

A Study on the Causes of Work Stress among Malaysia Civil Defense Force (MCDF) Personnel

Khamarul Arifin Mohd Zainal Abidin, Maliza Delima Kamarul Zaman* & Shamsul Azren Mohd Shukur
Universiti Teknologi Mara, Puncak Alam, Malaysia
khamarul.arifin@gmail.com, *malizadelima@uitm.edu.my, shamsulshukur@uitm.edu.my,

Abstract: Life in the modern world today is full of frustrations, demands and deadlines as stress has become a norm for many people. Since the harsh episode of the pandemic, stress is the normal physical response that disturbs our balance. Many experienced work-related ill health cases due to work-related stress, depression and anxiety. Therefore, work stress is inevitable. Work stress is increasing in Malaysia, especially since the pandemic and it continues to pose a major global health threat until now. Alarmingly, stress has become a modern epidemic and has influenced poor public health. Many past researches reviewed the prevalence of occupational stress and the causes of its prediction among the Malaysian population and found many occupational stress severe incidents. The Malaysian government mobilized the Malaysia Civil Defense Force (MCDF) for several responsibilities to save lives and properties. Based on the nature of MCDF work, stress is a major issue. There are many factors of stress; operational, organizational and lifestyle to name a few. Organizational stress highlights employees' attachment to the organization, operational stress highlights employees' experience doing the work, and lifestyle stress highlights individual ways of living. Therefore, the researchers attempt to examine the relationships between operational, organizational and lifestyle factors and the most influencing factor that may cause stress among a population of 180 personnel of MCDF, while carrying out their work assignments in Klang Valley.

Keywords: *Stress, Work-stress, Malaysia, Malaysia Civil Defense Force, Operational factor.*

1. Introduction and Background

According to Rom and Reznick (2016), the foundations of stress research in the 19th century were contributed by several scientific big names. In his book "The Origin of Species", Charles Darwin said that only those organisms capable of adapting to a changing environment will survive. This was further enhanced by Claude Bernard, who added that it is made possible if those organisms can keep the internal environment stable and constant. The first person to have introduced and formulated the Fight or Flight model of the stress response was Walter Bradford Cannon (Rom & Reznick, 2016). In May 1936, Hans Selye wrote a landmark 'Letter to the Editor', entitled "A Syndrome produced by Diverse Nocuous Agents", which later became known as the General Adaptation Syndrome, or GAS (Selye, 1936).

Selye's argument was "Anything that causes stress endangers life unless it is met by adequate adaptive responses; conversely, anything that endangers life causes stress and adaptive responses" (O'Connor, Thayer & Vedhara, 2021). According to Dua (2019), when there is little stress, it can boost our motivation and ability to work well under pressure. But, if we constantly experience feelings of being overwhelmed and completely exhausted, it is essential to take action to rebalance our nervous system. Stress is a dynamic circumstance in which an individual is confronted with an opportunity, limitation, or demand connected to what he or she desires and for which the outcome is thought to be both unpredictable and crucial. The body's defenses kick in when we perceive a threat (Dua, 2019). It is now well established that stress can affect health directly, through autonomic and neuroendocrine responses, but also indirectly, through changes to health behaviors (Hill, Moss, Sykes-Muskett, Conner & O'Connor, 2018). Alarmingly, stress is recognized as a leading cause of long-term sickness in many countries around the globe, resulting in millions of working days lost (American Psychological Association, 2019).

A 'stress response' is the body's defenses kicking into high gear in a rapid, automatic process whenever we sense danger (Dua, 2019). When a worker's abilities do not match the demands of the job, it gives rise to harmful emotional and physical conditions, and stress is the response to those conditions (Okechukwu & Babatunde, 2021). A study by Yussof, Idris and Razak (2022), recommended conducting more research to find out the prevalence of mental health hazards such as stress, anxiety, and depression as well as ways to avoid them. According to them, workplace stress can negatively impact employees' quality of life, productivity, and job performance (Yussof et al., 2022). This is agreed by Wijayanti and Fauzi (2020) that

emphasized employee job stress negatively affects performance to a greater or lesser extent. Due to its negative effects, workplace stress needs to be researched as well as managed effectively.

Malaysia Civil Defense Force (MCDF): MCDF was tasked with several responsibilities by the Malaysian government. MCDF was part of the Compliance Operations Task Force, for monitoring and enforcing compliance with the standard operation procedures (SOPs) of the movement control order (MCO) throughout the country, either through roadblocks (Sekatan Jalan Raya/SJR) or inspections in public areas. MCDF was also tasked to coordinate the registration of persons under Surveillance (PUS) at all International Points of Entry (POE) and also lead the Quarantine Station Secretariat administering all quarantine stations during the pandemic (NADMA, 2020). MCDF was also part of the National Task Force, whose main objective is to coordinate security action plans and the containment of illegal entry of migrants at all entry points and border areas, whether by land, sea, or air (Krishnan, Yusof, Aman & Nagalan, 2021). MCDF was also tasked to assist the Welfare Department with humanitarian assistance, especially to the migrant worker and refugee population (Wahab, 2020).

MCDF during War Times: It means any measure that does not involve the use of weapons to face a hostile attack whether the measure is taken before, during or after the time of the enemy's attack (PRO Dept, 2022).

MCDF during Peace Times: It means any measure taken to protect life and property whether the measure is taken, before, during or after a disaster. Based on Act 221, it can be understood that Civil Defence functions in times of peace, times of war and times of disasters by taking any measures to save, protect and reduce the loss of life and damage to the property of civilians (PRO Dept, 2022).

The World Health Organization (WHO): The World Health Organization (WHO) reported that in 2019, an estimated 15% of working adults had some form of mental disorder. It also states that about 12 billion workdays are lost annually to depression and anxiety across the globe, which works out to a US\$1 trillion (RM4.7 trillion) loss in productivity each year (WHO, 2022). In Malaysia, the result of a national survey shows that 29.2 percent, or one in three Malaysian adults aged 16 years and above, had displayed symptoms of having a mental health condition, compared to 11.2 percent of a similar survey in 2006 (Institute for Public Health, 2015). Alarmingly, the same survey showed that 10.1 percent of youths had attempted suicide with the states of Sabah, Kelantan, Kuala Lumpur and Sarawak having the highest prevalence of mental health conditions.

The Malaysian Context: The National Health and Morbidity Survey in 2019 shows that Malaysians experiencing some symptoms of depression amounted to half a million, spreading thinner the limited government facilities on mental health (Institute for Public Health, 2020). According to the National Strategic Plan for Mental Health 2020-2025 reported by the Ministry of Health (MOH), stressful life events and problems at work are some of the contributing risk factors to Major Depressive Disorder (MDD) progression in Malaysia (MOH, 2020). Employee stress is so prevalent in Malaysia that it is included as one of the action plans in the National Strategic Plan for Mental Health 2020-2025 in the form of training on mental health and work-life balance, involving multiple agencies such as the Ministry of Health, Rural and Regional Development Ministry, Ministry of Women, Family and Community Development, Department of Occupational Safety & Health Malaysia (DOSH), Malaysia's Social Security Organization (SOCSO), The Malaysian Trades Union Congress (MTUC), The Congress of Union of Employees in the Public and Civil Services Malaysia, abbreviated CUEPACS and other agencies, to not only employees, but also employers (MOH, 2020).

Problems at work have led to an increase in sicknesses, the fading of morals and human components, the daily emergence of new concerns, and the rise of job stress, which has been dubbed "the ailment of the century" (Panigrahi, 2016). Stress can affect health directly, either through neuroendocrine and autonomic responses, or indirectly via health behavior changes (Hill et al., 2018). It can also cause employees to have symptoms such as fatigue, hypertension, headaches, depression, and anxiety (Holden, Forester, Williford, & Reilly, 2019). In an assessment by Kassim, Ismail and Ismail (2018) published between 2008 and 2017 across different databases using a search technique (ISI Web of Knowledge, PubMed, Scopus, Google Scholar), 6.0 percent to 71.7 percent of the population reported experiencing job stress.

There are many causes of stress researched by many scholars. One of the stressors is organizational stress. Organizational stress as the name suggests, is experienced by environmental demands on those who are attached to organizations. The attachment can be considered primarily or even directly (Fletcher, Hanton, & Mellalieu, 2006). Examples of organizational stress are work overload, under promotion, working long hours, job insecurity and tight deadlines. Personality and family problems can also trigger mental and physical illness in employees (Cooper & Marshal, 1976).

Another factor of stress is operational stress which originated from Royal Canadian Air Force medical officer Donald Reid in his article "Some Measures of the Effect of Operational Stress on Bomber Crews," published in 1974 (Richardson, Dart, Grenier, English, & Sharpe, 2008). Examples of operational stress include harsh working environments, forms of harassment, bullying, work conflict, trauma, danger, and loss of exposure. Operational stress also includes sleep disruption due to work and family issues such as marital problems, illnesses or death (Military Health System, 2021).

Lifestyle stress can be explained by the work of Sharifi-Rad, Kumar, Zucca, Varoni, Dini, Panzarini and Rajkovic (2020), in their study that found lifestyle such as smoking, alcohol consumption, adequate or inappropriate diet, exercise, training or untrained condition, does contribute to oxidative stress, which can affect muscle activity, ultimately contributing to skeletal muscle fatigue during strenuous exercise. Based on the understanding of the work nature of the MCDF personnel, who monitor, enforce compliance and coordinate the security of people during war and peace times, this research is undertaken to examine the relationships between operational, organizational and lifestyle causes of stress among MCDF personnel. Therefore, the study developed the research questions and research objectives as below:

The questions of this research are as follows: -

RQ1: Is there any relationship between operational causes and stress?

RQ2: Is there any relationship between organizational causes and stress?

RQ3: Is there any relationship between lifestyle causes and stress?

RQ4: What is the most significant factor that contributes to stress?

The objectives of this research are as follows: -

RO1: To examine the relationship between operational causes and stress.

RO2: To examine the relationship between organizational causes and stress.

RO3: To examine the relationship between lifestyle causes and stress.

RO4: To examine the most significant relationship that contributes to stress.

Definitions of Terms

Front-Liners: Essential services serviced by dedicated personnel in operation. These groups are working in different sectors such as healthcare, medicine, security, food, retail, and transport. These groups were collectively referred to as the "front-liners" (Buhat, Torres, Olave, Gavina, Felix, Gamilla & Rabajante, 2020).

Occupational Stress: The term "occupational stress" refers to stress that is connected to one's place of employment and is brought on by unforeseen obligations and responsibilities that don't fit with one's knowledge, abilities, or expectations and make it difficult to deal (Kassim et al., 2018).

Scope of Study: The scope of the study is focused on the personnel from the Malaysia Civil Defense Force in Klang Valley, operating from MCDF Kuala Lumpur District office, Jalan Padang Tembak, Kuala Lumpur.

Significance of this Study: This study is significant as it explores the causes that contribute to work stress for MCDF personnel. By doing so, it provides an insight into the management of MCDF, whether due attention needs to be given to these causes, and mitigate them, if necessary, to eliminate or reduce the stress level of their personnel. It also guides on the causes of stress. This will assist in understanding in allocation of tasks and activities in the organization.

2. Literature Review

Stress: The definition of job stress as defined by Shukla and Srivastava (2016) is the harmful physical and emotional responses that occur when role (job) requirements do not match with the employees' capabilities, resources, and needs. The organizational stress framework includes sources of work stress, for example, role conflict, role ambiguity, work overload, and role expectations. Stress experienced by the persons due to their role (job) in the organization is also known as occupational role stress. Moreover, occupational role stress and job stress are interchangeable terms (Shukla & Srivastava, 2016). Selye (1936) is considered the founder of modern stress research; there have been other stress theories by other researchers. One of the theories is the Transactional Model of Stress and Coping (TMSC) by Lazarus and Folkman (1984) which the researchers adopted as the underpinning theory. According to Lazarus and Folkman, stress arises "when individuals perceive that they cannot adequately cope with the demands being made on them or with threats to their well-being". This definition acknowledges the individual experience of stress as well as the importance of the wider contextual conditions (Mustafar, Hodgson, Lhussier, Forster, Carr, & Dalkin, 2020). According to Herman, Reunke and Eddy (2020), a key element of the TMSC theory is the focus on two types or levels of appraisals, namely primary and secondary, as a method of how an individual appraises a stressor.

Primary appraisal refers to how an individual assesses whether an event is a threat challenge or simply benign. Secondary appraisals refer to how that individual chooses to respond to the event including consideration of various coping options. The primary appraisals would directly affect the secondary appraisals. This in turn directly affects coping strategies that are selected and enacted, this would lead to physiological and emotional reactions to stress. This would ultimately influence the long-term impacts of stress on the individual (Herman et al., 2020). It was thought that a person's naive theories and generalized beliefs influence those consecutive evaluative stress appraisal processes (Montagna, Marksteiner & Dickhauser, 2021).

Operational Causes: Weaver, Landrigan, Sullivan, O'Brien, Qadri, Viyaran & Wang (2020), in their study, use 'working no extended duration shifts' as its baseline, an increase in the risk of adverse outcomes was recorded even when working 1 extended duration shift in a month; and this risk was further aggravated when working 5 or more extended duration. The study also showed that limiting shifts to less than 16 hours yielded an 18% reduction in attentional failures. The risk of infection for healthcare workers is directly increased by long-time exposure to large numbers of infected patients and it is also indirectly increased by the pressure of treatment, work intensity, and lack of rest (Wang, Zhou & Liu, 2020). According to Luyun (2022), under overwhelming conditions, frontliners are truthfully yearning to display their functional abilities. During the pandemic, most of them had gambled the risks of infecting their families and relatives, to carry out their roles and responsibilities. Infection control protocols were followed by them even when at home (Luyun, 2022).

Frontliners living in large epidemics were confronted with exceptional circumstances of working hours with sustained psychological tension and unexplained tiredness (Karlsson, 2020). According to Chua, Al-nsi, Kim, Wong and Han (2022), stress that produces the psychological response to job strain has been widely recognized as a response that may be explained by the environmental conditions of the workplace. A study on anesthesiologists' work pattern behavior by Gupta, Bajwa, Malhotra, Mehdiratta and Kakkar (2020) involves erratic work schedules, night shifts and long hours in the operation theatres and intensive care unit. Chronic fatigue, moodiness, trouble concentrating, fatigue, sleep deprivation, excessive worry, aggressive behavior, impaired vigilance, loss of appetite, mood swings, behavioral changes and poor work performance often are signs of stress (Gupta et al., 2020). Stogner, Miller, and McLean (2020), state that law enforcement personnel presumably face higher exposure to traumatic events.

The officers are likely to experience increased high-stress encounters with individuals suffering from mental health problems aggravated by fear of contagion, economic uncertainty, resource shortages, and isolation. First-liners are exposed to stress as they will be the first responders who have the responsibility for maintaining public safety, risk of exposure through interactions with the community, and the concern of exposing family members to the virus in the case of a pandemic (Stogner et al., 2020). A study by Florendo and Rabajante (2020) proves the effectiveness of using personal protective equipment (PPE) during the pandemic creates a protection level that removes a substantial fraction of the risk faced by healthcare worker

patients entering a given location at the same time, or the average number of encounters per hour, or the work exposure time. Although it is a known fact on the importance of PPE in the fight against the SARS-like pandemic that attacks the respiratory system, it was reported that its usage caused stress and exhaustion (Florendo & Rabajante, 2020).

According to the Centre for Disease Control (2020), providing care to others during the COVID-19 pandemic can lead to stress, anxiety, fear, and other strong emotions. How one copes with these emotions can affect his well-being, the care he gives to others while doing his job, and the well-being of the people he cares about outside of work. Frontline workers such as health care providers and first responders were identified as people who may respond more strongly to the stress of a crisis (Centre for Disease Control, 2020). In the study by Kang, Li, Hu, Chen, Yang, Yang and Wang (2020), during the harsh episode of the pandemic, medical workers in Wuhan have been facing enormous pressure, including a high risk of infection and inadequate protection from contamination, overwork, frustration, discrimination, isolation, patients with negative emotions, a lack of contact with their families, and exhaustion. The severe situation is causing mental health problems such as stress, anxiety, depressive symptoms, insomnia, denial, anger, and fear.

These mental health problems not only affect the medical workers' attention, understanding, and decision-making ability but could also have a lasting effect on their overall well-being. Protecting the mental health of these medical workers is thus important for control of the epidemic and their long-term health (Kang et al., 2020). According to Beckner, Conkright, Eagle, Martin, Sinnott, LaGoy, and Jabloner (2021), their study of the military has shown that approximately 80 to 85 percent of military accidents are the result of human error, due to fatigue and decreased cognitive performance, which in turn resulted in slower reaction times, reduced accuracy, lack of concentration, and poor logical reasoning.

It was also demonstrated that in areas of sustained attention and working memory, operational stress hurts cognitive performance (Beckner et al., 2021). The study by Li, Cheung and Sun (2019) identifies several sources of stress (stressors) in police work i.e., the complex and dangerous nature of the working environment, demanding job conditions, heavy workloads, and irregular shift work. A study by Akerstorm, Corin, Severin, Jonsdottir and Bjork (2021) has shown that multiple factors such as high job demands, low job control, low job support, effort-reward imbalance, typical working hours, poor psychosocial safety climate, bullying and role stress are some of the causes for employees' burnout or stress-related mental health problems. Therefore, H1 is hypothesized as follows:

H1: There is a significant relationship between operational causes and stress.

Organizational Causes: Stogner et al. (2020) found that mental health problems among law enforcement personnel are associated with a demanding work environment, agency culture and inconsistent shift scheduling. They, as many first responders, are subjected to altered patrolling routines, changes to shift schedules and work hours that drive workplace stress higher, especially during the COVID-19 pandemic. A study by Li et al. (2019) finds that several sources of stress (stressors) in the police force are poor communication between administrators and officers, unfair supervision, controversial performance ratings and weak supervisory support. Polinard, Ricks, Duke and Lewis (2022) state nurses acknowledged that it was an ongoing learning process for organizations, especially in the utilization and allocation of resources, in addition to frequent changes in policies and procedures. The consensus was that their ability to adapt to these changes was influenced by the leadership response to supply shortages, care complexities and uncertainties (Polinard et al., 2022).

In the study by Cui, Jiang, SShi, Zhang, Kong, Qian and Chu (2021) among nurses, the causes of occupational stress, are caused by high expectations, lack of time, skills, and social support, which, in turn, causes anxiety, post-traumatic stress disorder (PSTD), distress, burnout and other psychological problems. Other common causes of stress and anxiety include the lack of an effective hospital management system, lack of training, uncertainty regarding COVID-19 treatment during the pandemic and care policies further exacerbate the situation. The study also found that mental health problems among law enforcement personnel are associated with a demanding work environment, agency culture and inconsistent shift scheduling. Therefore, H2 is hypothesized as follows:

H2: There is a significant relationship between organizational causes and stress.

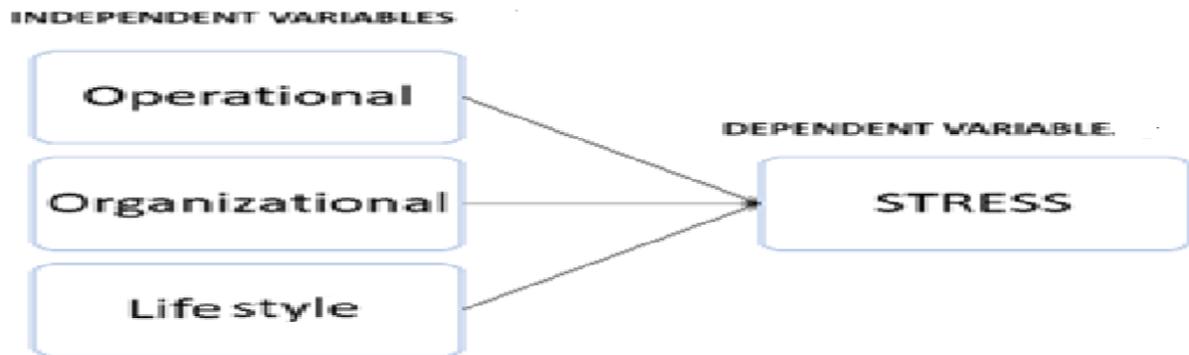
Lifestyle Stress Causes: Having an unhealthy eating habit or an unbalanced lifestyle cannot be compensated by consuming superfoods (Sharifi-Rad et al., 2020). Di Renzo, Gualtieri, Pivari, Soldati, Attina and Cinelli (2020) state that COVID-19 brought about a sudden radical change to the lifestyle of the population, particularly in everyday behaviors. It is crucial to maintain a correct nutrition status, especially during instances when our immune system might need to fight back (Di Renzo et al., 2020). The study by Soares (2021) finds that adults reduced physical activity levels and increased sedentary times since the pandemic. The usage of spiritual practices, such as yoga, meditation, and other rest practices may have contributed to resilience and stress control, supporting response efficacy, and assisting in achieving a protective feeling from outside threats (Soares 2021). The findings of the research of Kraft, Maity, and Porter (2019) indicate that salespeople who practice a wellness lifestyle would have a high probability of displaying problem-solving tendencies rather than emotion-based avoidance tactics in coping with job stress.

Sherman, Williams, Amick, Hudson, and Messias (2020) emphasized that due to depression and anxiety associated with childcare issues, food insecurity, reduced access to routine medical care, symptoms ascribed to COVID-19, and lack of daily structure as a result of social isolation and re-adaptation of new norms, significantly elevated psychological distress. Adopting a healthy lifestyle is one of the stress management techniques (Dua, 2019). A study by Nair (2020) showed that older people are better able to handle illness fear and changes in lifestyle, which may be because they are more settled and have the probable ability to better accept crises. In a study by Shanahan, Steinhoff, Bechtiger, Murray, Nivette, Hepp and Eisner (2020), participants on average had responded that the COVID-19 crisis was somewhat disruptive to their lifestyle (i.e., daily routine, work, education, and family). Secondary consequences of the pandemic as major lifestyle and economic disruptions re-ensued associated with recurrent social standstill and economic decline were a common theme. Therefore, H3 is hypothesized as follows:

H3: There is a significant relationship between lifestyle and stress.

From the literature reviewed, the framework was developed as below:

Table 1: The Research Framework



Although we are no longer in the midst of the harsh episode of the pandemic, our lifestyles have changed tremendously since the beginning of the pandemic. The pandemic has brought different environments and perspectives in life. We value friends and family more than before; we work using technology and we self-learn many skills during the pandemic. However, we still experience stress due to work demands and the environment is not like we used to have. We also experience high job demand, low job supply and inflation. The MDCF personnel who are still on active duty are no exception. Due to the nature of their work and any work in a general era post-pandemic, stress is still unavoidable and needs to be managed. By knowing the factors that influence stress among MDCF personnel, stress is hoped to be managed properly to avoid further stress consequences.

3. Research Methodology

The researchers present in-depth discussion on the topics such as research design, population and sampling, questionnaire design, data collection and data analysis that will be used for this research. The process of

performing this study employs a quantitative approach, with clear instructions from the questions and the elaboration on them. Its purpose is to determine the link between the dependent variable and the independent variables, geared towards developing the research framework. Hypothesis testing will be used to test the theory with primary data as the source in which the researchers aimed to collect data through questionnaires.

Research Design: The process of performing this study employs a quantitative approach, with clear instructions from the question and the elaboration on it. Its purpose is to determine the link between the dependent variable and the independent variables, geared towards developing the research framework. Hypothesis testing is used to test the theory with primary data as the source in which the researcher collects data through questionnaires. This study will use a quantitative research method where it is based on the positivist inquiry conducted to collect numerical data which are then will be analyzed using statistical tests. The time horizon in this study is a cross-sectional design where data will be gathered just once, and it is sufficient to gain all the information required for this study. The study setting is a non-contrived setting where it will be conducted in the natural environment and all activities take place in a normal manner with very minimum researcher interference. The unit analysis of this study is the non-medical government front-liners namely personnel from MCDF in Klang Valley.

They were chosen above other agencies as they are carrying tasks almost similar to their counterparts from the medical fraternity. This study is a non-experimental design which is a correlational study design, defined as a quantitative method of research in which two or more quantitative variables from the same group of subjects are correlated to determine a relationship or covariation between the variables (Chuan, 2006). Statistical tests will be used to obtain a correlation coefficient (the value ranges from 0 to 1) and three estimations will be expected. First, if the relationship is significant, i.e., the probability value is smaller than 0.05 or $p < 0.05$ (a pre-determined significant level for this study), then will be reported that there is a significant relationship between the variables. Second, this study will report the strength of the relationship, which is the bigger the correlation coefficient, the stronger the relationship between the variables. Third, if the correlation coefficient is positive, then this study will report that there is a relationship between the variables.

Population and Sample: The sample will be selected based on a stratified random sampling technique within the MCDF personnel in the Klang Valley area, operating from the MCDF Kuala Lumpur District office, Jalan Padang Tembak, Kuala Lumpur. According to Etikan and Bala (2017), sample stratification is employed when the population from which the sample is to be drawn does not have a homogeneous group of stratified sampling techniques, and it is generally utilized to obtain a representative of a decent sample. Stratified sampling divides the universe into several sub-populations that are individually more homogeneous than the total population (the differences between sub-populations are called strata) and select items are chosen from each stratum to generate a sample. Because each stratum is more homogeneous with the population, more precise estimates are generated from each stratum (Etikan & Bala, 2017).

In this research, the population will be divided into smaller groups according to their workstation in Klang Valley, where the research will invite everyone in the groups to participate. The questionnaire will be sent to the MCDF group WhatsApp and Telegram phone application. Social media will be used to gather the data in the form of Google form for ease of data collection and data analysis purposes. The scale to be used with a continuum as Likert's interval scales ranging from "1" as strongly disagree to "5" as strongly agree. The population consists of 180 MCDF personnel on duty in Klang Valley. The population is chosen to gauge the peak of the employees' work stress level. According to Krejcie and Morgan (1970), the sample size is 123.

Data Collection: The data collection for this study will be collected through primary data collection using survey techniques. A self-administered questionnaire for the quantitative data collection method will be used in this research. This study will use an online mode of data collection, and distribution via the link of social media. An online form survey is developed using the Google form website and the link will be disseminated through internet platforms such as WhatsApp and other social media platforms.

Questionnaire Design

Table 2: The Questionnaire Sources

No of items	Variable	Source
9	Stress	(Shukla & Srivastava, 2016) Development of a short questionnaire to measure an extended set of role expectation conflict, co-worker support and work-life balance: The new job stress scale
14	Operational stress	(Irniza et al., 2014) A Psychometric Properties of the Malay-version Police Stress Questionnaire
16	Organizational stress	(Irniza et al., 2014)
5	Lifestyle stress	(Irniza et al., 2014)

A questionnaire has been developed which includes 5 sections. The first section consisted of demographic information which covered the personal attributes of the respondent including gender, age, race, marital status, education, rank, length, of service and the location of duty. The questions were adapted from previous journals that related to this study by Shukla and Srivastava (2016) and Irniza, Emilia, Saliluddin and Isha (2014). Section A utilized multiple-choice questions. For subsequent sections, questions using a numerical 5-point Likert scale were employed (1 = strongly disagree; 5 = strongly agree) to examine how strongly the respondents agreed or disagreed with the statements. All the items in the questionnaires have been validated and adapted from related studies from the resources as shown in Table 2 above. Table 3 was developed based on the items included to measure the intended variables.

Table 3: Questionnaire Development

Part	Variable	Scale
Part A	Demographic (8 items) Gender Age Race Marital Status Education Level Rank How long have you been with your organization? Location of duty	Nominal Scale Ordinal scale
Part B	Dependent Variable: Stress (9 items) I have a lot of work and fear that very little time to do it. I feel so burdened that even a day without work seems bad. I feel that I never take a leave. Many people at my unit are tired of the organizational demand. My task makes me nervous The effect of my task on me is too high. Many times, my task becomes a big burden. Sometimes when I think about my task, I get a tight feeling in my chest. I feel guilty when I take a leave.	1 (strongly disagree) to 5 (strongly agree)
Part C	Independent Variable 1: Operational stress (16 items) I feel unequal sharing of work responsibilities. I experience perceived pressure to volunteer free time. There are constant changes in policy/legislation. I experienced the inconsistent leadership style of the superior. My leaders over-emphasized the negatives (e.g. supervisor evaluations,	1 (strongly disagree) to 5 (strongly agree)

public complaints).	
I have the feeling that different rules apply to different people (e.g., favoritism).	
My organization faces a lack of resources.	
I feel the need to be accountable for doing your job.	
I have excessive administrative duties.	
I am open to going for internal investigations.	
I have the feeling that I always have to prove myself to the organization.	
I have inadequate equipment.	
I have a lack of training on new equipment.	
If I am sick or injured my co-workers seem to look down on me.	
We face staff shortages.	
I have too much computer work.	
Independent Variable 2:	1 (strongly disagree) to 5 (strongly agree)
Organizational stress (14 items)	
I feel like I am always on the job.	
I have work-related activities on days off (e.g., court and community events).	
I have overtime demands.	
I have traumatic events (domestic, death, injury and witness tragic accidents).	
I face occupational-related health issues (e.g., back pain, neck pain, joint pain).	
I am fatigued.	
My friends or family feel the effects of the stigma associated with your job.	
I have the risk of being injured on the job.	
I work alone at night.	
I have a lack of understanding from family and friends about my work.	
I receive negative comments from the public.	
I have to shift work.	
I am upholding a higher image in public.	
I have paperwork.	
Independent Variable 3:	1 (strongly disagree) to 5 (strongly agree)
Lifestyle (4 items)	
I have limitations in my social life.	
I am managing my social life outside work.	
I am eating healthily at work.	
I am making friends outside the job.	
I am finding time to stay in good physical condition (e.g., exercise)	

Data Analysis: Quantitative is a phenomenon in which researchers collect numerical data and analyze the data using mathematical methods (Aliaga, 2000). Since this study will use a quantitative method, the suitable way to analyze the data from the questionnaire that will be collected is the Statistical Package for Social Science (SPSS) 28.0 Version Software for Windows. Correlation analysis will be used to examine this research question and to evaluate the relationships between dependent and independent variables based on the responses that will be received via the distribution of the questionnaire.

4. Conclusion

The researchers attempt to employ a quantitative technique, using primary data that will be obtained through an online survey. As a result, the five-point Likert scale was chosen as the data collection method. The sample will be acquired using the stratified sampling technique of probability sampling. The researchers plan to utilize the Statistical Package for the Social Science (SPSS) Version 28.0 for data processing. The objective of this paper is to examine the causes of work stress among MCDF personnel. The factors under study are operational, organizational and lifestyle that cause stress among a sample of 123 personnel of MCDF while

carrying out their work assignments in Klang Valley. The researchers conducted and completed the pilot test. This study is significant as it explores the causes that contribute to work stress among MCDf personnel. By doing so, it provides an insight into the management of MCDf, whether due attention needs to be given to these causes, and mitigate them, if necessary, to eliminate or reduce the stress level of the personnel. It also guides on the causes of stress. This will assist in understanding and allocating tasks and activities in this organization.

References

- Akerstorm, M., Corin, L., Severin, J., Jonsdottir, I. H. & Bjork, L. (2021). Can Working Conditions and Employees' Mental Health Be Improved via Job Stress Interventions Designed and Implemented by Line Managers and Human Resources on an Operational Level? *International Journal of Environmental Research and Public Health*, 1-16.
- Aliaga, M. &. (2000). Interactive Statics. Saddle River, 3-15.
- American Psychological Association. (2019). Stress in America: Stress and Current Events. American Psychological Association.
- Beckner, M. E., Conkright, W. R., Eagle, S. R., Martin, B. J., Sinnott, A. M., LaGoy, A. D. & Jabloner, L. R. (2021). Impact of simulated military operational stress on executive function relative to trait resilience, aerobic fitness, and neuroendocrine biomarkers. *Physiology & Behavior*, 1-13.
- Buhat, C. H., Torres, M. C., Olave, Y. H., Gavina, M. A., Felix, E. O., Gamilla, G. B. & Rabajante, J. F. (2020, March 30). A mathematical model of COVID-19 transmission between frontliners and the general public. medRxiv.
- Centre for Disease Control. (2020). Healthcare Personnel and First Responders: How to Cope with Stress and Build Resilience During the COVID-19 Pandemic. Retrieved from Centers for Disease Control and Prevention: <https://www.cdc.gov/coronavirus/2019-ncov/hcp/mental-health-healthcare.html>.
- Chua, B.-L., Al-nsi, A., Kim, S., Wong, A. F. & Han, H. (2022). Examining airline employees' work-related stress and coping strategies during the global tourism crisis. *International Journal of Contemporary Hospitality Management*, 1-28.
- Chuan, C. (2006). Sample Size Estimation using Krejcie and Morgan and Cohen Statistical Power Analysis a Comparison. *Jurnal Penyelidikan IPBL*, 7, 78-86.
- Cui, S., Jiang, Y., SShi, Q., Zhang, L., Kong, D., Qian, M. & Chu, J. (2021). Impact of Covid-19 on Anxiety, Stress and Coping Styles in Nurses in-Emergency Departments and Fever Clinics: A Cross-Sectional Survey. *Risk Management and Health Care Policy*, 585-594.
- Cooper, C. L. & Marshal, J. (1976). Occupational Sources of Stress: A Review of the Literature Relating to Coronary Heart Disease and Mental Ill Health. *Journal of Occupational Psychology*, 49, 11-28.
- Di Renzo, L., Gualtieri, P., Pivari, F., Soldati, L., Attina, A. & Cinelli, G. (2020). Eating habits and lifestyle changes during COVID-19 lockdown: an Italian survey. *Journal of Translational Medicine*, 1-15.
- Dua, K. (2019). Stress management: An overview. *Journal of Pharmacognosy and Photochemistry*, 1448-1452.
- Etikan, I. & Bala, K. (2017). Sampling and Sampling Methods. *Biometrics & Biostatistics International Journal*, 5(6).
- Fletcher, D., Hanton, S. & Neil, R. (2012). *Scandinavian Journal of Medicine and Science in Sports*, 22(4), 545-557.
- Florendo Dy, L. & Rabajante, J. (2020). A COVID-19 Infection Risk Model for Frontline Health Care Workers. medRxiv.
- Gupta, B., Bajwa, S., Malhotra, N., Mehdiratta, L. & Kakkar, K. (2020). Tough times and Miles to go before we sleep Corona warriors. *Indian J Anaesth*, 64(2), 42-46.
- Herman, K. C., Reunke, W. M. & Eddy, C. L. (2020). Advances in understanding and intervening in teacher stress and coping: The Coping-Competence-Context Theory. *Journal of School Psychology*, 69-74.
- Hill, D. C., Moss, R. H., Sykes-Muskett, B., Conner, M. & O'Connor, D. B. (2018). Stress and eating behaviors in children and adolescents: Systematic review and meta-analysis. *Appetite*.
- Holden, S. L., Forester, B. E., Williford, H. N. & Reilly, E. (2019). Sport Locus of Control and Perceived Stress among College Student-Athletes. *International Journal of Environmental Research and Public Health*.
- Institute for Public Health. (2015). National Health and Morbidity Survey Vol. 2. Putrajaya: MOH.
- Institute for Public Health. (2020). National Health and Morbidity Survey (NHMS) 2019. Putrajaya: MOH.
- Irniza, R., Emilia, Z., Saliluddin, S. M. & Isha, A., N. (2014). A Psychometric Properties of the Malay-version

- Police Stress Questionnaire. *Malays J Med Sci.* (Jul-Aug), 42-50.
- Kang, L., Li, Y., Hu, S., Chen, M., Yang, C., Xiang Yang, B. & Wang, Y. (2020). The mental health of medical workers in Wuhan, China dealing with the 2019 novel coronavirus. *The Lancet*, 7.
- Karlsson, U. &. (2020). Covid-19: risks to healthcare workers and their families. *BMJ*.3944.
- Kassim, M., Ismail, A. & Ismail, R. (2018). A review of occupational stress prevalence and its predictors among selected working populations in Malaysia. *Malaysian Journal of Public Health Medicine*, 18(2), 1-6.
- Kraft, F. B., Maity, D. & Porter, S. (2019). The salesperson's wellness lifestyle, coping with stress and the reduction of turnover. *Journal of Business & Industrial Marketing*, 347-359.
- Krejcie, R. V. & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and psychological measurement*, 30(3), 607-610.
- Krishnan, T., Yusof, S., Aman, H. A. & Nagalan, S. (2021). The Role of National Task Force in Responding To Illegal Activities During Covid-19 Pandemic. *Jurnal Pengajian Umum Asia Tenggara*, 22, 224-237.
- Lazarus, R. & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer Publishing Company.
- Li, J. C., Cheung, J. C. & Sun, I. Y. (2019). The impact of job and family factors on work stress and engagement among Hong Kong police officers. *Policing: An International Journal*, 284-300.
- Luyun, J. L. (2022). Factors associated with Preventive Behavior of COVID-19 Frontliners in Cagayan: Using Health Belief Model. *Journal of Positive School Psychology*, 1504 - 1525.
- Military Health System. (2021). This product is reviewed annually and is current until superseded. <https://health.mil/Military-Health-Topics/Centers-of-Excellence/Psychological-Health-Center-of-Excellence/Psychological-Health-Readiness/Combat-and-Operational-Stress-Control/COSRs>
- Ministry of Health/MOH. (2020). National Strategic Plan for Mental Health 2020-2025. Kuala Lumpur: Ministry of Health, Malaysia.
- Montagna, M., Marksteiner, T. & Dickhauser, O. (2021). The Effect of a Computerized Growth-Mindset Intervention on Teaching Students' Mindset and Cognitive Stress Appraisal. *Frontiers in Education*, 6.
- Mustafar, J., Hodgson, P., Lhussier, M., Forster, N., Carr, S. & Dalkin, S. (2020). 'Everything takes too long and nobody is listening': Developing theory to understand the impact of advice on stress and the ability to cope. *Plos One*, 1-22.
- NADMA. (2020). Entry and quarantine process person under surveillance (Pus). Kuala Lumpur: Govt of Malaysia.
- Nair D R, R. V. (2020). Lifestyle and psychosocial stress during COVID-19 lockdown – an online survey. *Kerala Journal of Psychiatry*, 5-15.
- O'Connor, D. B., Thayer, J. F. & Vedhara, K. (2021). Stress and Health: A Review of Psychobiological Processes. *Annual Review of Psychology*, 72, 663 - 688.
- Okechukwu, C. & Babatunde, O. B. (2021). Work-Related Stress and the Relationship with the Health Belief Model among Medical Doctors in a Tertiary Hospital in Port-Harcourt, Nigeria. *Journal of Education, Society and Behavioral Science*, 10-21.
- Panigrahi, A. (2016, Oct - Dec). Managing stress at the workplace. *Journal of Management Research and Analysis*, 3(4), 154-160.
- Polinard, E. L., Ricks, T. N., Duke, E. & Lewis, K. A. (2022). *Pandemic perspectives from the frontline - The nursing stories*. Wiley, 1-14.
- PRO Dept. (2022, Dec 16). Sejarah APM. Retrieved Jan 1, 2023, from Portal Rasmi Angkatan Pertahanan Awam Malaysia: <https://www.civildefence.gov.my>.
- Richardson, D., Darte, K., Grenier, S., English, A. & Sharpe, J. (2008). Operational Stress Injury Social Support: A Canadian Innovation in Professional Peer Support. MacDonal Franklin OSI Research Centre. 34.
- Rom, O. & Reznick, A. Z. (2016). The Stress Reaction: A Historical Perspective. *Advs Exp. Medicine, Biology - Neuroscience and Respiration*, 1-4. doi:10.1007/5584_2015_195
- Selye, H. (1936). A syndrome produced by nocuous agents. *Nature*, 32.
- Shanahan, L., Steinhoff, A., Bechtiger, L., Murray, A., Nivette, A., Hepp, U. & Eisner, M. (2020). Emotional distress in young adults during the COVID-19 pandemic: Evidence of risk and resilience from a longitudinal cohort study. *Psychological Medicine*, 1-10.
- Sharifi-Rad, M., Anil Kumar, N. V., Zucca, P., Varoni, E., Dini, L., Panzarini, E. & Rajkovic, J. (2020). Lifestyle, Oxidative Stress, and Antioxidants: Back and Forth in the Pathophysiology of Chronic Diseases. *Frontiers in Physiology*, 11, 1-21.
- Sherman, A., Williams, M., Amick, B., Hudson, T. & Messias, E. (2020). Mental health outcomes associated with the COVID-19 pandemic: Prevalence and risk factors in a southern US state. *Psychiatry Research*, 1-8.

- Shukla, A. & Srivastava, R. (2016). Development of a short questionnaire to measure an extended set of role expectation conflict, coworker support and work-life balance: The new job stress scale. *Cogent Business & Management*, 1-19.
- Soares, L. (2021). An Examination of the Impact of the COVID-19 Health Threat, Stress, and Social Isolation on Lifestyle Habits as Analyzed through the Protection Motivation Theory. UNF Graduate Theses and Dissertations, 1083.
- Stogner, J., Lee Miller, B. & McLean, K. (2020). Police Stress, Mental Health, and Resiliency during the COVID-19 Pandemic. *American Journal of Criminal Justice*, 718-730.
- Wahab, A. (2020). The outbreak of COVID-19 in Malaysia: Pushing migrant workers at the margin. *Social Sciences & Humanities Open*.
- Wang, J., Zhou, M. & Liu, F. (2020). Reasons for healthcare workers becoming infected with novel coronavirus disease 2019 (COVID-19) in China. *Journal of Hospital Infection*.
- Weaver, M., Landrigan, C., Sullivan, J., O'Brien, C. S., Qadri, S., Viyaran, N. & Wang, W. (2020). The Association Between Resident Physician Work-Hour Regulations and Physician Safety and Health. *The American Journal of Medicine*, 133(7), e343-e354.
- Wijayanti, R. & Fauzi, H. (2020). Factors affecting the work stress of police officers: A systematic review. *Psychology Idea*, 18(2), 112-126.
- WHO. (2022). World Health Statistics 2022. World Health Organization.
- Yussof, K., Idris, S. M. & Razak, N., A. (2022). Self-Efficacy towards Health Risk among Graduates. *International Journal of Academic Research in Business and Social Sciences*, 12(1), 983-993.