

## ORIGINAL ARTICLE

# OPERATIONAL AND ORGANISATIONAL STRESS AMONG POLICE OFFICERS IN JOHOR DURING THE COVID-19 PANDEMIC

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## ABSTRACT

Police officers are subjected to a higher risk of operational and organisational stress due to their duty, especially during the COVID-19 pandemic. This study aimed to establish the stress levels (low, moderate, and high cut-off values) using the Malaysian version of the police operational stress questionnaire (PSQ-Op) and the police organisational stress questionnaire (PSQ-Org). The study specifically sought to determine the operational and organisational stress levels among police officers in Johor during the COVID-19 pandemic. The Bahasa Malaysia version of PSQ-Op and PSQ-Org was distributed to 233 police officers in Johor. The cut-off values for the low, moderate, and high stress were established using the sample's mean, while the sample's tertile was to provide stress levels among those police officers. The low, moderate, and high stress for operational stress using the sample's mean was found to be at 32.6 per cent, 27.5 per cent and 39.9, respectively, but were slightly higher (34.8%, 32.6% and 32.6%, respectively) when using the sample's tertile. The low, moderate, and high operational stress was 23.6 per cent, 37.3 per cent, and 39.1 per cent, respectively, when applying the sample. Meanwhile, when using the sample's tertile, the low, moderate, and high stress of organisational stress were 38.2 per cent, 30.9 per cent and 30.9 per cent, respectively. In conclusion, this study has found that the COVID-19 pandemic triggered higher levels of stress among police officers in Johor, calling for measures to be planned and implemented to avoid higher stress levels from affecting the effectiveness and productivity of police officers, which is crucial in maintaining public safety in Malaysia. Future studies need to focus on the other consequences of stress exposure by considering existing control measures.

**Keywords:** Operational stress, organisational stress, Royal Malaysian Police, Johor, sample's mean, sample's tertile, COVID-19 Pandemic

## INTRODUCTION

Police officers are at risk of physical and psychological problems due to the nature of their job to act urgently during emergencies, disasters and traumatic events<sup>2</sup>. Thus, they must have solid stress management skills and emotional intelligence to face the constantly changing environment<sup>1</sup>. In 2020, the Coronavirus-2 (Sars-CoV-2) epidemic emerged and spread from Wuhan City, China, to the whole world, leading to a worldwide pandemic<sup>3</sup>. Later, the World Health Organisation (WHO) named the disease COVID-19<sup>4</sup>. Those infected with COVID-19 and their close contact were quarantined until they were free from the infection. Measures such as movement restrictions and quarantine were implemented around the world to prevent COVID-19 transmission<sup>5</sup>.

In Malaysia, movement control order (MCO) was enforced in response to the COVID-19 pandemic<sup>6</sup>. MCO was implemented on the entire Malaysian population, except for travelling due to emergencies and other permitted reasons, with the approval of law enforcement agencies in Malaysia. Police officers were among the front

liners during MCO and were faced with the challenging task of keeping the public safe to help prevent COVID-19 transmission. As a result, this had put their physical and mental well-being at risk<sup>7-10</sup>. Factors such as minimal contact with family, busy schedule, higher odds of being infected with COVID-19, and lack of personal protective equipment exacerbated stress among police officers<sup>11</sup>. Thus, the implementation of more stringent lockdowns, social distancing, and stay-at-home mandates while being understaffed led police officers to experience high-stress levels during the COVID-19 pandemic<sup>7,12</sup>. To illustrate, a study found that 30.4 per cent out of 600 police personnel had significant levels of stress, ranging from mild to moderate stress, during the COVID-19 lockdown in Eluru, Andhra Pradesh<sup>13</sup>.

This paper aimed to establish low, moderate, and high-stress cut-off values using the Malaysian version of the police operational stress questionnaire (PSQ-Op) and police organisational stress questionnaire (PSQ-Org) and to determine the operational and organisational stress level among police officers in Johor during the COVID-19 pandemic. This study is important as police

officers are the frontliners during emergencies, such as COVID-19, whose roles are to maintain public order and enforcement of the laws. Stress can lead to reduced productivity among police officers, which may require immediate attention by the government to prevent and control mental health issues among the police force.

## METHODS

A cross-sectional study was carried out among 233 police officers from 300 police officers working under the Crime Prevention and Community Safety Department (CPCSD). Four districts were involved in this study: Johor Bharu Utara, Johor Bharu Selatan, Tangkak, and Muar, to ensure police officers in urban and rural areas were included in the study. The study was intended to include 300 officers from the department, but 67 officers refused to participate in this study. The Police Department in Johor was selected for the study due to the high number of COVID-19 reported cases during the period of study in the state. Data collection commenced from April to June 2021 with the approval from Johor Contingent Headquarters (IPK) obtained on 9 March 2021 and ethical approval from the Universiti Putra Malaysia (Ethical Committee for Research Involving Human Subjects with identification number JKEUPM-2020-357)

Data were collected using the police operational stress questionnaire (PSQ-Op) and police organisational stress questionnaire (PSQ-Org), developed in 2006<sup>15</sup> and translated into Bahasa Malaysia for the current study<sup>14</sup>. The permission to use and translate the PSQ-Op and PSQ-Org was obtained from the original researchers before the data collection. Psychometric properties of the questionnaires after the translation were performed, and the reliability test showed a good internal consistency of Cronbach Alpha coefficient 0.93 for PSQ-Op and 0.94 for PSQ-Org<sup>14</sup>. The Bahasa Malaysia version of PSQ-Op and PSQ-Org consisted of 19 and 17 stressors, respectively. Additionally, eight items were included in the questionnaire to elucidate the background information of the respondents.

A pre-test was performed on 30 police officers from Selangor to ensure understanding and proper responses among the police officers in regard to the questionnaire. The data collection was conducted using convenience sampling. The data was distributed either physically or through Google Forms to the police officers. This approach ensured that the data collection process was timely and took into account restrictions on social distancing, MCO, and the availability of police officers during the COVID-19 pandemic. The means of each item in PSQ-Op and PSQ-Org were derived from averaging the scores for each stressor in the questionnaires based on the responses of the police officers.

Cut-off values of low, moderate, and high stress were calculated using two methods, namely (i) mean and standard deviation of PSQ-Op and PSQ-Org and (ii) 33<sup>rd</sup>, 67<sup>th</sup> and 100<sup>th</sup> percentiles of the samples<sup>16</sup>. The frequency of the police officers' stress level was calculated and categorised into low, moderate, and high using the cut-off values<sup>16-17</sup>. Cut-off values were established using mean and standard deviation that applied low-stress level for the value of mean - (1.5 x standard deviation), while the value of mean + (1.5 x standard deviation) as high-stress level and those between high and low as moderate stress<sup>16</sup>.

## RESULTS

### Demographic characteristics of police office

Based on the findings, it was discovered that 88.8 per cent of the police officers were male. The majority (72.5%) of the police officers were Malays. When considering educational background, most of the police officers (82.0%) had attained at least a secondary level of education, with 17.2 per cent having received tertiary education. Analysing the age distribution among the participating police officers, the majority fell within the 25 to 34-year-old range (58.8%), followed by 27.5 per cent aged between 35 to 44 years. Regarding residence, 38.2 per cent of police officers resided in barracks or rental houses, while 36.9 per cent lived in their own homes. In addition, 40.8 per cent of the police officers had less than 7 years of experience, 32.6 per cent had over 11 years of experience, and 26.6 per cent had worked for approximately 8 to 10 years. The study's participants included 51.1 per cent constables, 44.2 per cent non-commissioned officers, and 4.7 per cent inspectors. Table 1 summarises the demographic characteristics of the participating police officers.

In the PSQ-Op and PSQ-Org questionnaires, a scale of 4 indicated moderate stress levels. Consequently, the mean responses below 4 indicated lower stress, while above 4 indicated moderate to high stress for each item of PSQ-Op and PSQ-Org. Based on Table 2, the highest mean and standard deviation for PSQ-Op responses was fatigue ( $4.71 \pm 1.506$ ), while the lowest mean and standard deviation were making friends outside the job ( $3.48 \pm 1.427$ ). Table 2 shows the descriptive statistics of PSQ-Op responses received from police officers.

Table 3 shows the descriptive statistics of PSQ-Org responses received from police officers. The highest mean and standard deviation for PSQ-Org responses was for constant changes in policy/legislation ( $4.89 \pm 1.806$ ), while the lowest mean and standard deviation was for dealing with the court system ( $3.51 \pm 1.537$ ).

**Table 1: Socio-demographic characteristics of police officers in Johor**

| Variable                  |                                   | Frequency (n) | Percentage (%) | $\chi^2$ | p value |
|---------------------------|-----------------------------------|---------------|----------------|----------|---------|
| Gender                    | Male                              | 207           | 88.8           | 140.605  | <.001   |
|                           | Female                            | 26            | 11.2           |          |         |
| Ethnicity                 | Malay                             | 169           | 72.5           | 323.343  | <.001   |
|                           | Indian                            | 1             | 0.4            |          |         |
|                           | Chinese                           | 1             | 0.4            |          |         |
|                           | Others                            | 62            | 26.6           |          |         |
| Level of education        | Secondary level                   | 191           | 82.0           | 257.365  | <.001   |
|                           | Tertiary level                    | 40            | 17.2           |          |         |
|                           | Others professional certification | 2             | 0.9            |          |         |
|                           |                                   |               |                |          |         |
| Marital status            | Single                            | 52            | 22.3           | 209.880  | <.001   |
|                           | Married                           | 178           | 76.4           |          |         |
|                           | Divorced                          | 3             | 1.3            |          |         |
| Age group (year)          | 18 -24                            | 16            | 6.9            | 266.077  | <.001   |
|                           | 25 -34                            | 137           | 58.8           |          |         |
|                           | 35 -44                            | 64            | 27.5           |          |         |
|                           | 45 -54                            | 6             | 2.6            |          |         |
|                           | 55 -64                            | 10            | 4.3            |          |         |
| Place of residence        | Barrack                           | 89            | 38.2           | 7.528    | .023    |
|                           | Rental house                      | 86            | 36.9           |          |         |
|                           | Own house                         | 58            | 24.9           |          |         |
| Working experience (year) | Below 7                           | 95            | 40.8           | 7.064    | .029    |
|                           | 8-10                              | 62            | 26.6           |          |         |
|                           | More than 11                      | 76            | 32.6           |          |         |
| Ranking                   | Constable                         | 119           | 51.1           | 209.863  | <.001   |
|                           | Non-commissioned officers         | 103           | 44.2           |          |         |
|                           | Inspector                         | 11            | 4.7            |          |         |

**Table 2: Descriptive statistics of PSQ-Op**

| Item                                                                    | Mean | Standard deviation |
|-------------------------------------------------------------------------|------|--------------------|
| Fatigue                                                                 | 4.71 | 1.506              |
| Occupational related health issues                                      | 4.68 | 1.822              |
| Overtime demand                                                         | 4.6  | 1.465              |
| Risk of being injured on the job                                        | 4.6  | 1.465              |
| Negative comment from the public                                        | 4.51 | 1.666              |
| Feeling like you are always on the job                                  | 4.49 | 1.793              |
| Limitation to social life                                               | 4.36 | 1.732              |
| Work alone                                                              | 4.24 | 1.55               |
| Traumatic event                                                         | 4.2  | 1.704              |
| Paperwork                                                               | 4.18 | 1.466              |
| Work related activities on days off                                     | 4.1  | 1.655              |
| Lack of understanding from family and friends about your work           | 4.08 | 1.472              |
| Friends/ family feel the effects of the stigma associated with your job | 4.08 | 1.700              |
| Finding time to stay in good physical condition                         | 4    | 1.628              |
| Upholding a higher image in public                                      | 3.86 | 1.648              |
| Shift work                                                              | 3.84 | 1.804              |
| Manage social life outside of work                                      | 3.63 | 1.557              |
| Eating healthy at work                                                  | 3.62 | 1.51               |
| Making friends outside the job                                          | 3.48 | 1.427              |

\*Means were derived from averaging the scores for each stressor in the questionnaires

**Table 3: Descriptive statistics of PSQ-Org**

| Item                                                                                   | Mean | Standard deviation |
|----------------------------------------------------------------------------------------|------|--------------------|
| Constant changes in policy/legislation                                                 | 4.89 | 1.806              |
| Inconsistent leadership style                                                          | 4.87 | 1.934              |
| Leaders over emphasise the negatives (e.g., supervisor evaluations, public complaints) | 4.74 | 1.705              |
| The feeling that different rules apply to different people (e.g., favouritism)         | 4.7  | 1.881              |
| Inadequate equipment                                                                   | 4.7  | 1.733              |
| Staff shortages                                                                        | 4.67 | 1.706              |
| Unequal sharing of work responsibilities                                               | 4.66 | 1.606              |
| Lack of resources                                                                      | 4.65 | 1.718              |
| Perceived pressure to volunteer free time                                              | 4.49 | 1.595              |
| Excessive administrative duties                                                        | 4.3  | 1.606              |
| Lack of training on new equipment                                                      | 4.12 | 1.52               |
| Feeling like you always have to prove yourself to the organisation                     | 4.1  | 1.501              |
| The need to be accountable for doing your job                                          | 4.09 | 1.571              |
| Too much computer work                                                                 | 3.98 | 1.534              |
| Internal investigations                                                                | 3.93 | 1.556              |
| If you are sick or injured your co-workers seem to look down on you                    | 3.73 | 1.704              |
| Dealing with court system                                                              | 3.51 | 1.537              |

*\*Means were derived by averaging the scores for each stressor in the questionnaires*

The cut-off values of low, moderate, and high stress for PSQ-Op and PSQ-Org were done using mean and tertile<sup>16</sup>. The cut-off values for PSQ-Op for the sample's mean and standard deviation found that low stress was indicated by values less than 3.86, while moderate and high stress were between 3.86 to 4.49 and more than 4.49, respectively. The cut-off values for PSQ-Org were determined at 3.90 for low stress, 3.90 to

4.83 for moderate stress, and more than 4.83 for high stress. Based on the tertile, the cut-off values of PSQ-Op were 3.89 for low stress, 3.89 to 4.68 for moderate stress, and more than 4.68 for high stress, while for PSQ-Org were 4.00 for low stress, 4.00 to 5.00 for moderate stress, and more than 5.00 for high stress. Table 4 shows the cut-off values for PSQ-Op and PSQ-Org.

**Table 4: Cut-off values for PSQ-Op and PSQ-Org**

| Statistics           | Operational stress                                 | Stress level                                     | Organisational stress                              | Stress level                                     |
|----------------------|----------------------------------------------------|--------------------------------------------------|----------------------------------------------------|--------------------------------------------------|
| Mean $\pm$ Std. dev. | 4.17 $\pm$ 1.21                                    | Low <3.86<br>Moderate = 3.86-4.49<br>High >4.49  | 4.36 $\pm$ 1.31                                    | Low <3.90<br>Moderate = 3.90-4.83<br>High >4.83  |
| Tertile              | 33 <sup>rd</sup> = 3.89<br>67 <sup>th</sup> = 4.68 | Low < 3.89<br>Moderate = 3.89-4.68<br>High >4.68 | 33 <sup>rd</sup> = 4.00<br>67 <sup>th</sup> = 5.00 | Low < 4.00<br>Moderate = 4.00-5.00<br>High >5.00 |

Using the established cut-off values, the stress levels were categorised into low, moderate, and high levels of stress for operational stressors (see Figure 1). In comparison to the level of operational stressors by Kukić et al.<sup>16</sup>, using the cut-off values of stress from the sample's mean, it was found that the values of low and moderate stress were 34.0 per cent and 37.0 per cent, respectively<sup>16</sup>. This indicated a slightly higher value than the low and moderate operational stress levels in this study, which were 32.6 per cent and 27.5 per cent, respectively. However, the level of high stress was seen higher in this study at 39.9 per cent compared to 29.0 per cent by Kukić et al.<sup>16</sup>. When using the cut-off from tertile, the low and moderate stress levels for operational stress among police officers in this study was found to be at 34.8 per cent and 32.6

per cent, respectively, which was slightly lower than the level of low (36.0%) and moderate (34.0%) stress in the study by Kukić et al.<sup>16</sup>. Similarly, this study revealed a higher stress level (32.6%) compared to the study by Kukić et al.<sup>16</sup> where the level of high stress was 30.0 per cent.

Figure 2 shows the low, moderate, and high-stress levels for organisational stressors among police officers. Using cut-off values from the sample's mean, the organisation stress level among police officers found was 23.6 per cent for low level while 37.3 per cent for moderate level. This differed from the organisational stress seen in Kukić et al.<sup>16</sup>, where low stress was found to be higher at 35 per cent, while moderate stress was found to be slightly lower at 35 per

cent among police officers. The high-stress (39.1%) level also was seen higher in this study than in Kukić et al.<sup>16</sup>. Moreover, this study also found that the use of the cut-off value from the sample's tertile revealed 38.2 per cent and 30.9 per cent of police officers had low and high-stress levels, respectively. These were higher

compared to the study by Kukić et al.<sup>16</sup>, who found 34.0 per cent and 30.0 per cent of police officers experiencing low and high stress. Moderate organisational stress in this study was 30.9 per cent, which was lower than the frequency of moderate stress (36.0%) by Kukić et al.<sup>16</sup>.

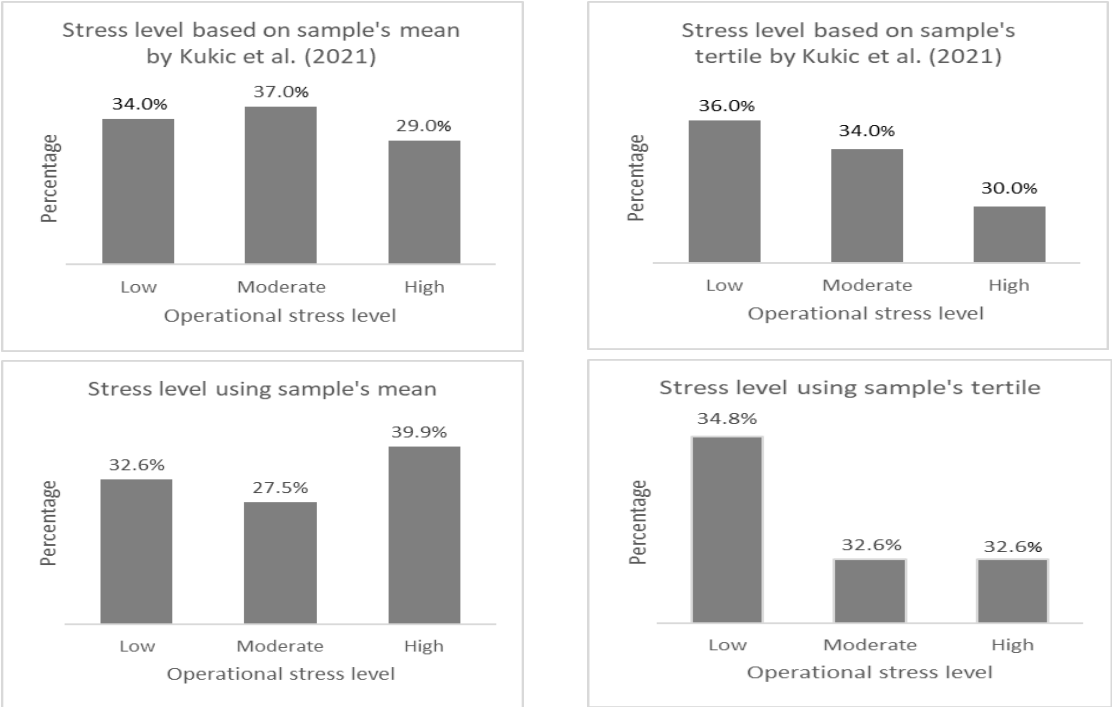


Figure 1: Operational stress levels according to cut-off values

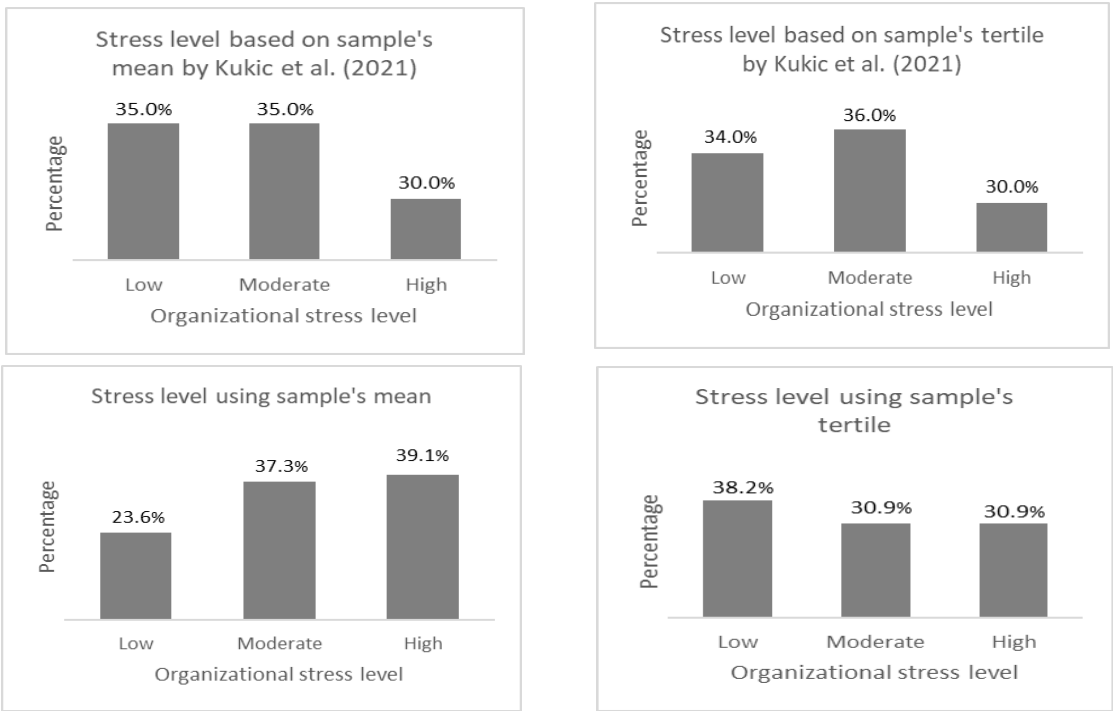


Figure 2: Organisational stress levels according to cut-off values

DISCUSSION

This study found that the high stress among police officers for this study was seen as higher



compared to the previous study by Kukić et al.<sup>16</sup> with a high stress level of 30 per cent or above among the police officers using the cut-off values from the sample's mean and tertile for operational and organisational stress. This showed that the COVID-19 pandemic played a significant factor in triggering higher stress levels among police officers in Johor.

In a study, it was reported that low, moderate, and high operational stress among police officers was reported at 24.0 per cent, 32.0 per cent and 44.0 per cent, respectively, while for organisational stressors, the low, moderate, and high stress among police officers was 34.0 per cent, 27.0 per cent and 39.0 per cent<sup>17</sup>. It showed a much lower frequency of low operational stress but a higher frequency of high operational stress among police officers compared to this study. The reason for using mean and tertile was to prevent cut-off values that represent stress levels biased towards the skewed side of the data. Using mean and standard deviation can under or overestimate stress level if it is determined towards the skewed side of data; thus, tertile can be used to adjust the cut-off values as it allocates the sample into three groups based on sample size, minimum recorded values, and maximum recorded values<sup>16</sup>.

In comparison to the previous study, the frequency of low, moderate, and high stress in this study was higher. For example, Masilamani et al.'s (2013)<sup>19</sup> study that was conducted prior to the COVID-19 pandemic revealed the frequency of stress was 18 per cent, 14.9 per cent, and 5.9 per cent for mild, moderate, and severe stress, respectively, among 579 police officers<sup>19</sup>. This was attributed to the changes in police routine, such as stress during the pandemic, and was also positively associated with increased workload among police officers compared to pre-pandemic<sup>10</sup>.

Stressors in police work can increase the risk for mental health morbidities among police officers as well as affect their mental well-being, professionalism, police force effectiveness, and public safety<sup>20</sup>. These stressors can be divided into operational and organisational stressors<sup>14-16</sup>. Operational stressors are associated with mental health problems, such as anxiety, depression, and impaired cognition among officers<sup>21</sup>. For example, in a study published in 2020, work shifts, inability to meet family members, interpersonal isolation, and fear of the COVID-19 infection resulted in police personnel being stressed and anxious<sup>22</sup>. Another study revealed that police officers frequently face close experiences and have more cognitive, mental, psychological and emotional stress<sup>11</sup>. As a result, they are more vulnerable to depression, anxiety, and stress.

Moreover, other factors that influence stress levels among police officers include long duty hours and poor eating habits, which can lead to health problems among police officers<sup>22</sup>. The majority of police officers are feeling tense due to workload increases and improper sleep patterns<sup>23</sup>. Besides, police officers are among the first responders during emergencies and experience fatigue caused by working overtime and pressure due to their work responsibility<sup>24</sup>.

A study reported that police officers with some comorbidity experienced a higher degree of stress and the possibility of the development of anxiety<sup>25</sup>. A reviewed paper found that stressors, such as fatigue, workload, family support, infection risk, and traumatic events, may cause stress, anxiety, and depression among police officers<sup>26</sup>. Another study involving 388 police officers reported that work stress is caused by the lack of support towards police officers. In addition, organisation/administrative pressure is associated with higher symptoms of depression<sup>27</sup>.

Determining stress levels is important due to the profound effect of stress on the police force<sup>28</sup>, which deals with the safety and security of a nation. This study found that police officers were exposed to high-stress levels due to exposure to operational and organisational stressors during the COVID-19 pandemic. In short, this study contributed to identifying the level of stress among police officers during the pandemic, which can be used for future planning by policing agencies to prevent and control the implication of operational and organisational stressors during national emergencies among police officers. This is important to ensure the efficiency and productivity of the police force in maintaining public order in the country.

Moreover, this study has provided a cut-off value for stress levels based on the responses to operational and organisational stressors collected using PSQ-Op and PSQ-Org. This study is novel in the context of Malaysia and can serve as baseline information on the effect of national emergencies on the stress level among police officers. However, this study has not highlighted the other psychological effects of stressors, such as anxiety and depression, on police officers and their biological markers (e.g., cortisol level), behavioural changes, and physiological changes.

## CONCLUSIONS

In conclusion, the cut-off values for stress levels were examined using the Malaysian version of the police operational stress questionnaire (PSQ-Op) and police organisational stress questionnaire (PSQ-Org) to assess low, moderate, and high stress for the operational and organisational stress among police officers in Johor. Therefore, the results of this study can be used to represent Malaysian Police Officers. The

study also revealed the level of operational and organisational stress among Malaysian police officers in Johor, which was higher during the COVID-19 pandemic compared to pre-pandemic in Malaysia. Due to this, the policing agency needs to evaluate measures that can be taken to prevent the high prevalence of stress in the police workforce, especially during a national emergency such as the COVID-19 pandemic. This is because police officers are responsible for maintaining law and order to ensure the safety of the population and the country. Future studies need to focus on the other consequences of stress exposure and consider existing control measures in addition to stress levels. This is to enhance understanding of the interaction between exposure to stress, its effects, and existing control among the police force to plan for better intervention in protecting police officers against psychological stressors.

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## Competing interests

There are no competing interests to declare.

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