organization. *Legal and Criminological Psychology 16*(1), 160-172. https://doi.org/10.1348/135532510X497258

Thompson, J. (2013). Active listening techniques of hostage & crisis negotiators. *Psychology Today*. Retrieved from https://www.psychologytoday.com/sg/blog/beyond-words/201311/active-listening-techniques-hostage-crisis-negotiators

Vaswani, K. (2020, March 19). Coronavirus: The detectives racing to contain the virus in Singapore. *BBC*. Retrieved from https://www.bbc.com/news/world-asia-51866102

Vrij, A. (2005). Criteria-Based Content Analysis (CBCA): A qualitative review of the first 37 studies. *Psychology, Public Policy, and Law 11*, 3-41. http://doi.org/10.1037/1076-8971.11.1.3

Vrij, A., Meissner, C. A., Fisher, R. P., Kassin, S. M., Morgan III, C. A., & Kleinman, S. M. (2017). Psychological perspectives on interrogation. *Association for Psychological Science 12*, 927-955. https://doi.org/10.1177/1745691617706515.

Weger Jr, H., Bell, G. C., Minei, E. M., & Robinson, M. C. (2014). The relative effectiveness of active listening in initial interactions. *International Journal of Listening 28*, 13-31. https://doi.org/10.1080/10904018.2013.813234

Whitbourne, S. K. (2017). The mindset that makes it hard to admit you're wrong. *Psychology Today*. Retrieved from https://www.psychologytoday.com/sg/blog/fulfillment-any-age/201703/the-mindset-makes-it-hard-admit-youre-wrong

World Health Organisation. (2017, May). *Contact tracing* [Online Q&A]. Retrieved from https://www.who.int/features/qa/contact-tracing/en/

Yeo, S. J. (2020, March 28). A guide to Singapore's COVID-19 contact tracing system. *The Straits Times*. Retrieved from https://www.straitstimes.com/multimedia/a-guide-to-singapores-covid-19-contact-tracing-system

Yip, Wai Yee. (2020, May 1). Coronavirus: More need to use contact tracing app for it to be effective. *The Straits Times*. Retrieved from https://www.straitstimes.com/singapore/more-need-to-use-contact-tracing-app-for-it-to-be-effective

FROM PIONEER POLICE PSYCHOLOGIST TO THE HOME TEAM'S CHIEF PSYCHOLOGIST:

REFLECTIONS BY DR MAJEED KHADER

When I was asked to write an article about the role of the Chief Psychologist at the Ministry of Home Affairs (MHA), I imagined the reader grimacing at yet another personal biography. I did too. On second thoughts, however, I realised there have been several points of reflection in my personal journey as a Home Team psychologist, over 28 years of working in this field, that other professionals and the general reader might find interesting. With this in mind, I share them here.

THE FIRST POLICE PSYCHOLOGIST AT THE POLICE ACADEMY

Although the title Chief Psychologist of MHA might sound grandiose, my beginnings were humble. No room, no table, no computer, and no one at the Police Academy knew I was coming. So, my first day at work was, to say the least, unusual. As a psychologist recruited on contract and placed at the Police Academy (or PA) – HQ was unclear what to do with me – I was asked to teach stress management. PA, along Thomson Road, was this huge, green, serene, beautiful place with lots of history, going back pre-war. There was so much history that there were stories of it being haunted. At times, some of my clients, who were trainees, discussed their spooky experiences during my counselling sessions; the common story was one where they saw a spirit holding on to the ceiling fan, looking down at them as they lay in bed at night. Why didn't they prepare me for this at psychology school, I wondered. At the PA, when news travelled that there was an in-house psychologist, counselling picked up quickly, mostly for national service trainees who sometimes faced adjustment issues. So my work mostly comprised stress management and counselling. For three years, I taught stress management training to thousands of officers.

By 1997, the stress training became routine. But little did I realise how it had shaped me and the profession. For instance, officers that I had trained had become comfortable talking to a psychologist (which paved the way for many future psychologists both in the police and other departments). They knew about stress, critical incident stress, trauma and different ways of coping. Graduating officers deployed at different units were supporters and often helped out as 'eyes and ears' who shared with me the morale and work challenges they faced operationally, which helped me appreciate ground concerns as I progressed in my career. Bosses found this useful for programme evaluation and implementation, because they had (through my work) a sense of what the officers liked and disliked. Also, it was easy to walk into a police station and be welcomed as their previous trainer at PA; officers often have fond memories of PA. Some senior officer trainees (then in their twenties as young Inspectors and Assistant Superintendents) were over time promoted to commanders and supported the use of psychology in police work. (There is sometimes bureaucratic debate about whether an embedded in-house psychological services approach or a HQ-centralised or outsourced psychological services approach may be better. For the reasons cited here, I think an embedded approach is better, from the perspective of getting deep insights into policing and law enforcement.)

Other Home Team departments soon grew open to the idea of using psychologists. Much of this was due to the early work of our team and I cannot take sole credit for it; but being a pioneer, I was in the thick of it. At a personal and deeper professional level, I was getting very raw first-hand experience of policing and criminal work, when I interacted and lunched with my police friends. The pace at the Academy was slower than in HQ and the front-line units, so real friendships were forged through deeper conversations. Close lunch mates, many of who were senior in age, shared inside stories about prominent cases, including the Toa Payoh Ritual Murders, gang fights, past secret societies, and gun man incidents in early Singapore. Many of these officers remain friends with me today, thanks to social media. Then they treated me like a little brother, even though I was novelty to them, like a museum exhibit. Psychology was novel because it wasn't only new to policing, it was relatively new in Singapore. NUS had rolled out its fourth batch of Psychology Honours students. Prior to me and my senior Peter Tan who had joined six months earlier, few, if any, recruited psychology staff were from the local universities. Almost all were returned psychology scholars and had mainly worked at the Institute of Mental Health and Woodbridge Hospital. I think in a way we were test cases. The climate at PA was ideal for a young researcher interested in crime and policing. I learned much about policing, investigations, crime on the streets and the life of a *mata*[1]. Unlike many other countries, cops here don't write about their experiences or their culture, but their tales were captivating for a young man who had only read about these things from Western police psychology journals and crime novels.

We do so much more now with a full range of services in the Home team and MHA. I refer to these services as falling under the three O's: Services for Officers (counselling, peer counselling, resilience programmes, crisis support); the Organisation (psychologically informed environments and processes, leadership assessment and selection, leadership development, leadership training, crisis leadership training, organisational change management and development, consultations, psychological selection of entry level officers, specialist groups and special tactics groups, NSF support and care); and Operations and forensic/criminal psychology (criminal profiling, hostage and crisis negotiation, crowd psychology management, emergency psychology, evaluation and crime research, crime prevention, offender rehabilitation and behaviour change, drug risk assessments and rehabilitation, intel support and preparing our communities for major incidents and trauma). To support these three Os, there is overarching research and development we undertake employing behavioural and psychological sciences.

LIFE AND DEATH MATTERS

When you see death as part of work, it is sobering, but shapes you. Every home team officer who has faced this, knows this. Sometimes death is in the form of suicide, homicide, road traffic incidents, accidents, disasters, crime scene incidents, or crime scene photos. I had read about post trauma stress disorder (PTSD) whilst in psychology school, but personally experiencing it is a thing that is hard to psychologically prepare for. Your dinner becomes tasteless, you feel sad and you may experience aspects of PTSD in the form of 'intrusive thoughts' (when you have forceful images enter your mind and you try to stop it, but cannot). You often face this because the orang lama believes in the discipline of going to the ground (i.e. visiting the crime scene). Going to the ground, you sometimes see distressed families, spouses and kids. Why this insistence on going to the ground? It is not explained, it is just something you do. But you will get scolded if you do not go. I think it provides psychological fidelity – a sense of time, place, smells, motion, and people in the area. Perhaps it provides tacit insight, what the Germans call fingerspitzengefuhl or a feeling in your fingertips, which captures sharp situational awareness and provides one with the ability to respond effectively and perceptively. Responding to the scene, sometimes you see blood, broken bone fragment, brain matter, and at times, white skull bits. Not your everyday sights.

This is especially true when officers respond to suicide cases; sometimes body parts are in different places, pieces. It is not easy to know

[1]*Mata* refers to eye in Malay, but mata-mata generally means policeman (or watchman), where a patrolling policeman of the olden days was the "all eyes". (See https://remembersingapore.org/2013/08/10/history-of-sg-police-force/)

who this person was who had taken his or her life. No easy identification. Sometimes young police officers see a body with a persistently ringing phone in a pocket. It makes you wonder if a loved one is looking for them, despite the person thinking that he should leave this world. At times, outside of the police cordon, you see a person worriedly peering through the crowd, wondering if the commotion is about their loved ones. Indeed, sad moments. I think about what young police, CNB and SCDF officers have to go through when they encounter death like this. The bold exterior front they have to put on, when everyone is looking, as if they see this all the time (when they do not). As a psychologist responding to these kinds of incidents, I used to wonder why it would be different. Because you wear a blue Home Team uniform? I don't know if you can ever train for this. But police officers, SCDF officers, and many Home Team officers see these kinds of things or other equally distressful sights. They have my respect and gratitude. I don't think the public realises what these officers go through emotionally. It must be hard. It's hard to talk about this to friends and family, let alone the fact that you cannot. These experiences change them psychologically – and sometimes cynically too. For some, they become overprotective friends, lovers and parents.

A MOMENT OF TERROR

At one stage of my career, I was asked to interview arrested terrorists. That was another shaping moment. I worried if they would talk to me or if they would refuse to. We succeeded in interviewing them, and I realised many of them had been misled by leaders who gave them the wrong idea of religion. Learning about some of their plans was disturbing to me because they had no qualms about harming Singapore and the people living here. The experience of having to do these interviews was difficult initially because I had young children at the time and feared for my own safety. A senior officer teased me, saying that if I was worried, I would be provided a bodyguard (he meant it as a joke); but it wasn't amusing. As a non-trained civilian psychologist, I didn't remember signing up to do this. It was part exciting, part stressful but that's exactly the Home Team: never a dull day. As the days progressed, I realised this was important work for the safety of our own families. I also developed a new form of respect for the officers working for the Internal Security Department. They are professionals who are on top of their game. Doing this made me have a deep sense of patriotism. It also opened up a whole new strand of research we started to do on the psychology of extremism, thought reformation ('brainwashing'), persuasion, influence, group dynamics and hate crimes.

SAME BUT DIFFERENT

As the years progressed, I had a role in the start-up and development of psychological services in CNB, Prisons, ICA, HTBSC, and SCDF. What did I learn? That I should not merely repeat what I did for the police for the other departments. That there is a need to respect differences in the deep cultures of each department. Each has its own unique historical, organisational, sub-cultural differences and operational differences. This is not too much of a surprise to me being a psychologist, because I know that even in our own personal homes, siblings can be different, despite sharing the same parents and being exposed to similar parenting experiences. The Home Team is like that. Same, yet different.

BEING 'CP'

As I became Chief Psychologist, I have had several inflexion points. What seems clear is that I am a Chief to the psychologists. This was initially daunting. How does a Chief behave? Should you sound clever? I didn't get the playbook. But the discovery was that I learnt over time that I have to also be Chief to the Ministry Headquarters Senior Directors and Directors, the Commissioners and commanders, and to appreciate their organisational and operational needs. This sometimes means that I cannot always be on the side of the psychologists all the time. With greater inter-ministry work, I further learned that the role includes being a partner to other Chiefs in other ministries. There is sometimes a need to peer-lead to push positive agendas for the whole of public service and government. And finally, as Chief I have to be a representative of Singapore with international partners and professionals on matters pertaining to the nature of psychology as it is applied within the ministry. When I was first asked to write the job description for Chief Psychologist MHA, it didn't dawn on me that the role is so multidimensional and complex.

FATHERHOOD AND AUTISM

The last 17 years have been more challenging because my wife and I have an autistic teenager. Raouf is autistic and low functioning (meaning he finds it difficult to do his daily chores such as bathing, cleaning up after toilet, eating, putting on his clothes). He was developing normally like most kids till about two, when we suspected that he was autistic since he wasn't engaging in eye contact, was often chasing his own shadow, often liked spinning objects and was quite sensitive to touching various things. We got him diagnosed early and put him through therapy. He is now 17 and a joy in our lives. Working in the police force, I realised many others have similar experiences coping with mental illness or mental disability. The point of sharing this is to raise awareness about disability. We can live with illness and disability and thrive in spite of challenges.

More than any other experience, Raouf has taught me about patience, being centred, being grounded and being aware of the hundreds who live with disability who get by. I have learnt about my own personal resilience and of others. I have learnt that I have very supportive leaders and supervisors in the police and the Home Team – who are understanding and accommodating. With the encouragement of my better half, I have further learnt that if you want something (in the disability sphere), you have to be a part of it, advocate for it and not wait for it to happen. Make it happen. There were many things we achieved in the disability ground because we pushed for it.

I have learnt through Raouf that while you worry about tomorrow, you never let today slip by. When you know that you may not be around for your child after you are gone, the thought of it is disheartening. But also, we learn to live the moment. And that every day has to be relished one day at a time. I have learnt that my being Chief means nothing to him. But being his father, playmate and understanding friend is everything. Titles, ranks and grades don't define us at the end of the day. Our values do, the relationships we make, do. The meaning of the work we do makes a difference. In this regard, my work has been a meaningful experience for me. I thank the Home Team for this.

ABOUT THE AUTHOR

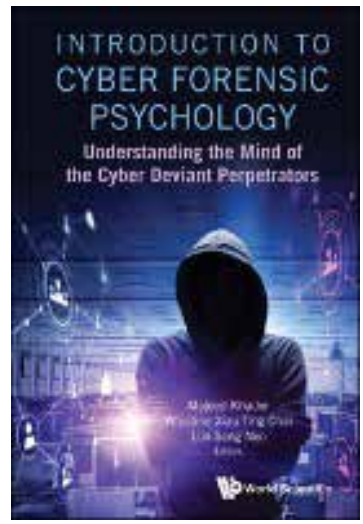
Majeed Khader
is the Chief Psychologist of the Ministry of Home Affairs, and Director of the Home Team Behavioural Sciences Centre. A trained crisis negotiator, he is also Associate Professor (Adjunct) at both the National University of Singapore and the Nanyang Technological University. He has published widely and is the author of Crime and Behaviour, and co-editor of several books, including Introduction to Cyber Forensic Psychology, Prepared for Evolving Threats: the Role of the Behavioural Sciences, and Combatting Violent Extremism in the Digital Era. He plays a key role in leading, directing and guiding practice, research, training, and operational support of various behavioural sciences domains.

RECENT PUBLICATIONS BY HOME TEAM STAFF

BOOKS

Introduction to Cyber Forensic Psychology: Understanding the Mind of the Cyber Deviant Perpetrators

Edited by Majeed Khader, Whistine Chai and Loo Seng Neo
World Scientific, February 2021, 404 pages



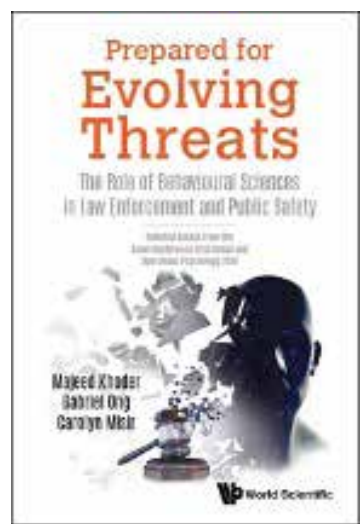
The first of its kind in Singapore, *Introduction to Cyber Forensic Psychology*, explores emerging cybercrimes and cyber enabled crimes. Utilising a forensic psychology perspective to examine the mind of the cyber deviant perpetrator as well as strategies for assessment, prevention, and interventions, it seeks to tap on the valuable experiences and knowledge of leading forensic psychologists and behavioural scientists in Singapore. Some of the interesting trends discussed in this book include stalkerware usage, livestreaming of crimes, online expressions of hate and rebellion, attacks via smart devices, COVID-19 related scams and cyber vigilantism. Such insights enhance our awareness about the growing pervasiveness of cyber threats and showcase how behavioural sciences is a force-multiplier in complementing existing technological solutions.

Majeed Khader and Whistine Chai are with the Home Team Behavioural Sciences Centre (HTBSC). Neo Loo Seng was formerly with HTBSC.

Prepared for Evolving Threats: The Role of Behavioural Sciences in Law Enforcement and Public Safety

Selected Essays from the Asian Conference of Criminal and Operations Psychology 2019

Edited by Majeed Khader, Gabriel Ong and Carolyn Misir
World Scientific, September 2020, 280 pages

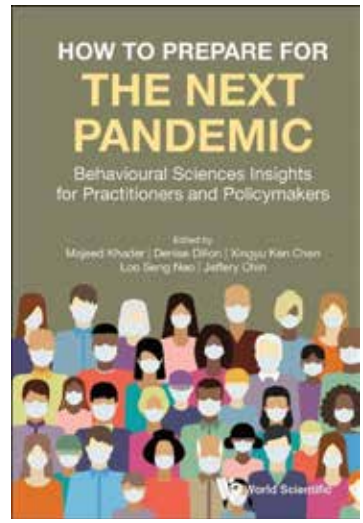


This book is a collection of essays from local, regional, and international experts in the fields of law enforcement, safety, and security who participated in the Asian Conference of Criminal and Operations Psychology held in Singapore in 2019. In a world where threats and crises are increasingly transnational, there is value in the cross-cultural exchange of information and the integration of knowledge bases to understand the present-day landscape dynamics. More than ever, there is a greater urgency for behavioural sciences to inform and shape operational protocols and policies in the security sector.

Majeed Khader is the Chief Psychologist of the Ministry of Home Affairs. Gabriel Ong is with the Singapore Prison Service Psychological & Correctional Rehabilitation Division. Carolyn Misir is with the Singapore Police Psychological Services Division.

How to Prepare for the Next Pandemic: Behavioural Sciences Insights for Practitioners and Policymakers

Edited by Majeed Khader, Denise Dillon, Xingyu Ken Chen, Loo Seng Neo and Jeffery Chin
World Scientific, December 2020, 276 pages



In many countries, as the number of confirmed COVID-19 cases skyrocketed exponentially, a surge of 'bad' behaviours such as xenophobia attacks, propagation of misinformation, and panic-buying of essential items became commonplace. Panic and chaos have reigned as the world witnessed unprecedented moves by countries to close their borders and implement strict quarantine orders in a desperate attempt to mitigate the spread of the coronavirus. COVID-19 has impacted many different aspects of society, from politics to the psychological well-being of citizens, and the list will grow as the spread of the disease persists. While it is impossible to fathom the way COVID-19 will change our usual way of life, there are prevailing concerns that the community currently faces. What are the psychological impacts of a pandemic? How do we enhance the collective resilience of the community during a pandemic? How do we cope with mental health issues during a pandemic? How do we deal with bereavement during a pandemic? How can we support healthcare workers and emergency responders during a pandemic? These are just some of the many important concerns that influence the way we cope with the COVID-19 outbreak. There is therefore an urgent need to enhance our understanding and level of preparedness against Covid-19 and pandemics in general. To that end, *How to Prepare for the Next Pandemic: Behavioural Sciences Insights for Practitioners and Policymakers* aims to examine the impacts pandemic have on our society from a behavioural sciences perspective, and to identify solutions that practitioners and policymakers can adopt to combat the spread of COVID-19 in this new operating environment.

Majeed Khader and Xingyu Ken Chen are with the Home Team Behavioural Sciences Centre (HTBSC). Jeffery Chin, also of HTBSC, is currently on secondment to the Ministry of Social and Family Development.

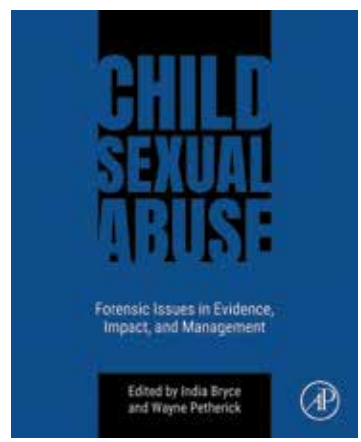
BOOK CHAPTERS

Offender subtypes and theories of child sexual abuse—Illustrations using two Singapore case studies (Chapter 2)

By Xiangbin Lin, Paul Zhihao Yong, Priyathanaa Kalyanasundram and Kend Tuck Ng

Interventions for sex offenders who target child victims (Chapter 26)

By Shamala Gopalakrishnan, Yasmin Ahamed and Natasha Lim



The Rotherham child sexual exploitation: An analysis of organisational and criminological contributors (Chapter 31)

By Whistine Chai, John Yu, Ang Mae Chen and Majeed Khader

In *Child Sexual Abuse: Forensic Issues in Evidence, Impact and Management*
Edited by India Bryce Wayne Petherick Elsevier, April 2020

In Chapter 2, Lin, Yong, Kalyanasundram and Ng of the Singapore Prison Service investigate various factors that facilitate decisions to sexually offend against children with a focus on the motivations of child sexual abuse. The development of these motivations and their corresponding goals are discussed and case studies are used to illustrate these motivations, and how they lead to offending behaviour.

In Chapter 26, Gopalakrishnan, Ahamed and Lim of the Singapore Prison Service provide an overview of the intervention approaches and techniques used in the interventions for sex offenders who target child victims. While most publications have focused on the treatment of sexual offenders from an academic stance, they provide a 'practitioner-oriented' angle based on their clinical experiences as psychologists working with sex offenders in the Singapore Prison system. Their chapter aims to put together a range of interventions that have been used in a prison setting with sex offenders who targeted child victims.

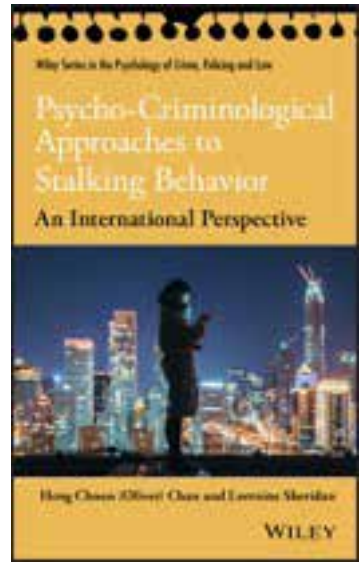
In Chapter 31, Chai, Yu, Chen and Khader of the Home Team Behavioural Sciences Centre examine the Rotherham Child Sexual Exploitation case, one of the worst incidences of organised sexual abuse in the UK, with estimates of more than 1400 child victims who were sexually exploited between the 1990s to 2013 in Rotherham. They provide an analysis of the causes and contributors to this prolonged and pervasive series of child sexual exploitation by examining open-source inquiry and investigative reports through various perspectives and theories of crime. Their findings reveal the presence of salient investigative and operational shortcomings of implicated agencies and organisations as well as plausible criminological factors across society that fuelled the spread and persistence of these crimes. Some recommendations to mitigate and manage child sexual exploitation are presented at the end of their chapter as learning lessons from the Rotherham incident.

Xiangbin Lin, Paul Zhihao Yong, Priyathanaa Kalyanasundram, Kend Tuck Ng, Shamala Gopalakrishnan, Yasmin Ahamed, Natasha Lim, Whistine Chai, Ang Mae Chen and Majeed Khader are psychologists with Home Team Departments. John Yu, formerly with HTBSC, is now furthering his education in clinical psychology.

Unwanted Attention: A Survey on Cyberstalking Victimisation

By Majeed Khader and Stephanie Chan

In *Psycho-Criminological Approaches to Stalking Behaviour: An International Perspective*
Edited by Heng Choon (Oliver) Chan and Lorraine Sheridan
John Wiley & Sons Ltd, June 2020



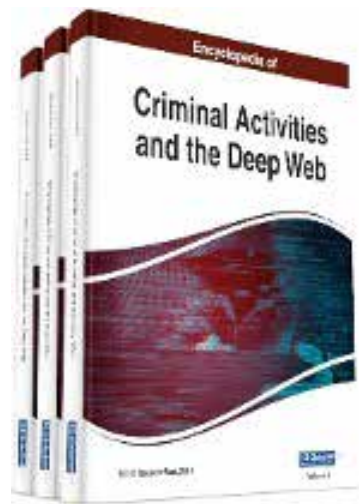
Given the advent of technology and the pervasive use of social media, the Home Team Behavioural Sciences Centre embarked on a study to explore the nature and impact of cyberstalking victimisation among Singaporean emerging adults. Surveying a total of 497 university undergraduates and 317 polytechnic students, this study examined the prevalence of cyberstalking, victims' threat perception and subjective distress, and victims' coping strategies and their attitudes towards future help-seeking avenues. Prevalence rates for cyberstalking ranged from 27.7% to 55.5%. The subsequent findings of victim threat perception, distress, coping strategies, and help-seeking preferences are discussed with respect to implications for greater awareness and anti-cyberstalking measures.

Majeed Khader and Stephanie Chan are with the Home Team Behavioural Sciences Centre

Crime-Fake News Nexus

By Xingyu Chen, John Yu, Pamela Goh, Loo Seng Neo, Verity Er and Majeed Khader

In *Encyclopedia of Criminal Activities and the Deep Web, Volume 1*
Edited by Mehdi Khosrow-Pour
IGI Global, February 2020



Fake news has become intertwined with criminal offences of various magnitudes across the globe. Singapore, for example, has also seen a recent emergence of bitcoin investment scams that employ fake news to deceive their victims. Despite this emerging nexus between fake news and criminal conduct, there is a dearth of literature examining this convergence to date. Thus, an exploratory study on fake news cases that came into contact with the criminal justice system in Singapore from 2013 to 2018 was conducted by the Home Team Behavioural Sciences Centre. This study also aims to provide an exploratory outlook on the following: (a) the type of crime-fake news in Singapore, (b) the impact that crime-related fake news (or crime-fake news) has on the victims as well as society, (c) the profile of the fake news creators and their motivations, (d) the channels of transmission, as well as € the response to mitigate the crime-fake news.

The Importance of the Human-Centric Approach in Combating Cyber Threats

By Pamela Goh, Loo Seng Neo and Xingyu Chen

Leveraging on Digital Footprints to Identify Potential Security Threats: Insights From the Behavioural Sciences Perspective

By Loo Seng Neo

In *Encyclopedia of Criminal Activities and the Deep Web, Volume 3*
Edited by Mehdi Khosrow-Pour
IGI Global, February 2020

The world faces increasing prevalence of cyber threats and cyberattacks despite advancements in technological defences against them. Cyber perpetrators are constantly looking to exploit any vulnerabilities in the computer and network systems, where humans are unfortunately the weakest link. Although they are aware of the threats and know what should be done in order to protect themselves and their organisations, people are still not engaging enough in these cyber hygiene practices. The chapter by Goh, Neo and Chen, psychologists from the Home Team Behavioural Sciences Centre, attempts to understand human behaviours in cyberspace, providing insights into the reasons for cyber threats and what can be done to counter them.

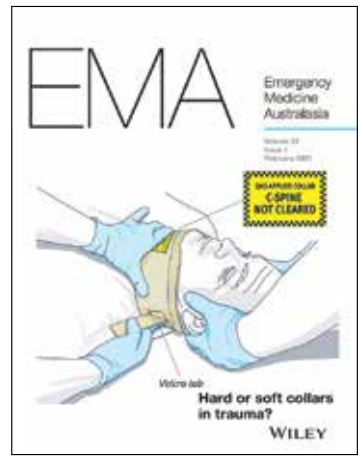
The growing pervasiveness of the Internet has revolutionised how individuals communicate and interact with one another. Despite being an effective channel for communication, it has also been exploited by individuals with malicious intent – such as criminals, violent extremists – for the purposes of fundraising, recruitment, propaganda creation and dissemination, sharing of vital information, data mining, etc. With the ease of accessibility and cloak of anonymity, individuals with malicious intent have reorganised their operations online to exist and operate in social environments that may not agree with their activities. How then can individuals with malicious intent be identified in advance? How are they using the Internet and social media to further their nefarious deeds? These questions can be addressed by examining how open-source digital footprints (i.e., one's online behaviours on social media and Internet) should be harnessed to better identify and assess potential security threats. It is within these digital footprints where a potential perpetrator's intention and warning signs may manifest, which in turn can be utilised to assess the threat they pose. The chapter by Neo discusses how digital footprints can be leveraged to identify potential security threats, particularly for crime and security issues that could result in negative repercussion at the national level, such as acts of violent extremism and hate crimes.

Xingyu Chen, Pamela Goh and Majeed Khader are with the Home Team Behavioural Sciences Centre (HTBSC). Verity Er is with the Community Corrections Command of the Singapore Prison Service. John Yu and Neo Loo Seng were formerly with HTBSC.

Impact of COVID-19 'circuit-breaker' measures on emergency medical services utilisation and out-of-hospital cardiac arrest outcomes in Singapore

By Qin Xiang Ng, Ebenezer ZH Lee, Joey AM Tay and Shalini Arulanandam

Emergency Medicine Australasia 33(1), February 2021



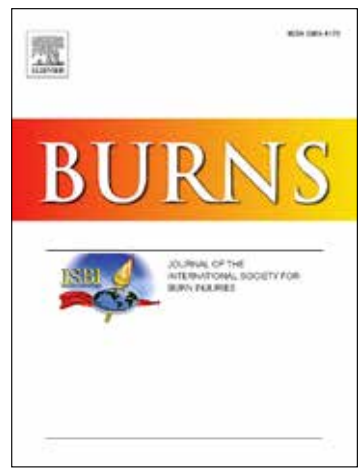
To understand the impact of COVID-19 restrictions on emergency medical services (EMSs) utilisation and out-of-hospital cardiac arrest outcomes in Singapore, a retrospective observational study was conducted comparing data collected by the Singapore Civil Defence Force on EMS utilisation in Singapore from 1 April to 31 May, 2020 to previous figures. It found that overall, EMS call volume and total out-of-hospital cardiac arrests remained comparable to past years. There was an appreciable decline in prehospital return of spontaneous circulation rates, albeit not statistically lower than pre-COVID periods (P = 0.078). The findings of this article contribute to a growing body of literature internationally on the potential impact of the COVID-19 pandemic on EMS utilisation and outcomes.

Qin Xiang Ng, Ebenezer Lee, Joey Tay and Shalini Arulanandam are with the Singapore Civil Defence Force.

Epidemiological trends of personal mobility devices and power-assisted bicycles-related fires and injuries in Singapore

By Jason Qi Wei Kwek, Qin Xiang Ng, Amelia Justina Lim, Li Feng Ang and Shalini Arulanandam

Burns, online November 2020

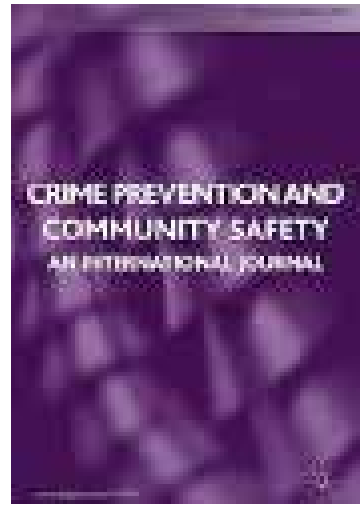


To study the epidemiological trends of personal mobility devices (PMD) and power-assisted bicycles (PAB)-related fires and injuries in Singapore. a retrospective chart review was conducted of all emergency medical services (EMS)-attended PMD/PAB-related fire incidents from January 2017 to December 2019, using data collated by the Singapore Civil Defence Force. There were 178 incidents and 101 casualties over the 3-year period. In most cases, the casualties were young males, sustained smoke inhalation injuries and required conveyance to the hospital. The article found that PMDs and PABs have inherent fire risks and may carry a significant impact on public health and safety.

Jason Kwek, Qin Xiang Ng, Amelia Lim, Li Feng Ang and Shalini Arulanandam are with the Singapore Civil Defence Force.

Examining the influence of emotional arousal and scam preventive messaging on susceptibility to scams

By Hui Ying Lu, Stephanie Chan, Whistine Chai, Shi Mian Lau and Majeed Khader



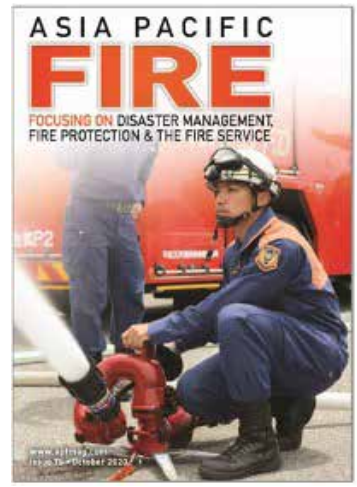
Crime Prevention and Community Safety 22 (4), December 2020

With the increase in scams globally and the elusive methods of perpetrators, law enforcement agencies have turned to public education and awareness programmes to decrease the number of scam victims. This has also raised a need to look into the psychology of scams and how they can be prevented. Emotional arousal has been shown to hinder cognitive decision-making processes in scam victims, subsequently influencing them to fall prey to scams. Despite this, messages used in scam prevention campaigns have been framed in ways that appeal to rational cognitive processes. This exploratory study examined two research questions: do (a) the type of messaging used in scam prevention posters (cognitive-focused poster vs. emotion-normalising poster) and (b) emotional arousal (positive arousal vs. negative arousal vs. no arousal) influence one's susceptibility to scams? Susceptibility to scams was measured through participants' intention to purchase items during a fake e-commerce scam scenario. Emotional arousal was measured with a combination of heart rate variability (HRV) data obtained through wearable heart rate trackers, and self-report scales. Results of the study showed that participants who viewed emotion-normalising posters demonstrated a lower susceptibility to scams compared to those who viewed the cognitive-focused poster. However, emotional arousal was not found to have any influence on one's susceptibility to scams. These findings serve to inform crime prevention campaigns by law enforcement. Findings from this exploratory study can also encourage further research into scam prevention research.

Hui Ying Lu, Stephanie Chan, Whistine Chai, Shi Mian Lau and Majeed Khader are with the Home Team Behavioural Sciences Centre.

Enhancing Responders' Performance and Safety Through Smart Wearable Technologies

By Hasan Kuddoos



Asia Pacific Fire 75, October 2020

The article discusses how SCDF has embarked on a new frontier of using smart wearable technologies to optimise the performance and enhance the safety of emergency responders. SCDF has consistently invested in technologies that can enhance their responders' capabilities. In this smart digital era, the new technologies have allowed data-driven decision-makings, and an evidence-based approach for training outcomes. The smart wearable technologies will also be extended to SCDF's frontline officers in the next phase for optimisation of performance and real-time monitoring for signs of over-exertion during operational response.

Hasan Kuddoos is with the Civil Defence Academy of the Singapore Civil Defence Force.

How Does "Context" Influence Risk and Needs Assessments in Correctional Settings – Ideas and Practices from Correctional Psychologists of Singapore Prison Service

By Boon Siang Kwek, Shamala D/O Gopalakrishnan, Xiangbin Lin and Rashida Mohamed

Advancing Corrections Journal 10, October 2020

This article illustrates and discusses the importance of contexts using four mini-case studies of risk and needs assessments. Through this article, the team hopes to encourage fellow correctional practitioners to consider, beyond the usual offender-centric risk and protective factors, the unique contextual factors relevant to each assessment.

An Exploratory Study on the Impact of a Strength-based and Desistance-informed Approach to Motivational Feedback on Risk/Needs

By Shermaine Chionh, Jeslyn S. Z. Ng and Cheng Xiang Long

Advancing Corrections Journal 10, October 2020

This study examined if integrating strength-based and desistance elements in an RNR-based risk feedback motivated offenders to change. Eighteen drug abusers in the Singapore Drug Rehabilitation Centre received motivational feedback on their LS/CMI-identified risk-needs and were guided to identify their strengths and values to set life goals. Deductive thematic analysis of their goal-planner showed that those who became motivated after feedback, compared to those not, displayed signals of motivation for change by recognising offending problems, expressing intentions to change, and planning goals and prosocial ways to achieve them. Findings provide a practical strength-based and desistance approach to motivating offenders.

Boon Siang Kwek, Shamala D/O Gopalakrishnan, Xiangbin Lin, Rashida Mohamed, Shermaine Chionh, Jeslyn S. Z. Ng and Cheng Xiang Long are with the Singapore Prison Service.

Desistance journey of female drug abusers in Singapore

By Fann Jiang and Cheng Xiang Long

ICPA Taskforce, October 2020
"Beyond Prisons: Women and Community Corrections"

This study examines the desistance journey of female drug abusers in Singapore, including gender-specific factors that contribute to or challenge their attempts to stop their drug abuse. Findings inform gender-specific reintegration needs of female drug abusers in Singapore.

Fann Jiang and Cheng Xiang Long are with the Singapore Prison Service.

Redefining the Performance of Emergency Responders

By Leon Yip

Crisis Response Journal 15(3), September 2020

This article describes how the Singapore Civil Defence Force has invested heavily in innovative science and technology. The aim is to provide holistic and effective measures to improve responder performance.

Mental Wellbeing in Emergency Response Services

By Khoo Swee Giang, Cyrus Chng and Ng Song Lim

Crisis Response Journal 15(3), September 2020

Fire, rescue and civil defence personnel are exposed to dangerous work conditions and stressors, which can lead to sleep disturbances, fatigue and detrimental psychological effects. This article reviews the Singapore Civil Defence Force's successful peer support system to improve wellbeing.

Insarag Guidelines – Fit for Purpose

By Anwar Abdullah

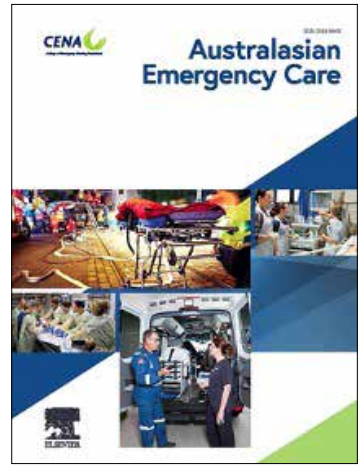
Crisis Response Journal 15(3), September 2020

The International Search and Rescue Advisory Group (INSARAG) has reviewed its guidelines for dealing with the sudden onset of events involving large scale structural collapse. This article outlines the strategy of the Guidelines Review Group.

Leon Yip, Khoo Swee Giang, Cyrus Chng, Ng Song Lim and Anwar Abdullah are with the Singapore Civil Defence Force.

Self-reported incidence of verbal and physical violence against emergency medical services (EMS) personnel in Singapore

By Guek Khim Tay, Abd Rahman Abdul Razak, Kenneth Foong, Qin Xiang Ng and Shalini Arulanandam



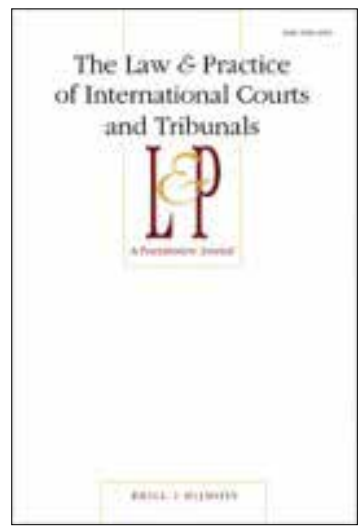
Australasian Emergency Care, September 2020

Western studies have highlighted alarmingly high rates of work-related violence experienced by emergency medical services (EMS) staff. As there is a paucity of Asian studies, we aimed to investigate the incidence of physical and verbal violence against the EMS crew in the Singapore Civil Defence Force (SCDF). This was a cross-sectional study, utilising an online survey made available to all active paramedics in the SCDF. Paramedics with at least one year of work experience were eligible to participate. All responses were kept anonymous. The response rate was 50.9% (n = 246), out of 483 paramedics in service at the time of the study. The respondents consisted of 144 males (58.5%) and 102 females (41.5%). They were between 18 and 55years old; 160 (65.0%) of them had worked in EMS for less than 6 years. The paramedics experienced high levels of verbal and physical violence, but there was reticence in reporting these incidents. The main risk factor for violence appeared to be alcohol intoxication. Paramedics may benefit from security escort for clients with history of alcohol intoxication or violence and more teaching on self-defence and soft restraints. Current training and protocols should be revised to meet these needs.

Guek Khim Tay, Abd Rahman Abdul Razak, Kenneth Foong, Qin Xiang Ng and Shalini Arulanandam are with the Singapore Civil Defence Force.

Taking Stock: Abuse of Process Within the International Court of Justice

by Azfer Ali Khan and Luke Tattersall.



The Law & Practice of International Courts and Tribunals 19(2), August 2020

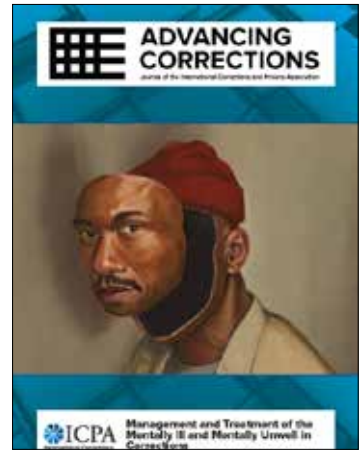
The doctrine of abuse of rights exists as a general principle of international law and can be found embodied, either explicitly or deriving expression through other principles, within the majority of domestic legal systems. Abuse of process is a specific invocation of this principle, but the International Court of Justice has always demonstrated reluctance to utilise this doctrine. In light of developments of abuse of process in the international arena as well as the United Kingdom and Singapore, one way forward for the International Court of Justice would be to recognise the abuse of process doctrine as a case management tool and more readily make use of it to preserve the integrity of the proceedings before it.

Azfer Ali Khan is with the Singapore Police Force

Managing Inmates with Mental Disorders: The Psychiatric Housing Unit of Singapore Prison Service

By Rashida Mohamed Zain, Georgina Tay, Jessie Yeung, Rossheema Binte Haniff and Padma D/O Jairam

Advancing Corrections Journal 9, June 2020



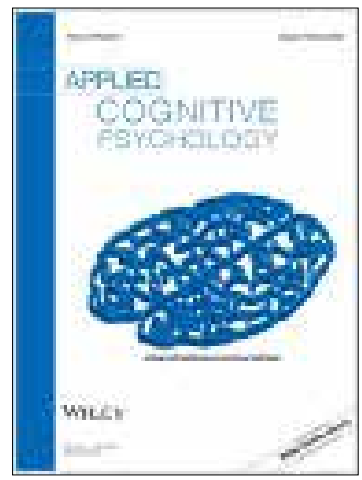
Inmates with mental disorders present as a population that require large amounts of resources to manage and treat. Furthermore, these individuals tend to commit disciplinary infractions and tend to reoffend at a higher rate than the mainstream incarcerated population. This poses as a challenge to correctional facilities all over the world and best practices on the management and treatment of this specialised population are widely sought after. In 2011, the Psychiatric Housing Unit under the Singapore Prison Service commenced operations and started the admissions of inmates with mental disorders into the facility. This article seeks to document the background and key processes within this specialised housing unit, specifically in the management and treatment of inmates with mental disorders.

Rashida Mohamed Zain, Georgina Tay, Jessie Yeung, Rossheema Binte Haniff and Padma D/O Jairam are with the Singapore Prison Service.

Lying about flying: The efficacy of the information protocol and model statement for detecting deceit

By Aldert Vrij, Sharon Leal, Haneen Deeb, Stephanie Chan, Majeed Khader, Whistine Chai and Jeffery Chin

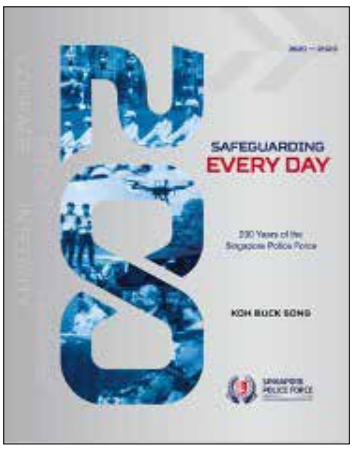
Applied Cognitive Psychology 34 (1), January /February 2020



Due to time constraints, interviews aimed to detect deception in airport settings should be brief and veracity assessments should be made in real time. In two experiments carried out in the departure hall of an international airport, truth tellers were asked to report truthfully their forthcoming trip, whereas liars were asked to lie about the purpose of their trip. In Experiment 1, we examined five verbal cues that we thought had potential to discriminate truth tellers from liars in short airport interviews: elaboration in disclosing information, checkable details, how many people are aware of the trip, complications, and plausibility. In Experiment 2, we attempted to improve the interview protocol by adding a second interview phase in which we introduced an information protocol and model statement. All five cues differentiated truth tellers from liars in both experiments, but the information protocol and model statement did not enhance these differences.

Stephanie Chan, Majeed Khader and Whistine Chai are with the Home Team Behavioural Sciences Centre. Jeffery Chin is on secondment to the Ministry of Social and Family Development.

BOOK PUBLISHED BY THE SINGAPORE POLICE FORCE



Safeguarding Every Day: 200 Years of the Singapore Police Force
By Koh Buck Song

Straits Times Press, 2020

A commemorative publication to celebrate 200 years of the Singapore Police Force (SPF), *Safeguarding Every Day* encapsulates the SPF's bicentennial heritage and developments – from its rudimentary founding in 1820, through the colonial era, to internal self-government and briefly being part of Malaysia, and to the modern professional police force ensuring the nation's safety and security today. The SPF's devotion to public service and commitment to operational excellence would not have been possible without the contributions and sacrifices of past and present officers. To inspire future generations, the SPF's resilience and resourcefulness come through in the many ways in which it adapts to changing security threats, be it dealing with secret societies and communal unrest in the past or fighting crime and terrorism among other emerging challenges today.

Acknowledgements

The *Home Team Journal* would like to thank the following for providing the photographs used on the cover:

• Central Narcotics Bureau

• Home Team News

• Home Team Science and Technology Agency

• Singapore Police Force

THE HOME TEAM COMPRISES 11 AGENCIES:

Ministry of Home Affairs Headquarters • Singapore Police Force • Internal Security Department • Singapore Civil Defence Force • Immigration & Checkpoints Authority • Singapore Prison Service • Central Narcotics Bureau • Home Team Academy • Home Team Science and Technology Agency • Casino Regulatory Authority • Yellow Ribbon Singapore

All Home Team departments and agencies work together as one, in close partnership with the community, to keep Singapore safe and secure.

The Home Team Academy's mission is to empower learning and growth, and enable a united and successful Home Team. It aspires to be a leading corporate university in homefront safety and security.

www.mha.gov.sg/hta

ISSN: 2010-0617