INFLUENCE OF WORKPLACE VIOLENCE ON RESILIENCE AMONG SELECTED PUBLIC HEALTH WORKFORCE IN TERENGGANU

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INFLUENCE OF WORKPLACE VIOLENCE ON RESILIENCE AMONG SELECTED PUBLIC HEALTH WORKFORCE IN TERENGGANU

By

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DECLARATION

iv

I, Amer Taufek bin Abd Wahab, declared this research project is my work and has not been submitted for the award of a higher degree elsewhere. All the information that has been derived from other sources is clearly indicated in the thesis.

Amer Taufek bin Abd Wahab

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

LIST OF SYMBOLS

%	Percent
=	Equal to
$\geq$	More than and equal to
$\leq$	Less than and equal to
>	More than
<	Less than

LIST OF ABBREVIATIONS

AdjOR   Adjusted Odds Ratio

CI   Confidence Interval

HCW   Healthcare worker

IK   Health Inspector

ILO   International Labour Organization

MA   Medical Assistant

MO   Medical officer

MOH   Ministry of Health

OR   Odd ratio

PHC   Primary healthcare

PHW   Public Health Workforce

PKA   Public Health Assistant

SD   Standard deviation

SPM   Sijil Pelajaran Malaysia

WHO   World Health Organization

WPV   Workplace violence

ABSTRAK

PENGARUH KEGANASAN TEMPAT KERJA TERHADAP DAYA TAHAN DI KALANGAN TENAGA KERJA KESIHATAN AWAM TERPILIH DI TERENGGANU

Latar belakang: Keganasan di tempat kerja adalah isu global yang semakin mendapat perhatian, melibatkan semua sektor pekerjaan, terutama sektor kesihatan di mana pekerja kesihatan menghadapi risiko lebih tinggi. Pada masa yang sama, daya tahan, yang didefinisikan sebagai kemampuan individu untuk menyesuaikan diri dengan pelbagai situasi yang mencabar sambil mengekalkan kesejahteraan, adalah penting bagi Pekerja Kesihatan Awam (PHW) yang menghadapi cabaran di tempat kerja. Ia berfungsi sebagai faktor perlindungan daripada gangguan psikologi, keletihan, dan beban kerja yang dirasai, terutamanya dalam kalangan profesional kecemasan dalam kalangan pekerja kesihatan.

Objektif: Kajian ini bertujuan untuk mengkaji hubung kait di antara tahap daya tahan yang rendah dengan pendedahan keganasan di tempat kerja, ciri-ciri individu, ciri-ciri pekerjaan, dan persekitaran kerja psikososial di kalangan Pekerja Kesihatan Awam (PHW) di Terengganu.

Kaedah:

Kajian keratan rentas ini, yang dijalankan dari Mei 2022 hingga Oktober 2023, melibatkan semua lapan pejabat kesihatan daerah dan klinik kesihatan kerajaan di Terengganu. Peserta dalam kajian ini dipilih menggunakan persampelan rawak. Data dikumpul menggunakan tiga soal selidik yang diurus sendiri iaitu Soal Selidik Konten Kerja Versi Melayu (M-JCQ), Soal Selidik Keganasan Tempat Kerja dalam Sektor Kesihatan ILO/ICN/WHO/PSI, dan Soal Selidik

Skor Ketahanan Connor-Davidson (CD-RISC 10). Analisis regresi logistik berganda digunakan untuk menentukan faktor-faktor yang berkaitan dengan ketahanan yang rendah di kalangan peserta..

Keputusan: Kajian ini melibatkan 1044 peserta dengan kadar tindak balas 92% dengan umur min (SD) 37.24 (7.64) tahun. Purata (SD) skor bagi kebebasan dalam membuat keputusan, tuntutan kerja psikologi, tuntutan kerja fizikal, dan sokongan sosial masing-masing adalah 70.70 (10.61), 22.91 (3.11), 11.4 (3.00), dan 25.47 (3.77). Individu yang berkahwin, skor yag lebih tinggi dalam kebebasan dalam membuat keputusan, tuntutan kerja fizikal, dan sokongan sosial secara signifikan dikaitkan dengan WPV (Masing- masing dengan Adjusted OR 0.54 (95% CI: 0.37, 0.81), 1.03 (95% CI: 1.01, 1.04), 1.06 (95% CI: 1.06, 1.11), dan 0.90 (0.87, 0.94), P- value< 0.05). Regresi logistik menunjukkan bahawa selain daripada skor kebebasan membuat keputusan yang lebih tinggi (Adjusted OR 0.98 (95% CI: 0.97, 0.99), P= 0.02), skor tuntutan kerja psikologi yang lebih tinggi (Adjusted OR 0.83 (95% CI: 0.78, 0.88), P< 0.001) dan skor sokongan social yang lebih tinggi (Adjusted OR 0.92 (95% CI: 0.88, 0.95), P<0.001), pendedahan kepada WPV juga secara signifikan dikaitkan dengan tahap ketahanan yang rendah (Adjusted OR 1.48 (95% CI: 1.09, 2.00), P= 0.013).

Kesimpulan: Kajian ini mengenal pasti faktor-faktor penting yang berhubungan dengan tahap ketahanan yang rendah di kalangan PHA, termasuk pendedahan kepada keganasan di tempat kerja, dan elemen persekitaran kerja psikososial termasuk kebebasan membuat keputusan, tuntutan kerja psikologi, dan sokongan sosial. Mengatasi keganasan di tempat kerja adalah penting kerana pendedahan kepada WPV mempunyai hubungan yang signifikan dengan tahap

daya tahan yang rendah. Program pendidikan dan kempen kesedaran dapat menyumbang kepada membina budaya hormat dan sifar toleransi terhadap keganasan di tempat kerja. Selain itu, usaha perlu diarahkan ke arah memperkukuhkan kebebasan dalam membuat keputusan (kawalan kerja) dan sokongan sosial dalam persekitaran kerja psikososial. Membina persekitaran kerja yang memberi keutamaan kepada kerjasama, kerja pasukan, dan sokongan bersama, sambil juga memupuk komunikasi terbuka, saluran maklum balas, dan perasaan persaudaraan di kalangan PHW, dapat meningkatkan tahap daya tahan di kalangan mereka.

Kata kunci: Daya tahan, keganasan di tempat kerja, persekitaran kerja psikososial, pekerja kesihatan awam, kesihatan pekerjaan

ABSTRACT

INFLUENCE OF WORKPLACE VIOLENCE ON RESILIENCE AMONG SELECTED PUBLIC HEALTH WORKFORCE IN TERENGGANU

Background: Workplace violence is a globally recognized issue, impacting on all employment sectors, particularly the health sector where healthcare workers face a higher risk. Concurrently, resilience, defined as individuals' ability to adapt to diverse adverse situations while maintaining well-being, is crucial for Public Health Workforce (PHW) confronting workplace challenges.

Objective: This study aims to examine the relationship between low resilience levels and workplace violence exposure, individual characteristics, job characteristics, and the psychosocial work environment among PHW in Terengganu.

Methodology: This cross-sectional study, conducted from May 2022 to October 2023, included all eight district health offices and government health clinics in Terengganu. The participants in the study were selected using random sampling. Data was collected using three self-administered questionnaires which were the Malay version Job Content Questionnaire (M-JCQ), Workplace Violence in the Health Sector ILO/ICN/WHO/PSI Questionnaire, and Connor-Davidson Resilience Score (CD-RISC 10) Questionnaire. Multiple logistic regression analysis was applied to determine the associated factors for low resilience among participants.

Results: The study included 1044 participants with a response rate of 92% with a mean (SD) age of 37.24 (7.64) years. Mean (SD) scores for decision latitude, psychological job demand, physical job demand, and social support were 70.70 (10.61), 22.91 (3.11), 11.4 (3.00), and 25.47 (3.77) respectively. Married individuals, high score for decision latitude, physical job demand, and social support were significantly associated with WPV (Adjusted OR 0.54 (95% CI: 0.37, 0.81), 1.03 (95% CI: 1.01, 1.04), 1.06 (95% CI: 1.06, 1.11) and 0.90 (0.87, 0.94), P- value< 0.05 respectively). Logistic regression revealed that, in addition to higher score of decision latitude (Adjusted OR 0.98 (95% CI: 0.97, 0.99), P- value= 0.02), higher score for psychological job demand (Adjusted OR 0.83 (95% CI: 0.78, 0.88), P- value< 0.001) and higher score for social support (Adjusted OR 0.92 (95% CI: 0.88, 0.95), P- value<0.001), Exposure to WPV also significantly associated with low resilience levels (Adjusted OR 1.48 (95% CI: 1.09, 2.00), P- value= 0.013).

Conclusion: The study identified key factors associated with low resilience levels among PHWs, including workplace violence exposure and psychosocial work environment elements such as high score of decision latitude, psychological job demand, and social support. Addressing workplace violence is crucial, given its significant relationship with low resilience levels. Educational programs and awareness campaigns can foster a culture of respect and zero tolerance for workplace violence. Efforts should also focus on strengthening decision latitude and social support within the psychosocial work environment, fostering a cooperative and supportive atmosphere among PHWs**.**

CHAPTER 1
INTRODUCTION

1.1 Background

1.1.1 Workplace violence

Workplace violence is one of the important issues in the workplace that is gaining attention globally, which involves all sectors of employment, including the health sector. Workers in the healthcare sector are known to have a greater danger of being victims of workplace violence, with roughly one-quarter of all violent occurrences on the job occurring in this sector (OSHA, 2015).

Workplace violence (WPV) was described by the International Labor Organization (ILO) as incidents when personnel are abused, threatened or assaulted in circumstances related to their work, including commuting to and from work, involving an explicit or implicit challenge to their safety, well-being or health (Di Martino, 2002). Whereas, according to the National Institute for Occupational Safety and Health's (NIOSH) definition of workplace violence, "workplace violence" refers to any act of physical assault, threatening conduct, or verbal abuse that takes place in the workplace (DOSH, 2002). In general, although there are numerous definitions of workplace violence, all of them clarify that workplace violence is a sort of violence that occurs in the workplace.

During the six years between 2011 and 2017, the rate of serious workplace violence in healthcare was more than four times higher than the rate of serious workplace violence in private industry, which was 9.1 per 10000 workers on average. This meant that injured workers needed time off work to recover from their injuries. In addition, the Bureau of Labor Statistics (BLS)

reported in 2013 that 80% of workplace violence was perpetrated by patients, with families accounting for the remaining 16%. The most common form of violence was physical, such as hitting, kicking, beating, and shoving (Bureau of Labor Statistics, 2021).

The Ministry of Health of Malaysia (MOH) has reported that there has been a rising trend of workplace violence among healthcare workers (HCWs) in Malaysia from 2013 to 2018, with a total of 44 and 432 respective incidents. Analysis of violence case reporting in 2018 found that nurses had the cases for WPV, which is 28 % (121 cases), followed by medical officers 23% (101 cases) and assistant medical officers 10% (45 cases) (Saiful Anuar *et al.*, 2018).

According to the World Health Organization (WHO), there are two forms of violence, which are physical and psychological violence. Physical violence comprised the perpetrators' assault and attack, whereas psychological violence included verbal abuse, bullying and mobbing, sexual harassment, racial harassment, and threats (Di Martino, 2002). All these forms of violence generally have their own types of violence. The Centers for Disease Control and Prevention (CDC) identified four types of violence which are criminal intent, consumers or clients, worker-on-worker, and personal relationship. Type 1, which is the criminal intent is the type where the perpetrator has no legitimate relationship with the business or its employees and is usually committing a crime in conjunction with the violence. The second type of violence, which is the most prevalent, involves customers or clients, such as patients or family members, who probably conduct the violence due to unavoidable circumstances such as dissatisfaction with the services provided. Type 3 violence occurs between employees, such as verbal or emotional abuse

2

that is unjust, disrespectful, vengeful, and humiliating, yet it may range from homicide. On the other hand, type 4 violence occurs when the perpetrator has a personal relationship with the victim that crosses over into the workplace (CDC, 2020).

1.1.2 Resilience

The term resilience refers to individuals' abilities to adapt to diverse adverse situations while keeping a sense of purpose, balance, and good mental and physical well-being (Sergeant and Laws-Chapman, 2012). It involves the capacity to bounce back and thrive in the face of challenges (Infurna, 2020). According to other experts, resilience among healthcare workers is the ability to preserve personal and professional well-being in facing the difficulties and challenges at work (Sánchez-Zaballos and Mosteiro-Díaz, 2021).

Resilience has been demonstrated to be a protective factor against psychological disorders and to serve a positive function in lowering burnout and the perceived workload in emergency professionals among healthcare employees (Watson *et al.*, 2019). In addition, people who have a low level of resilience are also more likely to suffer anxiety when confronted with adversity, and they go through a significant amount of emotional discomfort when they attempt to address potentially stressful circumstances before they ever occur (Eley and Stallman, 2014).

Various factors, including biological and psychological factors influence the development of resilience. Genetic factors have been identified as potential contributors to resilience (Luthar *et al.*, 2006). Additionally, emotional health and well-being, social support, optimism, and cognitive functioning have been

found to predict psychological resilience (Gooding *et al.*, 2011). Resilience can also be influenced by childhood experiences, as individuals who have experienced adverse childhood experiences (ACEs) may have lower resilience and higher levels of mental distress (Dominguez and Brown, 2022).

Resilience is a dynamic process that involves rebounding and springing back from adversity (Morse *et al.*, 2021). It is not a fixed trait but can be cultivated and strengthened over time. Understanding the factors that promote resilience is important for preventing post-trauma psychopathology, treating trauma survivors, and enhancing community resilience (Iacoviello and Charney, 2014). Resilience research aims to explain why some individuals have better outcomes and functioning after adversity than others (Wassenaar, 2016).

A model was proposed by the National Academy of Medicine (NAM) (Figure 1) to describe the factors that might be on the well-being and resilience of clinicians. According to this model, there are both individual and external elements that might lead to burnout, as well as well-being and resilience. The model provides a further explanation, under the individual element, about the roles that HCWs play within the system. For instance, the workload of a clinician working in an emergency room is much more than that of a clinician working in an office. In addition to this, the individual factors section explains personal aspects such as the dynamics of the family, as well as the skill and abilities factor, which explains that various HCWs had varying degrees of communication skills, coping skills, and management skills. On the other hand, the external factors explained regarding the socio-cultural factors such as patient behavior and expectations, regulatory and health system environment, organizational factors such as bureaucracy and staff engagement, and also the learning or practice

environment such as workplace safety and violence (Brigham *et al.*, 2018).

Figure 2.1: **Factors Affecting Clinician Well-Being and Resilience by NAM model.**

Multiple studies evaluated resilience through a rating system (Connor and Davidson, 2003; Rossouw and Rossouw, 2016) . The score from the scale is not for diagnostic purposes, but rather for intervention purposes by the employer to keep workers motivated and prevent them from burning out.

1.1.3 Psychosocial environment at the workplace

Psychosocial work environment refers to the social and psychological aspects of the workplace that can significantly impact employees' mental health, well-being, and job satisfaction. It encompasses various factors such as job demands,

decision latitude, social support, incivility, work-life balance, and flexibility (Cortina *et al.*, 2001; Davidescu *et al.*, 2020; Joyce *et al.*, 2010; Stansfeld and Candy, 2006; Tarquinio, 2016)

Research has shown that the psychosocial work environment has a significant influence on employees' mental health. A meta-analytic review found a strong association between the psychosocial work environment and mental health outcomes (Stansfeld and Candy, 2006). They highlighted the importance of considering psychosocial factors in the workplace to prevent mental disorders and promote employee well-being.

One aspect of the psychosocial work environment is incivility or lack of civility, which refers to disrespectful and rude behavior in the workplace. Incivility can have detrimental effects on employees' mental health and job satisfaction (Cortina *et al.*, 2001; Laschinger *et al.*, 2009). It can increased stress levels, burnout, and turnover intentions among employees (Laschinger *et al.*, 2009). Thus, establishing a workplace that encourages respect and civility is essential for keeping a positive psychosocial atmosphere.

Work-life balance and flexibility are also important factors in the psychosocial work environment. Achieving a balance between work and personal life is essential for employee well-being and job satisfaction (Tarquinio, 2016). Flexible working conditions, such as flexible schedules and remote work options, have been found to positively impact employee health and well-being (Davidescu *et al.*, 2020). They provide employees with greater control over their work and personal lives, leading to increased job satisfaction and performance.

Furthermore, the psychosocial work environment may affect sustainable human resource management. Organizations that prioritize employee well-being

6

and provide supportive work environments are more likely to attract and retain talented employees (Davidescu et al., 2020). By promoting work-life balance, flexibility, and empowering employees, MOH as the employer of PHW, can create a positive psychosocial work environment that contributes to sustainable human resource practices.

One widely used tool for assessing the psychosocial work environment is the Job Content Questionnaire (JCQ) developed by Robert Karasek (Karasek *et al.*, 1998). The JCQ is designed to measure various dimensions of the work environment, including psychological demands, decision latitude, social support, physical demands, and job insecurity. It has been used in numerous studies to assess the psychosocial work environment and its impact on various outcomes. For example, a meta-analysis of individual participant data found that job strain, as measured by the JCQ, was associated with an increased risk of coronary heart disease (Kivimäki *et al.*, 2012). Also, JCQ is a widely used instrument for assessing psychosocial job strain (Ab Aziz *et al.*, 2023; Punnett and Wegman, 2004).

The JCQ consists of four main domains, with a total of 41 items. The domains measured in this tool are decision latitude, psychological job demands, physical job demands and social support. Each item has four choices on a Likert scale: strongly disagree, not agree, agree, or strongly agree. The score for the M-JCQ was calculated according to formulas for job content instrument construction based on the guidelines from the Job Content Questionnaire and User's Guide (Karasek *et al.*, 1998). In this guideline, the median of the total score was calculated and marked as the cut-off point to distinguish between the low and high categories. Then, the overall distribution of HCWs was classified

based on Karasek's job types, which were active, passive, low strain, and high strain. Those who belonged to only the high-strain group were defined as having job stress, meaning they had low decision latitude in combination with high job demand.

Ultimately, the psychosocial work environment plays a crucial role in employees' mental health, well-being, and job satisfaction. Factors such as job demands, decision latitude, social support, incivility, work-life balance, and flexibility significantly impact employees' experiences in the workplace. Creating a positive psychosocial work environment is essential for promoting employee well-being, preventing mental health issues, and fostering sustainable human resource management.

1.1.4 Resilience among Public Health Workforces

In a broad sense, the public health workforce (PHW) consists of all people who devote a considerable portion of their time to work that promotes the health of individuals. Specifically, the workforce consists of individuals employed by public health agencies at all levels of government, community-based and non-profit organizations with a health promotion focus (Tilson and Gebbie, 2004). In their efforts to ensure the quality and accessibility of health care, they use their understanding of epidemiology and biostatistics, as well as their capacity to develop coalitions and promote systemic change in people and communities (Gebbie, 1999).

PHWs usually face even heavier challenges in their jobs in protecting and promoting the health of communities, especially during times of crisis and uncertainty, such as disease outbreaks, natural disasters, and public health

emergencies. In the face of these challenges, resilience within the public health workforce is not just a desirable trait but an essential one. Resilience empowers public health professionals to effectively respond to and recover from adversity, ensuring their well-being, the efficient functioning of public health systems, and the population's health.

When it comes to healthcare professionals, resilience is considered more than simply a personality quirk. It is something that can be developed both formally via education and informally by paying attention to and soaking up recommendations from those around them. In Malaysia, PHW consists of public health medicine specialists, medical officers, health educators, microbiologist, medical assistants, nurses, health inspectors, epidemiological officers, public health inspector, public health assistants and others. They are the cornerstone of all effective public health initiatives, particularly in handling the current COVID-19 pandemic.

1.2 Statement of problem and study rationale

WPV has received more attention recently, particularly in the healthcare system. This is mainly due to the significant increase in reported cases even though many cases are not reported at all. Furthermore, the rate of serious workplace violence in the healthcare industry is more than four times higher than the rate in other private industries. In 2019, 761 of the 5,333 fatal workplace injuries that occurred in the United States were the result of intentional injury by another person (Bureau of Labor Statistics, 2021). Whereas in Malaysia, the number of cases of WPV among HCWs in Malaysia increased nearly ten times from 2013 to 2018 (Saiful Anuar *et al.*, 2018). Apart from that, the prevalence of WPV in hospital settings was also high (Baharudin, 2018; Sahiran *et al.*, 2021; Zainal *et al.*, 2018). This circumstance is highly worrisome since WPV might induce mental stress among personnel, which would have implications for their job performance in delivering community health services (Pinto *et al.*, 2018). In addition, in our situation amid a covid pandemic 19, both frontline and non-frontline healthcare providers are experiencing psychological distress (Norhayati *et al.*, 2021).

This situation raises concerns about the resilience of healthcare workers as the resilience score was lower in nurses who were exposed to violence (Sani *et al.*, 2020). Lower resilience could lead to burnout and can affect job performance (Kim *et al.*, 2022a). Thus, it is important to know the resilience level among HCWs so

that the quality of healthcare services is always at its highest.

To the best of our knowledge, many previous studies were focused on WPV in clinical settings such as emergency department especially in Malaysia and none of the published studies in Malaysia that study the WPV among PHW. In addition, many of the studies related to WPV were conducted in the west coast of Malaysia like Kuala Lumpur, and none of them was conducted in the east coast of Malaysia. Statistics released by the Department of Statistics of Malaysia (DOSM) in 2020 reported that there is a significant different in crime rates on east coast and west coast of Malaysia where the west coast had higher crime rates (Department of Statistics Malaysia, 2020). Thus, the findings in this study among the population in the east coast may be different from previous studies which were conducted on west coast of Malaysia. Apart from that, there are only a few studies that study the relationship between WPV and the resilience level among HCWs. However, none of them involve PHW. Thus, in this study, we are focusing on the PHW working east coast of Malaysia which is in Terengganu.

Our research would be beneficial because it offers the Ministry of Health (MOH) to have a more profound knowledge of the actual situation of WPV among PHW in Malaysia, as well as learn much more about the resilience level of PHW for intervention purposes. This is because evidence reveals that supportive leadership and co-workers' support significantly influence resilience level among employee (Cooke *et al.*, 2019).

1.3 Research questions

1. What are the psychosocial workplace environment scale (job demand, job control and social support) among PHW in Terengganu?

2. What is the proportion of WPV among PHW in Terengganu?

3. What are the factors associated with WPV among PHW in Terengganu?

4. What is the proportion of low resilience level among PHW in Terengganu?

5. What is the relationship between WPV exposure, individual characteristics, job characteristics and psychosocial work environment with low resilience level among PHW in Terengganu?

1.4 Research hypothesis

1. There is an association between individual characteristics, job characteristics and psychosocial work environment with WPV among PHW in Terengganu.

2. There is a relationship between low resilience levels with WPV exposure, individual characteristics, job characteristics and psychosocial work environment among PHW in Terengganu.

1.5 Objectives

1.5.1 General objective

To study the psychosocial workplace environment scale, prevalence of WPV, and factors associated with WPV, as well as to determine the proportion of low resilience levels and explore the relationship between WPV exposure, individual characteristics, job characteristics, and psychosocial work environment with low resilience levels among PHW in Terengganu.

1.5.2 Specific objectives

1. To determine the psychosocial workplace environment scale (decision latitude, psychological job demand, physical job demand and social support) among PHWs in Terengganu.

2. To determine the proportion of WPV among PHW in Terengganu.

3. To determine the factors associated with WPV among PHW in Terengganu.

4. To determine the proportion of low resilience level among PHW in Terengganu.

5. To determine the relationship between WPV exposure, individual characteristics, job characteristics and psychosocial work environment with low resilience level among PHW in Terengganu.

CHAPTER 2

LITERATURE REVIEW

2.1 Psychosocial work environment

2.1.1 Definition and epidemiology

Psychosocial work environment refers to the social and psychological aspects of the workplace that can significantly impact employees' mental health, well-being, and job satisfaction. It encompasses various factors such as job demands, decision latitude, social support, incivility, work-life balance, and flexibility (Cortina *et al.*, 2001; Davidescu *et al.*, 2020; Joyce *et al.*, 2010; Stansfeld and Candy, 2006; Tarquinio, 2016).

Decision latitude, a concept introduced by and Theorell, refers to the level of control an individual has over their work tasks and the ability to make decisions, where high decision latitude implies that individuals have significant autonomy and control over their work, including the ability to make decisions, set goals, and use their skills effectively, while low decision latitude suggests limited control and discretion, with individuals having little say in how tasks are performed and little opportunity to use their skills (Karasek, 1979). The specific definition of high and low mean score of decision latitude would depend on the methodology of a particular study or survey. Typically, high, and low mean scores are determined statistically based on the distribution of responses among participants. For example, in some studies, the top quartile or tertile of decision latitude scores may be categorized as high, while the bottom quartile or tertile may be categorized as low (Ab Aziz *et al.*, 2023). These categories help

researchers analyze the relationship between decision latitude and various outcomes such as job satisfaction, stress, and performance. Decision latitude combined the score of skill discretion and decision authority (Karasek, 1979). Research has consistently shown that low decision latitude, in combination with high job demands, is associated with an increased risk of cardiovascular diseases, such as coronary heart disease (CHD) and myocardial infarction (Kivimäki *et al.*, 2012; Niedhammer *et al.*, 2008). Prior research has shown varying mean scores and ranges for decision latitude. A cross- sectional study using JCQ among primary HCWs in Kelantan in 2019 found that the mean (SD) score of decision latitude was 64.5 (6.33) with a range score of 42 to 88. Another study by Žutautienė *et al.* (2020) in Lithuania among hospital physician by using JCQ found that the mean (SD) score for decision latitude was 70.93 (10.30) with range score of 32 to 96. A study in north of China among HCWs in three university hospitals by using JCQ found that the mean (SD) for decision latitude was 22.39 (3.08).

Another component of JCQ is job demand which refers to the psychological and physical stressors or requirements of a job (Karasek, 1979). Physical job demand refers to physical aspects of a job that require sustained physical effort and are associated with physiological costs (Baka, 2015). These demands are typically assessed through direct workplace measurements, such as repeated lifting, pushing, pulling, bending, and repetitive or forceful hand movements (Rusch *et al.*, 2021). The job demand-resources (JD-R) model provides a framework for comprehending the impact of job demands on employees. According to this model, excessive job demands can lead to negative outcomes such as emotional exhaustion and burnout (Demerouti *et al.*, 2001). In

addition, in this study which was conducted among employees from insurance company in Netherlands by using JCQ, they found that the mean (SD) for job demand was 2.69 (0.43) which is quite low as compared to another study in Kelantan, Malaysia by Ab Aziz *et al.* (2023) found that the mean (SD) score for job demand was 12.5 (2.16) with range score of 5 to 20. Other than that, study in Lithuania also reported higher mean (SD) score for job demand which is 33.2 (4.81) with range score of 18 to 48.

Psychological job demand refers to the mental stresses that exist in the work environment, such as intense time pressure and intellectually challenging tasks (Demerouti *et al.*, 2001). Other than that, psychological job demand encompasses the sustained psychological effort required in a job, including cognitive and emotional exertion (Sun *et al.*, 2021). It involves the mental and emotional energy needed for tasks such as decision-making, problem-solving, and coping with work-related stressors (Zhang *et al.*, 2021). According to the demand-control model of job strain, high psychological demands with low job control can lead to high job strain (Hirokawa *et al.*, 2016). Study by Ab Aziz *et al.* (2023) in Kelantan, Malaysia reported the mean (SD) for psychological job demand was 18.1 (4.11) with range score of 8 to 31. Another study in north of China among HCWs in three university hospitals by using JCQ found that the mean (SD) for psychological job demand was 33.66 (4.39) (Li *et al.*, 2004).

Another component of the psychosocial work environment is social support, multidimensional concept that encompasses the provision of psychological and material resources intended to benefit an individual's ability to cope with stress (Feeney and Collins, 2014). Social support is defined as "the availability of helping relationships and the quality of those relationships at the

workplace" (Kuriakose *et al.*, 2022). It encompasses tangible instrumental and informational supports as well as non-tangible emotional and appraisal supports, and can occur at the organizational level, among and between supervisors/employers, and colleagues (Graham *et al.*, 2023). Social support from coworkers and the employer together makes up the total social support at workplace (Karasek et al., 1998). In a study by Hu et al. (2018) among nurse practitioners in Taiwan using JCQ reported that the mean (SD) for employer and coworkers support was 11.57 (2.37) and 12.80 (1.92) respectively. Meanwhile, another study in China among HCWs, also using JCQ found that the mean (SD) for total social support was 22.39 (3.08) (Li et al., 2004). In Lithuania, a study reported the mean (SD) of the support from supervisor was 11.53 (1.63) with range of 4 to 18 and whereas from the coworker, the mean (SD) was 11.98 (1.63) with range score of 3 to 12 (Žutautienė *et al.*, 2020). In Malaysia, a study in Kelantan state among primary HCWs reported that the mean (SD) social support from supervisor was 11.7 (1.70) with range score of 4 to 16 and the mean (SD) for coworkers' support was 12.2 (1.30) with range score of 8 to 16 (Ab Aziz *et al.*, 2023). Table 2.1 summarizes the findings of psychosocial work environment in previous study.

Table 3.1: The summary of psychosocial work environment findings in previous study.

Factors	Place	Finding	study
Decision latitude	Kelantan, Malaysia	Mean (SD) score of decision latitude was 64.5 (6.33) with range of 42 to 88.	(Ab Aziz *et al.*, 2023)

Table 2.1, continued.

	Lithuania	Mean (SD) score of decision latitude was 70.93 (10.30) with ranges of 32 to 96.	(Žutautienė *et al.*, 2020)
	China	Mean (SD) score of decision latitude was 22.39 (3.08).	(Li *et al.*, 2004)
Physical job demand	Netherland	The mean (SD) for physical job demand was 2.69 (0.43).	(Demerouti *et al.*, 2001)
	Malaysia	The mean (SD) score for job demand was 12.5 (2.16) with range of 5 to 20.	(Ab Aziz *et al.*, 2023)
	Lithuania	The mean (SD) score for job demand which is 33.2 (4.81) with range of 18 to 48.	(Žutautienė *et al.*, 2020)
Psychological job demand	China	mean (SD) for psychological job demand was 33.66 (4.39)	(Li *et al.*, 2004)
	Malaysia	the mean (SD) for psychological job demand was 18.1 (4.11) with range of 8 to 31	(Ab Aziz *et al.*, 2023)

Table 2.1, continued.

Social support	Taiwan	Mean (SD) for employer and coworkers support was 11.57 (2.37) and 12.80 (1.92) respectively.	(Hu *et al.*, 2018)
	China	Mean (SD) for total social support was 22.39 (3.08)	(Li *et al.*, 2004)
	Lithuania	Mean (SD) of the support from supervisor was 11.53 (1.63) with range of 4 to 18 and whereas from the coworker, the mean (SD) was 11.98 (1.63) with range score of 3 to 12	(Žutautienė *et al.*, 2020)

2.1.2 Pre-existing questionnaire for psychosocial work environments

The assessment of the psychosocial work environment has been widely conducted using various questionnaires in previous studies. One of the most widely used questionnaires is the Copenhagen Psychosocial Questionnaire (COPSOQ) (Kristensen *et al.*, 2005). This tool has been extensively utilized in research to assess and improve the psychosocial work environment. It covers dimensions such as social community, leadership quality, workplace social

capital, and other psychosocial factors related to job, individual, organization, and person-work levels in the work environment (Aminian *et al.*, 2015). The COPSOQ has been translated into various languages, making it applicable in diverse cultural settings (Baç and Ekmekçi, 2021). Additionally, the COPSOQ II, a theory-based questionnaire, covers many aspects of the psychosocial working environment rather than being linked to one specific theoretical framework (Berthelsen *et al.*, 2017).

Furthermore, the Job Content Questionnaire (JCQ) has also been employed to evaluate psychosocial indicators in the workplace (Nogueira *et al.*, 2012). This questionnaire is based on Karasek's Demand-Control Model and assesses subscales of job control and psychological demands (Chien *et al.*, 2011). JCQ has emerged as one of the most widely used instruments for assessing psychosocial job characteristics in the workplace. Its popularity can be attributed to several factors supported by various studies. The JCQ, developed by Karasek, has been extensively utilized due to its reliability, validity, and cross-cultural applicability (Karasek *et al.*, 1998). It has been validated and found to be suitable for measuring psychosocial stressors and physical demands in various occupational settings, such as nursing staff in hospitals (Amin *et al.*, 2015).

Moreover, the Effort Reward Imbalance (ERI) Questionnaire has been used to evaluate occupational psychosocial risks (Lucero-Perez *et al.*, 2022). These questionnaires provide a comprehensive assessment of the psychosocial work environment, covering various dimensions such as job control, psychological demands, effort-reward imbalance, and social support.

In addition to the COPSOQ, JCQ, and ERI Questionnaire, the Danish Psychosocial Work Environment Questionnaire (DPQ) has been developed and validated for the comprehensive assessment of psychosocial working conditions (Clausen *et al.*, 2018). This questionnaire provides a new approach to evaluating the psychosocial work environment, offering a different perspective and contributing to the diversity of assessment tools available for researchers and work environment professionals.

Overall, COPSOQ, JCQ, ERI Questionnaire, and DPQ are among the widely used questionnaires in previous studies to evaluate the psychosocial work environment, providing researchers with valuable tools to assess various dimensions of the psychosocial work environment. Table 2.2 shows the variety of questionnaires that were widely used in previously published studies.

Table 3.2: Pre-existing questionnaire for psychosocial work environments

Questionnaire	Developer	Characteristic	Limitation
Copenhagen Psychosocial Questionnaire II (COPSOQII)	National Research Centre for the Working Environment	127 items 41 subscales with total 127 questions	providing limited comparisons by occupational groups
(127 items)	(NRCWE) (Denmark)		
Job Content Questionnaire (JCQ)	Robert Karasek, USA	41 items	The validity in different job contexts, such as among sex

Table 2.2, continued.

			workers, have not been extensively explored
Effort Reward Imbalance (ERI) Questionnaire	(Siegrist *et al.*, 2014)	16 Items divided into 10 measuring reward, 6 measuring effort	The theoretical threshold of the effort-reward ratio may not be ideal for certain cultural contexts.
Danish Psychosocial Work Environment Questionnaire (DPQ)	(Clausen *et al.*, 2018)	119 items covering 38 different psychosocial work environment dimensions	Developed for the Danish workforce and may not fully capture the nuances of psychosocial work environments in other cultural settings

2.2 Workplace violence

Workplace violence (WPV) is the incidents when personnel are abused, threatened, or assaulted in circumstances related to their work, including commuting to and from work, involving an explicit or implicit challenge to their safety, well-being, or health (Di Martino, 2002).

In recent years, new evidence has emerged of the impact and harm caused by psychological violence. Psychological violence included verbal abuse, bullying and mobbing, sexual harassment, racial harassment, and threat (Di Martino, 2002). In this context, bullying stands out as one of the most rapidly spreading types of WPV. It is offensive behavior when a person makes spiteful, cruel, malicious, or humiliating attempts to undermine an individual worker or groups of workers by engaging in activities such as making life difficult for them, shouting at the staff to get the job done, and punishing others by constantly insulting them or removing their responsibilities because they are too competent. This kind of behavior constitutes offensive behavior (Di Martino, 2002).

2.2.1 Epidemiology of WPV

According to previously published studies, we can conclude that WPV occurred all over the world. A study by Di Martino (2002) involving several countries among the HCWs worldwide, the WPV had highest prevalence in Bulgaria where 75.8% of the 508 HCWs worked in 27 health facilities and 14 general practitioners (GPs) had experienced from WPV. This followed by the study in Australia and South Africa with 67.2% out of 400 participants and 61% out of 1018 respectively. The least cases in this study were in the Rio de Janeiro, Brazil where 46.7% out of 1569 exposed to WPV. Whereas, a study in Saudi Arabia in 2009 among primary healthcare (PHC) workers found that 28% from total 1091 PHC workers had exposed of at least one episode of violence where doctors had highest exposure to WPV with 41.2% (El-Gilany *et al.*, 2009). A Study in Lebanon in 2011 among 256 Emergency Department (ED) employees in six (6) tertiary hospitals reported more than 80% of total respondents had exposed to at

least one form of violence (Alameddine *et al.*, 2011). In Palestine, study in 2015 reported that 76.1% from total 444 respondents in ED experienced a type of WPV in the past 12 months (Hamdan and Abu Hamra, 2015).

In Malaysia, several studies have reported the prevalence of WPV. Study by Baharudin (2018) among HCWs in ED in Klang, Malaysia reported that 80.6% of 160 HCWs had experienced at least one episode of violence within the last 12 months prior to the study. Another study in Kuala Lumpur among 136 ED HCWs in 2018 reported that as much as 71.3% from total respondents had experienced of WPV where nurses had higher prevalence as compared to doctors with 73.2% and 69.2% respectively (Zainal *et al.*, 2018). Latest study in Malacca in 2021 found that 38% from total 231 respondents from Emergency department were exposed to the WPV (Sahiran *et al.*, 2021). The summary of the prevalence of WPV is summarized in Table 2.3.

Table 3.3: The summary of WPV incidents.

Place	Findings	Study
Global	75.8% in Bulgaria; 67.2% in Australia; 61% in South Africa; 60% in Portugal; 54% in Thailand; and 46.7% in Brazil exposed to WPV.	(Di Martino, 2002)
Al-Hassa, Saudi Arabia	28% were exposed to at least one WPV.	(El-Gilany *et al.*, 2009)
Lebanon	More than 80% exposed to WPV.	(Alameddine *et al.*, 2011)