UNIVERSITI PUTRA MALAYSIA

WORK-RELATED PSYCHOSOCIAL RISK FACTORS AND MENTAL HEALTH SYMPTOMS DURING THE COVID-19 PANDEMIC AMONG WORKING YOUTH IN KLANG VALLEY

HARRY CHONG WAI SOON

lp
FPSK4 2022 28

WORK-RELATED PSYCHOSOCIAL RISK FACTORS AND MENTAL HEALTH SYMPTOMS DURING THE COVID-19 PANDEMIC AMONG WORKING YOUTH IN KLANG VALLEY

BY

HARRY CHONG WAI SOON

© COPYRIGHT UPM

Thesis submitted in fulfilment of the requirement for the degree of Bachelor of Science in Environmental and Occupational Health with Honours from the Faculty of Medicine and Health Sciences, Universiti Putra Malaysia

ACKNOWLEDGEMENTS

First and foremost, I would like to express my gratitude and appreciation to my supervisor, Dr Sharifah Norkhadijah Syed Ismail, and my co-supervisor, Assoc. Prof. Dr. Irniza Rasdi for their guidance, supervision and assistance throughout this project. Their valuable comments and opinions have contributed to the success of this research.

I would also like to thank to all working youth who participated in this research for their time and efforts to contribute to this study. Their contributions in this research are tremendous and important for the youth especially in Malaysia. I would like to appreciate to the organisations and people who inspired me to conduct this research.

Last but not least, I would like to express my gratitude to my beloved family and friends for supporting me throughout this research and my life in general. This accomplishment would not be possible without their support. Then, I would also love to show my appreciation towards all lecturers who taught me new knowledge throughout my four years of degree life.

© COPYRIGHT UPM

ABSTRACT

WORK-RELATED PSYCHOSOCIAL RISK FACTORS AND MENTAL HEALTH SYMPTOMS DURING THE COVID-19 PANDEMIC AMONG WORKING YOUTH IN KLANG VALLEY

HARRY CHONG WAI SOON

Introduction: Youth represented a significant part of the workforce globally, especially in Malaysia. Despite its significance in the labour force, the impact of work-related psychosocial risk factors on the mental health symptoms of working youth during the COVID-19 Pandemic was not well studied. **Objectives:** To identify the work-related psychosocial risk factors and their association with mental health symptoms during the COVID-19 Pandemic among working youth in Malaysia especially in Klang Valley. **Methodology:** A cross-sectional study was conducted among working youth in Klang Valley. Work-related psychosocial risk factors and mental health symptoms were measured using a self-administered questionnaire modified from Copenhagen Psychosocial Questionnaire version three (COPSOQ-III) and Generalised Anxiety Syndrome -7 (GAD-7). **Results and Discussion:** A total of 307 working youth participated in the study. During the COVID-19 Pandemic, most of the respondents had a low level of workplace bullying, moderate workload, work-pace and work-life conflict, high level of social support from supervisor, social support from colleagues and job insecurity. Most respondents also experienced a moderate level of all studied mental health symptoms. Most work-related psychosocial risk factors were positively correlated to mental health symptoms. Workload, work-pace, job insecurity, work-life conflict and workplace bullying predicted at least one studied mental health symptom. Monthly income and marital status were found to reduce the risk of burnout and depressive symptoms, respectively, while education level increases burnout risk. **Conclusion:** The study generates contexts to respond to the research gap in the context of work-related psychosocial risk factors and mental health symptoms among working youth.

Keywords: Work-related psychosocial risk factors, Mental health symptoms, Occupational health, Working youth

© COPYRIGHT UPM

ABSTRAK

FAKTOR-FAKTOR RISIKO PSIKOSOSIAL BERKAITAN DENGAN KERJA DAN SIMPTOM-SIMPTOM KESIHATAN MENTAL KETIKA PANDEMIK COVID-19 DALAM KALANGAN PEKERJA BELIA DI LEMBAH KLANG

HARRY CHONG WAI SOON

Pengenalan: Belia memainkan peranan yang signifikan dalam tenaga kerja global, terutamanya di Malaysia. Meskipun kepentingan belia dalam tenaga buruh tidak dapat dinafikan, namun impak factor-faktor risiko psikososial berkaitan dengan kerja terhadap simptom-simptom kesihatan mental semasa Pandemik COVID-19 tidak dikaji dengan menyeluruh. **Objektif:** Untuk mengenalpasti factor-faktor risiko psikososial berkaitan dengan kerja dan hubungannya terhadap symptom-simptom kesihatan mental semasa Pandemik COVID-19 dalam kalangan pekerja belia di Malaysia terutamanya di Lembah Klang. **Metodologi:** Kajian keratan rentas dijalankan dalam kalangan pekerja belia di Lembah Klang. Faktor-faktor risiko psikososial berkaitan dengan kerja dan simptom-simptom kesihatan mental diukur dengan borang soal selidik yang diubah daripada Psychosocial Questionnaire versi ketiga (COPSOQ-III) and Generalised Anxiety Syndrome-7 (GAD-7). **Keputusan dan Perbincangan:** Sejumlah 307 pekerja belia menyertai dalam kajian ini. Semasa Pandemik COVID-19, kebanyakan daripada responden mengalami tahap buli di tempat kerja yang rendah, tahap beban kerja, kadar kerja dan konflik kehidupan kerja yang sederhana, tahap sokongan sosial daripada penyelia, sokongan sosial daripada rakan sekerja dan ketidakamanan pekerjaan yang tinggi. Kebanyakan responden jugak mengalami tahap simptom-simptom kesihatan mental yang sederhana. Kebanyakan faktor-faktor risiko psikososial berkaitan pekerjaan mempunyai korelasi positif dengan simptom-simptom kesihatan mental. Beban kerja, ketidakamanan pekerjaan, konflik kehidupan kerja dan buli di tempat kerja meramal sekurang-kurangnya satu simptom kesihatan mental yang dikaji. Kajian ini juga mendapati pendapatan bulanan dan status perkahwinan masing-masing dapat mengurangkan risiko kelesuan dan simptom-simptom kemurungan, manakala tahap pendidikan meningkatan risiko kelesuan. **Kesimpulan:** Kajian ini menghasilkan konteks untuk merapatkan jurang kajian berkaitan dengan faktor-faktor psikososial berkaitan kerja dan simptom-simptom kesihatan mental dalam kalangan pekerja belia.

Kata kunci: Faktor-faktor risiko psikososial berkaitan pekerjaan, Simptom-simptom kesihatan mental, Kesihatan pekerjaan, Belia bekerja.

© COPYRIGHT UPM

TABLE OF CONTENTS

		Page
DECLARATION		ii
SIGNATURE OF SUPEVISOR/ INTERNAL EXAMINER		iii
ACKNOWLEDGEMENT		iv
ABSTRACT		v
ABSTRAK		vi
CONTENTS		vii
LIST OF TABLES		ix
LIST OF FIGURES		x
LIST OF ABBREVIATIONS		xi
CHAPTER 1: INTRODUCTION		1
1.1	Background	1
1.2	Problem Statement	3
1.3	Study Justification	7
1.4	Research Objectives	9
1.5	Hypotheses	10
1.6	Definition of Terms	10
1.7	Conceptual Framework	13
CHATER 2: LITERATURE REVIEW		15
2.1	Overview of Mental Health	17
2.2	Work-related Mental Health Symptoms	18
	2.2.1 Stress	18
	2.2.2 Burnout	19
	2.2.3 Depression	20
	2.2.4 Anxiety	20
	2.2.5 Sleep Disturbance	21
2.3	Vulnerability of Mental Health Symptoms among Working Youth	22
2.4	Work-related Psychosocial Risk Factors	23
	2.4.1 Workload and Work-pace	24
	2.4.2 Working time	24
	2.4.3 Social Support from Colleagues and Supervisor	25
	2.4.4 Job Insecurity	26
	2.4.5 Work-life Conflict	27
	2.4.6 Workplace Bullying	27
2.5	Influences of COVID-19 Pandemic on Work-related Psychosocial Risk Factors	28
2.6	Instruments for Work-related Psychosocial Risk Factors and Mental Health Symptoms	30
2.7	Law and Policy on Workplace Mental Health	40
	2.7.1 Law and Policy on Workplace Mental Health in Malaysia	40
	2.7.2 Law and Policy on Workplace Mental Health in selected Commonwealth Nations	42
CHAPTER 3: METHDOLOGY		46
3.1	Study Design	46
3.2	Study Location	46

© COPYRIGHT UPM

3.3 Study Duration 46
3.4 Study Population and Sampling 47
3.4.1 Study Sample 47
3.4.2 Sampling Method 48
3.4.3 Sampling Unit 49
3.5 Sample Size 50
3.6 Sampling Procedure 51
3.7 Sampling Instrumentation 53
3.7.1 Questionnaire 56
3.8 Data Analysis 57
3.9 Quality Control 59
3.10 Ethical Considerations 60

CHAPTER 4: RESULTS 61
4.1 Study Background 61
4.2 Sociodemographic Characteristics of the Respondents 61
4.3 Work Characteristics of the Respondents 63
4.4 Work-related Psychosocial Risk Factors and Mental Health Symptoms 66
4.5 Distrubution of Work-related Psychosocial Risk Factors and Mental Health Symptoms of the Respondents 69
4.6 Comparison of Sociodemographic and Work Characteristics with Work-related Psychosocial Risk Factors and Mental Health Symptoms among the Respondents 78
4.7 Association between Work-related Psychosocial Risk Factors and Mental Health Symptoms among the Respondents 99
4.8 Predictors of Mental Health Symptoms among the Respondents 102

CHAPTER 5: DISCUSSION 107
5.1 Comparison of Sociodemographic and Work Characteristics to Work-related Psychosocial Risk Factors 107
5.2 Comparison of Sociodemographic and Work Characteristics to Mental Health Symptoms 110
5.3 The Prevalence of Mental Health Symptoms 112
5.4 The Correlation between Work-related Psychosocial Risk Factors and Mental Health Symptoms 115
5.5 The Significant Predictors of Mental Health Symptoms 119

CHAPTER 6: CONCLUSION AND RECOMMENDATIONS 125
6.1 Conclusion 125
6.2 Limitations 127
6.3 Recommendations 128

REFERENCE 130

APPENDIX 1 150
APPENDIX 2a 164
APPENDIX 2b 168
APPENDIX 3 172

© COPYRIGHT UPM

LIST OF TABLES

		Page
Table 2.1	List of instruments used in selected literature review	33
Table 2.2	Law and policy on the workplace in Australia, Canada and United Kingdom	45
Table 3.1	Advantages and disadvantages of convenience and snowball sampling	48
Table 3.2	The items for work-related psychosocial risk factors in Section B	55
Table 3.3	The items for mental health symptoms in Section C	57
Table 3.4	Research objectives and statistical analysis used for the study	58
Table 3.5	Reliability test result	59
Table 4.1	Sociodemographic characteristics of the respondents	62
Table 4.2	Work characteristics of the respondents	64
Table 4.3	Work-related psychosocial risk factors and mental health symptoms of the respondents	67
Table 4.4	Distribution of work-related psychosocial risk factors	72
Table 4.5	Distribution of mental health symptoms	76
Table 4.6	Comparison of sociodemographic and work characteristics with work-related psychosocial risk factors	80
Table 4.7	Comparison of sociodemographic and work characteristics with mental health symptoms	90
Table 4.8	Correlation between work-related psychosocial risk factors and mental health symptoms among the respondents	101
Table 4.9	Predictors of mental health symptoms among the respondents	105

© COPYRIGHT UPM

LIST OF FIGURES

		Page
Figure 1.1	Conceptual Framework	14
Figure 2.1	The map of Selangor State, Federal Territory of Kuala Lumpur and Putrajaya	47
Figure 2.2	Flowchart of sampling procedure	52

© COPYRIGHT UPM

LIST OF ABBREVATIONS

APA	American Psychology Association
BBI	Bergen Burnout Inventory
CBI	Copenhagen Burnout Inventory
COPSOQ	Copenhagen Psychosocial Questionnaire
DALYs	Disability-adjusted life years
DASS	Depression Anxiety Stress Scale
DIMS	Disorders of Initiating and Maintaining Sleep
DOES	Disorders of Excessive Somnolence
DOSM	Department of Statistics Malaysia
GAD-7	Generalised Anxiety Disorder-7
GHQ	General Health Questionnaire
HADS	Hospital Anxiety Disorder Scale
HASAWA 1994	Health and Safety at Work Act 1974
HSCL	Hopkins Symptom Checklist
ICD-11	11th Revision of the International Classification of Diseases
ILO	International Labour Organisation
IOHA	International Occupational Hygiene Association
JCQ	Job Content Questionnaire
KSQ	Karolinska Sleep Questionnaire
MAG	Malaysian Aviation Group
MBI	Maslach Burnout Inventory
NWI	National Workplace Initiative
OECD	Organisation for Economic Co-operation and Development
OSHA 1994	Occupational Safety and Health Act 1994

© COPYRIGHT UPM

PHEIC	Public Health Emergency of International Concern
PSS	Perceived Stress Scale
PTSD	Post-Traumatic Stress Disorder
QPSNordic	General Nordic Questionnaire for Psychological and Social Factors at Work
RT-PCR	Reverse Transcription Polymerase Chain Reaction
SF-36 MH	Short-Form Health Survey-36 Mental Health
SMEs	Small and Medium Enterprises
UWES	Utrecht Work Engagement Scale
WHO	World Health Organisation
WHO-5	World Health Organisation- Five Well-Being Index

© COPYRIGHT UPM

Chapter 1

Introduction

1.1 Background

Work represents the identity and role of an individual in society. It also provides the source of income for needs and wants. It is undeniable that work is significant to our life and human history. Despite its significance in improving our quality of life, work also deteriorates human health through exposure to occupational hazards. Physical hazards, chemical hazards, biological hazards, ergonomic hazards, safety hazards and psychosocial hazards are the six categories of occupational hazards (IOHA, n.d.). Among these occupational hazards, the psychosocial hazard is the most neglected in the workplace due to the difficulty identifying, assessing and controlling this hazard.

The International Labour Organisation referred to psychosocial hazards as "the interactions between and among work environments, job content, organizational conditions and workers' capacities, needs, culture, personal extra-job considerations that may, through perceptions and experience, influence health, work performance and job satisfaction" (ILO, 1986). These interactions potentially affect one's health, especially mental health. There are strong shreds of evidence linking psychosocial risk factors and mental health symptoms such as stress, depression and burnout (Law

© COPYRIGHT UPM

et al. 2020). To acknowledge the impact of work-related psychosocial hazards on mental health, the International Labour Organisation revised the List of Occupational Diseases in 2010 by including mental and behavioural disorders into the list.

Mental health symptoms including stress, depression, and burnout were the significant contributors to the global burden of diseases (Salleh, 2018). In 2019, mental health symptoms contributed 4.92% of the total Disability-Adjusted Life Years (DALYs) globally and a prevalence of 13% in the world population. Unfortunately, this problem is not an exception in Malaysia. According to the 2015 National Health and Morbidity Survey, the prevalence of mental health disorders in Malaysian adults rose by 18.5% between 1996 (10.7%) and 2015. (29.2%). Besides, depression as the predicted leading contributor to the global burden of diseases in 2030 by World Health Organisation, has recorded a prevalence of 2.3% in the 2019 survey.

There are various definitions to define what youth means. The United Nations defined youth as anyone aged between 15 to 24 years old: while the Malaysian Government defined youth age range from 18 to 30 years old. Regardless of its definition, youth is a valuable asset for the development and sustainability of society, nation and the world. Not to ignore that youth (15 to 24 years old) represent a significant part of the workforce globally (15%) (ILO, 2018). There are approximately 6.5 million youth aged 15 to 30 years old in the labour force in Malaysia, accounting for nearly 45% of the national labour force in 2019 (Statista, 2019). Even though youth represent a significant portion of the labour force, the

© COPYRIGHT UPM

current occupational safety and health practices did not provide comprehensive protection for them, especially for their mental well-being.

The working population is exposed to work-related health risk factors by the work nature and characteristics. Young workers are more likely to suffer from the impact of similar exposure compared to older workers. Law et al. (2020) stated that youth are highly susceptible and vulnerable to psychosocial hazards in the workplace, for example, job strain, workplace bullying, harassment and high work intensity. These hazards were found to be relatable to mental health symptoms (Henderson et al. 2011 & Nieuwenhuijsen et al. 2010) especially in youth (Milner et al., 2017). Besides, working youth often faced inequity issues and exploitation in their workplace compared to their older colleagues by superiors in the workplace. These issues arose due to age discrimination towards young workers and disdained by their colleagues due to lack of experience (McDonald et al., 2007). In the COVID-19 Pandemic, the working environment has evolved rapidly to adapt to the changes and maintain economic stability. This change will influence the work-related psychosocial risk factors exposed to working youth and its impact on mental health symptoms.

1.2 Problem Statement

Psychosocial hazards are evident for leading mental health symptoms among the working population. Work-induced mental health symptoms are capable of triggering the development of other severe and chronic health problems. Stress, for example, is a prominent occupational mental health problem that has been related to

© COPYRIGHT UPM

other mental health issues such as stress, depression, depersonalization, and post-traumatic stress disorder (WHO, 2010). These following conditions may give rise to other physiological conditions and consecutively impair one's social well-being (Lovallo, 2015). Compared to other hazards, the mitigation and control of the exposure of psychosocial hazards are difficult due to the nature of the hazard. Therefore, anyone may be impacted by the exposure and developmental health problems with a variety of severity at any point in their life.

Several research studies found that work-related psychosocial risk factors are associated with mental health symptoms such as depression, stress and burnout. Boschman et al. (2013) stated that low job control among Danish construction workers leads to distress, depression and post-traumatic stress disorder (PTSD). They also found that construction supervisors were more likely to develop depressive symptoms due to low involvement in decision making and low social support from their superiors. Besides, Idris et al. (2011) in their study found that job demand is the predictor of burnout among Malaysian workers and their work performance. Although many studies focused on psychosocial hazards, the elements focused on are mainly job demand, reward balance, and social support. There is a lack of studies regarding psychosocial hazards and mental health effects besides focusing on the Demand-Control-Support model. This situation restricts the understanding of other psychosocial factors, such as work organisation, workplace values and work-pace, and their interaction with the workers' mental health.

Despite being the leading contributor to the global disease burden, employers (Maulik, 2017) and society (Wahlbeck, 2015) often disregard mental health

© COPYRIGHT UPM

symptoms due to a lack of recognition and awareness of mental health issues. Discrimination on mental health symptoms continues to persist despite the progression of social development and increasing understanding of these issues, including the younger generation. This phenomenon discourages people from seeking help, allowing the condition to progressively worsen. Several studies showed younger workers are more likely to develop mental health symptoms due to exposure to psychosocial hazards in the workplace. High-risk occupations such as healthcare workers showed that younger healthcare workers tend to have higher self-rated depression scores (30.05 ± 8.16) compared to their older counterparts (29.06 ± 7.87) (Liang et al., 2020). A study on migrant workers in China also showed older workers have higher mental health scores (World Health Organisation- Five Well-Being Index (WHO-5): 13.49, Short-Form Health Survey (SF-36) Mental Health (SF-36 MH): 76.03) compared to the young migrant workers (WHO-5: 12.62, SF-36 MH: 71.42) due to the effects of social support received (Li et al., 2014). In an age-specific study conducted by Pidd et al. (2017) on Australian young construction workers and apprentices, job stress, organizational bullying, and overall social support accounted for 38.2% of the heterogeneity in psychological distress. This study also found that low social support and workplace bullying contributes to substance use such as cannabis and meth/amphetamine use even though these two factors are not linked to psychological distress. It is clear that psychosocial hazards are not merely affecting the working youth mental health, but they can suffer from behavioural issues and other physical health problems.

Following the discovery of the SARS-CoV-2 virus that causes COVID-19, the disease rapidly progressed into a global pandemic causing the World Health

© COPYRIGHT UPM

Organisation to declare a Public Health Emergency of International Concern (PHEIC) on this disease. It does not only affect human health but also causes severe social and economic disruption to the world, especially to the vulnerable. From a health perspective, COVID-19 Pandemic has negatively impacted the population's mental well-being. Many countries including Malaysia have reported on the increase of mental health illnesses during this pandemic. For example, Wong et al. (2021) reported there were high reported symptoms of depression (59.2%), anxiety (55.1%) and stress (30.6%) among the general population above 18 years old in Malaysia. Although Shanmugan et al. (2020) in their brief communication predicted the surge of mental health symptoms during COVID-19 among Malaysian is aligned with the reported output from Wong et al. (2021), it is still no clear shreds of evidence to show the influence of COVID-19 on the work-related psychosocial risk factors towards mental health symptoms among working youth in Malaysia. In China, the prevalence of depression (27.9%), anxiety (31.6%) and stress (24.4%) among the general population are lower than in Malaysia (Shi et al., 2020). In the same study, Shi et al. (2020) reported that the occupational exposure risk of COVID-19 contributed to the prevalence of mental health conditions especially among healthcare workers and other essential workers. A similar study conducted in Italy on the general population also reported a similar trend on the prevalence of depression (29.5%) and stress (27.2%).

Even though the increase of mental health illnesses was reported during the pandemic, there are inadequate studies on possible psychosocial risk factors in the workplace, especially during the COVID-19 Pandemic. Therefore, it is crucial to identify the work-related psychosocial risk factors and their association with mental

© COPYRIGHT UPM

health symptoms among working youth during the COVID-19 Pandemic. It is very crucial to understand the working environment of current working youth. As it can be a preliminary study to identify psychosocial risk factors and develop a healthy working environment for working youth in different sectors.

This study generates contexts between potential work-related psychosocial risk factors and mental health symptoms among working youth, particularly in Malaysia. With the scarce reference in Malaysia, this study's significant results can contribute to forming a new model for future study in Malaysia. This model contributes significantly to the mental health symptoms among youth in the working population and the prediction of potential effects on their well-being. It also provides context on how COVID-19 Pandemic influences work-related psychosocial risk factors and mental health symptoms. Thus, the purpose of this study is to identify the prevalence and potential work-related psychosocial risk factors associated with mental health symptoms during the COVID-19 Pandemic among working youth in Malaysia specifically in Klang Valley.

1.3 Study Justification

This study produced an extensive understanding of the work-related psychosocial risk factors and other predictors of mental health symptoms among working youth in Klang Valley. The studies on the mental health condition in the general population and specific occupations are done in several countries; however, there are insufficient studies and limited reviews on youth in the working populations around the world, including Malaysia. Thus, this research focuses on the prevalence

© COPYRIGHT UPM

and work-related psychosocial risk factors of mental health symptoms among working youth in Klang Valley.

Youth is a critical period of development that links adolescence to adulthood. In this period of transition, youth often faced numerous challenges and responsibilities whereby it will strongly influence their adulthood and beyond. This period also indicates school-to-work transitions, in which youth become a part of the national workforce. In this significant period for youth, they also experience the height of psychological vulnerabilities and onset of severe mental health symptoms (Bonnie et al., 2015). Therefore it is crucial to conduct a study specifically on working youth to determine the prevalence of mental health symptoms and their work-related psychosocial risk factors. On top of that, measuring the age differences between working youth in terms of the work-related psychosocial risk factors and their effect on mental health symptoms would be more comprehensive than using ambiguous generational stereotypes to understand the age difference at work (Cadiz et al., 2015).

Besides, psychosocial factors can provide context related to the mental health status of working youth. For job strain, Bonsaksen et al. (2019) reported that the frequency of high-strain jobs is higher in the young age population compared to the older counterpart. Other risk factors such as leadership, work-life conflict, and aggression have received less attention in previous research, in addition to the usual work-related psychosocial risk factors such as job strain and social support. These risk factors are not an exception in contributing to working youth's mental well-being (Laschinger et al., 2015 & Tonso et al., 2016). In addition, this study

© COPYRIGHT UPM

conducted during the COVID-19 Pandemic helps to identify its influences on work-related psychosocial risk factors and mental health symptoms among the Malaysian working population, specifically on working youth. Therefore, the study on work-related psychosocial risk factors should be in-depth to generate a significant relationship between the specific risk factors and the working youth' mental health symptoms in the occurrence of global health emergencies. The output of the study can provide context for the influence of these factors on the working youth and the prevention strategy of mental health symptoms.

1.4 Research Objectives

General objective

To identify the work-related psychosocial risk factors and their association with mental health symptoms during the COVID-19 Pandemic among working youth in Klang Valley.

Specific objective

I. To determine the sociodemographic and work characteristics of the respondents;

II. To determine the work-related psychosocial risk factors of the respondents;

© COPYRIGHT UPM

III. To determine the perceived mental health symptoms such as depression, stress, sleep disturbance, anxiety and burnout among the respondents;

IV. To compare the sociodemographic factor, work characteristics with work-related psychosocial risk factors and mental health symptoms among the respondents during the COVID-19 Pandemic;

V. To determine the association between work-related psychosocial risk factors, and mental health symptoms among the respondents; and,

VI. To determine the significant determinants to mental health symptoms to the respondents during the COVID-19 Pandemic.

1.5 Hypotheses

I. There is a significant difference between sociodemographic characteristics, work characteristics; work-related psychosocial risk factors and mental health symptoms among working youth.

II. There is a significant relationship between work-related psychosocial risk factors and perceived mental health symptoms among working youth.

1.6 Definition of terms

Conceptual definition

I. Mental health

© COPYRIGHT UPM

- Mental Health is defined as “a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and can make a contribution to his or her community” (WHO,2004)

II. Mental health symptoms

- Mental health symptoms are mental indications of health conditions “involving changes in emotion, thinking or behaviour or a combination of these” (APA, n.d.)

III. Youth

- Youth means a person not less than fifteen years and not more than forty years old (*Youth Societies and Youth Development Act 2007* (Malaysia) S.2)

IV. Psychosocial risk factors

- Psychosocial risk factors are defined as “the dynamic interaction between individuals and their environment and are often influenced by the existing issues regarding individual suitability to the environment as well as emotional reactions and their interactions” (Cox et al., 2000).

V. COVID-19

- COVID-19 is an infectious disease caused by SARS-COV-2 that leads to acute respiratory illness. (WHO, 2020)

© COPYRIGHT UPM

Operational definition

I. Mental health

- The health domain of Copenhagen Psychosocial Questionnaire version III (COPSOQ-III) and Generalised Anxiety Disorder 7 (GAD-7) will be used in determining the status of mental health.

II. Mental health symptoms

- Mental health symptoms such as depressive symptoms, anxiety, burnout, sleep disturbance and stress will be studied.

III. Youth

- Youth are the participants who are aged between eighteen to thirty years old and currently working in Klang Valley.

IV. Psychosocial risk factors

- Psychosocial risk factors are the 7 scales of psychosocial risk factors in COPSOQ-III which consist of workload, work-pace, job insecurity, work-life conflict, social support from supervisors, social support from colleagues and workplace bullying. (Burr et al., 2019).

V. COVID-19

- COVID-19 can be transmitted through droplets and aerosols and be detected using real-time reverse transcription-polymerase chain reaction (RT-PCR) and antigen test. COVID-19 has an incubation period of 2 to 14 days (WHO, 2020).

© COPYRIGHT UPM

1.7 Conceptual Framework

Figure 1.1 illustrates the conceptual framework of this study. Based on this framework, working youth aged from 18 to 30 years old in Klang Valley were selected to participate in this study. The respondents are required to complete the questionnaire based on the variables stated. 3 independent variables and 1 dependent variable were included and studied in this research.

First of all, the sociodemographic characteristics include age, gender, ethnicity, education level, marital status, monthly income which are specifically assessed concerning mental health symptoms. Second, work characteristics include work sectors, employment type, workstation, position, working hours, work experience, specifically assessed concerning mental health.

Third, work-related psychosocial risk factors were directly measured associated with mental health symptoms. Job security, workload, work-pace, work-life conflict, social support from colleagues and supervisors, and workplace bullying are among the work-related psychosocial risk factors measured.

For dependent variables, the Copenhagen Psychosocial Questionnaire's selected health scales and Generalized Anxiety Disorder 7 (GAD-7) were adapted to measure the current mental health symptoms among the respondents. The mental health symptoms measured are stress, burnout, depression, anxiety and sleeping troubles. For this research, all these factors were tested and evaluated.

© COPYRIGHT UPM

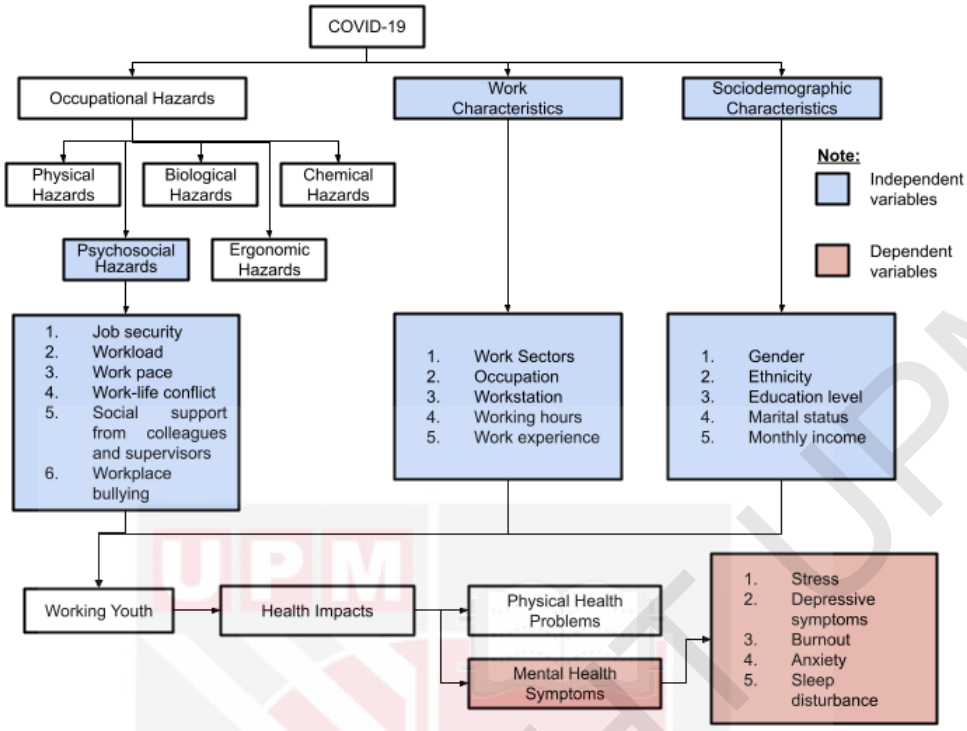

Figure 1.1: Conceptual Framework

© COPYRIGHT UPM

Chapter 2

Literature Review

2.1 Overview of Mental Health

Mental well-being is one of the three elements of health aside from physical and social well-being. When we discuss mental health, it is not just the absence of mental disorders or disabilities; but it is also about self-realisation, productivity, coping capability, and the ability to contribute to others (WHO, 2014). It is essential to maintain our mental health condition to live a normal life as an individual and a part of society. However, with the presence of stressors and challenges, our mental well-being will be affected and unable to maintain in good condition. Mental health symptoms arise when a person is unable to maintain their mental well-being and there are changes in their usual behaviours. Ritchie and Roser (2018) estimated that around 1 billion people have mental health disorders from mild to severe globally. Mental health symptoms also contribute to the global burden of disease. World Health Organization predicted that depression will be the top leading contributor to the global burden of disease by 2030 (WHO, 2011).

In Malaysia, National Health and Morbidity 2015 reported the prevalence of Generalised Anxiety Disorder and Depression in Malaysia are 1.7% and 1.8% respectively (Institute of Public Health, 2015). The same survey in 2015 reported that the prevalence of mental health symptoms among adults was 29.2%, equivalent to

© COPYRIGHT UPM

4.2 million Malaysian adults (Institute of Public Health, 2015). These statistics showed that the prevalence of mental health symptoms among Malaysian increased by 19% compared to 1996 (Institute of Public Health, 2015). In 2019, the National Health and Morbidity Survey reported that the national prevalence of depression among adults is 2.5%, equivalent to half million of the total population (Institute of Public Health, 2019).

Many factors contribute to mental health symptoms in the global population. The factors are mainly surrounding factors such as working environment, social circle and personal experience in life. Unemployment, financial crisis, marital problems, drug abuse were predicted to be some of the significant factors that cause mental health symptoms in Malaysia (Chowdhury et al., 2013). Studies worldwide showed that mental health has a substantial impact on the quality of life, physical and social well-being, and economic productivity (Xiang et al., 2010; Kirsten, 2010; Ohrnberger et al., 2017).

Based on the previous public health emergencies, it is not only causing harm to the public's health but also their ability to maintain well-being and livelihood (Pfefferbaum & North, 2020). It is expected that the COVID-19 Pandemic will lead to a surge of mental health problems especially those whose livelihood is heavily affected. To curb this pandemic, society has changed the living norms to adapt and protect them from the disease. Most nations including Malaysia enforced public health interventions such as lockdown to restrict the COVID-19 transmission. This pandemic also becomes the source of mental health deterioration among the working populations all around the world. Mental health symptoms became more prevalent

© COPYRIGHT UPM

across different working populations. Healthcare workers particularly are the most directly affected by this pandemic as the exposure towards psychosocial risk factors have increased dramatically while being the frontliners to fight against the pandemic (Pfefferbaum & North, 2020). Other occupation groups are also facing problems with their mental well-being due to the economic recession following the spread of the pandemic (Sinclair et al., 2021).

2.2 Work-related Mental Health Symptoms

Environment plays an important role in influencing an individual's mental health condition. This supports that the workplace is crucial in determining mental health conditions among the workers, especially working youth. With the prolonged exposure to risk factors in the workplace, a person may develop mental health symptoms such as stress, burnout and depression. Work-related mental health symptoms impose severe implications on individual well-being and economic burden. In terms of individual well-being, mental health symptoms may lead to them in the workplace context or injury, physical illnesses and addictive behaviour (Ganster & Rosen, 2013; Sinha, 2008). On the other hand, mental health symptoms may increase economic burden through reduced productivity and absenteeism (Bubonya et al., 2017; Adaramola, 2012). OECD (2012) estimates that one in five workers will experience mental health symptoms at any given time with a lifetime prevalence of 50%. The prevalence of mental health symptoms is also affected by the difference of occupation groups, whereby some occupation groups are most likely to develop mental health symptoms compared to low-risk occupation groups.

© COPYRIGHT UPM

2.2.1 Stress

Work-related stress is defined as "the response people may have when presented with work demands and pressures that are not matched to their knowledge and abilities and which challenge their ability to cope" (WHO, n.d.). Stress credited to 40% of work-related mental health symptoms in Great Britain (Health and Safety Executive, 2012). Work-related stress has cost western countries US$221.13 million to $187 billion and 70-80% of the cost is contributed by productivity-related issues in the workplace (Hassard et al., 2018). The studies of work-related stress in Malaysia mainly focused on the healthcare and education sectors due to the nature of work. High workload and overwhelming responsibility are the major stressors among healthcare workers and educators (Salari et al., 2020; Samad et al., 2010). Samad et al. (2010) showed that 72.1% of primary teachers experience moderate stress while Salari et al. (2020) reported the prevalence of stress among healthcare workers is 45%.

2.2.2 Burnout

Burnout is "a syndrome conceptualized as resulting from chronic workplace stress that has not been successfully managed". Based on the latest 11th Revision of the International Classification of Diseases (ICD-11), burnout is considered an occupational phenomenon, not a medical condition. Compared to stress, burnout is only applicable in occupational settings. Galletta (2016) stated that employees who are subjected to high work demands can experience workplace burnout as a result of emotional exhaustion. Valente et al. (2016) in their study showed that an adverse

© COPYRIGHT UPM

psychosocial environment is highly associated with moderate and high levels of burnout. They identified that low social support, high strain and unbalanced reward/effort are the contributors to burnout (Valente et al., 2016). Burnout also leads to physiological, psychological, occupational and social impacts on the workers (Roslan et al., 2021).

2.2.3 Depression

Depression is one of the common mental health symptoms in the world, specifically in the workplace setting. As the major contributor to the global burden of diseases, the impact of depression is profound on health, social and economic aspects. Depression has a longer disability period and a higher risk of relapse than other medical conditions, leading to a higher economic loss through absenteeism and presenteeism (Conti & Burton, 1994; Evans-Lacko & Knapp, 2016). A nationwide survey in South Korea on Korean employees reported that the prevalence of depression is 39% which is related to low job control and hazard exposure at work (Park et al., 2016). Saah et al. (2021) also reported a similar prevalence among Ghanian waiters (38.3%) with the ability to foresee better remuneration as the predictor of depression. In Malaysia, professional groups are less likely to develop depression compared to other occupation groups (Yeoh et al., 2017). It also reported that business owners are the group with the most depressive symptoms due to great job pressure and long working hours.

© COPYRIGHT UPM

2.2.4 Anxiety

Anxiety is defined as "apprehensiveness or anticipation of future danger or misfortune accompanied by a feeling of worry, distress, or somatic symptoms of tension" (ICD-11). A person may have anxiety when faced with perceived pressure and problems from the surrounding. Work-related psychosocial risk factors lead to anxiety among healthy workers over the course of employment in an unhealthy workplace (Melchior et al, 2007). Along with depression, anxiety is one of the most prevalent mental health symptoms in the workplace. Jones-Bitton et al. (2019) reported that anxiety was classified as possible or probable cases in around 57% and 33% of the participants, respectively among the farmers. Besides, anxiety is often found to have a comorbidity relationship with other physical and mental health symptoms. (Zamri et al., 2017) found musculoskeletal disorders are associated with moderate to severe anxiety while (Murcia et al., 2013) reported high comorbidity of generalised anxiety disorder and major depressive disorder.

2.2.5 Sleep disturbances

Sleep disturbances cover a wide range of sleep problems such as disorders of initiating and maintaining sleep (DIMS), disorders of excessive somnolence (DOES), disorders of sleep-wake schedule, and parasomnias (Cormier, 2013). It often presents as a general symptom of medical or psychological conditions; also coexist with medical and psychological conditions as an exacerbator and barrier of treatment. Several studies suggested work-related psychosocial risk factors, directly and indirectly, impact sleep disturbance among workers. Heo et al., (2013) and Takaki et

© COPYRIGHT UPM

al. (2010) found that psychosocial risk factors are highly associable with sleep disturbances among the workers. It is also found that night work shifts, irregular and prolonged working hours increased the risk of sleep disturbances (Cheng & Cheng, 2016; Hege et al., 2015). The indirect relationship between sleep disturbance and psychosocial risk factors was reported by Gosling et al. (2014) whereby increased sleep disturbances are associated with poor mental health caused by job strain and low social support.

2.3 Vulnerability of Mental Health Symptoms among Working Youth

Youth is a crucial period of life; a period of emerging adulthood in the phase of human development (Caroli & Godard, 2014). In this development phase, youth are also susceptible to mental health problems in the process. With the drastic changes for the past few decades, the changes in the social environment influence the development of youth and its susceptibility, making it different compared to other generations. The prevalence of mental health symptoms among youth is higher than other age groups (Gulliver et al., 2010) and is often detected at the late of their youth (Patel et al., 2007). Half of all lifelong mental health symptoms begin in the mid-teens, and three quarters by the mid-twenties (Kessler et al., 2007). The common mental health symptoms faced by youth are depression, stress, depersonalisation and anxiety. Despite having a high prevalence of mental health symptoms, youth are not well accessed to mental health services compared to other populations due to a lack of awareness towards mental health and perceived barriers that halt youth from seeking help (Gulliver et al., 2010).

© COPYRIGHT UPM

It is also a crucial period for school-to-work transition (Schoon & Silbereisen, 2009). With the accessibility for education and the development of technology, this period becomes longer as a result of improved education quality and opportunity. The prolonged period of transition increased the risk of mental health symptoms among youth (Shields et al., 2021). The youth often face many challenges as they step into the workforce due to a lack of experience and social exclusion in the workplace (Shields et al., 2021). Employment has significant consequences to one's physical and mental health, including to the youth. With low experience in work, youth often face insecurity at work and have a poor working environment exposed to various hazards.

Despite understanding the vulnerability of mental health symptoms among youth, there is a lack of studies focused on the working youth population. Most of the studies available analyse the data obtained and compare the outcomes of different age groups (Li et al., 2014; Liang et al., 2020; Żołnierczyk-Zreda et al., 2012). These studies showed a significant difference between younger workers and their older counterparts. Zeng et al. (2014) showed that younger workers had lower psychological outcomes. Different studies also share a similar trend on depression, stress and burnout in working youth across various occupation groups (Johnson et al., 2013; Hertel et al., 2013; Corbett et al., 2020). Age has an association with mental health symptoms; however, the association is not linear. Ageing workers experience high burnout levels but lower than youth workers. This shows it is important to study different age groups to understand the relationship between age stage and mental health symptoms.

© COPYRIGHT UPM

Aside from the individual factors, work-related psychosocial risk factors are associated with mental health symptoms among working youth. A systematic review stated that exposure to a poor working environment leads to adverse mental health conditions among the working youth (Law et al., 2020). For instance, the high job demand is associated with the new onset of depression among young workers (Melchior et al., 2007). Ramos et al. (2016) reported that young workers with high job tenure were particularly vulnerable to job demands and insufficient resources at work. Some studies showed that working youth are more affected by similar risk factors faced by older workers. Li et al. (2014) stated that young workers have poorer mental well-being compared to older workers even having long working hours and income dissatisfaction. (Jang et al., 2019) reported that prolonged and labouring work leads to an unbalanced work-life ratio among young gastroenterologists which have a significant relationship with poor mental health compared to their older counterparts.

2.4 Work-related Psychosocial Risk Factors

Psychosocial risk factors at work have been recognised as one of the major hazards contributing to occupational health disorders (WHO, 1984). Psychosocial risk factors are defined as "the elements pertaining to influence social factors on an individual's mind and behaviour, and to the interrelation of behavioural and social factors". Based on previous studies, the domains of work-related psychosocial risk factors are focused to identify the contributing factors of mental health symptoms in a workplace. These domains and their mechanism will be further discussed in the

© COPYRIGHT UPM

following sections. Besides the common risk factors, new and emerging psychosocial risk factors will be identified and discussed.

2.4.1 Workload and Work-pace

Quantitative demands refer to the amount and pace of work required to complete a task. Quantitative demands often relate to workload, amount of work and intensity. High workload and intensity indicate a great amount of work needed to complete in a limited timeframe given by the workers. This condition induces a high strain on the workers in the presence of low control over their jobs. Upadyaya et al. (2016) and Mette et al. (2018) concluded that high quantitative demands lead to burnout and stress. Besides, the increase of psychosocial workload was also reported to have a positive association with anxiety (Magnavita & Fileni, 2013). Occupation groups are also considered as a predictor of workload to the workers. Healthcare workers and educators are some of the recognised occupation groups with high workload (Salari et al., 2020; Samad et al., 2010). The work-pace is also important to some organisations to achieve their target performance quantitatively. Thus, a high work-pace often will lead to a greater workload among the workers to maximize the output (Dextras-Gauthier et al., 2012). This will increase the pressure faced by the workers and lead to absenteeism due to burnout (Ståhl et al., 2018).

2.4.2 Working Time

© COPYRIGHT UPM

Influence at work or normally known as job control is a crucial component in the Demand-Control-Support model, an influential theory on psychological well-being in the occupational setting. Influence at work is the ability of a person to influence the task, mobility and social environment in a workplace. Control over working time also indicates the ability of the worker to control their job. Based on the Demand-Control-Support model, the ability to control one's job is related to job strain (Karasek & Theorell, 1990). Low influence at work among pink collars, blue collars and white collars are associated with the prevalence of stress and burnout (Tuvesson et al., 2011; Jones-Bitton et al., 2019; Idem et al., 2011). Low influence at work is often associated with high working hours among the workers due to the employers' intention to increase productivity through increasing the working hours. Low influence to control working hours and shifts are significant in affecting the sleeping quality. This is proven by several studies on different occupation groups based on the working hours and irregular shifts (Yun et al., 2021; Härmä et al., 2018; Hege et al., 2015)

2.4.3 Social Support from Colleagues and Supervisors

Social support is the inseparable component in the Demand-Control-Support model (Karasek & Theorell, 1990). It acts as the buffer against job strain from the interaction of demand and control. Social support can come from anyone around us; supervisors and colleagues are the sources in the workplace context. Extensive studies have been conducted to understand the role of social support and its effect on health generally. It was found to improve the caring ability for self and others (Lee & Pak, 2020). Besides, it is also a moderator of the interaction between other work-

© COPYRIGHT UPM

related psychosocial risk factors and mental health such as workplace bullying (Warszewska-Makuch et al., 2015) and workload (Avanzi et al., 2018). Studies on different occupation groups also prove that social support from supervisors and colleagues can improve mental health by mediating burnout and stress faced by the workers (Avanzi et al., 2018; Hamama, 2012; Hsieh & Tsai, 2019).

2.4.4 Job Insecurity

Job insecurity occurs when the workers feel not confident in securing their current job. WHO (1998) reported that it is not just affecting employment; it is also about the workers' health. Numerous studies are done on the relationship between job insecurity and mental health (De Witte et al., 2015; Menéndez-Espina et al., 2019; Caroli & Godard, 2014). These studies showed similar results on the effect of job insecurity on mental health. Many factors lead to job insecurity; insecurity over working conditions and lack of predictability at work (Fløvik et al., 2020) can be the indicator of job insecurity. Insecurity over working conditions includes salary reduction, position transferring and changes in task and working time. These conditions not only indicate job insecurity but also result in negative emotions among the workers. When the workers have perceived job insecurity based on the changes in the workplace, it is unavoidable that the workers will start worrying and feel stress for what they have been through. Saah et al. (2021) showed that poor prediction on the salary changes, in particular, leads to high anxiety among the waiters. The incapability to manage negative emotions due to insecurity will deteriorate their mental health.

© COPYRIGHT UPM

2.4.5 Work-life Conflict

Work-life conflict occurs when work and personal life (family and social relationship) are interfaced and affect any of it negatively. Most of the work-life conflicts arise when a person has multiple roles in work and family whereby the demand and expectation are conflicting with each other (Kossek & Lee, 2017). Being the most neglected work-related psychosocial risk factor, it significantly affects health outcomes for the workers (Hammig & Bauer, 2013). Work-life conflict shows significant effects on burnout, stress and depression in the workplace (Brauchli et al., 2011; Hammig & Bauer, 2013; Yang & Islam, 2020). Hege et al. (2019) found that prolonged working hours is the factor of work-life conflict among the long-haul truck driver. They also found a significant relationship between work-life conflict and sleep disturbance. The proper management of work-life conflict in the workplace by both employers and employees are essential and can reduce the prevalence of mental health symptoms and improve organisational indicators (Foy et al., 2019).

2.4.6 Workplace Bullying

Workplace bullying is any verbal, physical, social or psychological abuse committed by any individual from supervisors to colleagues in the workplace. Workplace bullying is more often committed by the superiors in the organisation. Hershcovis et al. (2015) concluded that there are three predictive characteristics of workplace bullying which are Perpetrator, Target and Situational Characteristics. A person with perpetrator characteristics is more likely to commit bullying on those who are perceived as weak or easy to be bullied. However, the workplace

© COPYRIGHT UPM

environment plays an important role in the incidence through the culture and presence of other work-related psychosocial risk factors. It has consequential impacts on the victims who faced bullying and the organisation. Reviews done by Nielsen et al. (2014) and Sansone & Sansone (2015) showed an association between workplace bullying and mental health problems, specifically depression and anxiety. Burnout is also prevalent among nurses who faced workplace bullying which can be a predictor of job satisfaction and work quality among these nurses (Purpora et al., 2019).

2.5 Influences of COVID-19 Pandemic on Work-related Psychosocial Risk Factors

Work changed rapidly following the imposed lockdown by many countries to curb the transmission of COVID-19. Many people have abruptly switched to remote working to ensure the economic stability and livelihood of the workers. The disruption of work dynamics caused by the pandemic has detrimental effects on the workers' wellbeing. Wong et al. (2021) reported that the employees' perception of occupational stressors have changed after the pandemic occurred. Several studies showed that the work-related psychosocial risk factors changes following the disruption of work dynamics. For instance, remote working decreased the resources needed to conduct the work safely and soundly (Ruiz-Frutos et al., 2021). Wang et al. (2021) also reported that remote working changed the work characteristics in terms of social support, job autonomy, monitoring, and workload among Chinese workers. These also found to have a significant impact on the challenges faced by the workers during remote working. Nevertheless, a survey conducted by Ross & Lewchuk (2021) showed that employers take advantage of the shift of work

© COPYRIGHT UPM

dynamics to manipulate their employees. They found a significant increase in workload and effort among the workers. It also showed that the workers faced issues in getting their salary, reduction of salary and difficulty in applying for leaves during this pandemic (Ross & Lewchuk, 2021).

Remote working during COVID-19 Pandemic also heavily altered the balance between work and personal life. With the current technological advancement, the boundary of work is not restricted to a specific location and time. The outbreak of the COVID-19 Pandemic accelerates the adaptation of boundaryless work. As the boundary becomes vague, most people find it difficult to manage between work and personal life. The work-life interface should be in equilibrium to maintain workers well-being, and one of the moderators of the equilibrium of interface is the boundary at work. The boundary at work provides a clear division of work and personal life, through physical boundaries or time shifts (Allen et al., 2021). With the implementation of remote working, however, workers are required to work from home which leads to the interference of physical boundaries between work and life (Allen et al., 2021). The sudden implementation of remote working found to be interrupting the work-life balance as a result of inadequate preparation for remote working such as having a dedicated working space at home (Allen et al., 2021). Despite some parties claiming that remote working provides flexibility at working hours which helps to improve the workers' well-being and personal relationship, it is still unclear as there is a lack of studies on this issue during the COVID-19 Pandemic. As remote working is non-voluntary for most of the workers, it may affect their well-being and productivity compared to those who volunteer to do so.

© COPYRIGHT UPM

Other than that, the economic recession is non-neglectable towards work-related psychosocial risk factors during the COVID-19 Pandemic. Increased unemployment rate around the world was reported around the world. Many businesses, especially Small and Medium Enterprises (SMEs) are struggling to survive through this pandemic. This certainly will impact the job security and working condition of the workers in Malaysia as SMEs comprise almost 50% of total employment in 2019 (DOSM, 2020). Businesses will take action to reduce operational costs such as resources and paycheck to maintain sustainability. This action will reduce worker's job satisfaction and development in the organisation. An article published by the Economic Policy Institute with the title of "*Young workers hit hard by the COVID-19 economy*" reported that the economic impacts from COVID-19 are tremendous and persistent on young workers (Gould and Kassa, 2020). This condition worsens unemployment and underemployment issues among working youth, which consecutively affects global economic recovery (Gould and Kassa, 2020). Sinclair et al. (2021) stated that the economic condition in this pandemic became a significant stressor for the workers. It is due to loss of financial resources and employment instability faced by the workers when the organisations prioritize sustaining themselves from this crisis.

2.6 Instruments for Work-related Psychosocial Risk Factors and Mental Health Symptoms

There are various instruments to assess work-related psychosocial risk factors. Most of the studies available used standardised instruments based on validated models and theories. Job Content Questionnaire is one of the instruments adopted

© COPYRIGHT UPM

from Karasek and Theorell's Demand-Control-Support Model to study the interaction between job demand, job control and social support in the workplace. Effort-Reward Imbalance Scale is based on the Effort-Reward Imbalance Model by Siegrist (1996) that proposed an imbalance between effort and rewards when the effort is greater than rewards, the work stress produced will lead to adverse health outcomes including mental health symptoms.

Some instruments designed to assess specific work-related psychosocial risk factors such as social support, work engagement and negative acts in the workplace. Li et al. (2014) used the Chinese Social Support Rating Scale to identify the social support received by migrant and urban workers in Guangzhou, China. Ramos et al. (2016) and Upadyaya et al. (2016) adopted Utrecht Work Engagement Scale in their studies to identify the relationship between work engagement and depression, anxiety and burnout. Negative Acts Questionnaire is an instrument to study the negative acts occurring in the workplace such as workplace bullying. Warszewska-Makuch et al. (2015) used this instrument to study the effect of workplace bullying on office workers in Poland.

Occupation-specific and work environment-specific instruments developed to study the common psychosocial risk factors of occupation or environment. These specificities provide relevant and accurate information on the exposure experienced by the workers. Teacher Stress Inventory and Trucker Sleep Disorders Survey are some of the examples of the instruments used on specific occupation groups. In terms of environment-specific instruments, Ward Atmosphere Scale and ICU questionnaire were used by Tuvession et al. (2011) and Gallete et al. (2016)

© COPYRIGHT UPM

respectively. Ward Atmosphere Scale used by Tuvession et al. (2011) to study the correlation between ward atmosphere and stress among psychiatric nurses while the ICU questionnaire studied teamwork among healthcare workers in the Intensive Care Units (ICUs).

© COPYRIGHT UPM

Table 2.1: List of instruments used in the selected literature review

Measured element	Instrument use	Source
Work-related psychosocial risk factors	Job Content Questionnaire (JCQ)	Valente et al. (2016) Melchior et al. (2007) Zamri et al. (2017) Zeng et al. (2014) Magnavita & Fileni (2012) Cheng & Cheng (2016) Takaki et al. (2010)
	Effort-Reward Imbalance (ERI) Model Questionnaire	Valente et al. (2021) Magnavita & Fileni (2012) Hammig & Bauer (2012)
	Social Support Rating Scale	Li et al. (2014)
	Utrecht Work Engagement Scale (UWES)	Ruiz-Frutos et al. (2020) Ramos et al. (2016) Upadyaya et al. (2016)
	Work Addiction Risk Test	Upadyaya et al. (2016)

	General Nordic Questionnaire for Psychological and Social Factors at Work (QPSNordic)	Tuvession et al., (2011) Fløvik et al. (2020)
	Ward Atmosphere Scale	Tuvession et al. (2011)
	Negative Acts Questionnaire	Warszewska-Makuch et al. (2018) Takaki et al., 2010)
	Job Insecurity Scale	Menéndez-Espina et al. (2019)
	Antonovsky's life orientation questionnaire	Ruiz-Frutos et al. (2020)
	Environment Cohort Study	Madsen et al. (2016)
	Teacher Stress Inventory	Samad et al. (2010)

UPM COPYRIGHT ©

	ICU Questionnaire	Gallette et al. (2016)
Mental health symptoms	Maslach Burnout Inventory (MBI)	Valente et al. (2016) Jang et al. (2020) Gallete et al. (2016)
	Copenhagen Burnout Inventory (CBI)	Roslan et al. (2021) Avanzi et al. (2018) Brauchli et al. (2011) Cheng & Cheng (2016)
	Depression, Anxiety and Stress Scale (DASS)	Zamri et al. (2017) Saah et al. (2021)
	WHO-5 Wellbeing Index (WHO-5)	Park et al. (2016) Li et al. (2014) Zeng et al. (2014)
	Perceived Stress Scale (PSS)	Jones-Britton et al. (2020) Tuvession et al. (2011)
	Hospital Anxiety and Depression Scale (HADS)	Jones-Bitton et al. (2020) Jang et al. (2020)

© COPYRIGHT UPM

	Short Form Health Survey	Zamri et al. (2017)
	Bergen Burnout Inventory (BBI)	Upadyaya et al. (2016)
	General Health Questionnaire (GHQ)	Magnavita & Fileni (2012) Warszewska-Makuch et al. (2015) Menéndez-Espina et al. (2019) Ruiz-Frutos et al. (2020) Samad et al. (2010)
	Hopkins Symptom Checklist (HSCL)	Fløvik et al. (2020)
	Swiss Health Survey	Hammig & Bauer (2013)
	The Center for Epidemiologic Studies Depression Scale	Cheng & Cheng (2016)
	Pittsburgh Sleep Quality	Takaki et al. (2010)

© COPYRIGHT UPM

	Karolinska Sleep Questionnaire (KSQ)	Takaki et al. (2010)
	Bergen Burnout Inventory (BBI)	Madsen et al. (2016)
Work-related psychosocial risk factors and mental health symptoms	Copenhagen Psychosocial Questionnaire (COPSOQ)	Freimann & Merisalu (2015) Brauchli et al (2011) Madsen et al. (2016)
	Trucker Sleep Disorder Survey	Hege et al., 2015
	Health and Safety Executive (HSE) Management Standards Tool	Ramos et al. (2016)

© COPYRIGHT UPM

To study work-related psychosocial risk factors more holistically, instruments were designed to multiple risk factors in the workplace at once. Several models and theories were combined to produce instruments for workplace assessment and research purposes. Based on the literature review, Copenhagen Psychosocial Questionnaire (COPSOQ) and General Nordic Questionnaire for Psychological and Social Factors at Work (QPSNordic) and UK Health & Safety Executive Management Standards Tool were examples of instruments adapted with different work-related psychosocial risk factors based on different models and studies. These international instruments are mainly developed by national and international organisations, agencies or committees. General QPSNordic consists of 123 items with 13 scales of work-related psychosocial risk factors such as job demands, job predictability, organisational commitment and interaction between work and personal life. Other than that, COPSOQ was developed based on 7 different models to assess 6 domains of workplace psychosocial risk factors for research and organisation management. Lastly, HSE Management Standards Tools was developed by Health & Safety Executive, a government agency responsible to regulate, encourage and enforce health, safety and welfare in the workplace and research on occupational risks in the United Kingdom.

The study of work-related psychosocial risk factors is not limited to standardised instruments; the study instrument can be designed by the researchers through literature reviews, pilot study and interview with the respondents. Wong et al. (2020) designed the instruments based on their literature review, pilot survey and in-depth interview on hotel employees. Literature reviews are a more common source to design specific questionnaires based on the researchers' objectives. Avanzi et al. (2018) and Yang &

© COPYRIGHT UPM

Islam (2020) designed their study instrument based on previous studies related to the researches. The items from previous studies were obtained and modified based on the objectives and population. On the other hand, Roslan et al. (2021) used open-ended questions to obtain more information about the respondents' exposure to work-related psychosocial risk factors.

For mental health symptoms, there are numerous valid instruments used for the assessment. Some instruments only focused on one mental health symptom. Pittsburgh Sleep Quality and Copenhagen Burnout Inventory are examples of instruments assessed on one mental health symptom. Instruments like Depression, Anxiety and Stress Scale (DASS) and Hospital Anxiety and Depression Scale (HADS) assess two or more mental health symptoms simultaneously. These symptoms often share similarity by their type, DASS for instance, assessing depression, anxiety and stress which are categorized as negative emotional symptoms.

Assessing mental health symptoms does not always use one specific instrument. Certain psychosocial risk factors instruments include health elements especially mental health symptoms. COPSOQ, Trucker Sleep Disorder Survey and HSE Management Standards Tool are the instruments consisting of both work-related psychosocial risk factors and mental health symptoms. These instruments are not only suitable in research, but also apply to organisational settings to understand the health impact of the workers from the workplace risk factors exposure.

© COPYRIGHT UPM

2.7 Law and policy on workplace mental health

Law and policy are important approaches to ensure a healthy psychosocial work environment for the workers. A healthy psychosocial work environment can improve work productivity at the workplace and promote mental and behavioural wellbeing. The law and policy on workplace mental health will be discussed and compared between Malaysia and other Commonwealth countries.

2.7.1 Law and policy on workplace mental health in Malaysia

The Occupational Safety and Health Act 1994 (OSHA 1994) is the most relevant law on workplace mental health. OSHA 1994 is the legislative framework aimed to promote, encourage and protect the safety, health and welfare of the workers in Malaysia. Section 15 of OSHA 1994 reads "it shall be the duty of every employer and every self-employed person to ensure, so far as is practicable, the safety, health and welfare at work of all his employees". This provision stated the duty of employers to take practical actions to ensure the wellbeing of the employees. Despite that, OSHA 1994 focused on the physical safety and health of the workers. Employers must ensure workers free from hazardous risk at the workplace, protect workers' health from any potential hazards, including the appropriate equipment and clothing to provide the necessary information, instruction, and training in the workplace. The hazardous risks mostly focus on physical and chemical risks as there is no specific provision and regulation in the act which state psychosocial risk and mental health in the workplace (Azmi et al., 2021). Regulation 13

© COPYRIGHT UPM

of Occupational Safety and Health (Safety and Health Committee) Regulations 1996 stated that the safety and health committee only focuses on accident, near-miss accident, dangerous occurrence, occupational poisoning or occupational disease. The lack of functions of the Safety and Health Committee on activities related to mental health caused workplace mental health to be neglected intentionally and not intentionally by the employers (Azmi et al., 2021). Other laws such as Employment Act 1955 and Mental Health Act 2001 that related to either employment and mental health did not have any provisions related to workplace mental health.

In terms of policy, there is no specific policy in Malaysia focused on workplace mental health (Azmi et al., 2021). However, there is a general policy of mental health known as the National Mental Health Policy. It provides comprehensive strategies and guidelines to mitigate mental health issues in the community. However, the limitations faced by the Ministry of Health lead to difficulties in implementing the plan (Azmi et al., 2021). For workplace mental health, the Department of Occupational Safety and Health published Guidance for the Prevention of Stress and Violence at the Workplace in 2002. This guidance recognised stress and violence by providing the method of assessment, intervention, monitoring and evaluation of stress and violence at the workplace. This is the only document provided by the authorities to manage these problems. The effectiveness and adherence to the guidance are unknown and never been reviewed since its publication.

COVID-19 Pandemic has increased the occurrence of mental health issues significantly in Malaysia. To overcome the spike of mental health issues among the

© COPYRIGHT UPM

community, community-based initiatives have been provided by the government to manage the impact of the COVID-19 Pandemic on mental health issues. For example, the Ministry of Women, Family and Community Development provides psychological support to people who are affected by the pandemic through the tele-counselling hotline (Rahim et al., 2020). While there is no government initiative to mitigate the increase of workplace mental health issues, self-initiatives are important to manage personal and workers' mental wellbeing. Shanmugam et al. (2020) suggested the workers utilize flexible working hours to manage work-life matters and their well-being. From the employers' perspective, several initiatives can be implemented to support the workers amid this pandemic. For instance, an article by Murugesan (2020) in the New Straits Time reported that Malaysian Aviation Group (MAG) collaborated with a digital therapeutic company to protect the mental health of the workers who were heavily affected by this pandemic due to travel restrictions imposed globally.

2.7.2 Law and policy on workplace mental health in selected Commonwealth nations

Table 2.2 shows the law and policy on workplace mental health in other regions such as Australia, Canada and the United Kingdom. Australia's Commonwealth Fair Work Act 2009 assures employers to have balanced work environments without affecting economic development and productivity. The act provides comprehensive guidelines for employers and employees to minimise occupational stress for employees. According to the act, the employees receive protections from overwork, work-life

© COPYRIGHT UPM

conflicts and discrimination from the employers (Mohamed et al., 2018). Section 62 (3)(a) and (b) of the Act stated that employees should be allowed to reject employers' requests to work overtime if it will affect their health and disrupt personal matters. This provides the rights of the employees from getting exploited by employers and has a positive impact on their mental health. Currently, Australia does not have a specific policy on workplace mental health; however, the federal government has invested in the National Workplace Initiative (NWI) to provide a consistent approach to workplace mental health nationwide. The National Workplace Initiative aimed to create a framework for workplace mental health strategies and strengthen Australia's current programmes and interventions (National Mental Health Commission, n.d.).

Besides, The Canadian Centre for Occupational Health and Safety Act 1985 is the primary federal act for occupational safety and health. The objectives of the act are to foster occupational health and safety, as well as the protection of employees' physical and mental health in Canada. The centre intends to facilitate consultation, cooperation and maintenance of occupational health and safety among federal, provincial and territorial jurisdictions (Mohamed et al., 2018). Aside from this, some provincial regulations provide direct protection on the worker's mental health. Saskatchewan Occupational Health and Safety Regulations 1996 include any disease or impairment of mental condition as injury. This provision directly requires the employers to protect the employers from any hazards that cause mental health injuries (Mohamed et al., 2018). Canada also launched an initiative to protect mental wellbeing in the workplace. The National Standard of Canada for Psychological Health and Safety in the Workplace is an initiative by the Canadian government to provide voluntary guidelines, tools and

© COPYRIGHT UPM

resources for all organisations in Canada to promote workplace mental wellbeing and prevent the exposure of work-related psychosocial risk factors (Greco-Sanchez & Everatt, 2015).

Lastly, compared to previous laws, the United Kingdom's Health and Safety at Work Act 1974 (HASAWA 1974) protects the worker's mental health in a different way. HASAWA 1974 shares a similar general duty for employers in the act as OSHA 1994 was derived from this law. The establishment of the Health and Safety Executive (HSE) was allowed to make any appropriate arrangements to ensure the health, safety, and welfare at work of employees (Azmi et al., 2021). This agency integrates mental health policy in health and safety programs such as Stress Priority Programme. This programme was developed with clear standards of management practice for different work stressors. Tools were also developed for employers to identify work-related psychosocial risk factors and their solutions (Azmi et al., 2021). Same with other countries, the United Kingdom had developed several policies specifically for workplace mental health for example "Thriving at Work: The Stevenson/Farmer Review of Mental Health and Employers". The policy aims to transform mental health supports including in workplaces. It recommends that employers incorporate "mental health core standards" in the workplace to help manage their employees' mental health (Stevenson, 2017).

© COPYRIGHT UPM

Table 2.2: Law and policy on the workplace in Australia, Canada and the United Kingdom

Countries	Laws	Descriptions	Policies	Descriptions
Australia	Commonwealth Fair Work Act 2009	Aims to provide a healthy work environment while maintaining the organisation productivity and development	National Workplace Initiative	Funded by the Federal Budget to provide a nationally consistent approach for workplace mental health.
Canada	Saskatchewan Occupational Health and Safety Regulations 1996	Recognised mental health diseases and conditions as work injury	The National Standard of Canada for Psychological Health and Safety in the Workplace	Provide voluntary standards for organisations to enhance the psychosocial work environment
United Kingdom	Health and Safety at Work Act 1974	Establish Health and Safety Executive to develop standards for better management of work stressors	Thriving at Work: The Stevenson/Farmer Review of Mental Health and Employers	Provide recommendations for employers to support the mental health of all employees to continue and thrive at work

Chapter 3

Methodology

3.1 Study Design

This was a cross-sectional study that aimed to determine the work-related psychosocial risk factors and the prevalence of mental health symptoms among working youth in Klang Valley at a particular time.

This study determines the relationship between work-related psychosocial risk factors and mental health symptoms among working youth in Klang Valley. This study design can propose the relationship between the studied variables from the existing knowledge (Sousa et al., 2007).

3.2 Study Location

The study was conducted at Klang Valley; a conglomerate of urban consists of the Federal Territory of Kuala Lumpur, the Federal Territory of Putrajaya and several

© COPYRIGHT UPM

surrounding districts of Selangor (Gombak, Petaling, Klang, Sepang, Kuala Langat and Hulu Langat).

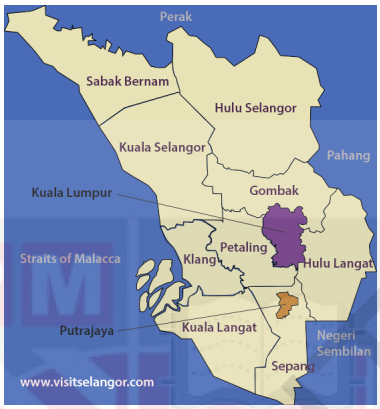

Figure 3.1 The map of Selangor state, Federal Territory of Kuala Lumpur and Putrajaya (VisitSelangor, 2018)

3.3 Study Duration

The study was conducted from August 2021 to October 2021.

3.4 Study Population and Sampling

3.4.1 Study Sample

© COPYRIGHT UPM

All youth in Klang Valley with formal and informal employment was invited to participate in this study. This is because the study required youth who work in Klang Valley.

3.4.2 Sampling Method

In this study, a mixed sampling method was used. The convenience sampling was used by distributing the questionnaire to anyone eligible based on the inclusion and exclusion criteria via a social media platform. The snowball sampling method was also be used to find more participants from the previous participants through referral until a sufficient sample size reached for this study. Table 3.1 showed the advantages and disadvantages of convenience and snowball sampling. Convenience sampling was used because of its cost-effectiveness while snowball sampling was used due to the ability to generate more contexts about the target population. The participants will be given a set of questionnaires to respond to this study via Google Form.

Table 3.1 Advantages and disadvantages of convenience and snowball sampling

Sampling methods	Convenience sampling (Jager et al., 2017)	Snowball sampling (Johnson, 2005)
Advantages	● Cost-effective ● Efficient ● Easy to implement	● Cost-effective ● Efficient ● Able to track hidden population

© COPYRIGHT UPM

Disadvantages	• Lack of generalizability	• Sample collected may not be representative of the study population

3.4.3 Sampling Unit

The sampling unit of this study was working youth aged between 18 to 30 years old regardless of gender in Klang Valley. Expatriate and migrant workers are included in this study to understand the trend of work-related psychosocial risk factors and the mental health symptoms at their workplace. Nevertheless, individuals who have been diagnosed with chronic disease will be excluded from the study during the screening phase because chronic health diseases such as cancer and chronic renal failure increased the probability of mental health symptoms (Verhaak et al., 2005).

A. Inclusion Criteria

I. Aged between 18 to 30 years old;

II. Currently formal or informally employed in Klang Valley.

B. Exclusion Criteria

I. Have been diagnosed with a chronic disease (cancer, kidney disease) that alters mental health because it will affect the result of the questionnaire;

II. Unemployed individuals.

© COPYRIGHT UPM

3.5 Sample Size

The sample size calculation for this study was calculated using the one proportion formula (Daniel, 1999). The prevalence of mental health problems from Lee et al. (2016) was used in the calculation. Lee et al. (2016) used data from 33,569 respondents of the Third Korean Working Conditions Survey in 2011 to study the psychosocial factors in working conditions and psychological well-being of all Korean worker populations. Li et al. (2016) reported the prevalence of psychological well-being is 39.5% among Korean workers aged from 15 to 29 years old. 7% of precision was selected to yield an adequate and achievable sample size while maintaining the representativeness of the result to the population (De Sio et al., 2020). De Sio et al. (2020) conducted a study on workplace bullying and work-related stress among 191 healthcare workers and a 7% margin of error was considered in the study to reach an adequate and achievable sample size while considering the limitation of resources in the study (Naing et al., 2006). For this study, 7% of precision was selected considering there was no previous study specifically on work-related psychosocial risk factors and mental health symptoms in working youth while being able to obtain representative and adequate samples for the study.

$$n = \frac{Z^2_{1-\frac{\alpha}{2}} P(1-P)}{d^2}$$

Whereby,

n: Sample size

© COPYRIGHT UPM

$Z_{1-\frac{\alpha}{2}}$: 1.96 at level confidence of 0.95

P: 0.395 (Prevalence of psychological well-being among workers aged from 15 to 29 years old from Lee et al., 2016)

d: Precision of 0.07

$$n = \frac{(1.96)^2 \ (0.395) \ (1 - 0.395)}{(0.07)^2}$$

$$n = 187$$

The total sample size of this study is 187. An additional 20% was included in the calculated sample size to account for the possibility of missing data, unavailability of participants, refusal to participate, and non-response. This additional 20% will increase the sample size and the power of the study. The final sample size is 225 respondents.

3.6 Sampling Procedure

The study was conducted upon receiving approval from the Ethics Committee for Research Involving Human Subjects Universiti Putra Malaysia (JKEUPM) (JKEUPM-2021-378). The data collection was conducted using the self-administered questionnaire distributed to the respondents. The self-administered questionnaires were distributed in Google Form to the respondents. The data collected was analyzed using Statistical Package for the Social Sciences (SPSS) version 25 to identify the relationship between

© COPYRIGHT UPM

sociodemographic and work characteristics, work-related psychosocial risk factors and mental health symptoms among the respondents. Figure 3.2 shows the flowchart of the sampling procedure.

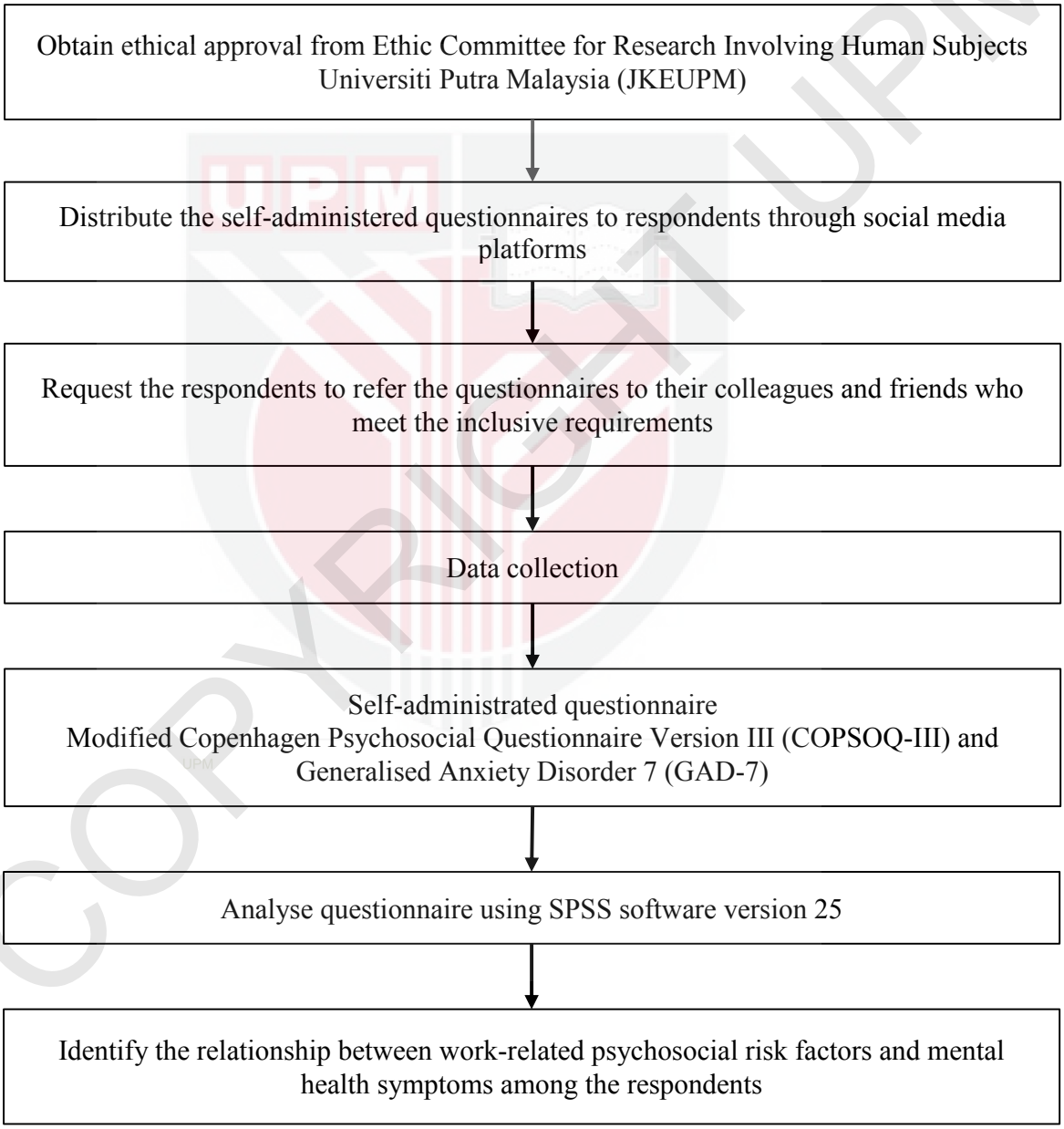

Figure 3.2: Flowchart of the sampling procedure

© COPYRIGHT UPM

3.7 Study Instrumentation

A set of questionnaires related to the work-related psychosocial risk factors and mental health symptoms was adopted and modified from previous studies.

3.7.1 Questionnaires

The self-administered questionnaire was prepared in bilingual (English and Bahasa Malaysia). The questionnaire was modified from Copenhagen Psychosocial Questionnaire version III (COPSOQ-III) (Burr et al, 2019) and Generalised Anxiety Disorder 7 (GAD-7) (Spitzer et al., 2006) added with sociodemographic and work characteristics. COPSOQ-III was selected because it covers all important aspects of work-related psychosocial risk factors and the mental health symptoms that are intended to study (Burr et al., 2019) while GAD-7 was selected for its wide usage on workplace assessment on anxiety (Pavičić Žeželj et al., 2019; Xie et al., 2021).

Section A: Sociodemographic and work characteristics

The sociodemographic characteristics studied were age, gender, ethnicity, level of education, marital status, number of family members and household income. The work characteristics included in this study were work sectors, workstation, position, working duration, working days, and work experience. For the workstation, an item will

© COPYRIGHT UPM

be included in the questionnaire to see whether the respondents work from home during the pandemic. A change in working hours was also asked to understand the changes in working hours before and after the pandemic.

Section B: Work-related psychosocial risk factors

The Copenhagen Psychosocial Questionnaire was developed by Kristensen et al (2006) to assess the psychosocial risks in occupational settings and conduct research on work and health. Kompier (2002) identified 7 psychosocial theories covered in this instrument : The Job Characteristics Model, The Michigan Organization Stress Model, The Job Demands–Control Model, The Sociotechnical Approach, and The Action-Theoretical Approach, The Effort–Reward Imbalance Model and, The Vitamin Model. The instrument was then updated by the International COPSOQ network and included two new theories into it: the Social Capital Theory and Stress-as-Offence-to-Self theory (Burr et al., 2019). Burr et al. (2019) stated that this instrument has been used in 40 countries and available in different languages to assess psychosocial risk factors of various occupations and workplaces.

Table 3.2 highlights the work-related psychosocial risk factors items in Section B of the questionnaire. The workload was item number one to four, work-pace was item number five to seven, social support from supervisors and colleagues were from number eight to ten, and number 11 to 13, respectively. Job insecurity was from number 14 to 16, followed by work-life conflict from number 17 to 19 and workplace bullying, which was

© COPYRIGHT UPM

number 20. In this study, several scales in the COPSOQ-III were included. There will be scales in this instrument that will be used: workload, work-pace, workplace bullying, work-life conflicts, job insecurity, social support from colleagues, and social support from supervisors. For work-related psychosocial risk factors, each scale was defined based on the health effect it reflects, namely, health-friendly condition, intermediate health condition, and health risk (Souto et al., 2019). The score in each scale was divided into three percentiles, using cut-off values of 1.33 and 2.66, respectively (Souto et al., 2019). Average scores less than 1.33 was classified as low, average scores from 1.33 to 2.66 was classified as moderate, followed by average scores more than 2.66 was classified as severe for all work-related psychosocial risk factors. Likert scale from 0 to 4 was used which these scoring will be used by the respondents to choose for the item according to:

I. 0= Never/ Hardly ever : At least 1 time or none in a month
II. 1= Seldom : At least 1 time in two weeks
III. 2= Sometimes : At least 1 time in a week
IV. 3= Often : 2 – 3 times in a week
V. 4= Always : Almost every day in a week

Table 3.2 The items for work-related psychosocial risk factors in Section B

Scales	No. of items
Workload	1, 2, 3, 4
Work-pace	5, 6, 7
Social support from supervisors	8, 9, 10

© COPYRIGHT UPM

Social support from colleagues	11, 12, 13
Job insecurity	14, 15, 16
Work-life conflict	17, 18, 19
Workplace bullying	20

Section C: Mental health symptoms

Mental health symptoms were evaluated using the health domain of COPSOQ-III (Burr et al., 2019) and Generalized Anxiety Disorder 7 (GAD-7) (Spitzer et al., 2006). For mental health symptoms, each scale was defined in terms of the reflected severity of mental health effects, namely, normal, moderate, and severe conditions (Souto et al., 2019). The score obtained in each scale was divided into three percentiles, using cut-off values of 1.33 and 2.66, respectively (Souto et al., 2019). Average scores less than 1.33 was classified as low, average scores from 1.33 to 2.66 was classified as moderate, followed by average scores more than 2.66 was classified as severe for all mental health symptoms. These scales from COPSOQ-III and GAD-7 used the Likert scale from 0 to 4 which these scoring will be used by the respondents to choose the items according to:

I. 0= Never/ Hardly ever : At least 1 time or none in a month

II. 1= Seldom : At least 1 time in two weeks

III. 2= Sometimes : At least 1 time in a week

IV. 3= Often : 2 – 3 times in a week

© COPYRIGHT UPM

V. 4= Always : Almost every day in a week

Table 3.3 highlights the mental health symptoms items in Section C of the questionnaire. The burnout was item number one to four, sleep disturbance was item number five to eight, stress was from number night to eleven, respectively. Depressive symptoms were from number 12 to 15, followed by work-life conflict from number 16 to 22.

Table 3.3 The items for mental health symptoms in Section C

Scales	Items
Burnout	1, 2, 3, 4
Sleep disturbance	5, 6, 7, 8
Stress	9, 10, 11
Depressive symptoms	12, 13, 14, 15
Anxiety	16, 17, 18, 19, 20, 21, 22

3.8 Data Analysis

SPSS version 25 was used to perform data analysis based on the specific objectives of the study. Table 3.4 shows the statistical analysis for the respective objectives.

© COPYRIGHT UPM

Table 3.4: Research objectives and statistical analysis used for the study

Objectives		Statistical Analysis
I.	To determine the sociodemographic and work characteristics of the respondents;	Descriptive analysis
II.	To determine the work-related psychosocial risk factors of the respondents;	Descriptive analysis
III.	To determine the perceived mental health symptoms such as depression, stress, sleep disturbance, anxiety and burnout among the respondents;	Descriptive analysis
IV.	To compare the sociodemographic factor, work characteristics with work-related psychosocial risk factors and mental health symptoms among the respondents during the COVID-19 Pandemic	Mann Whitney test and Kruskal Wallis test
V.	To determine the association between work-related psychosocial risk factors, sociodemographic, work characteristics and mental health symptoms among the respondents	Spearman Correlation
VI.	To determine the significant determinants to mental health symptoms of the respondents during the COVID-19 Pandemic.	Stepwise Regression Analysis

© COPYRIGHT UPM

3.9 Quality Control

The questionnaire used in the study was modified from validated instruments. A pilot study was conducted to test the validity and reliability. This was to ensure the objective of the research achieved with quality assurance. The questionnaire was pre-tested with 10% of the sample size that has similar characteristics to the study participants to avoid contamination of the study participants. Therefore, 23 respondents were chosen to ensure the validity and reliability of the questionnaire. Table 3.5 showed the Cronbach's alpha values for all work-related psychosocial risk factors and mental health symptoms of 307 respondents have good internal consistency.

Table 3.5: Reliability test result (N=307)

Variables	Cronbach's alpha
Workload	0.810
Work-pace	0.827
Social support from supervisors	0.862
Social support from colleagues	0.854
Job insecurity	0.810
Work-life conflict	0.887
Workplace bullying[a]	-
Burnout	0.724
Sleep disturbance	0.787
Stress	0.833
Depressive symptoms	0.780
Anxiety	0.921

[a]: There is only one question for workplace bullying

© COPYRIGHT UPM

3.10 Ethical Considerations

Ethical approval was obtained from the Ethics Committee for Research Involving Human Subjects Universiti Putra Malaysia (JKEUPM). The study purpose and data collection procedures will be informed to the respondents while informed consent will be requested from the respondents. For the Respondent's Information Sheet and Informed Consent Form, it will be attached together with the self-administered questionnaire in the Google Form. After reading the respondent's information sheet, the respondents will be required to choose the agree option in the Google Form to ensure the respondents are voluntarily agree to take part in the research and informed about the details stated in the Respondent's Information Sheet. Lastly, the respondents will be asked whether they wish to know the result related to the participation in the research.

Considering the privacy of respondents and the vulnerability of the migrants and expatriates who involved in the research, any personal data will be protected under the provision of Personal Data Protection Act 2010. Prior to that, all the confidential information gained shall not be disclosed. If the respondents who wish to know the results related to their participation in the research are found to show severe mental health symptoms in the research, the respondents will be informed about their condition and will advise them to seek medical attention.

© COPYRIGHT UPM

Chapter 4

Result

4.1 Response rate

The study received a 136% response rate. Based on the sample size calculation, 225 respondents should be recruited from the study. However, there were 307 respondents recruited by the end of the study. The number of respondents obtained from this study exceeded the minimum sample size required to produce reliable results.

4.2 Sociodemographic Characteristics of Respondents

Table 4.1 shows the sociodemographic characteristics of the respondents. There were 50.8% female and 49.2% of male working youth. The mean age of these working youth was 23.91 years old, with 50.5% of them were aged 18 to 23 years old, and 49.5% of them were 24 to 30 years old. All of the respondents are Malaysian (100%), with Malay and Bumiputera as the major ethnicity (45.3%), following Chinese (39.4%) and Indian (15.3%). The majority of the respondents are single (88.3%), and two-third of the respondents' education level was either Secondary education or Bachelor's degree.

© COPYRIGHT UPM

Almost a quarter of the respondents were currently residing in the Federal Territory of Kuala Lumpur (24.8%), and only 2% of the respondents were currently residing in the Kuala Langat district. About 38.8% of the respondents have a monthly income from RM 2001 to RM 3000, and only 6.5% of the respondents received a monthly income of more than RM 4001.

Table 4.1: Sociodemographic characteristics of the respondents (N=307)

Variables		N (%)	Mean (SD)
Gender			
	Male	151 (49.2)	
	Female	156 (50.8)	
Age			23.91(3.44)
	18 to 23 years old	155 (50.5)	
	24 to 30 years old	152 (49.5)	
Nationality			
	Malaysian	307(100)	
Ethnicity			
	Malay and Bumiputera	139 (45.3)	
	Chinese	121 (39.4)	
	Indian	47 (15.3)	
Education Level			
	Secondary Education	103 (33.6)	
	Pre-university	23 (7.5)	
	Diploma	56 (18.2)	
	Bachelor Degree	111 (36.2)	
	Master Degree	13 (4.2)	
	Doctorate Degree	1 (0.3)	
Current Residence			
	Federal Territory of Kuala Lumpur	76 (24.8)	
	Federal Territory of Putrajaya	41 (13.4)	
	Petaling District	62 (20.2)	
	Gombak District	51 (16.6)	

© COPYRIGHT UPM

	Klang District	56 (18.2)
	Kuala Langat District	6 (2.0)
	Hulu Langat District	15 (4.9)
Marital Status		
	Single	271 (88.3)
	Married	36 (11.7)
Monthly Income		
	Below RM1000	18 (5.9)
	RM 1001 to RM 2000	57 (18.6)
	RM 2001 to RM 3000	119 (38.8)
	RM 3001 to RM 4000	93 (30.3)
	RM 4001 to RM 5000	13 (4.2)
	RM 5001 to RM 6000	7 (2.3)

4.3 Work Characteristics of the Respondents

Table 4.2 shows the distribution of work characteristics of the respondents. The most number of occupations among the respondents were sales & related workers (26.4%), followed by office & administrative support workers (25.7%) and Production and operating workers (20.2%). There was 3.9% of the respondents' occupations were not classified in any listed occupation. Only 3.6% of the respondents were teacher & education related workers. In terms of work sector, manufacturing sector and infrastructure and communication sector both had 69 respondents respectively (22.5%), following hospitality, food and beverage sector (20.2). Only 1.9% of the respondents were working in the other sectors that were not classified.

The average working hours per week was 40.52 hours. Nearly 60% of the respondents worked less than 41 hours per week, and the remaining 40.7% worked more

© COPYRIGHT UPM

than 41 hours per week. At the same time, around 61.9% of the respondents did not have any overtime during the COVID-19 Pandemic. Among those who had overtime, 61.45% of the respondents worked an extra 1 to 6 hours per week. During the COVID-19 Pandemic, 70% of the respondents were required to work from home, especially within the sampling period whereas 28.7% of them were required to work from home for 3 to 4 days per week, and almost 25% of them worked from home for 1 to 2 days per week. Around 54.7% of the respondents' monthly income remained unchanged during the pandemic in terms of monthly income. For the remaining percentage, 40.4% of the respondents had decrement in their monthly income with an average decrement of 13.75%. Only 4.9% of the respondents had increment on their monthly income with an average of 15.77% compared to the pre-COVID period. Based on the working experience, most of the respondents had 1 to 5 years of experience (59.6%), and only 6.5% of the respondents had working experience of more than 10 years.

Table 4.2: Work characteristics of the respondents (N=307)

Variables		N (%)	Mean (SD)
Occupation			
	Senior Managements	7 (2.3)	
	Production & Operating Workers	62 (20.2)	
	Teacher & Education Related Workers	11 (3.6)	
	Engineers & Related Technicians	43 (14)	
	Sales & Related Workers	81 (26.4)	
	Office & Administrative Support Workers	79 (25.7)	
	Healthcare Practitioners	12 (3.9)	
	Others	12 (3.9)	

© COPYRIGHT UPM

Work Sector			
	Manufacturing	69 (22.5)	
	Infrastructure and Communication	69 (22.5)	
	Accountancy, Banking and Finance	16 (5.2)	
	Wholesale and Retail	58 (18.9)	
	Healthcare	17 (5.5)	
	Education	12 (3.9)	
	Food, Beverage and Hospitality	62 (20.2)	
	Others	4 (1.3)	
Do you work from home?			
	No	92(30)	
	Yes, 1-2 days per week	75 (24.4)	
	Yes, 3-4 days per week	88 (28.7)	
	Yes, 5-6 days per week	52 (16.9)	
Did your monthly income change during the pandemic?			
	No, it remained unchanged	168 (54.7)	
	Yes, it decreases	124 (40.4)	-13.75% (10.23%)
	Yes, it increases	15 (4.9)	15.77% (12.05%)
Working Hour			40.52 (9.40)
	Less than 41 hours	182 (59.3)	
	41 hours and above	125 (40.7)	
Do you work overtime during this pandemic?			
	No	190 (61.9)	
	Yes	117(38.1)	
Overtime hour			5.72(3.93)
	1 to 6 hours	72 (61.54)	
	6 hours and more	45 (38.46)	
Working Experience			
	Less than 1 year	78 (25.4)	
	1 year to 5 years	183 (59.6)	
	6 years to 10 years	26 (8.5)	
	More than 10 years	20 (6.5)	

© COPYRIGHT UPM

4.4 Work-related Psychosocial Risk Factors and Mental Health Symptoms

Table 4.3 shows the work-related psychosocial risk factors and mental health symptoms of the respondents. Based on the work-related psychosocial risk factors of this study, most of the respondents had moderate workload (55.0%), moderate work-pace (45.3%), and moderate work-life conflict (40.1%). On the other hand, most of the respondents had high social support from supervisor (65.8%), high social support from colleagues (42.7%), and severe job insecurity (51.8%). Only workplace bullying had most respondents for the low work-related psychosocial risk factors (74.9%).

Social support from supervisor had the highest mean score of 2.79±0.05 following by job insecurity (2.61±0.05), social support from colleagues (2.33±0.08), work-pace (2.25±0.09), work-life conflict (2.12±0.07), workload (1.98±0.17) and lastly workplace bullying (0.70±1.12). As social support from supervisor and colleagues were positive scales, the higher the value, the lower the risk. Each of the risk factors was divided into three percentiles using cut-off values of 1.33 and 2.66, respectively, to determine the severity of these risk factors.

For mental health symptoms, burnout was reported to have the highest mean score of 2.24±0.09, followed by anxiety (2.15±0.05), stress (2.12±0.07), depressive symptoms (2.06±0.07), and lastly, sleep disturbance (2.00±0.81). Similar to work-related psychosocial risk factors, all mental health symptoms were also divided into three percentile using cut-off values of 1.33 and 2.66, respectively. After the

© COPYRIGHT UPM

classification, most of the respondents had moderate sleep disturbance (55.0%), moderate burnout (56.7), moderate stress (45.0%), moderate depressive symptoms (59.0%), and moderate anxiety (38.1%)

Table 4.3 Work-related psychosocial risk factors and mental health symptoms of the respondents

Work-related psychosocial risk factors		n (%)	Mean(SD)
Workload	Low	71 (23.1)	1.98(0.17)
	Moderate	168 (55.0)	
	Severe	67 (21.8)	
Work-pace	Low	57 (18.6)	2.25(0.09)
	Moderate	139 (45.3)	
	Severe	111 (36.2)	
Social Support from Supervisor[a]	Low	32 (10.4)	2.79(0.05)
	Moderate	73 (23.8)	
	High	202 (65.8)	
Social Support from Colleagues[a]	Low	50 (16.3)	2.33(0.08)
	Moderate	126 (41.0)	
	High	131 (42.7)	
Job Insecurity	Low	55 (17.9)	2.61(0.05)
	Moderate	93 (30.3)	
	Severe	159 (51.8)	
Work-life Conflict	Low	80 (26.1)	2.12(0.07)

© COPYRIGHT UPM

	Moderate	123 (40.1)	
	Severe	104 (33.9)	
Workplace Bullying	Low	230 (74.9)	0.70(1.12)
	Moderate	50 (16.3)	
	Severe	27 (8.8)	
Mental Health Symptoms			
Sleep Disturbance	Low	71 (23.1)	2.00(0.81)
	Moderate	169 (55.0)	
	Severe	67 (21.8)	
Burnout	Low	40 (13.0)	2.24(0.09)
	Moderate	173 (56.7)	
	Severe	93 (30.3)	
Stress	Low	67 (21.8)	2.12(0.07)
	Moderate	138 (45.0)	
	Severe	102 (33.2)	
Depressive Symptoms	Low	53 (17.3)	2.06(0.07)
	Moderate	181 (59.0)	
	Severe	73 (23.7)	
Anxiety	Low	80 (26.1)	2.15(0.05)
	Moderate	117 (38.1)	
	Severe	110 (35.8)	

© COPYRIGHT UPM

4.5 Distribution of Work-Related Psychosocial Risk Factors and Mental Health Symptoms of the Respondents

Table 4.4 presents the distribution of work-related psychosocial risk factors based on modified Copenhagen Psychosocial Questionnaire version III (COPSOQ-III). Based on the workload scale, the item with the highest mean score was “Do you have enough time for your work tasks during the COVID-19 Pandemic?” (2.19±1.02). This item shows that most of the respondents experienced it sometimes (32.6%) and often (27.7%), respectively, which indicates a higher score of the item indicates more severe workload. Based on the work-pace scale, the item with the highest mean score was “Do you have to work very fast during the COVID-19 Pandemic?” (2.34±0.98) shows more than half of the respondents experienced this item sometimes (38.4%) and often (27.4%) respectively, which higher scores indicate more severe work-pace.

In terms of social support from supervisor, the item with the highest mean score was "How often is your immediate superior willing to listen to your problems at work during the COVID-19 Pandemic if needed?" (2.84±1.03). It shows that more than half of the respondents experienced this item often (34.2%) and always (31.3%), respectively which higher score indicates higher social support from supervisor. For another positive scale, the items with the same and highest mean score for social support from colleagues were "How often do you get help and support from your colleagues during the COVID-19 Pandemic, if needed?" (2.38±1.046) and "How often are your colleagues willing to listen to your problems at work during the COVID-19 Pandemic, if needed?"

© COPYRIGHT UPM

(2.38±1.05). Both items show that more than half of the respondents experienced it sometimes and often, respectively. The higher the score of the item, the higher social support from colleagues received by the respondents.

Similar to social support from colleagues, job insecurity also have two items with the same and highest mean score, which were "Are you worried about it being difficult for you to find another job if you become unemployed during the COVID-19 Pandemic?" (2.64±1.18) and "Are you worried about the timetable being changed (shift, weekdays, time to enter and leave ...) against your will during the COVID-19 Pandemic?" (2.64±1.20). The item "Are you worried about it being difficult for you to find another job if you become unemployed during the COVID-19 Pandemic?" shows 27.7% and 31.6 of respondents experienced this item sometimes and always, respectively. On the other hand, "Are you worried about the timetable being changed (shift, weekdays, time to enter and leave ...) against your will during the COVID-19 Pandemic?" item shows 34.9% and 22.1% of the respondents experienced this item sometimes and often, respectively, which higher score indicates more severe job insecurity.

For work-life conflict, the item with the highest mean score was "Do you feel that your work drains so much of your energy that it has a negative effect on your private life during the COVID-19 Pandemic?" (2.18±1.11) shows more than half of the respondents experienced this item sometimes (35.8%) and often (25.4%) respectively, which higher score indicate more severe work-life conflict. Lastly, the mean for workplace bullying item "Have you ever been exposed to verbal, physical, social or psychological abuse during the pandemic; If yes, how frequent are you exposed to the

© COPYRIGHT UPM

negative acts above?" was 0.70±1.12 with the majority of the respondents (66.8%) never or hardly ever experience this item which the lower score indicates less severe workplace bullying.

© COPYRIGHT UPM

Table 4.4 Distribution of work-related psychosocial risk factors

Work-Related Psychosocial Risk Factors	0= Never/ Hardly N (%)	1= Seldom N (%)	2= Sometimes N (%)	3= Often N (%)	4= Always N (%)	Mean(SD)
Workload						
How often do you not have time to complete all your tasks during the COVID-19 Pandemic?	18 (5.9)	76 (24.8)	118 (38.4)	75 (24.4)	20 (6.5)	2.01 (0.99)
Do you get behind with your work during the COVID-19 Pandemic?	25 (8.1)	82 (26.7)	145 (47.2)	43 (14.0)	12 (3.9)	1.79 (0.92)
Is your workload unevenly distributed so it piles up during the COVID-19 Pandemic?	30 (9.8)	96 (31.3)	65 (21.2)	101 (32.9)	15 (4.9)	1.92 (1.10)
Do you have enough time for your work tasks during the COVID-19 Pandemic?	8 (2.6)	80 (26.1)	100 (32.6)	85 (27.7)	24 (11.1)	2.19 (1.02)
Work-pace						
Do you have to work very fast during the COVID-19 Pandemic?	7 (2.3)	47 (15.3)	130 (42.3)	80 (26.1)	43 (14.0)	2.34 (0.98)
Do you work at a high pace throughout the day during the COVID-19 Pandemic?	9 (2.9)	62 (20.2)	118 (38.4)	84 (27.4)	34 (11.1)	2.23 (0.99)
Is it necessary to keep working at a high pace during the COVID-19 Pandemic?	14 (4.6)	63 (20.5)	119 (38.8)	79 (25.7)	32 (10.4)	2.17 (1.02)
Social Support from Supervisor						
How often is your immediate superior willing to listen to your problems at work during the COVID-19 Pandemic, if needed?	7 (2.3)	25 (8.1)	74 (24.1)	105 (34.2)	96 (31.3)	2.84 (1.03)
How often do you get help and support from your immediate supervisor during the COVID-19 Pandemic, if needed?	8 (2.6)	31 (10.1)	76 (24.8)	93 (30.3)	99 (32.2)	2.79 (1.08)
How often does your immediate supervisor talk with you about how well you carry out your work during the COVID-19 Pandemic?	12 (3.9)	26 (8.5)	78 (25.4)	106 (34.5)	85 (27.7)	2.74 (1.08)

Social Support from Colleagues						
How often do you get help and support from your colleagues during the COVID-19 Pandemic, if needed?	9 (2.9)	46(15.0)	113 (36.8)	80 (26.1)	59 (19.2)	2.38 (1.046)
How often are your colleagues willing to listen to your problems at work during the COVID-19 Pandemic, if needed?	11 (2.6)	29(16.0)	107 (34.9)	91 (29.6)	49 (16.0)	2.38 (1.05)
How often do your colleagues talk with you about how well you carry out your work during the COVID-19 Pandemic?	17 (5.5)	43 (14.0)	136 (44.3)	71 (23.1)	40 (13.0)	2.24 (1.05)
Job Insecurity						
Are you worried about becoming unemployed during the COVID-19 Pandemic?	17 (5.5)	46 (15.0)	84 (27.4)	69 (22.5)	91 (29.6)	2.56 (1.22)
Are you worried about it being difficult for you to find another job if you become unemployed during the COVID-19 Pandemic?	12 (3.9)	44 (14.3)	85 (27.7)	69 (22.5)	97 (31.6)	2.64 (1.18)
Are you worried about the timetable being changed (shift, weekdays, time to enter and leave ...) against your will during the COVID-19 Pandemic?	27 (8.8)	40 (13.0)	107 (34.9)	68 (22.1)	65 (21.2)	2.64 (1.20)
Work-life conflict						
Do you feel that your work drains so much of your energy that it has a negative effect on your private life during the COVID-19 Pandemic?	23 (7.5)	56 (18.2)	110 (35.8)	78 (25.4)	40 (13.0)	2.18 (1.11)
Do you feel that your work takes so much of your time that it has a negative effect on your private life during the COVID-19 Pandemic?	25 (8.1)	66 (21.5)	104 (33.9)	69 (22.5)	43 (14.0)	2.13 (1.13)
Do the demands of your work interfere with your private and family life during the COVID-19 Pandemic?	25 (8.1)	75 (24.4)	107 (34.9)	62 (20.2)	38 (12.4)	2.04 (1.127)
Workplace Bullying						
Have you ever been exposed to verbal, physical, social or psychological abuse during the pandemic? If yes, how frequent are you exposed to the negative acts above?	205 (66.8)	25 (8.1)	50 (16.3)	18 (5.9)	9 (2.9)	0.70 (1.12)

Note:
0= Never/ Hardly ever: At least 1 time or none in a month
1= Seldom: At least 1 time in two weeks
2= Sometimes: At least 1 time in a week

3= Often: 2 – 3 times in a week
4= Always: Almost every day in a week

© COPYRIGHT UPM

Table 4.5 presents the distribution of mental health symptoms based on modified Copenhagen Psychosocial Questionnaire version III (COPSOQ-III) and Generalised Anxiety Disorder 7 (GAD-7). Based on sleep disturbance scale, the item with highest mean score was “How often have you slept badly and restlessly during the COVID-19 Pandemic?” (2.09±1.13) shows more than half of the respondents (53.4%) experience it sometimes which higher score indicate more severe sleep disturbance. For burnout, the item with the highest mean score was “How often have you felt tired during the COVID-19 Pandemic?” (2.36±1.04) shows 24.8% and 26.5% of the respondents experienced it seldom and often respectively which higher score indicate more severe burnout. In term of stress, the item with the highest mean score was “How often have you been irritable during the COVID-19 Pandemic?” (2.18±0.96) shows more than half of the respondents experienced it sometimes (37.1%) and often (30.9%) which higher score indicate more severe stress. Similar with stress scale, the item with highest mean score for depressive symptoms, “How often have you lacked self-confidence during the COVID-19 Pandemic?” (2.15±0.86), also showed the similar trend whereby more than half of the respondents experienced it sometimes (44.6%) and often (24.8%). The higher score indicates more severe depressive symptoms. Lastly, the anxiety item with the highest mean score was “Worrying too much about different things during the COVID-19 Pandemic” (2.26±1.27) shows that 27.4% and 25.4% of the respondents experienced it sometimes and often, respectively, which the higher score indicates more severe anxiety.

© COPYRIGHT UPM

Table 4.5 Distribution of mental health symptoms

Mental Health Symptoms	0= Never/ Hardly N (%)	1= Seldom N (%)	2= Sometimes N (%)	3= Often N (%)	4= Always N (%)	Mean(SD)
Sleep Disturbance						
How often have you slept badly and restlessly during the COVID-19 Pandemic?	11 (3.6)	51 (16.6)	164 (53.4)	61 (19.9)	20 (6.5)	2.09 (1.13)
How often have you found it hard to go to sleep during the COVID-19 Pandemic?	17 (5.5)	82 (26.7)	130 (42.3)	52 (16.9)	26 (8.5)	1.96 (0.99)
How often have you woken up too early and not been able to get back to sleep during the COVID-19 Pandemic?	27 (8.8)	76 (24.8)	85 (27.7)	100 (32.6)	19 (6.2)	2.03 (1.84)
How often have you woken up several times and found it difficult to get back to sleep during the COVID-19 Pandemic?	34 (11,1)	90 (29.3)	73 (23.8)	87 (28.3)	23 (7.5)	1.92 (1.15)
Burnout						
How often have you felt worn out during the COVID-19 Pandemic?	7 (2.3)	51 (16.5)	152 (49.5)	62 (20.2)	35 (11.4)	2.22 (0.93)
How often have you been physically exhausted during the COVID-19 Pandemic?	9 (2.9)	66 (21.5)	133 (43.3)	67 (21.8)	32 (10.4)	2.15 (0.97)
How often have you been emotionally exhausted during the COVID-19 Pandemic?	14 (4.6)	74 (24.1)	85 (27.7)	99 (32.2)	35 (11.4)	2.22 (1.08)
How often have you felt tired during the COVID-19 Pandemic?	4 (1.3)	76 (24.8)	74 (24.1)	112 (26.5)	41 (13.4)	2.36 (1.04)
Stress						
How often have you had problems relaxing during the COVID-19 Pandemic?	14 (4.6)	68 (22.1)	116 (37.8)	86 (28.0)	23 (7.5)	2.12 (0.99)
How often have you been irritable during the COVID-19 Pandemic?	10 (3.3)	65 (21.2)	114 (37.1)	95 (30.9)	23 (7.5)	2.18 (0.96)
How often have you been tense during the COVID-19 Pandemic?	19 (6.2)	62 (20.2)	138 (45.0)	60 (19.5)	28 (9.1)	2.05 (1.01)
Depressive symptoms						
How often have you felt sad during the COVID-19 Pandemic?	14 (4.6)	77 (25.1)	126 (41.0)	169 (22.5)	21 (6.8)	2.02 (0.97)

How often have you lacked self-confidence during the COVID-19 Pandemic?	14 (4.6)	54 (17.6)	137 (44.6)	76 (24.8)	26 (8.5)	2.15 (0.86)
How often have you had a bad conscience or felt guilty during the COVID-19 Pandemic?	8 (2.6)	88 (28.7)	107 (34.9)	75 (24.4)	29 (9.4)	2.09 (1.00)
How often have you lacked interest in everyday things during the COVID-19 Pandemic?	22 (7.2)	85 (27.7)	101 (32.9)	72 (23.5)	27 (8.8)	1.99 (1.07)
Anxiety						
Feeling nervous, anxious, or on edge during the COVID-19 Pandemic	37 (12.1)	63 (20.5)	87 (28.3)	69 (22.5)	51 (16.6)	2.11 (1.25)
Not being able to stop or control worrying during the COVID-19 Pandemic	34 (11.7)	48 (15.6)	84 (27.4)	78 (25.4)	61 (19.9)	2.18 (1.24)
Worrying too much about different things during the COVID-19 Pandemic	36 (11.7)	48 (15.6)	84 (27.4)	78 (25.4)	61 (19.9)	2.26 (1.27)
Having trouble relaxing during the COVID-19 Pandemic	38 (12.4)	59 (19.2)	84 (27.4)	74 (24.1)	52 (16.9)	2.14 (1.26)
Being so restless that it is hard to sit still during the COVID-19 Pandemic	41 (13.4)	61 (19.9)	80 (26.1)	73 (23.8)	52 (16.9)	2.11 (1.28)
Becoming easily annoyed or irritable during the COVID-19 Pandemic	37 (12.1)	61 (19.9)	83 (27.0)	79 (25.7)	47 (15.3)	2.12 (1.24)
Feeling afraid, as if something awful might happen during the COVID-19 Pandemic	44 (14.3)	49 (16.0)	82 (26.7)	82 (26.7)	50 (16.3)	2.15 (1.28)

Note:
0= Never/ Hardly ever: At least 1 time or none in a month
1= Seldom: At least 1 time in two weeks
2= Sometimes: At least 1 time in a week
3= Often: 2 – 3 times in a week
4= Always: Almost every day in a week

© COPYRIGHT UPM

4.6 Comparison of Sociodemographic and Work Characteristics with Work-related Psychosocial Risk Factors and Mental Health Symptoms

Table 4.6 and Table 4.7 illustrate the comparison of sociodemographic and work characteristics with work-related psychosocial risk factors and mental health symptoms among the respondents. Mann Whitney U test and Kruskal Wallis test were used to identify the differences between the groups.

The Mann-Whitney U test showed that female respondents (163.31) had significantly higher mean rank scores for job insecurity than male respondents (144.38) ($Z=-2.053$, $p<0.05$). All work-related psychosocial risk factors and mental health symptoms do not showed significant differences between respondents aged 18 to 24 years old and 24 to 30 years old. This situation is also similar for the respondents' marital status, working hours per week, and overtime hours per week.

The Kruskal Wallis test showed the anxiety was significantly difference between the respondents' ethnicity ($\chi^2= 7.356$, $p<0.05$). For instance, a high mean rank anxiety score among Indians (169.89) and Malay and Bumiputera (162.27) compared to Chinese (138.33). As for work-pace ($\chi^2= 14.793$, $p<0.05$), social support from colleagues ($\chi^2= 21.132$, $p<0.01$), and burnout ($\chi^2= 12.573$, $p<0.05$) were significantly difference by the level of education. Burnout was significantly difference by the current residence ($\chi^2= 13.819$, $p<0.05$). The monthly income and income changes of the respondents were insignificantly affected by their workplace. Similar to education level, the work sector of

© COPYRIGHT UPM

the respondents also show a significant difference in the respondents' work-pace (χ^2= 16.928, p<0.05), social support from colleagues (χ^2= 20.529, p<0.05), and burnout (χ^2= 14.585, p=0.042). Occupation, on the other hand, was significantly different work-pace (χ^2= 18.067, p<0.05) and social support from colleagues (χ^2= 14.914, p<0.05). Work from home, on the other hand, was significantly affecting the respondents' social support from colleagues (χ^2= 14.48, p<0.05) and burnout (χ^2=9.897, p<0.05). Lastly, the Kruskal Wallis test showed that there was a significant difference in the social support from colleagues between different working experiences, χ^2= 8.009, p<0.05, with a mean rank social support from colleagues score of 155.46 for less than 1 year experience, 154.28 for 1 year to 5 years of experience, 141.92 for 6 to 10 years of experience and 161.40 for more than 10 years of experience.

© COPYRIGHT UPM

Table 4.6: Comparison of sociodemographic and work Characteristics with work-related psychosocial risk factors

Variables		Workload				Work-pace				Social Support from Supervisor			
		Mean Rank	χ^2	Z	p	Mean Rank	χ^2	Z	p	Mean Rank	χ^2	Z	p
Gender													
	Male	150.940		-0.660	0.509	149.57		-0.931	0.352	157.01		-0.699	0.484
	Female	156.960				158.29				151.08			
Age													
	Less than 24 years old	154.010		-0.003	0.998	154.57		-0.122	0.903	152.50		-0.357	0.721
	24 and above	153.990				153.42				155.53			
Ethnicity													
	Malay and Bumiputera	158.140	5.951		0.051	158.32	2.572		0.276	160.65	4.632		0.099
	Chinese	141.750				155.81				142.74			
	Indian	173.280				136.55				163.31			
Education Level													
	Secondary Education	153.320	7.951		0.159	143.33	14.793		0.011*	167.4	6.876		0.230
	Pre-university	134.960				149.17				133.89			
	Diploma	168.320				137.73				144.98			
	Bachelor Degree	146.880				165.01				151.27			
	Master Degree	182.920				215.62				141.5			
	Doctorate Degree	274.000				252.00				206.5			

© COPYRIGHT UPM

Current Residence											
	Federal Territory of Kuala Lumpur	158.630	2.159	0.905	162.51	7.288	0.295	152.13	3.086		0.798
	Federal Territory of Putrajaya	152.680			131.2			162.9			
	Petaling District	151.580			169.66			161.18			
	Gombak District	153.410			147			145.37			
	Klang District	145.000			153.18			156.1			
	Kuala Langat District	175.330			131.5			129			
	Hulu Langat District	171.200			144.33			141			
Marital Status											
	Single	155.110	-0.670	0.503	153.56	-0.257	0.797	155.1	-0.710		0.478
	Married	145.610			157.31			145.74			
Monthly Income											
	Below RM1000	155.440	2.624	0.758	141.44	7.484	0.187	145.39	5.758		0.330
	RM 1001 to RM 2000	168.000			146.32			164.79			
	RM 2001 to RM 3000	150.590			156.29			142.82			
	RM 3001 to RM 4000	151.720			148.94			163.54			
	RM 4001 to RM 5000	137.230			186.77			149.58			

© COPYRIGHT UPM

	RM 5001 to RM 6000	155.710			216.29			159.71		
Occupation										
	Senior Managements	172.290	4.392	0.734	198.43	18.067	0.012*	159.71	3.432	0.842
	Production & Operating Workers	145.870			136.42			160.13		
	Teacher & Education Related Workers	155.450			166			139.23		
	Engineers & Related Technicians	155.580			132.26			144.81		
	Sales & Related Workers	164.400			155.69			154.83		
	Office & Administrative Support Workers	145.060			156.42			156.59		
	Healthcare Practitioners	145.500			202.17			129		
	Others	175.500			210.33			167.75		
Work Sector										
	Manufacturing	146.960	2.999	0.885	138.94	16.928	0.018*	150.59	2.314	0.940
	Infrastructure and Communication	165.830			154.61			151.07		
	Accountancy, Banking and Finance	155.500			191.19			143.06		
	Wholesale and Retail	151.480			133.98			160.21		
	Healthcare	148.350			196.35			143.71		

© COPYRIGHT UPM

	Education	145.500				162.75				144.83		
	Food, Beverage and Hospitality	151.810				161.6				162.35		
	Others	185.500				220.75				159		
Do you work from home?												
	No	156.800	0.744		0.863	150.83	3.562		0.313	157.1	5.006	0.171
	Yes, 1-2 days per week	149.310				145.73				161.97		
	Yes, 3-4 days per week	151.550				153.41				139.37		
	Yes, 5-6 days per week	159.960				172.54				161.79		
Did your monthly income change during the pandemic?												
	No, it remained unchanged	97.140	1.823		0.402	90.69	0.938		0.626	95.28	3.234	0.198
	Yes, it decreases	105.000				93.85				107.08		
	Yes, it increases	93.960				100.28				93.25		
Working Hour												
	Less than 41 hours	148.600		-0.508	0.611	148.9		-0.416	0.677	154.15	-1.047	0.295
	41 hours and above	153.230				152.81				145.24		
Do you work overtime during this												

© COPYRIGHT UPM

pandemic?												
	No	149.290		-1.315	0.189	145.04		-2.439	0.015*	155.21		-0.364	0.716
	Yes	161.640				168.55				152.03			
Overtime hour													
	1 to 6 hours	58.380		-0.277	0.782	57.42		-0.692	0.489	62.63		-1.733	0.083
	7 hours and more	59.990				61.52				53.2			
Working Experience													
	Less than 1 year	155.460	0.794		0.851	168.01	3.623		0.305	157.72	0.729		0.886
	1 year to 5 years	154.280				148.85				151.06			
	6 years to 10 years	141.920				142.85				160.15			
	More than 10 years	161.400				160.95				158.38			

Note: z: Mann Whitney test, χ^2: Kruskal Wallis test, *: significant at $p<0.05$.

© COPYRIGHT UPM

Table 4.6: Comparison of sociodemographic and work Characteristics with work-related psychosocial risk factors (Cont.)

Variables		Social Support from Colleagues				Job Insecurity				Work-life Conflict				Workplace Bullying			
		Mean Rank	χ^2	Z	p	Mean Rank	χ^2	Z	p	Mean Rank	χ^2	Z	p	Mean Rank	χ^2	Z	p
Gender																	
	Male	146.85		-1.506	0.132	144.38		-2.053	0.040*	154.79		-0.164	0.870	159.45		-1.396	0.163
	Female	160.92				163.31				153.23				148.73			
Age																	
	Less than 24 years old	158.52		-0.978	0.328	156.92		-0.639	0.523	156.24		-0.475	0.635	149.85		-1.093	0.275
	24 and above	149.39				151.03				151.72				158.24			
Ethnicity																	
	Malay and Bumiputera	149.44	0.912		0.634	159.4	2.377		0.305	155.46	4.033		0.133	160.77	5.828		0.054
	Chinese	159.15				145.21				144.83				154.23			
	Indian	154.21				160.68				173.28				133.37			
Education Level																	
	Secondary Education	134.69	21.132		0.001*	158.29	4.23		0.517	159.24	3.941		0.558	151.86	0.747		0.980
	Pre-university	161.72				135.22				169.28				155.37			
	Diploma	132.8				148.61				145.21				158.94			
	Bachelor Degree	178.08				160.18				151.49				153.59			
	Master Degree	172.27				127.69				136.96				153.73			

© COPYRIGHT UPM

	Doctorate Degree	242.00			102			255.5			115.5			
Current Residence														
	Federal Territory of Kuala Lumpur	157.09	11.816	0.066	146.39	3.671	0.721	145.32	7.535	0.274	154.88	1.114		0.981
	Federal Territory of Putrajaya	124.54			159.32			150.46			161.17			
	Petaling District	150.35			153.55			160.13			151.85			
	Gombak District	146.64			156.67			173.28			150.71			
	Klang District	170.62			159.86			152.89			156			
	Kuala Langat District	163.08			107			91.25			138.83			
	Hulu Langat District	193.3			167.73			146			148.63			
Marital Status														
	Single	155.49	-0.875	0.381	155.38	-0.822	0.411	156.78	-1.607	0.108	151.83	-1.55		0.121
	Married	142.79			143.61			133.06			170.33			
Monthly Income														
	Below RM1000	189.39	5.696	0.337	148.56	6.482	0.262	143.11	8.551	0.128	155.44	6.972		0.223
	RM 1001 to RM 2000	152.17			166.77			160.63			168			
	RM 2001 to RM 3000	156			151.23			162.06			150.59			

UPM COPYRIGHT ©

	RM 3001 to RM 4000	148.54			156.69			144.67			151.72		
	RM 4001 to RM 5000	156.15			147.08			126.27			137.23		
	RM 5001 to RM 6000	112.5			88.29			166.5			155.71		
Occupation													
	Senior Managements	174.36	14.914	0.037*	127.43	3.28	0.858	145.43	3.597	0.825	161	9.068	0.248
	Production & Operating Workers	141.41			149.13			154.44			148.35		
	Teacher & Education Related Workers	144.23			162			156.68			140.95		
	Engineers & Related Technicians	145.88			166.65			162.99			136.83		
	Sales & Related Workers	149.56			159.75			146.66			167.09		
	Office & Administrative Support Workers	154.92			149.87			151.09			149.84		
	Healthcare Practitioners	220.58			142.17			154.46			168.58		
	Others	202.54			142.17			190.29			177.04		
Work Sector													
	Manufacturing	140.93	20.529	0.005	145.1	7.688	0.361	143.83	3.197	0.866	153.34	4.191	0.758
	Infrastructure and	155.34			156.38			153.88			159.99		

© COPYRIGHT UPM

	Communication													
	Accountancy, Banking and Finance	182.81			160.38			158.44			135.41			
	Wholesale and Retail	130.74			166.93			156.84			150.2			
	Healthcare	219.32			121.65			145.53			152.97			
	Education	152.38			150.83			147			138.83			
	Food, Beverage and Hospitality	161.6			160.71			162.44			156.99			
	Others	187.88			96.5			198.75			195.13			
Do you work from home?														
	No	162.52	14.48	0.002*	160.35	1.96	0.581	156.23	0.98	0.806	153.7	4.372	0.224	
	Yes, 1-2 days per week	133.05			149.36			154.83			148.96			
	Yes, 3-4 days per week	144.69			157.77			157.02			165.3			
	Yes, 5-6 days per week	184.89			143.08			143.74			142.69			
Did your monthly income change during the pandemic?														
	No, it remained unchanged	117.56	3.089	0.213	93.14	1.561	0.458	91.28	0.708	0.702	87.11	1.092	0.579	
	Yes, it decreases	93.85			104.54			94.36			97.9			
	Yes, it increases	96.21			94.79			99.95			98.88			

© COPYRIGHT UPM

Working Hour															
	Less than 41 hours	143.1		-1.924	0.054	150.18		-0.086	0.932	158.1		-1.944	0.052	152.98		-0.785	0.432
	41 hours and above	161.15				150.97				139.56				146.93			
Do you work overtime during this pandemic?																	
	No	148.01		-1.634	0.102	154.8		-0.221	0.825	151.73		-0.609	0.542	152.16		-0.611	0.541
	Yes	163.72				152.7				157.69				156.99			
Overtime hour																	
	1 to 6 hours	62.03		-1.343	0.179	58.6		-0.175		57.17		-0.788	0.431	56.83		-1.157	0.247
	7 hours and more	54.16				59.63				61.93				62.47			
Working Experience																	
	Less than 1 year	169.15	8.009		0.046*	159.13	0.931		0.818	161.39	1.258		0.739	146.69	1.958		0.581
	1 year to 5 years	154.14				153.26				151.28				154.61			
	6 years to 10 years	135.85				141.92				145.23				163.02			
	More than 10 years	117.2				156.5				161.43				165.2			

Note: z: Mann Whitney test, χ^2: Kruskal Wallis test, *: significant at $p<0.05$.

Table 4.7: Comparison of sociodemographic and work characteristics with mental health symptoms

Variables		Sleep Disturbance				Burnout			
		Mean Rank	χ^2	Z	p	Mean Rank	χ^2	Z	p
Gender									
	Male	150.94		-0.66	0.509	150.99		-0.658	0.511
	Female	156.96				156.91			
Age									
	Less than 24 years old	154.01		-0.003	0.998	152.97		-0.231	0.817
	24 and above	153.99				155.05			
Ethnicity									
	Malay and Bumiputera	158.14	5.951		0.051	159.94	3.082		0.214
	Chinese	141.75				144.24			
	Indian	173.28				161.56			
Education Level									
	Secondary Education	153.32	7.951		0.159	139.66	12.574		0.028*
	Pre-university	134.96				164.63			
	Diploma	168.32				139.38			
	Bachelor Degree	146.88				170.29			
	Master Degree	182.92				164.42			
	Doctorate Degree	274				261.00			

© COPYRIGHT UPM

Current Residence								
	Federal Territory of Kuala Lumpur	158.63	2.159	0.905	156.64	13.819		0.032*
	Federal Territory of Putrajaya	152.68			124.87			
	Petaling District	151.58			161.06			
	Gombak District	153.41			152.08			
	Klang District	145			152.27			
	Kuala Langat District	175.33			238.75			
	Hulu Langat District	171.2			170.17			
Marital Status								
	Single	155.11	-0.67	0.503	155.46		-0.888	0.374
	Married	145.61			143.04			
Monthly Income								
	Below RM1000	155.44	2.624	0.758	182.36	6.963		0.223
	RM 1001 to RM 2000	168			164.01			
	RM 2001 to RM 3000	150.59			157.55			
	RM 3001 to RM 4000	151.72			142.39			
	RM 4001 to RM 5000	137.23			133.62			
	RM 5001 to RM 6000	155.71			131.29			
Occupation								
	Senior Managements	172.29	4.392	0.734	169.43	9.922		0.193
	Production & Operating Workers	145.87			148.57			

© COPYRIGHT UPM

	Teacher & Education Related Workers	155.45			166.32		
	Engineers & Related Technicians	155.58			134.3		
	Sales & Related Workers	164.4			159.13		
	Office & Administrative Support Workers	145.06			149.09		
	Healthcare Practitioners	145.5			185.33		
	Others	175.5			198.67		
Work Sector							
	Manufacturing	146.96	2.999	0.885	148.37	14.585	0.042*
	Infrastructure and Communication	165.83			159.98		
	Accountancy, Banking and Finance	155.5			172.53		
	Wholesale and Retail	151.48			149.11		
	Healthcare	148.35			185.59		
	Education	145.5			154.17		
	Food, Beverage and Hospitality	151.81			137.81		
	Others	185.5			261		
Do you work from home?							
	No	156.8	0.744	0.863	163.46	9.897	0.019*
	Yes, 1-2 days per week	149.31			145.64		
	Yes, 3-4 days per week	151.55			138.10		
	Yes, 5-6 days per week	159.96			176.24		

Did your monthly income change during the pandemic?								
	No, it remained unchanged	97.14	1.823		0.402	111.08	1.822		0.402
	Yes, it decreases	105				99.22			
	Yes, it increases	93.96				94.62			
Working Hour									
	Less than 41 hours	148.6		-0.508	0.611	151.26		-0.205	0.837
	41 hours and above	153.23				149.41			
Do you work overtime during this pandemic?									
	No	149.29		-1.315	0.189	151.93		-0.588	0.557
	Yes	161.64				157.37			
Overtime hour									
	1 to 6 hours	58.38		-0.277	0.782	60.16		-0.519	0.604
	6 hours and more	59.99				57.14			
Working Experience									
	Less than 1 year	155.46	0.794		0.851	165.81	4.383		0.223
	1 year to 5 years	154.28				151.55			
	6 years to 10 years	141.92				130.56			
	More than 10 years	161.4				160.88			

Note: z: Mann Whitney test, χ^2: Kruskal Wallis test, *: significant at $p<0.05$.

© COPYRIGHT UPM

Table 4.7: Comparison of sociodemographic and work characteristics with mental health symptoms (Cont.)

Variables		Stress				Depressive Symptoms				Anxiety			
		Mean Rank	χ^2	Z	p	Mean Rank	χ^2	Z	p	Mean Rank	χ^2	Z	p
Gender													
	Male	149.75		-0.89	0.374	154.07		-0.015	0.988	155.91		-0.395	0.693
	Female	158.12				153.94				152.15			
Age													
	Less than 24 years old	153.16		-0.18	0.857	152.36		-0.371	0.711	148.92		-1.078	0.281
	24 and above	154.86				155.67				159.18			
Ethnicity													
	Malay and Bumiputera	159.88	1.320		0.517	158.23	1.101		0.577	162.27	7.358		0.025*
	Chinese	148.48				148.25				138.33			
	Indian	150.81				156.3				169.89			
Education Level													
	Secondary Education	149.87	7.321		0.198	148.31	4.520		0.477	154.91	2.799		0.731
	Pre-university	160.41				166.96				143.57			
	Diploma	157.08				163.75				154.64			
	Bachelor Degree	148.19				151.52				151.5			
	Master Degree	203.81				146.31				176.23			

UPM
© COPYRIGHT

	Doctorate Degree	256.5			271			252.5			
Current Residence											
	Federal Territory of Kuala Lumpur	153.28	4.686	0.585	151.25	4.761	0.575	161.57	2.895	0.822	
	Federal Territory of Putrajaya	135.34			131.68			141.35			
	Petaling District	168.64			159.79			159.83			
	Gombak District	149.69			157.24			149.21			
	Klang District	154.94			163.21			150.86			
	Kuala Langat District	176.5			165.17			179.33			
	Hulu Langat District	150.33			155.13			144			

© COPYRIGHT UPM

Marital Status												
	Single	153.53		-0.274	0.784	156.4		-1.476	0.140	152.67		-0.765	0.444
	Married	157.54				135.92				163.99			
Monthly Income												
	Below RM1000	154.69	3.402		0.638	152.72	5.062		0.408	161.25	1.305		0.934
	RM 1001 to RM 2000	159.44				161.7				162.6			
	RM 2001 to RM 3000	153.71				161.1				148.38			
	RM 3001 to RM 4000	145.26				139.54				154.5			
	RM 4001 to RM 5000	184				165.08				152.35			
	RM 5001 to RM 6000	173.29				145.43				157.36			
Occupation												
	Senior Managements	173.29	6.915		0.438	165	8.663		0.278	159.5	6.946		0.434
	Production & Operating Workers	136.34				144.05				154.1			
	Teacher & Education Related Workers	153.77				168.91				153.41			
	Engineers & Related Technicians	144.17				151.77				151.1			
	Sales & Related Workers	169.77				169.95				168.22			
	Office & Administrative Support Workers	154.79				139.72				146.43			
	Healthcare Practitioners	160.88				156.25				107.42			
	Others	150.88				177.42				161.67			
Work Sector												
	Manufacturing	154.69	5.605		0.587	142.78	4.569		0.712	149.49	11.114		0.134

© COPYRIGHT UPM

	Infrastructure and Communication	162.66			158.04			162.43		
	Accountancy, Banking and Finance	148.38			176.38			168.31		
	Wholesale and Retail	151.37			163.07			163.37		
	Healthcare	162.82			146.35			106		
	Education	143.79			157.08			144		
	Food, Beverage and Hospitality	142.39			147.82			147.74		
	Others	226.5			175.75			224.13		
Do you work from home?										
	No	149.08	1.442	0.696	155.62	0.426	0.935	152.95	0.086	0.993
	Yes, 1-2 days per week	152.8			153.67			152.48		
	Yes, 3-4 days per week	153.12			150.03			155.65		
	Yes, 5-6 days per week	165.92			158.33			155.27		
Did your monthly income change during the pandemic?										
	No, it remained unchanged	97.08	0.204	0.903	92.53	0.215	0.898	102.36	1.356	0.508
	Yes, it decreases	100.09			98.61			103.23		
	Yes, it increases	96.32			97.72			94.02		

© COPYRIGHT UPM

Working Hour										
	Less than 41 hours	151.27	-0.2	0.842	149.28	-0.332	0.740	149.87	-0.16	0.873
	41 hours and above	149.39			152.26			151.4		
Do you work overtime during this pandemic?										
	No	149.84	-1.126	0.260	153.19	-0.23	0.818	149.32	-1.255	0.209
	Yes	160.75			155.31			161.61		
Overtime hour										
	1 to 6 hours	55.83	-1.371	0.171	56.83	-1.006	0.314	57.37	-0.706	0.480
	6 hours and more	64.07			62.48			61.61		
Working Experience										
	Less than 1 year	158.55	1.482	0.686	147.68	1.319	0.725	150.51	1.861	0.861
	1 year to 5 years	152.22			156.8			156.95		
	6 years to 10 years	141.88			145.92			136.04		
	More than 10 years	168.25			163.55			163.95		

Note: z: Mann Whitney test, χ^2: Kruskal Wallis test, *: significant at $p<0.05$.

© COPYRIGHT UPM

4.7 Association between Work-related Psychosocial Risk Factors and Mental Health Symptoms among the Respondents

Spearman's Correlation was used to determine the respondents' relationship between work-related psychosocial risk factors and mental health symptoms. The Spearman's correlation coefficient (ρ) is an analysis used to measure the strength and direction of association between two variables which lies between -1 (negative correlation) to +1 (positive correlation). Table 4.8 shows Spearman's correlation statistics of work-related psychosocial risk factors and mental health symptoms. The analysis indicates that workload positively correlates with all mental health symptoms ($p< 0.05$). However, the correlation with burnout was insignificant ($p> 0.05$). The correlation with sleep disturbance (0.129), stress ($\rho= 0.173$), depressive symptoms ($\rho=0.139$), and anxiety ($\rho= 0.164$) were relatively weak. Similar to workload, workplace bullying also has a significant ($p< 0.05$) and a positively weak association with sleep disturbance ($\rho= 0.164$), stress ($\rho= 0.168$), depressive symptoms ($\rho= 0.247$) and anxiety ($\rho= 0.193$). These results show that higher workload and workplace bullying among the respondents will lead to more severe sleep disturbance, stress, depressive symptoms, and anxiety. Work-pace has a significant positive weak relationship with sleep disturbance ($\rho= 0.243$), burnout ($\rho=0.237$) and depressive symptoms ($\rho= 0.226$) and in the same time, good positive relationship with stress ($\rho= 0.623$). This result indicates that higher work-pace will lead to more severe sleep disturbance, burnout, depressive symptoms, and anxiety. For social support from supervisor, all mental health symptoms have a negative but insignificant association ($p> 0.05$). Burnout is the only mental health symptom that

© COPYRIGHT UPM

has a significant association with social support from colleagues (ρ= 0.161). This result indicates that the respondents with higher social support from colleagues will have more severe burnout. Opposite to social support from colleagues, job insecurity has a significant and positively weak association with all mental health symptoms ($p< 0.001$) except burnout ($p> 0.05$). This association stipulates that individuals with high job insecurity have more severe sleep disturbance, stress, depressive symptoms, and anxiety. Among all work-related psychosocial risk factors, the only work-life conflict was significantly associated with all mental health symptoms, although the associations' strength was weak ($p<0.001$). This result indicates that those with more severe work-life conflict tend to have higher mental health symptoms.

© COPYRIGHT UPM

Table 4.8: Correlation between work-related psychosocial risk factors and mental health symptoms among the respondents (N= 307)

Spearman's Correlation (ρ)		Workload	Work-pace	Social Support from Supervisor	Social Support from Colleagues	Job Insecurity	Work-life Conflict	Workplace Bullying
Mental Health Symptoms	Sleep Disturbance	0.129*	0.243**	-0.018	-0.041	0.164**	0.161**	0.162**
	Burnout	0.099	0.237**	-0.055	0.161**	0.109	0.231**	0.134*
	Stress	0.173**	0.623**	-0.103	0.058	0.168**	0.244**	0.101
	Depressive Symptoms	0.139*	0.226**	-0.024	-0.033	0.247**	0.207**	0.133*
	Anxiety	0.164**	0.103	-0.044	-0.084	0.193**	0.160**	0.210*

Note: *: significant at p<0.05, **: significant at p<0.001

© COPYRIGHT UPM

4.8 Predictors of Mental Health Symptoms among the Respondents

Table 4.9 illustrates the results of the stepwise multiple regression to determine the predictors of Mental Health Symptoms for 307 working youth as the respondents. Twenty-one independent variables were assigned into two different blocks, which include sociodemographic and work characteristics and work-related psychosocial risk factors to generate a regression model for each mental health symptom as the dependent variables.

The first model was tested to determine the predictors of sleep disturbance among 307 respondents. The stepwise multiple regression produces statistically significant results, which stipulate work-pace, workplace bullying, and job insecurity accounted for approximately 9.9% of the variance in sleep disturbance (Adjusted R^2= 0.099, F (3, 303) =12.169, $p<0.001$). Based on the adjusted R^2, the model has a weak relationship with sleep disturbance. All predictors positively affect sleep disturbance with workplace bullying (β =0.197) as the strongest predictor in this model. The general form of the equation to predict sleep disturbance from work-pace, workplace bullying, and job insecurity is:

Sleep Disturbance =1.177 + (0.185×Work-pace) + (0.197×Workplace Bullying) + (0.169×Job Insecurity).

© COPYRIGHT UPM

Another regression test was run to generate the prediction model for burnout. It indicates work-life conflict, work-pace, workplace bullying, monthly income, and education level as the predictors of burnout among the respondents. The statistical test produces statistically significant results, and the model generated explains around 13.7% of the variance in burnout. (Adjusted R^2= 0.137, F (4, 302) =13.136, p<0.001). Based on the adjusted R^2, the model has a weak effect size on burnout. In this model, work-life conflict was the strongest predictor of burnout compared to other predict (β =0.209). All of the predictors positively affect burnout except for monthly income (β =-0.198). The general form of the equation to predict burnout from work-life conflict, work-pace, workplace bullying, monthly income and education level is:

Burnout= 1.742 + (0.153×Education Level) - (0.198×Monthly Income) + (0.209×Work-life Conflict) + (0.180×Work-pace).

Following with stress, the stepwise multiple regression produces significant results that indicate work-pace, work-life conflict, workplace bullying, and job insecurity accounted for approximately 37.5% of the variance in stress (Adjusted R^2= 0.375, F (4, 302) =46.913, p<0.001). Based on the adjusted R^2, the model has a substantial effect size on stress. All predictors positively affect stress, with work-pace (β= 0.548) as the strongest predictor in this model. The general form of the equation to predict stress from work-pace, work-life conflict, workplace bullying, and job insecurity is:

© COPYRIGHT UPM

Stress= 0.441 + (0.548×Work-pace) + (0.118×Work-life Conflict) + (0.096×Workplace Bullying) + (0.099×Job Insecurity).

For depressive symptoms, the statistical test produces a statistically significant result that indicates job insecurity, work-pace, workplace bullying, workload, and marital status as the predictors among the respondents. The generated model explains approximately 12.6% of the variance in depressive symptoms (Adjusted R^2= 0.126, F (5, 301) =9.797, p<0.001). Based on the adjusted R^2, the model has a weak effect size on depressive symptoms. All work-related psychosocial risk factor predictors positively affect depressive symptoms except marital status (β =-0.129), with job insecurity as the strongest predictor (β= 0.233) in this model. The general form of the equation to predict depressive symptoms from job insecurity, work-pace, workplace bullying, workload, and marital status is:

Depressive symptoms= 1.316 + (0.233×Job Insecurity) + (0.152×Work-pace) + (0.134×Workplace Bullying) + (0.116×Workload) – (0.129×Marital Status).

Last but not least, three variables were determined as predictors of anxiety among the respondents. The three variables are workplace bullying, job insecurity, and workload. The model generated explains 12.8% of the variance in anxiety (Adjusted R^2= 0.128, F (3, 303) =16.001, p<0.001). Based on the adjusted R^2, the model has a weak effect size on anxiety. All of the predictors in this model have a positive effect on anxiety. Among the predictors, workplace bullying (β =0.266) is the strongest predictor

© COPYRIGHT UPM

of anxiety in this model. The general form of the equation to predict anxiety from workplace bullying, job insecurity, and workload is:

Anxiety= 1.030 + (0.266×Workplace Bullying) + (0.193×Job Insecurity) + (0.148×Workload).

Table 4.9: Stepwise multiple regression predicting mental health symptoms among the respondents (N=307)

	Sleep Disturbance			
Predictors	Standardised β	p	95% CI	
Work-pace	0.184	0.001	0.072	0.274
Workplace Bullying	0.197	0.000	0.065	0.220
Job Insecurity	0.169	0.002	0.048	0.217
	Adj R^2= 0.099			
	Burnout			
Predictors	Standardised β	p	95% CI	
Education Level	0.153	0.005	0.027	0.154
Monthly Income	-0.198	0.000	-0.239	-0.072
Conflict	0.209	0.000	0.081	0.254
Work-pace	0.18	0.001	0.066	0.277
	Adj R^2= 0.136			
	Stress			
Predictors	Standardised β	p	95% CI	
Work-pace	0.548	0.000	0.453	0.633
Work-life Conflict	0.118	0.017	0.018	0.179
Workplace Bullying	0.096	0.036	0.005	0.141
Job Insecurity	0.099	0.039	0.004	0.160
	Adj R^2= 0.375			
	Depressive Symptoms			
Predictors	Standardised β	p	95% CI	

© COPYRIGHT UPM

Job Insecurity	0.233	0.000	0.097	0.258
Work-pace	0.152	0.005	0.041	0.235
Workplace Bullying	0.134	0.013	0.02	0.167
Workload	0.116	0.034	0.01	0.262
Marital Status	-0.129	0.017	-0.566	-0.056
	Adj R^2= 0.126			
	Anxiety			
Predictors	Standardised β	p	95% CI	
Workplace Bullying	0.266	0.000	0.149	0.345
Job Insecurity	0.193	0.000	0.088	0.302
Workload	0.148	0.006	0.067	0.399
	Adj R^2= 0.128			

Note 1: Adj. R^2: Adjusted R^2

Note 2: Strength of Effect Size (Cohen, 1988)

$R^2 < 0.02$: Very weak

$0.02 \leq R^2 < 0.13$: Weak

$0.13 \leq R^2 < 0.26$: Moderate

$R^2 \geq 0.26$: Substantial

© COPYRIGHT UPM

CHAPTER 5

DISCUSSION

5.1 Comparison of Sociodemographic and Work Characteristics on Work-related Psychosocial Risk Factors

This study shows that female working youth had more severe job insecurity than male working youth. A previous study on job insecurity reported a similar result whereby women had greater perceived job insecurity (Menéndez-Espina et al., 2020). Menéndez-Espina et al. (2020) deduced that gender inequality and the differences in working conditions exposed women to greater vulnerability to job insecurity. Despite the insignificant result between gender and social support from colleagues, this study shows that female working youth had lower support from their colleagues than working male youth. The result has vast contrast with most studies available whereby Sloan (2017) stated a sufficient amount of literature proposed that women had more significant social support than men.

For education level, this study shows there are significant differences in work-pace. However, no studies discuss the education level and work-pace, the education level of an individual plays a vital role in determining their career prospects such as

© COPYRIGHT UPM

career development and job opportunity. Higher education level provides better choice of job selection. To support this statement, Kristensen et al. (2004) stated that occupations that required higher education levels, such as white-collar jobs and professionals, had a high work-pace compared to blue-collar jobs, which commonly did not have high requirements on education level. Besides that, the education level of the respondents also shows a significant difference in the social support from colleagues. Despite that, the study result contrasts a study by Sundin et al. (2006) about individual characteristics and social support. They found that sociodemographic characteristics such as education level did not affect the social support received by an individual. However, Gürbüz (2007) discussed that a person with higher education level is more likely to recognise and analyse the improper work context associated with psychological aspects that negatively impact his or her mental and physical health. This can conclude that people with higher education levels are more aware of their work-pace and perceive it.

Regarding work characteristics, this study also indicates that the respondent's work-pace is significantly different between occupation and work sectors. Kristensen et al. (2004) showed that white-collar jobs have higher scores in quantitative demands, including work-pace than blue-collar jobs. This is because the nature of white-collar jobs required the workers to work at a higher pace to complete their tasks in a given time. It also can be supported by Pinto et al. (2016) in their study on the differential effects of job title on job demands. The study showed that project managers have greater job demands than other job classifications.

© COPYRIGHT UPM

On the other hand, previous studies also stated that work sectors affect the work-pace of an individual. For instance, the healthcare sector has the culture to work at a higher pace as time is precious in considering the patient's safety (Søvold et al., 2021). Accounting and banking sectors also show a similar trend on work-pace whereby Giorgi et al. (2019) reported that the banking population in Italy has high work demands, including work-pace. It is believed that any delay in their work may negatively impact the company's profit and consecutively affect the economy.

In addition, the occupations of the respondents also have significant differences in social support from colleagues. García-Herrero et al. (2017) showed that the social support from colleagues among healthcare workers In Europe was high. Besides, Weyers et al. (2008) stated that low socioeconomic positions received lower social support in general. This is because a person's socioeconomic position is influenced by their occupation (Fujishiro et al., 2010). Thus, it can be concluded that a person's occupation will influence the social support from colleagues. Following the COVID-19 Pandemic, working from home became compulsory for every worker including in Malaysia. Based on the result of this study, this new norm has a significant difference in terms of social support from colleagues.

Collins et al. (2016), in their study on social support in the workplace between teleworkers and office-based colleagues and supervisors, indicated that teleworkers received higher social support from colleagues than their office-based colleagues. This is because the teleworkers built a strong relationship with some colleagues while avoiding negative relationships in the workplace (Collins et al., 2016). Lastly, the working

© COPYRIGHT UPM

experience of the respondents also shows a significant difference in terms of social support received from colleagues. Although no study could directly explain this result, a person with more extended working experience has lower social support from colleagues than those with lesser working experience (Wok & Hashim, 2013). Wok and Hashim (2013) discussed that young employees with lesser experience preferred teamwork while older employees with more experience tend not to work with people of different ages. These differences could explain the reason for low social support from colleagues among respondents with longer working experience.

5.2 Comparison of Sociodemographic and Work Characteristics to Mental Health Symptoms

For sociodemographic characteristics, it was found that there was a significant difference between ethnicity on anxiety. Based on the study conducted by Cheah et al. (2020) on sociodemographic and generalized anxiety disorder among Malaysian adults, the Indian ethnic group had a positive relationship with anxiety. On the other hand, Sanil et al. (2018) reported that Malays were more prevalent of anxiety than other ethnic groups among university students in Johor Bahru. This difference in the result can be explained by the cultural differences and religious practices among individuals from different racial groups (Sanil et al., 2018). Besides that, education level is one of the sociodemographic characteristics that had a significant difference in burnout. This result is concurrent with Farshi and Omranzadeh (2014) in their study on the effect of education level on Iranian teachers' burnout level showed that teachers' education level

© COPYRIGHT UPM

significantly influenced their burnout level. Sezer (2012) and Jamaludin & You (2019) can support it, explaining that education level influences the lack of efficacy on their jobs lead to performance deterioration. The current finding is contradicted with the previous study by Kim & Yeom (2018). Kim & Yeom (2018) reported that lower education level was associated with higher burnout among intensive care unit nurses, especially the younger ones.

Furthermore, the current residence of the respondents showed there is a significant difference in burnout. Although the comparison of this study's finding on burnout with other works due to lack of studies on the influence of geographical locality on burnout, however, a book titled "Teachers Managing Stress & Preventing Burnout" stated that the prevalence of burnout among teachers are different in urban and rural schools. This is because the resources allocated for rural schools are lesser compared to urban schools (Gold & Roth, 2013). Although Klang Valley is the most urbanized region in Malaysia, the urbanization level between all districts in Klang Valley is not parallel. Thus, the difference in urbanization could influence the differences in burnout among the respondents in different districts.

Regarding work characteristics, only two characteristics showed significant differences in perceived burnout among the respondents: work sectors and work from home. For work sectors, this study result is aligned with a study conducted by Van den Broeck et al. (2017) on the relationships between job demands, job resources, burnout, and work engagement across four different sectors. The study stated that four sectors are significantly different in burnout, with the public sector having the highest burnout (Van

© COPYRIGHT UPM

den Broeck et al., 2017). It was reported that public sector jobs were passive compared to the other sectors; thus, the situation reflected on their burnout level. Besides work sectors, work from home also had a significant difference in burnout level. Based on the study by Hayes et al. (2020) on work-related burnout before and after the COVID-19 Pandemic, it was reported that work from home results in more burnout compared to work from the office as a result of lack of experience in working from home and unclear work-life boundary at home. Although previous studies mentioned that work from home potentially leads to more burnout, a well-managed work from home experience allows workers to find a new balance between work and personal life (Shanmugam et al., 2020).

5.3 The Prevalence of Mental Health Symptoms

The present study focuses on five mental health symptoms of the working youth in Klang Valley. In this discussion, the severe mental health symptoms will be used as the prevalence in the comparison and discussion with the prevalence of mental health symptoms from previous studies. First of all, the perceived sleep disturbance among the working youth in Klang Valley was 21.8%. The prevalence was similar to a national survey in China on sleep disturbance. The prevalence of difficulty falling asleep and waking early were 19.76% and 20.13%, respectively, among Chinese aged 18 to 44 years old (Cui et al., 2021). The result was concurrent with a study by Huang and Zhao (2020) on China respondents whereby respondents aged below 35 years old had a prevalence of 18.4% for sleep disturbance. These outputs can be explained that young people spend more time thinking about the COVID-19 Pandemic and the interruption of

© COPYRIGHT UPM

lifestyle during lockdown (Cui et al. 2021; Huang & Zhao, 2020). This study also highlighted that healthcare workers had a higher prevalence of sleep disturbance than other occupations due to the increased exposure risk of COVID-19 (Huang & Zhao, 2020).

Besides, the present findings appeared that the prevalence of burnout among the working youth was 30.3%. The result is similar to the conclusions of Spain on young oncologists, with a prevalence of 25.1% (Jiménez-Labaig et al., 2021). In contrast, the findings on Malaysian young healthcare workers showed that the prevalence was higher (42.8%) compared to the present results (Roslan et al., 2021). Despite the difference in the prevalence of burnout, Jiménez-Labaig et al. (2021) and Roslan et al. (2021) supported that young workers have a higher prevalence of burnout than their older counterparts. They suggested that lack of resources to cope with job demands and difficulty to manage work-life balance are the main contributors of burnout among young healthcare workers.

Furthermore, the current findings showed that the prevalence of stress was 33.2%. The prevalence of stress is similar to the study by (Wong et al., 2020), whereby the prevalence of stress among the population aged 18 to 25 years old in Malaysia was 29.8%. Wong et al. (2020) explained that the youth aged 18 to 25 years old experienced severe distress during the COVID-19 Pandemic due to economic concerns and uncertainty about their career prospects. Compared to the first Movement Control Order implemented in Malaysia, the prevalence of stress from the current findings and Wong et al. (2020) was half of the prevalence reported by Perveen et al. (2020), which was

© COPYRIGHT UPM

70%. This extremely high prevalence of stress can explain that Malaysians were facing more severe movement restriction that affects everyday human social life and other daily routines compared to the current study and Wong et al. (2020).

Moreover, the prevalence of depressive symptoms among working youth was 33.2%. The current finding showed a higher prevalence than Marzo et al. (2021), which was 25.1% among the general population in Malaysia during the third wave of Pandemic. Although the prevalence of depression among youth in the study was unknown; however, Marzo et al. (2021) discussed that being young could increase the risk of developing depressive symptoms. On the other hand, Chow et al. (2021) reported that the prevalence of depression among healthcare workers in Malaysia was 29.5%. This finding is concurrent with the current results among the working youth in Klang Valley. Chow et al. (2021) explained that the prevalence of healthcare workers was contributed by the increase of workplace hazards, especially work-related psychosocial risk factors, during the COVID-19 Pandemic.

Lastly, the current findings showed that the prevalence of anxiety was 35.8%. Based on a previous study on young adults in the United States, the reported prevalence of anxiety was 45.4% during the COVID-19 Pandemic (Liu et al., 2020). The factors that contributed to a high prevalence of anxiety were the sense of loneliness, worry on COVID-19 and distress tolerance among the young adult in the United States. In the Malaysian context, Wong et al. (2021) reported that 56.5% of youth aged 18 to 25 had moderate to severe anxiety. Similar to Liu et al. (2020), the factors contributing to the prevalence of anxiety were mainly related to the changes in personal and social life due

© COPYRIGHT UPM

to COVID-19 Pandemic. This discussion was supported by Glowacz and Schmits (2020), whereby 45% of young adults in Belgium, France and Canada had anxiety despite having low occupational activity. This finding highlighted that young adults are sensitive to the uncertainties during the COVID-19 Pandemic and the need for a support programme to mitigate the negative implications of the COVID-19 Pandemic to their mental health (Glowacz & Schmits, 2020).

5.4 The Correlation between Work-related Psychosocial Risk Factors and Mental Health Symptoms

The current findings showed that five out of seven work-related psychosocial risk factors had a significant positive association with sleep disturbance: workload, work-pace, job insecurity, work-life conflict, and workplace bullying. The current findings are concurrent with previous studies on sleep disturbance (Lin et al., 2021; Vleeshouwers et al., 2016, Mai et al., 2018; Bowen et al., 2017; Nielsen et al., 2021). In their systematic review, Lin et al. (2021) stated that people with high workloads tend to develop sleep disturbance during the COVID-19 Pandemic. They postulated that an increase in the intensity of physical activity during work reduced the sleep duration and increased the fatigue during the wake-up. Work-pace, on the other hand, reported that quantitative demands such as working at a high pace are significantly associated with troubled sleep. They hypothesized that high-paced work would lead to exhaustion and affect sleep quality (Vleeshouwers et al., 2016). Fatigue and exhaustion can explain it due to work at a high pace. For job insecurity, Mai et al. (2018) found that job insecurity

© COPYRIGHT UPM

elevated the probability of sleep disturbance in 27 European Countries. They postulated that the workers with job insecurity suffered from emotional and physiological arousals that affect their ability to sleep. For work-life conflict, Bowen et al. (2017) reported that it influenced the boundary-spanning stressor such as work contact interrupted work-life balance, hence affecting the quality of sleep among the construction workers. Lastly, Nielson et al. (2021) reported that workplace bullying increased insomnia, a form of sleep disturbance. They discussed that the workers' repetitive thoughts of negative work experience raised the mental arousal and gradually affected their sleep.

The current findings also identified that work-pace, social support from colleagues, work-life conflict and workplace bullying correlate significantly to burnout. First of all, the results from Tabakakis et al. (2020) stated that work-pace was positive and significantly associated with burnout. They suggested that a high work-pace will increase fatigue and exhaustion in the workers, leading to burnout. The work-life conflict was also positively associated with burnout which is concurrent with the findings by Gupta & Srivastava (2020). They postulated that work-life conflict persistently consumes the physical and mental resources of the workers and results in burnout. For workplace bullying, the current findings are consistent with Bae et al. (2021). They stated that the continuous physical and mental symptoms caused by workplace bullying acted as a stress factor and induced burnout. Compared to these three work-related psychosocial risk factors, the findings on social support from colleagues on burnout were inconsistent with previous studies. Bae et al. (2021) reported that social support was negatively correlated with burnout. The current finding can be

© COPYRIGHT UPM

explained that people with burnout may receive social support from their colleagues; hence the correlation was positive.

In this current study, stress had positive and significant correlations with the workload, work-pace, job insecurity, and work-life conflict. Based on the study conducted by Bowen et al. (2014) and Mette et al. (2018), quantitative demands such as workload and work-pace were positively correlated to stress among the workers. Bowen et al. (2014) reported that the significant correlation was due to job-specific demands, such as insufficient time with tight deadlines exerting pressure on the workers and increasing stress. These studies' findings are concurrent with the current results. Next, the present findings are also concurrent with the study conducted by van Zyl et al. (2013) on job insecurity and emotional consequences. High job insecurity often experiences job-induced tension that may directly link to stress among the workers (van Zyl et al., 2019). For work-life conflict, Foy et al. (2019) reported similar findings with the current study. Foy et al. (2019) postulated that the source of work-life strife among the workers begins with the difficulty of an employer to balance between a flexible work environment and business profit.

Nitta et al. (2018) stated that quantitative workload was highly associated with higher depressive scores. Lee et al. (2012) also noted that undesirable work conditions such as fast work-pace and high workload increased the job demand of the migrant workers. These working conditions will be exposed to negative working experiences and hence lead to depressive symptoms. Gasparro et al. (2020) reported that perceived job insecurity was positively associated with depressive symptoms. They postulated that

© COPYRIGHT UPM

young age and the fear of COVID-19 might represent psychological risk factors on job insecurity and increase the prevalence of depressive symptoms. For work-life conflict, the current findings were concurrent with Gisler et al. (2018), which also suggest that work-life conflict was positively associated with depression. They cited a longitudinal study by Bergs et al. (2018). They stated that the accumulation process of work-life conflict reduces the workers' opportunity to recover and yield depressive complaints and breakdowns. Lastly, workplace bullying was also a significant association with depressive symptoms in the current findings. Lange et al. (2020) reported consistent results with the present findings whereby severe bullying at the workplace increased the risk of depressive symptoms.

Last but not least, four work-related psychosocial risk factors had a significant positive association with anxiety: workload, job insecurity, work-life conflict, and workplace bullying. Based on Mahmood et al. (2021) reported that a higher workload is associated with anxiety. They postulated that the exhaustion faced by the physicians led to anxiety because of the fear of an uncertain future and inadequate resource allocation. Besides, Bracci & Riva (2020) found similar results as the current finding on the correlation between job insecurity and anxiety. They discussed that the fear of involuntary job loss and uncertainty and labour market are more likely to lead to higher prevalence among the workers. On the other hand, the current findings on work-life conflict were concurrent with Gisler et al. (2018). They reported that the positive relationship between work-life conflict and anxiety is more potent than between work-life conflict and depression. They postulated that the employer demands on work increase the anxiety among the workers. Lastly, workplace bullying was positively

© COPYRIGHT UPM

associated with anxiety. This current finding is consistent with previous studies on workplace bullying and anxiety. For example, Rodríguez-Muñoz et al. (2015) reported that workplace bullying negatively affects mental health and leads to anxiety.

5.5 The Significant Predictors of Mental Health Symptoms

The stepwise multiple regression analysis demonstrated work-pace, workplace bullying and job insecurity as the predictors and contributed 9.9% of the variance towards sleep disturbance. Workplace bullying had the highest contribution (β =0.197) to the model, followed by work-pace (β =0.184) and job insecurity (β =0.169). This showed that higher workplace bullying, higher work-pace and higher job insecurity predicted higher sleep disturbance. These predictors are consistent with the findings from previous studies. In the current results, high work-pace predicted sleep disturbance was supported by Ota et al. (2009) and Vleeshouwers et al. (2016). Ota et al. (2009) explained that high strains from the work-pace elevated cortisol and catecholamine, resulting in sleep problems such as insomnia. Workplace bullying also predicted high sleep disturbance among the respondents. This finding is consistent with a meta-analysis by Nielsen et al. (2020) on workplace bullying and sleep. They concluded that victims of workplace bullying had higher odds of sleep disturbance than the workers without bullying issues. They also suggested that sleep disturbance will affect work performance and escalate the workers into a bullying situation. For job insecurity, the current findings are concurrent with previous studies such as Choi et al. (2020). They conducted a national survey in South Korea and found that job insecurity significantly higher the risk

© COPYRIGHT UPM

for sleep disturbance. They postulated that the increased risk of sleep disturbance was due to mental arousal from negative tension related to job insecurity.

Besides, the multiple linear regression analysis also demonstrated that education level, monthly income, work-life conflict, and work-pace were significant predictors of burnout and contributed 13.6% of the variance towards burnout. Most of the predictors are positively associated with burnout except monthly income. The current finding showed that an increase in monthly income would reduce the prevalence of burnout among the respondents. This finding was supported by Correia & Almeida (2020) in their study on burnout among healthcare workers during the COVID-19 Pandemic. The study reported that higher income (β =-0.16) significantly predicted lower burnout (Correia & Almeida, 2020). They postulated that income provides resources for healthcare workers to overcome inconveniences and hassles caused by their work and hence reduce the risk of burnout. For education level, the findings were inconsistent in previous studies. Farshi & Omranzadeh (2014) found that higher education levels among teachers will lead to higher burnout. They postulated that lack of efficacy on work leads to burnout among teachers with higher education levels.

In contrast, de Paiva et al. (2017) reported that healthcare professionals with lower education are more likely to suffer from burnout in a university hospital. This is because the healthcare professionals with lower education levels had to give more effort for achievement and reputation than those with higher education levels. Work-life conflict was also one of the predictors of burnout in this current study. The result was supported by Geraldes et al. (2018), and they reported that lack of resources might arise

© COPYRIGHT UPM

as chronic work demands among the workers. These chronic work demands will deteriorate the workers' wellbeing, including developing burnout. Lastly, the current findings showed that the work-pace increased the risk of burnout. This finding is consistent with Ståhl et al. (2018), whereby they found that high demands, including work-pace, are associated with a higher risk of burnout. They explained that low decision latitude among the workers in controlling their work-pace and work pressure from the demands would lead to exhaustion.

The current study found that work-pace, work-life conflict, workplace bullying and job insecurity are the predictors of stress among the working youth in Klang Valley. Work-pace was the positive predictor of stress in this study. Dollard et al. (2014), in a chapter on Psychosocial Factors at Work in the Asia Pacific, suggested that high demand on work-pace with low job resources such as social support were related to adverse health impacts, including stress. However, Javaid et al. (2018) reported a negative association between work-pace and burnout whereby they deduced that the workers have higher quantitative demands than high work-pace. The same study also reported a similar result with the current findings on work-life conflict and stress. Javaid et al. (2018) reported that work-life conflict was positively associated with stress ($\beta = 0.201$). They postulated that the employers emphasized products' production and quality instead of the safety and health of the workers. This means the workers have less control over their work and affect their health. The previous study also supported the result of workplace bullying as the predictor of stress. A study on prison employees stated that the employees who witnessed or experienced workplace bullying had a high-stress level compared to those who never witnessed or experienced workplace bullying (Brewer &

© COPYRIGHT UPM

Whiteside, 2012). Aside from the working condition in prison, a generalized reason was postulated by Brewer & Whiteside (2012) stated that the employees who experienced or witnessed workplace bullying developed fear from the incident and worried about their ability to defend themselves. The accumulation of fears and worries make the employees feel stressed while working in such conditions. Lastly, the current finding was concurrent with Zyl et al. (2013) on the association between job insecurity and stress. They stated that the employees with higher cognitive and affective job insecurity often experienced higher job tension due to reduced organization commitment and consequently increased the risk of stress.

The current findings showed that depressive symptoms could be predicted by job insecurity, work-pace, workplace bullying, and marital status of the working youth in Klang Valley. These predictors are consistent with previous studies on depression symptoms. Firstly, Gasparro et al. (2020) reported that perceived job insecurity predicted depression among Italian dentists (β =0.58). The study discussed that the job insecurity among dentists could be explained by the career and financial uncertainty faced due to the COVID-19 Pandemic (Gasparro et al., 2020). As a result, such uncertainty may have exposed the risk to develop mental health symptoms like depressive symptoms. Next, the finding on the work-pace is consistent with Lee et al. (2012) on a study of work-related psychosocial factors and depression. They reported that job demands, including work-pace, significantly predicted depression among Korean-Chinese migrant workers and deduced that the undesirable work conditions exposed the workers to the risk of developing depressive symptoms.

© COPYRIGHT UPM

Nitta et al. (2019) also reported a similar result as the current finding on workload and depressive symptoms. They found that Japanese principals with high workloads were associated with higher depressive scores. The study explained that depressive symptoms are more likely to be prevalent among the principals who cannot manage a large amount of workload and balance the time on teaching and managing the school (Nitta et al., 2019). Workplace bullying was also one of the significant predictors of depressive symptoms, and the result is consistent with Hauge et al. (2010). Structural regression analysis by Hauge et al. (2010) showed that workplace bullying is the predictor of depression (β =0.36) and significantly contributed to the model. They discussed that the workers exposed to workplace bullying might contribute to the deterioration of mental health especially leading to depression based on the intensity and frequency of such negative experiences. Lastly, the current finding is consistent with et al. (Di Tella et al., 2020) on marital status predictors of depressive symptoms. Di Tella et al. (2020) deduced marital status as a significant predictor of depressive symptoms, and single healthcare workers are more likely to associate with a higher level of depressive symptoms. They also stated that social support is a protective factor for mental wellbeing, and it explained that healthcare workers with partners or spouses receive more social support and have a lower risk of developing depressive symptoms.

Last but not least, the current study identified three predictors of anxiety among working youth in Klang Valley: workplace bullying, job insecurity, and workload. The current finding showed that workplace bullying positively predicts anxiety. This result is concurrent with Rodríguez-Muñoz et al. (2015) on workplace bullying and anxiety (β =0.13). Spagnoli & Balducci (2017) stated that hostile work conditions such as high

© COPYRIGHT UPM

workload and job insecurity are associated with workplace bullying. Since workload and job insecurity are the predictors of anxiety in this study, it is possible that workplace bullying is the indirect effect of a poor psychosocial environment in the workplace that potentially leads to anxiety. Next, job insecurity is one of the predictors in this study. The finding can be supported by Spagnoli & Balducci (2017), whereby job insecurity increases the risk of anxiety. However, a study by (Wilson et al., 2020) reported that rather than being directly associated with anxiety, job insecurity has a significant indirect effect on anxiety through financial concern. The study found that job insecurity significantly predicted financial concern but not anxiety. Thus they concluded that job insecurity induced financial concern among the workers and was indirectly associated with a high level of anxiety (Wilson et al., 2020). Lastly, the finding of workload as the predictor of anxiety was also supported by Santa Maria et al. (2017). They conducted a study on the role of job demands and anxiety among police officers, and they found the indirect effect of job demands such as workload on anxiety through burnout. This showed that the increase in workload would lead to burnout, increasing the risk of anxiety among the police officers.

© COPYRIGHT UPM

Chapter 6

CONCLUSION

6.1 Conclusion

This cross-sectional study was conducted to determine the relationship between work-related psychosocial risk factors and mental health symptoms during the COVID-19 Pandemic among working youth in Klang Valley. The study investigates the types of work-related psychosocial risk factors and mental health symptoms among working youth in Klang Valley during the COVID-19 Pandemic. Furthermore, the study also investigates the correlation between work-related psychosocial risk factors and mental health symptoms. Lastly, the study examines the predictors of mental health symptoms based on sociodemographic, work characteristics and work-related psychosocial risk factors among working youth in Klang Valley during the COVID-19 Pandemic.

This study indicates that female respondents had significantly higher mean rank scores for job insecurity compared to male. The anxiety score was significantly difference by the ethnicity. The work-pace, social support from colleagues, and burnout

© COPYRIGHT UPM

were significantly difference by the level of education. Burnout also was significant difference by the current residence. Work-pace and social support from colleagues were significantly difference by type of occupation. Work from home, was significantly affecting the respondents' social support from colleagues and burnout. working experiences was significantly determined the difference in the social support from colleagues

This study found significant correlations between work-related psychosocial risk factors and mental health symptoms among working youth in Klang Valley during the COVID-19 Pandemic. In this study, work-life conflict was the only work-related psychosocial risk factor that found a significant correlation with all mental health symptoms. Workload and job insecurity have weak positive correlations on sleep disturbance, stress, depressive symptoms and anxiety. Work-pace also has significant correlations with sleep disturbance, burnout, stress and depressive symptoms. Workplace bullying also has significant correlations with sleep disturbance, burnout, depressive symptoms and anxiety. Social support from colleagues, on the other hand, only correlates with burnout, while social support from supervisors did not have any significant correlations with the mental health symptoms studied.

This study also found the significant predictors of all mental health symptoms based on the sociodemographic and work characteristics and work-related psychosocial risk factors of the working youth in Klang Valley. Work-pace, workplace bullying and

© COPYRIGHT UPM

job insecurity were the significant predictors of sleep disturbance. For burnout, education level, work-life conflict and work-pace have a positive association with a higher risk of burnout, while monthly income reduces the risk of burnout. Stress was found to have positive associations with work-pace, work-life conflict, workplace bullying and job insecurity. Job insecurity, work-pace, workplace bullying and workload were positively associated with higher levels of depressive symptoms, while marital status reduced the risk of developing depressive symptoms. Lastly, workplace bullying, job insecurity and workload were the significant positive predictors of anxiety among working youth in Klang Valley. In summary, exposure to work-related psychosocial risk factors was associated with the prevalence of mental health symptoms among working youth. Therefore, the model identified the contribution of sociodemographic and work characteristics, work-related psychosocial risk factors and mental health symptoms among this study population.

6.2 Study Limitations

There are a few limitations of this study. First of all, the cross-sectional study design was unable to determine the direction of the causality as the exposure and outcome were simultaneously assessed in the study on the study population. Besides that, self-reported questionnaires were used as the instrument of this study. This might lead to potential overestimation of the associations and recall bias while answering the questionnaire. Furthermore, the data were collected in a specific pandemic period from

© COPYRIGHT UPM

August 2021 to October 2021. This may affect the ability to generalise the result for a similar population. Nevertheless, the good variability in most of the sociodemographic and work characteristics of the sample supports the heterogeneity and the possibility of generalisability of this study result. Lastly, the current study population only focused on working youth aged 18 to 30. Therefore, it is unable to highlight the effect of work-related psychosocial risk factors on the mental health symptoms and the vulnerability of working youth of those risk factors.

6.3 Recommendations

To overcome the limitations stated above, longitudinal studies on work-related psychosocial risk factors and mental health symptoms are suggested to determine the possible factors, mediators and moderators that can affect working youth in Klang Valley. Longitudinal studies also can study the effect of the COVID-19 Pandemic on work-related psychosocial risk factors and mental health symptoms over time. This allows a better understanding of the effect of the government's control measure and the severity of the COVID-19 Pandemic. Furthermore, future studies should examine other factors such as behaviour and coping strategies as the mediating factors on mental health symptoms to generate a more conclusive model in explaining mental health symptoms. Moreover, future studies should adopt group comparisons among working youth and older working adults to verify the vulnerability of working youth towards work-related psychosocial risk factors.

© COPYRIGHT UPM

In order to minimise the effect of work-related psychosocial risk factors on the mental health symptoms among working youth, preventive measures must be taken by the employers to ensure a healthy psychosocial environment in the workplace such as below:

- Increase the workers control over their jobs to minimise the effect of workload and work-pace;
- Build up social support system for the workers;
- Consider the interaction between working and living environments for work-life balance;
- Implement No Disturb Policy after working hour;
- Provide training and skill enhancement for worker's career development, and;
- Create a safe environment with zero tolerance for workplace bullying.

© COPYRIGHT UPM

References

Allen, T. D., Merlo, K., Lawrence, R. C., Slutsky, J., & Gray, C. E. (2021). Boundary Management and Work-Nonwork Balance While Working from Home. *Applied Psychology*, *70*(1), 60–84. https://doi.org/10.1111/apps.12300

Avanzi, L., Fraccaroli, F., Castelli, L., Marcionetti, J., Crescentini, A., Balducci, C., & van Dick, R. (2018). How to mobilize social support against workload and burnout: The role of organizational identification. Teaching and Teacher Education, 69, 154–167. https://doi.org/10.1016/j.tate.2017.10.001

Azmi, R., Ahmad, S. N. S., & Mustafa, B. A. (2021). MENTAL HEALTH ISSUES AT WORKPLACE: AN OVERVIEW OF LAW AND POLICY IN MALAYSIA AND UNITED KINGDOM (UK). *International Journal of Law, Government and Communication*, *6*(22), 95–108. https://doi.org/10.35631/ijlgc.622009

Bae, S.-R., Hong, H.-J., Chang, J.-J., & Shin, S.-H. (2021). The Association between Korean Clinical Nurses' Workplace Bullying, Positive Psychological Capital, and Social Support on Burnout. *International Journal of Environmental Research and Public Health*, *18*(21), 11583. https://doi.org/10.3390/ijerph182111583

Bahar Moni, A. S., Abdullah, S., Bin Abdullah, M. F. I. L., Kabir, M. S., Alif, S. M., Sultana, F., Salehin, M., Islam, S. M. S., Cross, W., & Rahman, M. A. (2021). Psychological distress, fear and coping among Malaysians during the COVID-19 pandemic. *PLOS ONE*, *16*(9), e0257304. https://doi.org/10.1371/journal.pone.0257304

Bergs, Y., Hoofs, H., Kant, Ij., Slangen, J., & Jansen, N. W. (2017). Work–family conflict and depressive complaints among Dutch employees: examining reciprocal associations in a longitudinal study. *Scandinavian Journal of Work, Environment & Health*, *44*(1), 69–79. https://doi.org/10.5271/sjweh.3658

Bianchi, E. M. (2018). Meaning of work for managers in the Brazilian contemporary business context. *RAM. Revista de Administração Mackenzie*, *19*(5). https://doi.org/10.1590/1678-6971/eramg180046

Bonnie, R. J., Stroud, C., Breiner, H., Committee on Improving the Health, S., & National Research Council. (2015). Young adults in the 21st century. In *Investing in the Health and Well-Being of Young Adults*. National Academies Press (US).

Bonsaksen, T., Thørrisen, M. M., Skogen, J. C., & Aas, R. W. (2019). Who reported having a high-strain job, low strain job, active job and passive job? The WIRUS screening study. *PLOS ONE*, *14*(20). e0227336-e0227336. https://doi.org/10.1371/journal.pone.0227336

© COPYRIGHT UPM

Borritz, M., Bültmann, U., Rugulies, R., & Kristensen, T. S. (2005). Psychosocial Work Characteristics as Predictors for Burnout: Findings From 3Year Follow Up of the PUMA Study. *Journal of Occupational and Environmental Medicine*, *47*(10), 1015–1025. https://doi.org/10.1097/01.jom.0000175155.50789.98

Boschman, J. S., van der Molen, H. F., Sluiter, J. K., & Frings-Dresen, M. H. W. (2013). Psychosocial work environment and mental health among construction workers. *Applied Ergonomics*, *44*(5). https://doi.org/10.1016/j.apergo.2013.01.004

Boudrias, V., Trépanier, S.-G., & Salin, D. (2021). A systematic review of research on the longitudinal consequences of workplace bullying and the mechanisms involved. *Aggression and Violent Behavior*, *56*, 101508. https://doi.org/10.1016/j.avb.2020.101508

Bowen, P., Edwards, P., Lingard, H., & Cattell, K. (2014). Occupational stress and job demand, control and support factors among construction project consultants. *International Journal of Project Management*, *32*(7), 1273–1284. https://doi.org/10.1016/j.ijproman.2014.01.008

Bowen, P., Govender, R., Edwards, P., & Cattell, K. (2017). Work-related contact, work–family conflict, psychological distress and sleep problems experienced by construction professionals: an integrated explanatory model. *Construction Management and Economics*, *36*(3), 153–174. https://doi.org/10.1080/01446193.2017.1341638

Bracci, A., & Riva, E. (2020). Perceived Job Insecurity and Anxiety. A Multilevel Analysis on Male and Female Workers in European Countries. *Frontiers in Sociology*, *5*. https://doi.org/10.3389/fsoc.2020.573549

Brauchli, R., Bauer, G. F., & Hämmig, O. (2011). Relationship Between Time-Based Work-Life Conflict and Burnout. *Swiss Journal of Psychology*, *70*(3), 165–174. https://doi.org/10.1024/1421-0185/a000052

Brewer, G., & Whiteside, E. (2012). Workplace bullying and stress within the prison service. *Journal of Aggression, Conflict and Peace Research*, *4*(2), 76–85. https://doi.org/10.1108/17596591211208283

Bubonya, M., Cobb-Clark, D. A., & Wooden, M. (2017). Mental Health and Productivity at Work: Does What You Do Matter? *Labour Economics*, *46*(2017), 150–165. https://doi.org/10.1016/j.labeco.2017.05.001

Burr, H., Berthelsen, H., Moncada, S., Nübling, M., Dupret, E., Demiral, Y., Oudyk, J., Kristensen, T. S., Llorens, C., Navarro, A., Lincke, H.-J., Bocéréan, C., Sahan, C., Smith, P., & Pohrt, A. (2019). The Third Version of the Copenhagen Psychosocial Questionnaire. *Safety and Health at Work*, *10*(4), 482–503. https://doi.org/10.1016/j.shaw.2019.10.002

© COPYRIGHT UPM

Cadiz, D. M., Truxillo, D. M., & Fraccaroli, F. (2015). What Are the Benefits of Focusing on Generation-Based Differences and at What Cost? *Industrial and Organizational Psychology*, *8*(3), 356–362. https://doi.org/10.1017/iop.2015.49

Caroli, E., & Godard, M. (2014). Does Job Insecurity Deteriorate Health? A Causal Approach for Europe. *Health Economics*, *25*(2), 131–147. https://doi.org/10.1002/hec.3122

Carvalho, V. S., Santos, A., Ribeiro, M. T., & Chambel, M. J. (2021). Please, Do Not Interrupt Me: Work–Family Balance and Segmentation Behavior as Mediators of Boundary Violations and Teleworkers' Burnout and Flourishing. *Sustainability*, *13*(13), 7339. https://doi.org/10.3390/su13137339

Chi-Ming Hsieh, & Bi-Kun Tsai. (2019). Effects of Social Support on the Stress-Health Relationship: Gender Comparison among Military Personnel. *International Journal of Environmental Research and Public Health*, *16*(8). 1317. https://doi.org/10.3390/ijerph16081317

Choi, S., Ko, K., Park, J. B., Lee, K.-J., Lee, S., & Jeong, I. (2020). Combined effect of emotional labor and job insecurity on sleep disturbance among customer service workers. *Annals of Occupational and Environmental Medicine*, *32*, e33. https://doi.org/10.35371/aoem.2020.32.e33

Chow, S. K., Francis, B., Ng, Y. H., Naim, N., Beh, H. C., Ariffin, M. A. A., Yusuf, M. H. M., Lee, J. W., & Sulaiman, A. H. (2021). Religious Coping, Depression and Anxiety among Healthcare Workers during the COVID-19 Pandemic: A Malaysian Perspective. *Healthcare*, *9*(1), 79. https://doi.org/10.3390/healthcare9010079

Chowdhury, A., Islam, I., & Lee, D. (2013). The Great Recession, jobs and social crises: policies matter. *International Journal of Social Economics*, *40*(3), 220–245. https://doi.org/10.1108/03068291311291518

Cohen, J. (1988). Statistical power analysis for the behavioral sciences (2nd Ed.). New York: Routledge.

Collins, A. M., Hislop, D., & Cartwright, S. (2016). Social support in the workplace between teleworkers, office-based colleagues and supervisors. *New Technology, Work and Employment*, *31*(2), 161–175. https://doi.org/10.1111/ntwe.12065

Communicating and sharing working relationships with older employees | Emerald Insight. (2013). *Journal of Communication Management*. https://doi.org/10.1108\/jcom

© COPYRIGHT UPM

Conti, D. J., & Burton, W. (1994). The economic impact of depression in a workplace. *Journal of Safety Research*, *26*(3), 200. https://doi.org/10.1016/0022-4375(95)98077-d

Corbett, G. A., Milne, S. J., Mohan, S., Reagu, S., Farrell, T., Lindow, S. W., Hehir, M. P., & O'Connell, M. P. (2020). Anxiety and depression scores in maternity healthcare workers during the Covid-19 pandemic. *International Journal of Gynecology & Obstetrics*, *151*(2), 297–298. https://doi.org/10.1002/ijgo.13279

Cormier, R. E. (1990). Sleep disturbances. *Clinical Methods: The History, Physical, and Laboratory Examinations. 3rd edition*.

Correia, I., & Almeida, A. E. (2020). Organizational Justice, Professional Identification, Empathy, and Meaningful Work During COVID-19 Pandemic: Are They Burnout Protectors in Physicians and Nurses? *Frontiers in Psychology*, *11*. https://doi.org/10.3389/fpsyg.2020.566139

De Sio, S., Cedrone, F., Buomprisco, G., Perri, R., Nieto, H. A., Mucci, N., & Greco, E. (2020). Bullying at work and work-related stress in healthcare workers: a cross sectional study. *Annali Di Igiene: Medicina Preventiva E Di Comunita*, *32*(2), 109–116. https://doi.org/10.7416/ai.2020.2335

De Witte, H., Vander Elst, T., & De Cuyper, N. (2015). Job Insecurity, Health and Well-Being. In *In Sustainable working lives* (pp. 109–128). Springer, Dordrecht. https://doi.org/10.1007/978-94-017-9798-6_7

Dextras-Gauthier, J., Marchand, A., & Haines, V. (2012). Organizational culture, work organization conditions, and mental health: A proposed integration. *International Journal of Stress Management*, *19*(2), 81–104. https://doi.org/10.1037/a0028164

Di Tella, M., Romeo, A., Benfante, A., & Castelli, L. (2020). Mental health of healthcare workers during the COVID -19 pandemic in Italy. *Journal of Evaluation in Clinical Practice*. https://doi.org/10.1111/jep.13444

Dollard, M. F., Shimazu, A., Nordin, R. B., Brough, P., & Tuckey, M. R. (2014). The Context of Psychosocial Factors at Work in the Asia Pacific. *Psychosocial Factors at Work in the Asia Pacific*, 3–26. https://doi.org/10.1007/978-94-017-8975-2_1

Evans-Lacko, S., & Knapp, M. (2016). Global patterns of workplace productivity for people with depression: absenteeism and presenteeism costs across eight diverse countries. *Social Psychiatry and Psychiatric Epidemiology*, *51*(11), 1525–1537. https://doi.org/10.1007/s00127-016-1278-4

Fagerlind Ståhl, A.-C., Ståhl, C., & Smith, P. (2018). Longitudinal association between psychological demands and burnout for employees experiencing a high versus a

© COPYRIGHT UPM

low degree of job resources. *BMC Public Health*, *18*(1). https://doi.org/10.1186/s12889-018-5778-x

Fløvik, L., Knardahl, S., & Christensen, J. O. (2020). How leadership behaviors influence the effects of job predictability and perceived employability on... *Scandinavian Journal of Work, Environment & Health*, *46*(4), 392–401. https://doi.org/10.5271/sjweh.3880

Foy, T., Dwyer, R. J., Nafarrete, R., Hammoud, M. S. S., & Rockett, P. (2019). Managing job performance, social support and work-life conflict to reduce workplace stress. *International Journal of Productivity and Performance Management*, *68*(6). https://doi.org/10.1108/ijppm-03-2017-0061

Foy, T., Dwyer, R., Nafarrete, R., & Rockett, P. (2019). Managing job performance, social support and work-life conflict to reduce workplace stress. *International Journal of Productivity and Performance Management*, *68*(6), 1018–1041. https://doi.org/10.1108/IJPPM-03-2017-0061

Fujishiro, K., Xu, J., & Gong, F. (2010). What does "occupation" represent as an indicator of socioeconomic status?: Exploring occupational prestige and health. *Social Science & Medicine*, *71*(12), 2100–2107. https://doi.org/10.1016/j.socscimed.2010.09.026

Ganster, D. C., & Rosen, C. C. (2013). Work Stress and Employee Health. *Journal of Management*, *39*(5), 1085–1122. https://doi.org/10.1177/0149206313475815

Gasparro, R., Scandurra, C., Maldonato, N. M., Dolce, P., Bochicchio, V., Valletta, A., Sammartino, G., Sammartino, P., Mariniello, M., di Lauro, A. E., & Marenzi, G. (2020). Perceived Job Insecurity and Depressive Symptoms among Italian Dentists: The Moderating Role of Fear of COVID-19. *International Journal of Environmental Research and Public Health*, *17*(15), 5338. https://doi.org/10.3390/ijerph17155338

Geraldes, D., Madeira, E., Carvalho, V. S., & Chambel, M. J. (2019). Work-personal life conflict and burnout in contact centers. *Personnel Review*, *48*(2), 400–416. https://doi.org/10.1108/pr-11-2017-0352

Giorgi, G., Arcangeli, G., Ariza-Montes, A., Rapisarda, V., & Mucci, N. (2019). Work-related stress in the Italian banking population and its association with recovery experience. *International Journal of Occupational Medicine and Environmental Health*. https://doi.org/10.13075/ijomeh.1896.01333

Gisler, S., Omansky, R., Alenick, P. R., Tumminia, A. M., Eatough, E. M., & Johnson, R. C. (2018). Work-life conflict and employee health: A review. *Journal of Applied Biobehavioral Research*, *23*(4), e12157. https://doi.org/10.1111/jabr.12157

© COPYRIGHT UPM

Glowacz, F., & Schmits, E. (2020). Uncertainty and Psychological Distress during lockdown during the COVID-19 Pandemic: the young adults most at risk. *Psychiatry Research*, 113486. https://doi.org/10.1016/j.psychres.2020.113486

Gold, Y., & Roth, R. A. (2013). Teachers Managing Stress & Preventing Burnout. In *Google Books*. Routledge. https://books.google.com.my/books?id=jX4nAAAAQBAJ&pg=PA36&lpg=PA36&dq=suburban+high+burnout&source=bl&ots=5JzFENIvkF&sig=ACfU3U2EPJAuaamwBC6fM89lR7PB_P89mQ&hl=en&sa=X&ved=2ahUKEwj8t5yC5JL0AhWt7nMBHWviCT0Q6AF6BAgbEAM#v=onepage&q=suburban%20high%20burnout&f=false

Gosling, J. A., Batterham, P. J., Glozier, N., & Christensen, H. (2014). The influence of job stress, social support and health status on intermittent and chronic sleep disturbance: an 8-year longitudinal analysis. *Sleep Medicine*, *15*(8), 979–985. https://doi.org/10.1016/j.sleep.2014.04.007

Gould, E., & Kassa, M. (2020). Young workers hit hard by the COVID-19 economy: Workers ages 16–24 face high unemployment and an uncertain future. *Economic Policy Institute*. *https://www.epi.org/publication/young-workers-covid-recession*.

Greco-Sanchez, A., & Everatt, S. L. (2015). The National Standard of Canda for Psychological Health and Safety in the workplace: Impact, Innovation and Implementation Strategies for Occupational Health Nurses. *The Official Publication of the Ontario Occupational Health Nurses Association*, *34*(1), 11–16.

Gullander, M., Hogh, A., Hansen, Å. M., Persson, R., Rugulies, R., Kolstad, H. A., Thomsen, J. F., Willert, M. V., Grynderup, M., Mors, O., & Bonde, J. P. (2014). Exposure to Workplace Bullying and Risk of Depression. *Journal of Occupational and Environmental Medicine*, *56*(12), 1258–1265. https://doi.org/10.1097/jom.0000000000000339

Gulliver, A., Griffiths, K. M., & Christensen, H. (2010). Perceived barriers and facilitators to mental health help-seeking in young people: a systematic review. *BMC Psychiatry*, *10*(1). https://doi.org/10.1186/1471-244x-10-113

Hamama, L. (2012). Burnout in Social Workers Treating Children as Related to Demographic Characteristics, Work Environment, and Social Support. *Social Work Research*, *36*(2), 113–125. https://doi.org/10.1093/swr/svs003

Hämmig, O., & Bauer, G. F. (2013). Work, work-life conflict and health in an industrial work environment. *Occupational Medicine*, *64*(1). https://doi.org/10.1093/occmed/kqt127

© COPYRIGHT UPM

Hassard, J., Teoh, K., Visockaite, G., & Cox, T. (2017). The cost of work-related stress: a systematic review. *Journal of Occupational Health Psychology*, *23*(1). https://doi.org/10.1037/ocp0000069

Hayes, S., Priestley, J. L., Ishmakhametov, N., & Ray, H. E. (2020). *"I'm not Working from Home, I'm Living at Work": Perceived Stress and Work-Related Burnout before and during COVID-19*. https://doi.org/10.31234/osf.io/vnkwa

Hege, A., Perko, M., Johnson, A., Yu, C. H., Sönmez, S., & Apostolopoulos, Y. (2015). Surveying the Impact of Work Hours and Schedules on Commercial Motor Vehicle Driver Sleep. *Safety and Health at Work*, *6*(2), 104–113. https://doi.org/10.1016/j.shaw.2015.02.001

Henderson, M., Harvey, S., Øverland, S., Mykletun, A., & Hotopf, M. (2011). Work and common psychiatric disorders. *Journal of the Royal Society of Medicine*, *104*(5), 198–207. https://doi.org/10.1258/jrsm.2011.100231

Heo, Y.-S., Chang, S.-J., Park, S.-G., Leem, J.-H., Jeon, S.-H., Lee, B.-J., Rhee, K.-Y., & Kim, H.-C. (2013). Association between Workplace Risk Factor Exposure and Sleep Disturbance: Analysis of the 2nd Korean Working Conditions Survey. *Annals of Occupational and Environmental Medicine*, *25*(1), 41. https://doi.org/10.1186/2052-4374-25-41

Hertel, G., Thielgen, M., Rauschenbach, C., Grube, A., Stamov-Roßnagel, C., & Krumm, S. (2013). Age Differences in Motivation and Stress at Work. In *Age-Differentiated Work Systems* (pp. 119–147). Springer, Berlin, Heidelberg. https://doi.org/10.1007/978-3-642-35057-3_6

Honkonen, T., Ahola, K., Pertovaara, M., Isometsä, E., Kalimo, R., Nykyri, E., Aromaa, A., & Lönnqvist, J. (2006). The association between burnout and physical illness in the general population—results from the Finnish Health 2000 Study. *Journal of Psychosomatic Research*, *61*(1), 59–66. https://doi.org/10.1016/j.jpsychores.2005.10.002

How Covid-19 is impacting the mental health of young workers. (n.d.). UNI Global Union. Retrieved November 8, 2021, from https://www.uniglobalunion.org/news/how-covid-19-impacting-mental-health-young-workers

Huang, Y., & Zhao, N. (2020). Generalized anxiety disorder, depressive symptoms and sleep quality during COVID-19 outbreak in China: a web-based cross-sectional survey. *Psychiatry Research*, *288*, 112954. https://doi.org/10.1016/j.psychres.2020.112954

Idris, M. A., & Dollard, M. F. (2011). Psychosocial safety climate, work conditions, and emotions in the workplace: A Malaysian population-based work stress study.

© COPYRIGHT UPM

International Journal of Stress Management, *18*(4), 324–347. https://doi.org/10.1037/a0024849

Jager, J., Putnick, D. L., & Bornstein, M. H. (2017). More than Just Convenient: The Scientific Merits of Homogeneous Convenience Samples. *Monographs of the Society for Research in Child Development*, *82*(2), 13–30. https://doi.org/10.1111/mono.12296

Jahrami, H., BaHammam, A. S., Bragazzi, N. L., Saif, Z., Faris, M., & Vitiello, M. V. (2021). Sleep problems during the COVID-19 pandemic by population: a systematic review and meta-analysis. *Journal of Clinical Sleep Medicine*, *17*(2), 299–313. https://doi.org/10.5664/jcsm.8930

Jamaludin, I. I., & You, H. W. (2019). Burnout in relation to Gender, Teaching Experience, and Educational Level among Educators. *Education Research International*, *2019*, 1–5. https://doi.org/10.1155/2019/7349135

Jang, E. S., Park, S. M., Park, Y. S., Lee, J. C., & Kim, N. (2019). Work–Life Conflict and Its Health Effects on Korean Gastroenterologists According to Age and Sex. *Digestive Diseases and Sciences*, *65*(1), 86–95. https://doi.org/10.1007/s10620-019-05842-w

Javaid, M. U., Isha, A. S. N., Sabir, A. A., Ghazali, Z., & Nübling, M. (2018). Does Psychosocial Work Environment Factors Predict Stress and Mean Arterial Pressure in the Malaysian Industry Workers? *BioMed Research International*, *2018*, 1–11. https://doi.org/10.1155/2018/9563714

Jiménez-Labaig, P., Pacheco-Barcia, V., Cebrià, A., Gálvez, F., Obispo, B., Páez, D., Quílez, A., Quintanar, T., Ramchandani, A., Remon, J., Rogado, J., Sánchez, D. A., Sánchez-Cánovas, M., Sanz-García, E., Sesma, A., Tarazona, N., Cotés, A., González, E., Bosch-Barrera, J., & Fernández, A. (2021). Identifying and preventing burnout in young oncologists, an overwhelming challenge in the COVID-19 era: a study of the Spanish Society of Medical Oncology (SEOM). *ESMO Open*, *6*(4), 100215. https://doi.org/10.1016/j.esmoop.2021.100215

Johnson, S. J., Holdsworth, L., Hoel, H., & Zapf, D. (2013). Customer stressors in service organizations: The impact of age on stress management and burnout. *European Journal of Work and Organizational Psychology*, *22*(3), 318–330. https://doi.org/10.1080/1359432x.2013.772581

Johnson, T. P. (2005). Snowball Sampling. *Encyclopedia of Biostatistics*. https://doi.org/10.1002/0470011815.b2a16070

Jones-Bitton, A., Best, C., MacTavish, J., Fleming, S., & Hoy, S. (2019). Stress, anxiety, depression, and resilience in Canadian farmers. *Social Psychiatry and Psychiatric Epidemiology*, *55*(2), 229–236. https://doi.org/10.1007/s00127-019-01738-2

© COPYRIGHT UPM

Karasek, R. & Theorell, R. (1990*). Healthy work: Stress, productivity, and the reconstruction*

Kazi, A., & Haslam, C. O. (2013). Stress management standards: a warning indicator for employee health. *Occupational Medicine*, *63*(5), 335–340. https://doi.org/10.1093/occmed/kqt052

Kessler, R. C., Angermeyer, M., Anthony, J. C., DE Graaf, R., Demyttenaere, K., Gasquet, I., DE Girolamo, G., Gluzman, S., Gureje, O., Haro, J. M., Kawakami, N., Karam, A., Levinson, D., Medina Mora, M. E., Oakley Browne, M. A., Posada-Villa, J., Stein, D. J., Adley Tsang, C. H., Aguilar-Gaxiola, S., Alonso, J., … Ustün, T. B. (2007). Lifetime prevalence and age-of-onset distributions of mental disorders in the World Health Organization's World Mental Health Survey Initiative. *World psychiatry: official journal of the World Psychiatric Association (WPA)*, *6*(3), 168–176.

Kim, B. H., & Lee, H.-E. (2015). The association between working hours and sleep disturbances according to occupation and gender. *Chronobiology International*, *32*(8), 1109–1114. https://doi.org/10.3109/07420528.2015.1064440

Kim, H. S., & Yeom, H.-A. (2018). The association between spiritual well-being and burnout in intensive care unit nurses: A descriptive study. *Intensive and Critical Care Nursing*, *46*, 92–97. https://doi.org/10.1016/j.iccn.2017.11.005

KIRSTEN, W. (2010). Making the Link between Health and Productivity at the Workplace —A Global Perspective. *Industrial Health*, *48*(3), 251–255. https://doi.org/10.2486/indhealth.48.251

Kompier, M. (2004). Job Design and Well-Being. In *The Handbook of Work and Health Psychology* (Vol. 20, pp. 427–454). https://doi.org/10.1002/0470013400.ch20

Kossek, E. E., & Lee, K.-H. (2017). Work-Family Conflict and Work-Life Conflict. *Oxford Research Encyclopedia of Business and Management*. https://doi.org/10.1093/acrefore/9780190224851.013.52

Kouzes, J. M., & Posner, B. Z. (2006). *The leadership challenge workshop : facilitator's guide*. Wiley.

Kristensen *, T. S., Bjorner, J. B., Christensen, K. B., & Borg, V. (2004). The distinction between work pace and working hours in the measurement of quantitative demands at work. *Work & Stress*, *18*(4), 305–322. https://doi.org/10.1080/02678370412331314005

Kristensen, T. S., Bjorner, J. B., Christensen, K. B., & Borg, V. (2004). The Distinction between Work Pace and Working Hours in the Measurement of Quantitative

Demands at Work. *Work and Stress*, *18*(4), 305–322. https://doi.org/10.1080/02678370412331314005

Kristensen, T. S., Hannerz, H., Hogh, A., & Borg, V. (2006). The Copenhagen Psychosocial Questionnaire - A tool for the assessment and improvement of the psychosocial... *Scandinavian Journal of Work, Environment & Health*, *31*(6), 438–449. https://doi.org/10.5271/sjweh.948

Laberge, M., & Ledoux, E. (2011). Occupational health and safety issues affecting young workers: A literature review. *Work*, *39*(3), 215–232. https://doi.org/10.3233/WOR-2011-1170

Lange, S., Burr, H., Rose, U., & Conway, P. M. (2019). Workplace bullying and depressive symptoms among employees in Germany: prospective associations regarding severity and the role of the perpetrator. *International Archives of Occupational and Environmental Health*, *93*(4), 433–443. https://doi.org/10.1007/s00420-019-01492-7

Lau, B., & Knardahl, S. (2008). Perceived Job Insecurity, Job Predictability, Personality, and Health. *Journal of Occupational and Environmental Medicine*, *50*(2), 172–181. https://doi.org/10.1097/jom.0b013e31815c89a1

Law, P. C. F., Too, L. S., Butterworth, P., Witt, K., Reavley, N., & Milner, A. J. (2020). A systematic review on the effect of work-related stressors on mental health of young workers. *International Archives of Occupational and Environmental Health*, *93*(5), 611–622. https://doi.org/10.1007/s00420-020-01516-7

Lee, B.-J., Lamichhane, D. K., Jung, D.-Y., Moon, S.-H., Kim, S.-J., & Kim, H.-C. (2016). Psychosocial factors and psychological well-being: a study from a nationally representative sample of Korean workers. *Industrial Health*, *54*(3), 237–245. https://doi.org/10.2486/indhealth.2015-0191

Lee, H., Ahn, H., Miller, A., Park, C. G., & Kim, S. J. (2012). Acculturative Stress, Work-related Psychosocial Factors and Depression in Korean-Chinese Migrant Workers in Korea. *Journal of Occupational Health*, *54*(3), 206–214. https://doi.org/10.1539/joh.11-0206-oa

Lee, J. Y., & Pak, S. Y. (2016). The Impacts of Nurses' Psycho-social Health and Social Support from Colleagues on Patient Caring Ability. *Journal of Korean Academy of Nursing Administration*, *22*(5), 461–470. https://doi.org/10.11111/jkana.2016.22.5.461

Leśniewska, M., Kozioł, I., Budzyńska, J., & Milanowska, J. (2021). Burnout in COVID-19 era - a literature review. *Journal of Education, Health and Sport*, *11*(8), 236–246. https://doi.org/10.12775/JEHS.2021.11.08.024

© COPYRIGHT UPM

Li, J., Chang, S.-S., Yip, P. S. F., Li, J., Jordan, L. P., Tang, Y., Hao, Y., Huang, X., Yang, N., Chen, C., & Zeng, Q. (2014). Mental wellbeing amongst younger and older migrant workers in comparison to their urban counterparts in Guangzhou city, China: a cross-sectional study. *BMC Public Health*, *14*(1). https://doi.org/10.1186/1471-2458-14-1280

Liang, Y., Chen, M., Zheng, X., & Liu, J. (2020). Screening for Chinese medical staff mental health by SDS and SAS during the outbreak of COVID-19. *Journal of Psychosomatic Research*, *133*, 110102. https://doi.org/10.1016/j.jpsychores.2020.110102

Lin, Y. N., Liu, Z. R., Li, S. Q., Li, C. X., Zhang, L., Li, N., Sun, X. W., Li, H. P., Zhou, J. P., & Li, Q. Y. (2021). Burden of Sleep Disturbance During COVID-19 Pandemic: A Systematic Review. *Nature and Science of Sleep*, *13*, 933–966. https://doi.org/10.2147/NSS.S312037

Magnavita, N., & Fileni, A. (2013). Association of work-related stress with depression and anxiety in radiologists. *La Radiologia Medica*, *119*(5), 359–366. https://doi.org/10.1007/s11547-013-0355-y

Mahmood, Q. K., Jafree, S. R., Jalil, A., Nadir, S. M. H., & Fischer, F. (2021). Anxiety amongst physicians during COVID-19: cross-sectional study in Pakistan. *BMC Public Health*, *21*(1). https://doi.org/10.1186/s12889-020-10134-4

Mai, Q. D., Hill, T. D., Vila-Henninger, L., & Grandner, M. A. (2018). Employment insecurity and sleep disturbance: Evidence from 31 European countries. *Journal of Sleep Research*, *28*(1), e12763. https://doi.org/10.1111/jsr.12763

Marzo, R. R., Shekhawat, K. S., Chauhan, S., Patel, R., Kyaw, T. M., Amran, B. binti, Mat, M. A. I. bin, Rajendiran, V. A., Noor, M. A. bin M., Acharya, S., & Shrestha, S. (2021). *Sleep Disorder During the Third Wave of COVID-19 Pandemic among Malaysian Adults*. https://doi.org/10.21203/rs.3.rs-596311/v1

Marzo, R. R., Vinay, V., Bahari, R., Chauhan, S., Ming, D. A. F., Nelson Fernandez, S. F. A/P., Johnson, C. C. P., Thivakaran, A. Q. A., Rahman, M. M., & Goel, S. (2021). Depression and anxiety in Malaysian population during third wave of the COVID-19 pandemic. *Clinical Epidemiology and Global Health*, *12*, 100868. https://doi.org/10.1016/j.cegh.2021.100868

Maulik, P. K. (2017). Workplace stress: A neglected aspect of mental health wellbeing. *The Indian Journal of Medical Research*, *146*(4), 441–444. https://doi.org/10.4103/ijmr.IJMR_1298_17

Mcdonald, P., Bailey, J., Oliver, D. J., & Pini, B. (2007). Compounding Vulnerability? Young Workers and the Impact of the Work Choices Act. *Australian Bulletin of Labour*, *33*(1), 60–88.

© COPYRIGHT UPM

Melchior, M., Caspi, A., Milne, B. J., Danese, A., Poulton, R., & Moffitt, T. E. (2007). Work stress precipitates depression and anxiety in young, working women and men. *Psychological Medicine*, *37*(8), 1119–1129. https://doi.org/10.1017/s0033291707000414

Menéndez-Espina, S., Llosa, J. A., Agulló-Tomás, E., Rodríguez-Suárez, J., Sáiz-Villar, R., & Lahseras-Díez, H. F. (2019). Job Insecurity and Mental Health: The Moderating Role of Coping Strategies From a Gender Perspective. *Frontiers in Psychology*, *10*(286). https://doi.org/10.3389/fpsyg.2019.00286

Mette, J., Velasco Garrido, M., Harth, V., Preisser, A. M., & Mache, S. (2018). Healthy offshore workforce? A qualitative study on offshore wind employees' occupational strain, health, and coping. *BMC Public Health*, *18*(1). https://doi.org/10.1186/s12889-018-5079-4

Mette, J., Velasco Garrido, M., Harth, V., Preisser, A. M., & Mache, S. (2018). Healthy offshore workforce? A qualitative study on offshore wind employees' occupational strain, health, and coping. *BMC Public Health*, *18*(1). https://doi.org/10.1186/s12889-018-5079-4

Mette, J., Velasco Garrido, M., Preisser, A. M., Harth, V., & Mache, S. (2018). Linking quantitative demands to offshore wind workers' stress: do personal and job resources matter? A structural equation modelling approach. *BMC Public Health*, *18*(1). https://doi.org/10.1186/s12889-018-5808-8

Milner, H. R., Cunningham, H., Murray, I., & Alvarez, A. (2017). Supporting Students Living Below the Poverty Line. *National Youth at Risk Journal*, *2*(2). https://doi.org/10.20429/nyarj.2017.020204

Murcia, M., Chastang, J.-F., & Niedhammer, I. (2013). Psychosocial work factors, major depressive and generalised anxiety disorders: Results from the French national SIP study. *Journal of Affective Disorders*, *146*(3), 319–327. https://doi.org/10.1016/j.jad.2012.09.014

Murugesan, M. (2020, September 17). *Safeguarding the mental health of employees*. New Straits Times. https://www.nst.com.my/lifestyle/heal/2020/09/625111/safeguarding-mental-health-employees

Naing, L., Winn, T., & Nordin, R. (2006). Pratical Issues in Calculating the Sample Size for Prevalence Studies. *Archives of Orofacial Sciences*, *1*, 9–14.

Nielsen, M. B., Harris, A., Pallesen, S., & Einarsen, S. V. (2020). Workplace bullying and sleep – A systematic review and meta-analysis of the research literature. *Sleep Medicine Reviews*, 101289. https://doi.org/10.1016/j.smrv.2020.101289

© COPYRIGHT UPM

Nielsen, M. B., Magerøy, N., Gjerstad, J., & Einarsen, S. (2014). Mobbing i arbeidslivet og senere helseplager. *Tidsskrift for Den Norske Legeforening*, *134*(12/13), 1233–1238. https://doi.org/10.4045/tidsskr.13.0880

Nielsen, M. B., Pallesen, S., Einarsen, S. V., Harris, A., Rajalingam, D., & Gjerstad, J. (2021). Associations between exposure to workplace bullying and insomnia: a cross-lagged prospective study of causal directions. *International Archives of Occupational and Environmental Health*, *94*(5), 1003–1011. https://doi.org/10.1007/s00420-020-01618-2

Nieuwenhuijsen, K., Bruinvels, D., & Frings-Dresen, M. (2010). Psychosocial work environment and stress-related disorders, a systematic review. *Occupational Medicine*, *60*(4), 277–286. https://doi.org/10.1093/occmed/kqq081

Nitta, T., Deguchi, Y., Iwasaki, S., Kanchika, M., & Inoue, K. (2018). Depression and occupational stress in Japanese school principals and vice-principals. *Occupational Medicine*, *69*(1), 39–46. https://doi.org/10.1093/occmed/kqy149

O'Brennan, L., Pas, E., & Bradshaw, C. (2017). Multilevel Examination of Burnout Among High School Staff: Importance of Staff and School Factors. *School Psychology Review*, *46*(2), 165–176. https://doi.org/10.17105/spr-2015-0019.v46-2

OECD. Publishing (2012). *Mental Health and Work Sick on the Job?: Myth and Realities about Mental Health and Work. OECD publishing.* https://doi.org/10.1787/9789264124523-en

Ohrnberger, J., Fichera, E., & Sutton, M. (2017). The relationship between physical and mental health: A mediation analysis. *Social Science & Medicine*, *195*, 42–49. https://doi.org/10.1016/j.socscimed.2017.11.008

Ota, A., Masue, T., Yasuda, N., Tsutsumi, A., Mino, Y., Ohara, H., & Ono, Y. (2009). Psychosocial job characteristics and insomnia: A prospective cohort study using the Demand-Control-Support (DCS) and Effort–Reward Imbalance (ERI) job stress models. *Sleep Medicine*, *10*(10), 1112–1117. https://doi.org/10.1016/j.sleep.2009.03.005

Park, J., Han, M., Park, J., & Ryu, S. (2016). Prevalence of Depressive Symptoms and Related Factors in Korean Employees: The Third Korean Working Conditions Survey (2011). *International Journal of Environmental Research and Public Health*, *13*(4), 424. https://doi.org/10.3390/ijerph13040424

Patel, V., Flisher, A. J., Hetrick, S., & McGorry, P. (2007). Mental health of young people: a global public-health challenge. *The Lancet*, *369*(9569), 1302–1313. https://doi.org/10.1016/s0140-6736(07)60368-7

© COPYRIGHT UPM

Pavičić Žeželj, S., Cvijanović Peloza, O., Mika, F., Stamenković, S., Mahmutović Vranić, S., & Šabanagić Hajrić, S. (2019). Anxiety and depression symptoms among gas and oil industry workers. *Occupational Medicine*, *69*(1), 22–27. https://doi.org/10.1093/occmed/kqy170

Peters, E., Spanier, K., Radoschewski, F. M., & Bethge, M. (2018). Influence of social support among employees on mental health and work ability—a prospective cohort study in 2013–15. *European Journal of Public Health*, *28*(5), 819–823. https://doi.org/10.1093/eurpub/cky067

Pfefferbaum, B., & North, C. S. (2020). Mental Health and the Covid-19 Pandemic. *New England Journal of Medicine*, *383*(6), 510–512. https://doi.org/10.1056/nejmp2008017

Pidd, K., Duraisingam, V., Roche, A. M., & Trifonoff, A. (2017). Young construction workers: substance use, mental health, and workplace psychosocial factors. *Advances in Dual Diagnosis*, *10*(1). https://doi.org/10.1108/ADD-08-2017-0013

Pinto, J. K., Patanakul, P., & Pinto, M. B. (2016). Project Personnel, Job Demands, and Workplace Burnout: The Differential Effects of Job Title and Project Type. *IEEE Transactions on Engineering Management*, *63*(1), 91–100. https://doi.org/10.1109/tem.2015.2509163

Purpora, C., Cooper, A., Sharifi, C., & Lieggi, M. (2019). Workplace bullying and risk of burnout in nurses. *JBI Database of Systematic Reviews and Implementation Reports*, *17*(12), 2532–2540. https://doi.org/10.11124/jbisrir-d-19-00019

Qi, T., Hu, T., Ge, Q.-Q., Zhou, X.-N., Li, J.-M., Jiang, C.-L., & Wang, W. (2021). COVID-19 pandemic related long-term chronic stress on the prevalence of depression and anxiety in the general population. *BMC Psychiatry*, *21*(1). https://doi.org/10.1186/s12888-021-03385-x

Rahim, R., Sivanandam, H., Tan, T., & Carvalho, M. (2020, December 1). *Covid-19: Various initiatives to support mental health issues implemented, says Women's Ministry*. ; The Star. https://www.thestar.com.my/news/nation/2020/12/01/covid-19-various-initiatives-to-support-mental-health-issues-implemented-says-women039s-ministry

Ramos, R., Jenny, G., & Bauer, G. (2016). Age-related effects of job characteristics on burnout and work engagement. *Occupational Medicine*, *66*(3), 230–237. https://doi.org/10.1093/occmed/kqv172

Rodríguez-Muñoz, A., Moreno-Jiménez, B., & Sanz-Vergel, A. I. (2015). Reciprocal relations between workplace bullying, anxiety, and vigor: a two-wave longitudinal study. *Anxiety, Stress, & Coping*, *28*(5), 514–530. https://doi.org/10.1080/10615806.2015.1016003

© COPYRIGHT UPM

Roslan, N. S., Yusoff, M. S. B., Asrenee, A. R., & Morgan, K. (2021). Burnout Prevalence and Its Associated Factors among Malaysian Healthcare Workers during COVID-19 Pandemic: An Embedded Mixed-Method Study. *Healthcare*, *9*(1), 90. https://doi.org/10.3390/healthcare9010090

Roslan, N. S., Yusoff, M. S. B., Asrenee, A. R., & Morgan, K. (2021). Burnout Prevalence and Its Associated Factors among Malaysian Healthcare Workers during COVID-19 Pandemic: An Embedded Mixed-Method Study. *Healthcare*, *9*(1), 90. https://doi.org/10.3390/healthcare9010090

Ross, S., & Lewchuk, W. (2021, May 5). *Survey shows some bosses are using the pandemic as an excuse to push workers*. The Conversation. https://theconversation.com/survey-shows-some-bosses-are-using-the-pandemic-as-an-excuse-to-push-workers-159417

Ruiz-Frutos, C., Ortega-Moreno, M., Allande-Cussó, R., Ayuso-Murillo, D., Domínguez-Salas, S., & Gómez-Salgado, J. (2021). Sense of coherence, engagement, and work environment as precursors of psychological distress among non-health workers during the COVID-19 pandemic in Spain. *Safety Science*, *133*,. 105033. https://doi.org/10.1016/j.ssci.2020.105033

Saah, F. I., Amu, H., & Kissah-Korsah, K. (2021). Prevalence and predictors of work-related depression, anxiety, and stress among waiters: A cross-sectional study in upscale restaurants. *PLOS ONE*, *16*(4), e0249597. https://doi.org/10.1371/journal.pone.0249597

Saijo, Y., Chiba, S., Yoshioka, E., Kawanishi, Y., Nakagi, Y., Ito, T., Sugioka, Y., Kitaoka-Higashiguchi, K., & Yoshida, T. (2013). Job stress and burnout among urban and rural hospital physicians in Japan. *Australian Journal of Rural Health*, *21*(4), 225–231. https://doi.org/10.1111/ajr.12040

Salari, N., Hosseinian-Far, A., Jalali, R., Vaisi-Raygani, A., Rasoulpoor, S., Mohammadi, M., Rasoulpoor, S., & Khaledi-Paveh, B. (2020). Prevalence of stress, anxiety, depression among the general population during the COVID-19 pandemic: a systematic review and meta-analysis. *Globalization and Health*, *16*(1). https://doi.org/10.1186/s12992-020-00589-w

Salleh, M. R. (2018). The Burden of Mental Illness: An Emerging Global Disaster. *Journal of Clinical and Health Sciences*, *3*(1), 5. https://doi.org/10.24191/jchs.v3i1.6150

Samad, A., Hashim, Z., Saidi, M., & Abdullah, H. (2010). Assessment of Stress and Its Risk Factors Among Primary School Teachers in the Klang Valley, Malaysia. *Epidemiology*, *2*(2). https://doi.org/10.1097/01.ede.0000392452.76957.b9

Sansone, R. A., & Sansone, L. A. (2015). Workplace bullying: a tale of adverse consequences. *Innovations in Clinical Neuroscience*, *12*(1-2), 32–37.

© COPYRIGHT UPM

Santa Maria, A., Wörfel, F., Wolter, C., Gusy, B., Rotter, M., Stark, S., Kleiber, D., & Renneberg, B. (2017). The Role of Job Demands and Job Resources in the Development of Emotional Exhaustion, Depression, and Anxiety Among Police Officers. *Police Quarterly*, *21*(1), 109–134. https://doi.org/10.1177/1098611117743957

Santabárbara, J., Lasheras, I., Lipnicki, D. M., Bueno-Notivol, J., Pérez-Moreno, M., López-Antón, R., De la Cámara, C., Lobo, A., & Gracia-García, P. (2021). Prevalence of anxiety in the COVID-19 pandemic: An updated meta-analysis of community-based studies. *Progress in Neuro-Psychopharmacology & Biological Psychiatry*, *109*, 110207. https://doi.org/10.1016/j.pnpbp.2020.110207

Shanafelt, T. D., Hasan, O., Dyrbye, L. N., Sinsky, C., Satele, D., Sloan, J., & West, C. P. (2015). Changes in Burnout and Satisfaction With Work-Life Balance in Physicians and the General US Working Population Between 2011 and 2014. *Mayo Clinic Proceedings*, *90*(12), 1600–1613. https://doi.org/10.1016/j.mayocp.2015.08.023

Shanmugam, H., Juhari, J. A., Nair, P., Ken, C. S., & Guan, N. C. (2020). Impacts of COVID-19 Pandemic on Mental Health in Malaysia: A Single Thread of Hope. *Malaysian Journal of Psychiatry*, *29*(1). https://www.mjpsychiatry.org/index.php/mjp/article/view/536

Shanmugam, H., Juhari, J. A., Nair, P., Ken, C. S., & Guan, N. C. (2020). Impacts of COVID-19 Pandemic on Mental Health in Malaysia: A Single Thread of Hope. *Malaysian Journal of Psychiatry*, *29*(1). https://www.mjpsychiatry.org/index.php/mjp/article/view/536

Shields, B., & Chen, C. (2021). Examining the relationship between work-life conflict and burnout. *Journal of the National Institute for Career Education and Counselling*, *47*(1), 67–76. https://doi.org/10.20856/jnicec.4710

Shields, M., Dimov, S., Kavanagh, A., Milner, A., Spittal, M. J., & King, T. L. (2021). How do employment conditions and psychosocial workplace exposures impact the mental health of young workers? A systematic review. *Social Psychiatry and Psychiatric Epidemiology*. https://doi.org/10.1007/s00127-021-02077-x

Siegrist, J. (1996). Adverse health effects of high-effort/low-reward conditions. *Journal of Occupational Health Psychology*, *1*(1), 27–41. https://doi.org/10.1037/1076-8998.1.1.27

Sinclair, R. R., Probst, T. M., Watson, G. P., & Bazzoli, A. (2021). Caught between Scylla and Charybdis: How Economic Stressors and Occupational Risk Factors Influence Workers' Occupational Health Reactions to COVID-19. *Applied Psychology*, *70*(1), 85–119. https://doi.org/10.1111/apps.12301

© COPYRIGHT UPM

Sinha, R. (2008). Chronic Stress, Drug Use, and Vulnerability to Addiction. *Annals of the New York Academy of Sciences*, *1141*(1), 105–130. https://doi.org/10.1196/annals.1441.030

Sousa, V. D., Driessnack, M., & Amélia, I. (2007). An overview of research designs relevant to nursing: Part 1: Quantitative research designs. *Revista Latino-Americana de Enfermagem*, *15*(3), 502–507. https://doi.org/10.1590/S0104-11692007000300022

Souto, I., Pereira, A., Brito, E., Sancho, L., & Barros, S. (2019). Occupational Health Risk Among Teachers in Higher Education. In *International Conference on Healthcare Ergonomics and Patient Safety* (pp. 311–322). Springer, Cham. https://doi.org/10.1007/978-3-030-24067-7_36

Spagnoli, P., & Balducci, C. (2017). Do high workload and job insecurity predict workplace bullying after organizational change? *International Journal of Workplace Health Management*, *10*(1), 2–12. https://doi.org/10.1108/ijwhm-05-2016-0038

Spitzer, R. L., Kroenke, K., Williams, J. B. W., & Löwe, B. (2006). A Brief Measure for Assessing Generalized Anxiety Disorder. *Archives of Internal Medicine*, *166*(10), 1092. https://doi.org/10.1001/archinte.166.10.1092

Ståhl, A.-C. F., Ståhl, C., & Smith, P. (2018). Longitudinal association between psychological demands and burnout for employees experiencing a high versus a low degree of job resources. *BMC Public Health*, *18*(1). https://doi.org/10.1186/s12889-018-5778-x

Stevenson, D. (2017). Thriving at work: The Stevenson/Farmer review of mental health and employers. *Department for Work and Pensions and Department of Health, London.* http://hdl.voced.edu.au/10707/444168

Sundin, L., Bildt, C., Lisspers, J., Hochwälder, J., & Setterlind, S. (2006). Organisational factors, individual characteristics and social support: what determines the level of social support? *Work (Reading, Mass.)*, *27*(1), 45–55. https://pubmed.ncbi.nlm.nih.gov/16873980/

Takaki, J., Taniguchi, T., Fukuoka, E., Fujii, Y., Tsutsumi, A., Nakajima, K., & Hirokawa, K. (2010). Workplace Bullying could Play Important Roles in the Relationships between Job Strain and Symptoms of Depression and Sleep Disturbance. *Journal of Occupational Health*, *52*(6), 367–374. https://doi.org/10.1539/joh.l10081

Tonso, M. A., Prematunga, R. K., Norris, S. J., Williams, L., Sands, N., & Elsom, S. J. (2016). Workplace Violence in Mental Health: A Victorian Mental Health Workforce Survey. *International Journal of Mental Health Nursing*, *25*(5), 444–451. https://doi.org/10.1111/inm.12232

© COPYRIGHT UPM

Upadyaya, K., Vartiainen, M., & Salmela-Aro, K. (2016). From job demands and resources to work engagement, burnout, life satisfaction, depressive symptoms, and occupational health. *Burnout Research*, *3*(4), 101–108. https://doi.org/10.1016/j.burn.2016.10.001

Valente, M. do S. da S., Lopes, C. S., Pastor-Valero, M., & Menezes, P. R. (2016). Psychosocial Work Conditions and Burnout Among Brazilian Bank Employees: A Cross-Sectional Study. *Annals of Occupational Hygiene*, *60*(5), 567–580. https://doi.org/10.1093/annhyg/mew013

Varma, P., Junge, M., Meaklim, H., & Jackson, M. L. (2020). Younger people are more vulnerable to stress, anxiety and depression during COVID-19 pandemic: A global cross-sectional survey. *Progress in Neuro-Psychopharmacology and Biological Psychiatry*, *109*, 110236. https://doi.org/10.1016/j.pnpbp.2020.110236

Verhaak, P. F. M., Heijmans, M. J. W. M., Peters, L., & Rijken, M. (2005). Chronic disease and mental disorder. *Social Science & Medicine*, *60*(4), 789–797. https://doi.org/10.1016/j.socscimed.2004.06.012

Vleeshouwers, J., Knardahl, S., & Christensen, J. O. (2016). Effects of Psychological and Social Work Factors on Self-Reported Sleep Disturbance and Difficulties Initiating Sleep. *Sleep*, *39*(4), 833–846. https://doi.org/10.5665/sleep.5638

Wahlbeck, K. (2015). Public mental health: the time is ripe for translation of evidence into practice. *World Psychiatry*, *14*(1), 36–42. https://doi.org/10.1002/wps.20178

Wang, B., Liu, Y., Qian, J., & Parker, S. K. (2020). Achieving Effective Remote Working During the COVID-19 Pandemic: A Work Design Perspective. *Applied Psychology*, *70*(1), 16–59. https://doi.org/10.1111/apps.12290

Warszewska-Makuch, M., Bedyńska, S., & Żołnierczyk-Zreda, D. (2015). Authentic leadership, social support and their role in workplace bullying and its mental health consequences. *International Journal of Occupational Safety and Ergonomics*, *21*(2), 128–140. https://doi.org/10.1080/10803548.2015.1028230

Weyers, S., Dragano, N., Möbus, S., Beck, E.-M., Stang, A., Möhlenkamp, S., Jöckel, K. H., Erbel, R., & Siegrist, J. (2008). Low socio-economic position is associated with poor social networks and social support: results from the Heinz Nixdorf Recall Study. *International Journal for Equity in Health*, *7*(1). https://doi.org/10.1186/1475-9276-7-13

Wilson, J. M., Lee, J., Fitzgerald, H. N., Oosterhoff, B., Sevi, B., & Shook, N. J. (2020). Job Insecurity and Financial Concern During the COVID-19 Pandemic Are Associated With Worse Mental Health. *Journal of Occupational & Environmental Medicine*, *62*(9), 686–691. https://doi.org/10.1097/jom.0000000000001962

© COPYRIGHT UPM

Wok, S., & Hashim, J. (2013). Communicating and sharing working relationships with older employees. *Journal of Communication Management*, *17*(2), 100–121. https://doi.org/10.1108/13632541311318729

Wong, A. K. F., Kim, S. (Sam), Kim, J., & Han, H. (2021). How the COVID-19 pandemic affected hotel Employee stress: Employee perceptions of occupational stressors and their consequences. *International Journal of Hospitality Management*, *93*, 102798. https://doi.org/10.1016/j.ijhm.2020.102798

Wong, L. P., Alias, H., Md Fuzi, A. A., Omar, I. S., Mohamad Nor, A., Tan, M. P., Baranovich, D. L., Saari, C. Z., Hamzah, S. H., Cheong, K. W., Poon, C. H., Ramoo, V., Che, C. C., Myint, K., Zainuddin, S., & Chung, I. (2021). Escalating progression of mental health disorders during the COVID-19 pandemic: Evidence from a nationwide survey. *PLOS ONE*, *16*(3), e0248916. https://doi.org/10.1371/journal.pone.0248916

Wong, L. P., Alias, H., Md Fuzi, A. A., Omar, I. S., Mohamad Nor, A., Tan, M. P., Baranovich, D. L., Saari, C. Z., Hamzah, S. H., Cheong, K. W., Poon, C. H., Ramoo, V., Che, C. C., Myint, K., Zainuddin, S., & Chung, I. (2021). Escalating progression of mental health disorders during the COVID-19 pandemic: Evidence from a nationwide survey. *PLOS ONE*, *16*(3), e0248916. https://doi.org/10.1371/journal.pone.0248916

Xiang, Y.-T., Wang, C.-Y., Wang, Y., Chiu, H. F. K., Zhao, J.-P., Chen, Q., Chan, S. S. M., Lee, E. H. M., & Ungvari, G. S. (2010). Socio-demographic and clinical determinants of quality of life in Chinese patients with schizophrenia: a prospective study. *Quality of Life Research*, *19*(3), 317–322. https://doi.org/10.1007/s11136-010-9593-9

Yang, Y., & Islam, D. M. T. (2020). Work-life Balance and Organizational Commitment: a Study of Field Level Administration in Bangladesh. *International Journal of Public Administration*, 1–11. https://doi.org/10.1080/01900692.2020.1755684

Yeh, W. Y., Yeh, C. Y., & Chen, C. J. (2018). Exploring the public-private and company size differences in employees' work characteristics and burnout: data analysis of a nationwide survey in Taiwan. *Industrial Health*, *56*(5), 452–463. https://doi.org/10.2486/indhealth.2017-0182

YEH, W.-Y., YEH, C.-Y., & CHEN, C.-J. (2018). Exploring the public-private and company size differences in employees' work characteristics and burnout: data analysis of a nationwide survey in Taiwan. *Industrial Health*, *56*(5), 452–463. https://doi.org/10.2486/indhealth.2017-0182

Yeoh, S. H., Tam, C. L., Wong, C. P., & Bonn, G. (2017). Examining Depressive Symptoms and Their Predictors in Malaysia: Stress, Locus of Control, and Occupation. *Frontiers in Psychology*, *8*. https://doi.org/10.3389/fpsyg.2017.01411

© COPYRIGHT UPM

Yun, S., Kim, M., Lee, W.-T., Yoon, J.-H., & Won, J.-U. (2021). Irregular Work Hours and the Risk of Sleep Disturbance Among Korean Service Workers Required to Suppress Emotion. *International Journal of Environmental Research and Public Health*, *18*(4), 1517. https://doi.org/10.3390/ijerph18041517

Zamri, E. N., Moy, F. M., & Hoe, V. C. W. (2017). Association of psychological distress and work psychosocial factors with self-reported musculoskeletal pain among secondary school teachers in Malaysia. *PLOS ONE*, *12*(2), e0172195. https://doi.org/10.1371/journal.pone.0172195

Zeng, Z., Guo, Y., Lu, L., Han, L., Chen, W., & Ling, L. (2014). Mental health status and work environment among workers in small- and medium-sized enterprises in Guangdong, China-a cross-sectional survey. *BMC Public Health*, *14*(1). https://doi.org/10.1186/1471-2458-14-1162

Żołnierczyk-Zreda, D., Bedyńska, S., & Warszewska-Makuch, M. (2012). Work Time Control and Mental Health of Workers Working Long Hours: The Role of Gender and Age. *International Journal of Occupational Safety and Ergonomics*, *18*(3), 311–320. https://doi.org/10.1080/10803548.2012.11076947

Zyl, V., Chrizanne, V. E., & Rothmann, S. (2011). Job insecurity, job stress, organisational commitment and coping in private health care institutions. *South African Journal of Business Management*, *14*(1), 75–86.

© COPYRIGHT UPM

Appendix 1: Questionnaire

Date/*Tarikh*: ☐ **ID No.:** ☐

QUESTIONNAIRE/*BORANG KAJI SELIDIK*

RESEARCH TITLE/TAJUK KAJIAN:	**WORK-RELATED PSYCHOSOCIAL RISK FACTORS AND MENTAL HEALTH SYMPTOMS DURING THE COVID-19 PANDEMIC AMONG WORKING YOUTH IN KLANG VALLEY**
RESEARCHER NAME / *NAMA PENGKAJI:*	**HARRY CHONG WAI SOON**

Instructions / *Arahan*

This questionnaire contains 3 sections:

Borang kaji selidik ini mengandungi 3 bahagian:

1. Section A: Socio-demographic and work characteristics
   Bahagian A: Sosio-demografik dan ciri pekerjaan

2. Section B: Work-related psychosocial risk factors
   Bahagian B: Faktor-faktor risiko psikososial berkaitan dengan kerja

© COPYRIGHT UPM

3. Section C: Mental Health Symptoms

Bahagian C: Simptom-simptom Kesihatan Mental

Section A: Socio-demographic and work characteristics

(Bahagian A: Sosio-demografik dan ciri pekerjaan)

INSTRUCTIONS: Please tick your answer and fill in the blanks for the questions below.
ARAHAN: Sila tandakan jawapan anda dan isi jawapan di ruangan yang disediakan untuk soalan di bawah.

1) Age/ Umur: _____
2) Gender/ Jantina
   - ☐ Male/ Lelaki
   - ☐ Female/ Perempuan
3) Education level
   - ☐ Primary education/ Pendidikan rendah
   - ☐ Secondary education/ Pendidikan menengah (PMR, PT3, SPM, STPM, STAM)
   - ☐ Tertiary education/ Pengajian tinggi (Diploma, Bachelor, Master, PhD)
   - ☐ Others/ Lain-lain: _____
4) Ethnicity/ Bangsa
   - ☐ Malay/ Melayu
   - ☐ Chinese/ Cina
   - ☐ Indian/ India
   - ☐ Others/ Lain-lain: _____
5) Nationality/ Kewarganegaraan:
   - ☐ Malaysia: _____
   - ☐ Others/ Lain-lain: _____

© COPYRIGHT UPM

6) Marital Status

☐ Single/ Bujang

☐ Married/ Berkahwin

☐ Divorced, Widow or Widower / Bercerai, Janda atau Duda

7) Occupation/Pekerjaan

☐ Senior Managements/ Pengurusan Kanan

☐ Production & Operating Workers/ Pekerja Pengeluaran & Operasi

☐ Teacher & Education Related Workers/ Guru & Pekerja berkaitan dengan Pendidikan

☐ Engineers & Related Technicians/ Jurutera & Juruteknik Berkaitan

☐ Sales & Related Workers/ Jualan & Pekerja Berkaitan

☐ Office & Administrative Support Workers/ Pekerja Pejabat & Sokongan Pentadbiran

☐ Healthcare Practitioners/ Pengamal Kesihatan

8) Work Sector/ Sektor Pekerjaan

☐ Manufacturing/ Pembuatan

☐ Infrastructure and Communication/ Infrastruktur and Komunikasi

☐ Accountancy, Banking and Finance/ Perakaunan, Perbankan dan Kewangan

☐ Wholesale and Retail/ Borong dan Runcit

☐ Healthcare/ Penjagaan kesihatan

☐ Education/ Pendidikan

☐ Food, Beverage and Hospitality/ Makanan, Minuman dan Hospitaliti

☐ Others/Lain-lain: _____

9) Monthly income/ Pendapatan bulanan: RM _____

10) Do you work from home?/ Adakah anda berkerja dari rumah?

☐ Yes, 1-2 days per week/ Ya, 1-2 hari seminggu

☐ Yes, 3-4 days per week/ Ya, 3-4 hari seminggu

© COPYRIGHT UPM

☐ Yes, 5-6 days per week/ Ya, 5-6 hari seminggu

☐ No/ Tidak

11) a) Did your monthly income change during the pandemic?/ Adakah pendapatan bulanan anda berkurang semasa pandemik ini?

☐ Yes, it increases/ Ya, ia bertambah

☐ Yes, it decreases/ Ya, ia berkurang

☐ No, it remained unchanged/ Tidak, ia kekal tidak berubah

b) How many percent of your salary increases / decreases during the pandemic? / Berapa peratus kenaikan / penurunan gaji anda semasa pandemik?_____%

12) Working hours per week/ Waktu berkerja seminggu: _____ hours/ jam

13) a) Do you work overtime during this pandemic? / Adakah anda bekerja lebih masa semasa pandemik ini? :

☐ Yes/ Ya

☐ No/ Tidak

b) If yes, how many hours did you work overtime per week? / Sekiranya ya, berapa jam anda bekerja lebih masa seminggu? _____ hours

14) Working Experience/ Pengalaman Bekerja:

☐ Less than 1 year/ Kurang daripada 1 tahun

☐ 1 year to 5 years/ 1 tahun hingga 5 tahun

☐ 6 years to 10 years/ 6 tahun hingga 10 tahun

☐ More than 10 years/ Lebih daripada 10 tahun

© COPYRIGHT UPM

Section B: Work-related psychosocial risk factors

(Bahagian B: Faktor-faktor risiko psikososial berkaitan dengan kerja)

INSTRUCTION: Please choose the most suitable answer based on your current occupation during the COVID-19 pandemic. If there is no accurate choice, kindly choose the closest answer.

ARAHAN: Sila tandakan pilihan jawapan yang paling sesuai dengan pekerjaan anda semasa pandemik COVID-19. Jika anda merasakan tiada jawapan yang paling tepat, sila bulatkan jawapan yang paling hampir.

Guide/Panduan:

Hardly ever/ Tidak Hampir tidak :	At least 1 time or none in a month / Sekurang-kurangnya 1 kali atau tidak pernah dalam masa sebulan
Seldom / Jarang :	At least 1 time in two weeks / Sekurang-kurangnya 1 kali dalam masa dua minggu
Sometimes / Kadang-kadang :	At least 1 time in a week / Sekurang-kurangnya 1 kali seminggu
Often / Selalu :	2 – 3 times in a week / 2 – 3 kali seminggu
Always / Sentiasa :	Almost every day in a week / Hampir setiap hari seminggu

Hardly ever *Tidak Hampir tidak*	Seldom *Jarang*	Sometimes *Kadang-kadang*	Often *Selalu*	Always *Sentiasa*
0	1	2	3	4

1	How often do you not have time to complete all your	0	1	2	3	4

© COPYRIGHT UPM

	tasks during the COVID-19 Pandemic? *Berapa kerapkah anda tidak mempunyai masa untuk menyelesaikan semua tugasan anda semasa pandemik COVID-19?*					
2	Do you get behind with your work during the COVID-19 Pandemic? *Adakah anda ketinggalan dengan kerja anda semasa pandemik COVID-19?*	0	1	2	3	4
3	Is your workload unevenly distributed so it piles up during the COVID-19 Pandemic? *Adakah beban kerja anda semakin bertimbun disebabkan pembahagian tidak sekata semasa pandemik COVID-19?*	0	1	2	3	4
4	Do you have enough time for your work tasks during the COVID-19 Pandemic? *Adakah anda mempunyai cukup masa untuk menyiapkan tugasan kerja semasa pandemik COVID-19?*	0	1	2	3	4
5	Do you have to work very fast during the COVID-19 Pandemic? *Adakah anda perlu bekerja dengan sangat cepat semasa pandemik COVID-19?*	0	1	2	3	4
6	Do you work at a high pace throughout the day during the COVID-19 Pandemic? *Adakah anda bekerja pada kadar yang tinggi sepanjang hari semasa pandemik COVID-19?*	0	1	2	3	4
7	Is it necessary to keep working at a high pace during	0	1	2	3	4

© COPYRIGHT UPM

	the COVID-19 Pandemic? *Adakah ia perlu untuk terus bekerja pada kadar yang tinggi semasa pandemik COVID-19?*					
8	How often is your immediate superior willing to listen to your problems at work during the COVID-19 Pandemic, if needed? *Berapa kerapkah penyelia anda bersedia untuk mendengar masalah anda di tempat kerja semasa pandemik COVID-19, jika diperlukan?*	0	1	2	3	4
9	How often do you get help and support from your immediate supervisor during the COVID-19 Pandemic, if needed? *Berapa kerapkah penyelia anda membantu dan menyokong anda semasa pandemik COVID-19, jika diperlukan?*	0	1	2	3	4
10	How often does your immediate supervisor talk with you about how well you carry out your work during the COVID-19 Pandemic? *Berapa kerapkah penyelia anda dengan anda tentang seberapa baik anda menjalankan kerja anda semasa pandemik COVID-19?*	0	1	2	3	4
11	How often do you get help and support from your colleagues during the COVID-19 Pandemic, if needed? *Berapa kerapkah rakan sekerja anda membantu dan menyokong anda semasa pandemik COVID-19, jika diperlukan?*	0	1	2	3	4
12	How often are your colleagues willing to listen to your problems at work during the COVID-19 Pandemic, if	0	1	2	3	4

© COPYRIGHT UPM

	needed? *Berapa kerapkah rakan sekerja anda bersedia untuk mendengar masalah anda di tempat kerja semasa pandemik COVID-19, jika diperlukan?*					
13	How often do your colleagues talk with you about how well you carry out your work during the COVID-19 Pandemic? *Berapa kerapkah rakan sekerja anda dengan anda tentang seberapa baik anda menjalankan kerja anda semasa pandemik COVID-19?*	0	1	2	3	4
14	Are you worried about becoming unemployed during the COVID-19 Pandemic? *Adakah anda risau tentang menjadi penganggur semasa pandemik COVID-19?*	0	1	2	3	4
15	Are you worried about it being difficult for you to find another job if you become unemployed during the COVID-19 Pandemic? *Adakah anda risau tentang ia menjadi sukar untuk anda mencari pekerjaan lain jika anda menjadi penganggur semasa pandemik COVID-19?*	0	1	2	3	4
16	Are you worried about the timetable being changed (shift, weekdays, time to enter and leave ...) against your will during the COVID-19 Pandemic? *Adakah anda risau tentang jadual waktu yang diubah (syif, hari bekerja, masa untuk masuk dan pergi ...) bertentangan dengan kehendak anda semasa pandemik COVID-19?*	0	1	2	3	4
17	Do you feel that your work drains so much of your	0	1	2	3	4

© COPYRIGHT UPM

	energy that it has a negative effect on your private life during the COVID-19 Pandemic? *Adakah anda berasa yang kerja menghabiskan begitu banyak tenaga anda sehingga ia mempunyai kesan negatif ke atas kehidupan peribadi semasa pandemik COVID-19?*					
18	Do you feel that your work takes so much of your time that it has a negative effect on your private life during the COVID-19 Pandemic? *Adakah anda berasa yang kerja menghabiskan begitu banyak masa anda sehingga ia mempunyai kesan negatif ke atas kehidupan peribadi semasa pandemik COVID-19?*	0	1	2	3	4
19	Do the demands of your work interfere with your private and family life during the COVID-19 Pandemic? *Adakah keperluan kerja anda menganggu kehidupan peribadi dan keluarga anda semasa pandemik COVID-19?*	0	1	2	3	4

20a. Have you ever been exposed to verbal, physical, social or psychological abuse during the pandemic? /*Pernahkan anda terdedah kepada penderaan lisan, fizikal, sosial, psikologi semasa pandemik?*

☐ Yes/ Ya ☐ No/ Tidak

20b. If yes, how frequent are you exposed to the negative acts above?/ Jika ya, berapa kerapkah anda terdedah kepada perbuatan negative di atas?

☐ Seldom/ Jarang ☐ Often/ Sentiasa

☐ Sometimes/ Kadang-kadang ☐ Always/ Sentiasa

© COPYRIGHT UPM

Section C: Mental health symptoms

(Bahagian C: Simptom-simptom kesihatan mental)

INSTRUCTION: Please choose the most suitable answer based on your current occupation during COVID-19 Pandemic. If there is no accurate choice, kindly choose the closest answer.

ARAHAN: Sila tandakan pilihan jawapan yang paling sesuai dengan pekerjaan anda semasa pandemik COVID-19. Jika anda merasakan tiada jawapan yang paling tepat, sila bulatkan jawapan yang paling hampir.

Questions 1 to 22 / *Soalan 1 hingga 22*

These questions are about how you have been during the last 4 weeks.

Soalan-soalan ini adalah mengenai bagaimana keadaan anda selama 4 minggu terakhir.

Guide/Panduan:

Hardly ever/ Tidak Hampir tidak:		At least 1 time or none in a month / Sekurang-kurangnya 1 kali atau tidak pernah dalam masa sebulan
Seldom / Jarang	:	At least 1 time in two weeks / Sekurang-kurangnya 1 kali dalam masa dua minggu
Sometimes / Kadang-kadang	:	At least 1 time in a week / Sekurang-kurangnya 1 kali seminggu
Often / Selalu	:	2 – 3 times in a week / 2 – 3 kali seminggu
Always / Sentiasa	:	Almost every day in a week / Hampir setiap hari seminggu

© COPYRIGHT UPM

Hardly ever *Tidak Hampir tidak*	Seldom *Jarang*	Sometimes *Kadang-kadang*	Often *Selalu*	Always *Sentiasa*
0	1	2	3	4

1	How often have you slept badly and restlessly during the COVID-19 Pandemic? *Berapa kerapkah anda tidak dapat tidur dengan lena dan nyenyak semasa pandemik COVID-19?*	0	1	2	3	4
2	How often have you found it hard to go to sleep during the COVID-19 Pandemic? *Berapa kerapkah anda mendapati sukar untuk tidur semasa pandemik COVID-19?*	0	1	2	3	4
3	How often have you woken up too early and not been able to get back to sleep during the COVID-19 Pandemic? *Berapa kerap anda bangun terlalu awal dan tidak dapat tidur semula semasa pandemik COVID-19?*	0	1	2	3	4
4	How often have you woken up several times and found it difficult to get back to sleep during the COVID-19 Pandemic? *Berapa kerap anda bangun beberapa kali dan sukar untuk tidur semula semasa pandemik COVID-19?*	0	1	2	3	4
5	How often have you felt worn out during the COVID-19 Pandemic? *Berapa kerapkah anda berasa lesu semasa pandemik*	0	1	2	3	4

© COPYRIGHT UPM

	COVID-19?					
6	How often have you been physically exhausted during the COVID-19 Pandemic? *Berapa kerapkah anda mengalami kepenatan secara fizikal semasa pandemik COVID-19?*	0	1	2	3	4
7	How often have you been emotionally exhausted during the COVID-19 Pandemic? *Berapa kerapkah anda mengalami kepenatan secara emosi semasa pandemik COVID-19?*	0	1	2	3	4
8	How often have you felt tired during the COVID-19 Pandemic? *Berapa kerapkah anda berasa letih semasa pandemik COVID-19?*	0	1	2	3	4
9	How often have you had problems relaxing during the COVID-19 Pandemic? *Berapa kerapkah anda mempunyai masalah untuk berehat semasa pandemik COVID-19?*	0	1	2	3	4
10	How often have you been irritable during the COVID-19 Pandemic? *Berapa kerap anda mudah menjengkelkan* during the COVID-19 Pandemic *semasa pandemik COVID-19?*	0	1	2	3	4
11	How often have you been tense during the COVID-19 Pandemic? *Berapa kerapkah anda mudah cemas semasa pandemik COVID-19?*	0	1	2	3	4
12	How often have you felt sad during the COVID-19 Pandemic?	0	1	2	3	4

© COPYRIGHT UPM

	Berapa kerapkah anda berapa sedih semasa pandemik COVID-19?					
13	How often have you lacked self-confidence during the COVID-19 Pandemic? *Berapa kerapkah anda kurang keyakinan diri semasa pandemik COVID-19?*	0	1	2	3	4
14	How often have you had a bad conscience or felt guilty during the COVID-19 Pandemic? *Berapa kerapkan anda mempunyai hati nurani yang tidak baik atau merasa bersalah semasa pandemik COVID-19?*	0	1	2	3	4
15	How often have you lacked interest in everyday things during the COVID-19 Pandemic? *Berapa kerapkah anda kurang berminat dengan perkara harian semasa pandemik COVID-19?*	0	1	2	3	4
16	Feeling nervous, anxious, or on edge during the COVID-19 Pandemic *Berasa resah, gelisah atau tegang semasa pandemik COVID-19*	0	1	2	3	4
17	Not being able to stop or control worrying during the COVID-19 Pandemic *Tidak dapat menghentikan atau mengawal kebimbangan semasa pandemik COVID-19*	0	1	2	3	4
18	Worrying too much about different things during the COVID-19 Pandemic *Terlalu bimbang mengenai pelbagai perkara yang berlainan semasa pandemik COVID-19*	0	1	2	3	4

© COPYRIGHT UPM

19	Having trouble relaxing during the COVID-19 Pandemic *Mempunyai masalah untuk tenang semasa pandemik COVID-19*	0	1	2	3	4
20	Being so restless that it is hard to sit still during the COVID-19 Pandemic *Terlalu resah sehingga susah untuk berdiam diri semasa pandemik COVID-19.*	0	1	2	3	4
21	Becoming easily annoyed or irritable during the COVID-19 Pandemic *Mudah menjadi rimas dan menjengkelkan semasa pandemik COVID-19.*	0	1	2	3	4
22	Feeling afraid, as if something awful might happen during the COVID-19 Pandemic *Berasa takut bahawa sesuatu yang buruk akan terjadi semasa pandemik COVID-19.*	0	1	2	3	4

© COPYRIGHT UPM

Appendix 2a: Study Information Sheet and Respondent's Permission Form (English Version)

JAWATANKUASA ETIKA UNIVERSITI UNTUK PENYELIDIKAN MELIBATKAN MANUSIA (JKEUPM)
UNIVERSITI PUTRA MALAYSIA, 43400 UPM SERDANG,
SELANGOR, MALAYSIA

FORM 2.4: RESPONDENT'S INFORMATION SHEET AND INFORMED CONSENT FORM

Please read the following information carefully and do not hesitate to discuss any questions you may have with the researcher.

1. STUDY TITLE :

Work-related psychosocial risk factors and mental health symptoms during COVID-19 Pandemic among working youth in Klang Valley

2. INTRODUCTION:

COVID-19 Pandemic led to a surge of mental health problems around the world. It brings new work-related psychosocial risk factors to all workers as the nature of work have changed to adapt to the challenges faced. These work-related psychosocial risk factors contributed to mental health symptoms in the workforce, especially to the working youth. Despite being a huge part of the national workforce, working youth faced a huge problem in maintaining their mental wellbeing while struggling in their workplace during this pandemic. Therefore, this study is conducted to understand the relationship between work-related psychosocial risk factors and mental health symptoms among working youth in Klang Valley and to raise awareness on this issue

3. WHAT WILL YOU HAVE TO DO?

It is important that you read and understand this research information before agreeing to participate in this study. Your participation is voluntary and you may withdraw at any time. You will not receive any compensation from this study. If you agree to participate, you will receive a copy of this form to keep for your records. Your participation in this study is expected to be done in 15 to 20 minutes. . This study is estimated to include up to 225 participants. A set of questionnaire will be given to you if you agree to involve in this research and you are required to fill up the form in the given time. The form should be submitted back to the researcher. The questionnaire consists of 3 sections which are section A (Socio-demographic and work characteristics), section B (Work-related psychosocial risk factors) and section C (Mental health symptoms).

© COPYRIGHT UPM

4. WHO SHOULD NOT PARTICIPATE IN THE STUDY?

Youth who has chronic diseases (cancer and kidney diseases) and unemployed youth should not participate in this study.

5. WHAT WILL BE THE BENEFITS OF THE STUDY:

(a) TO YOU AS THE SUBJECT?

The information obtained from this research will help to the organisations to provide practical and reasonable prevention on the exposure of work-related psychosocial risk factors focused in this study. The result of the study may also provide context on managing psychosocial environment in the workplace and the mental wellbeing of the workers.

(b) TO THE INVESTIGATOR?

The information obtained able to provide context about work-related psychosocial risk factors and their mental health symptoms among working youth especially during public health emergencies. This information also allows the researchers to identify the relationship between work-related psychosocial risk factors and mental health problems, in addition to providing perspective of mental health intervention in the workplace for youth who work in Klang Valley.

6. WHAT ARE THE POSSIBLE RISKS?

The study will not impose any risks on you. You will be only assessed through the questionnaire provided.

7. WILL THE INFORMATION THAT YOU PROVIDE AND YOUR IDENTITY REMAIN CONFIDENTIAL?

Your information will be kept confidential by the researchers and will not be made publicly available unless disclosure is required by law. Data obtained from this study that does not identify you individually will be published for knowledge purposes. Your original records may be reviewed by the researcher, the Ethical Committee for this study, and regulatory authorities for the purpose of verifying the study procedures and/or data. Your information may be held and processed on a computer. Only research team members are authorized to access your information. By signing this consent form, you authorize the record review, information storage and data process described above.

© COPYRIGHT UPM

8. WHO SHOULD YOU CONTACT IF YOU HAVE ADDITIONAL QUESTIONS DURING THE COURSE OF THE RESEARCH?

If you have any question about this study or your rights, please contact;

i. Mr Harry Chong Wai Soon (Researcher)
Contact Number: 010-2572787
Email: chongharry1999@gmail.com

ii. Dr Sharifah Khadijah Binti Syed Ismail (Supervisor)
Contact Number: 012-2646712
Email: norkhadijah@upm.edu.my

Department of Environmental and Occupational Health
Faculty of Medicine and Health Sciences
Universiti Putra Malaysia

© COPYRIGHT UPM

*Please initial here if you have read and understood the contents of this page*_____

9. CONSENT

I …… Identity Card No. …… address……... ……..hereby voluntarily agree to take part in the research stated above *(clinical /drug trial/video recording/ focus group/interview-based/ questionnaire-based).

I have been informed about the nature of the research in terms of methodology, possible adverse effects and complications (as written in the Respondent's Information Sheet). I understand that I have the right to withdraw from this research at any time without giving any reason whatsoever. I also understand that this study is confidential and all information provided with regard to my identity will remain private and confidential.

I* wish / do not wish to know the results related to my participation in the research

I agree/do not agree that the images/photos/video recordings/voice recordings related to me be used in any form of publication or presentation (if applicable)

* delete where necessary

Signature ……..…… Signature ……..…….
(Respondent) (Witness)

Date :…….. Name :…….…..

I/C No. :…….…..

I confirm that I have explained to the respondent the nature and purpose of the above-mentioned research.

Date ……..…… Signature ……..…….
(Researcher)

© COPYRIGHT UPM

Appendix 2b: Study Information Sheet and Respondent's Permission Form (Malay Version)

JAWATANKUASA ETIKA UNIVERSITI UNTUK PENYELIDIKAN MELIBATKAN MANUSIA (JKEUPM)
UNIVERSITI PUTRA MALAYSIA, 43400 UPM SERDANG, SELANGOR, MALAYSIA

BORANG 2.4: PENERANGAN DAN PERSETUJUAN RESPONDEN

Sila baca maklumat berikut dengan teliti. Sekiranya anda mempunyai sebarang pertanyaan, sila kemukakan kepada penyelidik.

1.TAJUK KAJIAN

Faktor-faktor risiko psikososial berkaitan dengan pekerjaan dan simptom-simptom kesihatan mental semasa Pandemik COVID-19 di kalangan belia yang bekerja di Lembah Klang.

2. PENGENALAN

Pandemik COVID-19 telah menyebabkan peningkatan dalam masalah kesihatan mental di seluruh dunia. Ia membawa faktor-faktor risiko psikososial yang berkaitan dengan pekerjaan yang baharu kepada semua pekerja kerana sifat pekerjaan yang telah berubah bagi menyesuaikan diri dengan cabaran yang dihadapi. Faktor-faktor risiko psikososial yang berkaitan dengan pekerjaan menyumbang kepada simptom-simptom kesihatan mental di kalangan tenaga kerja, terutamanya kepada golongan belia yang bekerja. Meskipun belia ialah sebahagian besar tenaga kerja negara, belia yang bekerja mengalami kekangan yang besar dalam mengekalkan kesejahteraan mental mereka dan pada masa yang sama bergelut di tempat kerja mereka semasa pandemik ini. Oleh itu, kajian ini dilakukan untuk mengenal pasti hubungan antara faktor-faktor risiko psikososial yang berkaitan dengan pekerjaan dan gejala kesihatan mental di kalangan belia yang bekerja di Lembah Klang semasa Pandemik COVID-19 dan untuk meningkatkan kesedaran mengenai isu ini.

3. APAKAH YANG PERLU ANDA LAKUKAN?

Adalah penting bagi anda membaca dan memahami maklumat kajian sebelum anda bersetuju untuk menyertai kajian penyelidikan ini. Penyertaan anda adalah secara sukarela dan boleh menarik diri pada bila-bila masa. Anda tidak akan menerima sebarang pampasan daripada kajian ini. Sekiranya anda bersetuju untuk menyertai kajian ini, anda akan menerima satu salian borang selidik untuk simpanan anda. Penyertaan anda di dalam kajian ini dijangka mengambil masa 15 hingga 20 minit sahaja. Seramai 225

© COPYRIGHT UPM

orang dijangka akan menyertai kajian ini. Satu set borang selidik akan diberikan kepada anda sekiranya anda bersetuju untuk menyertai penyelidikan ini dan anda perlu melengkapkannya dalam tempoh masa yang diberikan. Anda perlu memberikannya semula kepada penyelidik. Borang selidik ini mengandungi 3 bahagian: Bahagian A (Sosio-demografik dan ciri-ciri pekerjaan); Bahagian B (Faktor-faktor risiko psikososial berkaitan dengan pekerjaan) dan Bahagian C (Simptom-simptom kesihatan mental).

4. SIAPA YANG TIDAK BOLEH MENYERTAI KAJIAN INI?

Belia yang menghadapi penyakit kronik (kanser dan penyakit ginjal) dan belia yang menganggur tidak boleh menyertai kajian ini

5. APAKAH FAEDAH MENYERTAI KAJIAN INI?

a) KEPADA ANDA SEBAGAI PESERTA?

Maklumat yang diperoleh daripada penyelidikan ini akan membantu organisasi untuk melakukan pencegahan yang praktikal dan munasabah terhadap pendedahan faktor-faktor risiko psikososial yang berkaitan dengan pekerjaan yang difokuskan dalam kajian ini. Hasil kajian ini juga dapat menberikan konteks dalam pengurusan persekitaran psikososial di tempat kerja dan kesejahteraan mental pekerja.

b) KEPADA PENYELIDIK?

Maklumat yang diperoleh daripada penyelidikan ini dapat memberikan konteks mengenai faktor-faktor risiko psikososial yang berkaitan dengan pekerjaan dan simptom-simptom kesihatan mental di kalangan belia yang bekerja terutamanya semasa kecemasan kesihatan awam. Maklumat ini juga membolehkan para penyelidik mengenal pasti hubungan antara faktor-faktor risiko psikososial yang berkaitan dengan pekerjaan dan masalah kesihatan mental, di samping memberikan perspektif intervensi kesihatan mental di tempat kerja bagi belia yang bekerja di Lembah Klang.

6. ADAKAH IA BERISIKO?

Kajian ini tidak akan mendatangkan sebarang risiko kepada anda. Anda hanya akan dinilai melalui borang soal selidik yang disediakan.

7. ADAKAH MAKLUMAT DAN IDENTITI SAYA KEKAL RAHSIA?

© COPYRIGHT UPM

Maklumat yang anda berikan akan dirahsiakan oleh kakitangan kajian. Ianya tidak akan dedahkan secara umum melainkan jika ia dikehendaki oleh undang-undang. Data yang diperolehi dari kajian ini tidak akan mengenalpasti anda secara perseorangan. Hasil kajian mungkin akan diterbitkan untuk tujuan perkongsian ilmu. Semua borang kajian dan data yang asal mungkin akan disemak oleh pihak penyelidik, Jawatankuasa Etika kajian ini dan pihak berkuasa regulatori bagi tujuan mengesahkan prosedur dan/atau data. Maklumat anda akan disimpan dalam komputer dan hanya kakitangan kajian yang dibolehkan sahaja dibenarkan untuk mendapatkan dan memproses data tersebut. Dengan menandatangani borang persetujuan ini, anda membenarkan penelitian rekod, penyimpanan maklumat dan pemprosesan data seperti yang dihuraikan di atas.

8. SIAPA YANG SAYA PERLU HUBUNGI SEKIRANYA SAYA MEMPUNYAI SOALAN TAMBAHAN SEMASA MENGIKUTI PENYELIDIKAN INI?

Sekiranya anda mempunyai sebarang persoalan tentang kajian ini atau hak anda, sila hubungi;

i. Encik Harry Chong Wai Soon (Penyelidik)

Nombor telefon: 010-2572787

Email: chongharry1999@gmail.com

ii. Dr Sharifah Khadijah Binti Syed Ismail (Supervisor)

Contact Number: 012-2646712

Email: norkhadijah@upm.edu.my

Jabatan Kesihatan Persekitaran dan Pekerjaan
Fakulti Perubatan Sains dan Kesihatan
Universiti Putra Malaysia

Sila tandatangan di sini sekiranya anda telah membaca dan memahami kandungan halaman ini _____

© COPYRIGHT UPM

9. PERSETUJUAN

Saya…… No Kad Pengenalan. …… beralamat…… ……..dengan ini bersetuju untuk mengambil bahagian secara sukarela dalam penyelidikan yang tersebut di atas *(kajian klinikal/percubaan ubat-ubatan/rakaman video/kumpulan sasaran/temuduga/ soal selidik).

Saya telah diberi penjelasan secara menyeluruh mengenai penyelidikan ini dari segi metodologi, risiko dan komplikasi (seperti tertulis pada Helaian Penerangan Responden). Saya memahami bahawa saya berhak menarik diri dari penyelidikan ini pada bila-bila masa tanpa memberi sebarang alasan.Saya juga memahami bahawa sebarang maklumat yang berkaitan identiti saya akan dirahsiakan.

Saya* berminat / tidak berminat untuk mengetahui keputusan kajian yang melibatkan saya.

I setuju/tidak bersetuju untuk imei/gambar/rakaman video/ rakaman suara digunakan dalam apa jua bentuk penerbitan atau pembentangan. (sekiranya berkaitan).

*potong yang tidak berkenaan

Tandatangan ……..…… Tandatangan ……..…….
(*Responden*) (*Saksi*)

Tarikh :…….. Nama :……..…..

No. K/P: ……..…..

Saya mengesahkan bahawa saya telah menerangkan kepada responden ini sifat dan tujuan penyelidikan yang tersebut di atas.

Tarikh ……..…… Tandatangan ……..…….
(*Penyelidik*)

© COPYRIGHT UPM