ASSESSMENT OF MENTAL HEALTH OF WORK FROM HOME EMPLOYEE DUE TO MOVEMENT CONTROL ORDER

DUAN JIN

RESEARCH REPORT SUBMITTED TO THE

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RESEARCH REPORT SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF SAFETY HEALTH AND ENVIRONMENT ENGINEERING

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Field of Study: **Risk assessment**

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ASSESSMENT OF MENTAL HEALTH OF WORK FROM HOME EMPLOYEE DUE TO MOVEMENT CONTROL ORDER

ABSTRACT

The emergence of COVID-19 has crossed the borders at a speedy rate and has infected more than 80 million people from the worldwide. The emergence of lockdown and new norms has drawn the public's attention to the economic recession and lifestyle changes. However, the public neglected their mental health at the same time. At the early stage of the Movement Control Order (MCO), we conducted a pre-survey on the psychosocial hazards faced resulted from work from home concept during the MCO. Among the responds collected from 67 respondents, the most feedbacks obtained are 89.55% of respondents complained their working environment at home is poor and not suitable for long hours of working while 67.16% of them complained that their psychosocial issues arise from working alone at home for long hours and lack of social events. 44.78% of respondents complained that household chores and disruption from family members make them mentally stressed. As for mental stress, ZUNG Anxiety Self-Assessment scale was used to assess the employees' anxiety level and the psychosocial safety climate was introduced to assess employees' satisfaction towards their employers. The questionnaire was given out through an online platform and 95 responds were collected. According to the data analysis by SPSS software, we found that anxious symptoms do occur through participants. The most vulnerable group was assigned to the female employee, an employee with bigger household size and higher education level among our analysis. To improve employees' mental health, the employer can pay more effort towards these vulnerable groups in psychosocial safety climate perspective by enhancing organization participation and involvement.

Key words: COVID-19; work from home; mental health; ZUNG Self Anxiety Assessment Scale; Psychosocial Safety Climate

PENILAIAN KESIHATAN MENTAL PEKERJA BEKERJA DARI RUMAH DENGAN PERINTAH KAWALAN GERAKAN

ABSTRAK

Kemunculan COVID-19 telah menular dengan pantas dan telah menjangkiti lebih daripada 80 juta orang dari seluruh dunia. Kemunculan langkah lockdown dan norma baru telah menarik perhatian masyarakat terhadap kemelesetan ekonomi dan perubahan gaya hidup. Namun, orang ramai mengabaikan kesihatan mental mereka pada masa yang sama. Pada peringkat awal Perintah Kawalan Pergerakan (PKP), bahaya psikososial yang dihadapi akibat dari konsep kerja dari rumah semasa PKP ini. Di antara maklum balas yang dikumpulkan daripada 67 responden, maklum balas yang paling banyak diperoleh adalah 89.55% responden yang mengadu persekitaran kerja mereka di rumah dalam keadaan yang buruk dan tidak sesuai untuk berjam-jam bekerja sementara 67.16% dari mereka mengadu bahawa masalah psikososial mereka berpunca daripada bekerja sendirian di rumah untuk berjam-jam dan kekurangan acara sosial. 44.78% responden mengadu bahawa kerja rumah tangga dan gangguan daripada ahli keluarga menjadikan mereka mengalami tekanan mental. Bagi tekanan mental, skala Penilaian Kendiri Kecemasan ZUNG digunakan untuk menilai tahap kegelisahan pekerja dan iklim keselamatan psikososial diperkenalkan untuk menilai kepuasan pekerja terhadap majikan mereka. Soal selidik diberikan melalui platform dalam talian dan 95 responden dikumpulkan. Menurut analisis data oleh perisian SPSS, kami mendapati bahawa gejala bimbang berlaku ataspeserta. Kumpulan yang paling terdedah adalah pekerja wanita, pekerja dengan saiz isi rumah yang lebih besar dan tahap pendidikan tinggi. Untuk meningkatkan kesihatan mental pekerja, majikan perlu berusaha lebih terhadap golongan yang disebutkan, dan dalam perspektif iklim keselamatan psikososial dengan meningkatkan penyertaan dan penglibatan organisasi.

Kata Kunci: COVID-19; bekerja dari rumah; kesihatan mental; Skala Penilaian Kecemasan Diri ZUNG; Iklim Keselamatan Psikososial

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MCO : Movement Control Order

WFH : Work From Home

ASA : Anxiety Self-Rating Assessment

PSC : Psychosocial Safety Climate

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CHAPTER 1:INTRODUCTION

1.1 Background of the Study

Coronavirus disease 2019(COID-19) is a new type of lung infection caused by severe acute respiratory syndrome coronavirus 2(SARA-CoV-2). SARA-CoV-2 got a high possibility of infectious and has already spread around the world. The Chinese government classified COVID -19 as B class contagious disease while taking the class's prevention and control measures of an infectious disease. As for 29 December 2020, 105,096 people have been infected, and 452 have died due to COVID-19 in Malaysia.

According to the Emergency Committee by the WHO Director-General under the International Health Regulations (IHR) (2005) recommendations, the World Health Organization announced on 30 January 2020 that the outbreak already constitutes a Public Emergency of International Concern (PHEIC). Symptoms of COVID-19 mainly include fever, fatigue, and dry cough. Moreover, severe cases may be got posthaste develop to acute respiratory distress syndrome and multiple organ failure.

Originating from 15 March 2020, Malaysia saw a significant jump in infection cases. Then the Prime Minister of Malaysia held a live nationwide telecast on 16 March 2020 at 10:00 pm (UTC+8) announce to implement the Movement Control Order (MCO). Furthermore, the government state that schools and non-essential businesses are required to be shut down, and this stringent policy continued until the implementation of the Conditional Movement Control Order on 4 May 2020. Under CMCO, it is estimated that 6.64 million people, or close to half of the country's workforce, have returned to work since the conditional MCO.

According to the Special Survey on Effects of COVID-19 on Economic & Individual Round 2, the Department of Statistics Malaysia shows 42.6% of responses within 41,386 of participants need to work from home according to the government requirement. And according to this, we found that 39.3% of employees need to work from home during

MCO despite those employers and own-account workers for the period 10 - 24 April 2020. Department of Statistics, Malaysia. (2020, July).

MCO remained until the implementation of the Conditional Movement Control Order on 4 May. Under CMCO, it is estimated that 6.64 million people, or close to half of the country's workforce, have returned to work.

In the beginning stage of the pandemic, the ordinary public was more concerned about their health condition and the risk of infection because of an unknown virus's appearance. Publics were still in the adaptive stage for working at home and using a digital online platform to carry out daily work, to get used to the new normal as soon as possible. While some of the workers are dismissed or asked to take unpaid leave, the pressure brought by poor or sharply decreased economic levels will follow.

Due to the poor state of the economy, some employers are forced to suspend business temporarily, while worse must declare bankruptcy. Although the government's requirement in the CMCO and the subsequent recovery phase that they can resume business activities as usual by following the SOP formulated by the Ministry of health, and which has brought some relief to the employers and employees, while the healthy and positive environment in the economic market are far less active than before the pandemic. Furthermore, since 30 September, the six-month loan remission and repayment period have also been announced to end. Although banks and the Perikatan Nasional government agree to adopt a more extension and targeted approach that more focus on groups and truly need it. The government tries to help reduce the pressure on enterprises and individuals. Simultaneously, it still causes economic pressure on many organizations and individuals to a certain extent, leading to the rise of public anxiety level and causes a silent mental illness pandemic among the messes.

At the same time, people who have not returned to the workplace are also likely to have depression and anxiety symptoms. Shi et al. (2020) found that among those who returned

to work, those who worked at home had a higher risk of mental health symptoms than those who did not. Engaging in work activities can spread from concentration about epidemics. Compared with working at home, interpersonal interaction in routine work can reduce depression and reduce the risk of mental disorders (Stafford et al., 2008; R. Wang et al., 2018). This study reveals that although employees work from home, we should still pay attention to their mental health problems. Simultaneously, maintain a good psychosocial safety climate to reduce the increase of anxiety caused by the psychological pressure caused by infectious diseases and work from home.

COVID-19 is a respiratory disease and may also pose challenges to mental health, such as anxiety, depression, and post-traumatic stress disorder (Shigemura et al., 2020; Tandon, 2020). Mental health is one of the most neglected areas of public health. According to the World Health Organization, nearly one billion people suffer from mental illness. Three million people die each year from the harmful use of alcohol. One person dies by suicide every 40 seconds. However, according to the World Health Organization, more than 75% of people with mental, neurological, and drug abuse disorders in low-income and middle-income countries do not receive any treatment at all. As a result, almost no one in the world has access to high-quality mental health services.

During the pandemic, given the existing stigma, discrimination, disturbance in health services, and gaps in access to mental health services, mental disorder data on a global scale will only rise, not falling. In an article entitled "This is not a normal mental health disaster" published in the Atlantic (Stern, 2020), the author discusses how the psychological impact of COVID-19 will be sustained in the long run through the facts and lessons learned from the fact that more than 40% of SARS survivors experienced shocking mental illness (the most common being depression and schizophrenia) after the 2003 SARS pandemic (Lam et al., 2009), the appeal the government and organizations to pay more effort to manage the impact of COVID-19 on mental health.

As the world continues to respond to COVID-19, addressing the pandemic's further impact on mental health is critical both for organizations and individuals. Ignoring the mental health impact of COVID-19 can profoundly impact social, mental health and lead to a catastrophic secondary health crisis, which may last for a long time after the pandemic subsides.

In conclusion, this paper attempts to assess the anxiety level of general employees during the epidemic period by using the self-anxiety assessment scale and evaluate the satisfaction degree of public as employees for the internal safety and social atmosphere of their organizations during the period of pandemics by psychosocial safety climate assessment scale and then to explore the correlation between various factors.

1.2 Problem Statement

The psychological turmoil from this pandemic disaster will exist in the subconscious for a long time and even affect routine work and life in the future.

The Public Health Emergencies that come from the COVID-19 disaster will also cause some negative impact on the health, safety, and well-being of both individuals (causing a sense of insecurity, confusion, emotional isolation, and stigma) and communities (economic losses, closure of office and school, insufficient resources for medical services and inadequate distribution of basic daily necessities). Uncertain infection detection; the extreme shortage of medical protection resources; the implementation of unfamiliar restrictive public health protects measures; huge and growing economic losses; as well as various kinds of information from media that are difficult to distinguish the true and the false, will unintentionally lead to widespread emotional distress among the people, thus affecting the mental health of the masses.

For now, we are unfortunately to see that this unprecedented twine crisis -health and economic-has caused significant changes in life and livelihoods of many people around the world, and Malaysia has not been spared in this disaster. With the rapid increase of

unemployment rate, underemployment of graduates, rising levels of anxiety, fear, and other negative emotions, gender induced inequality, and many other problems have become increasingly acute with the spread of the pandemic. Moreover, all these will directly or indirectly influence all Malaysian public's mental health, which will reverse impact the national economy.

Therefore, it is imperative to conduct research about employee's anxiety levels and assess their satisfaction with their organization's psychosocial safety climate.

1.3 Objective

The main objectives of this work :

1. To explore the anxiety status and satisfaction with Psychosocial Safety Climate of their organization through a questionnaire survey for employees of different gender, age, and other demographic characteristics.
2. To explore the characteristics that may be the possible causes for the appearance of anxiety symptoms through Work from Home employees.
3. To explore the correlation between demographic information with questionnaire result from Self-rating Anxiety Assessment scale, Psychosocial Safety Climate Assessment scale through SPSS software.
4. To give suggestion according to the correlation we explored before head to help policymakers to put forward more targeted policy for vulnerable groups.

1.4 Scope of the study

This study investigates the anxiety levels of Malaysian employees' who need to work from home after implementing the movement control order. Therefore, this study intends to exclusively address employees who work in the sectors that the government gave and need to work from home during MCO.

A questionnaire will be mailed out, which will include both demographic information, SAS-scale, and PSC-scale. Therefore, we will collect the results of this research from employees involved in work from home policy.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

When it comes to major emergencies, we often use the death toll, economic loss, building destruction rate, ecological damage, and other indicators to measure the loss of disasters, but it is easy to ignore the vast psychological pain behind these figures.

After the Wenchuan earthquake in China, many Chinese scholars investigated the victims' psychological status after the earthquake. They found that most people will have a psychological imbalance after the earthquake, which causes a negative impact on post-disaster reconstruction. After the earthquake, Zhao (2009) conducted a psychological survey on 780 victims after the earthquake and found that 30.0% of the victims had acute stress disorder. Luo (2008) issued a questionnaire to the people in the disaster area and visited a large number of residents on the spot. It was found that 45.9% of the residents had acute stress disorder. Salari et al. (2020) conduct research based on several databases with the keyword “prevalence of stress and anxiety in the general population during the COVID-19 pandemic". The results showed that the spread of COVID-19 caused physical health problems and affected the mental health of different groups of people worldwide and even led to mental diseases of people all over the world. Therefore, during the COVID-19 pandemic, while maintaining individual mental health, organizations, and institutions as well as the government, are best committed to developing psychological interventions that can improve the mental health of vulnerable groups.

According to this series of data, we can intuitively reflect the impact of major emergencies on the public, not only in the damage of physical health but also the damage to the publics' mental health. When major emergencies come, such as natural disasters or the rapid spread of epidemics such as COVID-19, which will threaten people's lives, we will experience a deep sense of helplessness, which cannot be changed by our recoverability. If public’s psychological quality is weak and they are not helped in time,

they will experience a variety of negative emotional experience, which will lead to an increase in the suicide rate, slow down the pace of reconstruction work, and affect the overall development of society.

And the worldwide and rapid spread of COVID-19 is conclude by Wang (2017) :

(1) It is endangering the safety of public life and property. When public emergencies occur, the public is not fully prepared. The first thing is the threat of public life and economic losses, for natural disasters and other events will also destroy the living environment, traffic interruption, the destruction of public facilities and so on.

(2) It affects the mental health of the public. The occurrence of emergencies has a great impact on public psychology. Negative emotions such as fear, depression, and anxiety will spread among the crowd. The main psychological impact of the event factors on people is a psychological stress disorder. In the process of the incident, the individual's survival and self-protection instinct are fully reflected, the conflict to the collective consciousness and mutual aid and cooperation behavior, and the reduction of the trust degree of the government organization will affect the relationship and psychology of the masses and endanger the mental health of the public group.

(3) It will affect social stability and economic development. The stability and development of society need the public's overall harmony and mutual assistance, as well as stable production and living activities. If public emergencies occur frequently, people live in anxiety and panic and lose trust in society and government; it is impossible to carry out normal production activities. Even under the temptation and stimulation of some saboteurs, a group-derived emergency may occur, causing secondary harm to society and the public, and then it is more unfavorable to maintain a stable social environment and economic development.

(4) It is harmful to the public trust of government functional departments. In the emergency management of emergencies, the public trust of government functional departments plays an important role. After the occurrence of an emergency, whether there is a good emergency response plan, whether it can deal with the crisis timely and effectively, and whether it can protect public life and property safety as much as possible will significantly impact the government's public credibility. If emergencies occur frequently, all kinds of rumours spread everywhere, disturbing people's hearts, it will inevitably disturb the regular social order and increase society's unstable elements. Therefore, the functional departments of the government must pay attention to it, make a timely attitude to stabilize people's minds, timely release crisis information, and actively do a good job in information communication with the public, guide the public opinion correctly, and fully show the government's integrity, ability, and responsibility, so as to help maintain and improve the trust of the government and social stability.

2.2 Research About Mental Health During COVID-19

Generally, in the general community and primary health care institutions, the most common mental disorders are depression and anxiety disorder (Goldberg & Huxley, 1992). Anxiety and depression are also the primary mental health causes of disability in the global disease burden (World Health Organization, 2001). A population-based cross-sectional study from Patel & Kleinman (2003) shown that poor and marginalized people are at higher risk of developing common mental disorders. This conclusion has undoubtedly been verified during this pandemic.

Since the pandemic, the research on the new coronavirus has become a hot topic for scholars worldwide. At present, more recent attention has focused on the provision of follows: The mechanism of the infection and treatment of COVID-19 (Dinakaran et al., 2020; Huang et al., 2020; Minielly et al., 2020; Rodriguez Morales et al., 2020; Yang et al., 2020). Simultaneously, some researchers study the psychological changes of different

groups of people (mainly including healthcare providers, students, and other specific occupations) during the epidemic period to explore the psychological impact of the epidemic on human beings that can not be ignored.

Anxiety and depression account for a large proportion of the global burden of disease. Murray (1996) speculated that it would become the second most common cause of disability by 2020. On the premise that the pandemic's rapid and extensive spread has a great impact on the economy and daily life. These effects have the possibility that may translate into a series of emotional reactions (such as pain or abnormal mental state), unhealthy behaviors (such as excessive drug use), and diseases that do not comply with public health directives (such as Violation of the quarantine) are associated with the overall prevalence rate. Extensive research on disaster mental health has confirmed that emotional distress is prevalent among the affected population, and this finding will undoubtedly be echoed in those affected by the COVID19 influenza pandemic.

Finding and establishing certainty is essential for human beings to obtain a sense of security after a disaster. On the contrary, when human beings face the risk of uncertainty, the most primitive anxiety and fear are more likely to be activated.

In the face of the public's fear, the ability to deal with the negative emotions will increase. Meanwhile, in the face of this unknown virus, the brain's instinctive intuition can easily lead the public to lose the rational response-ability, thus expanding the fear and anxiety, by which these negative emotions will increase with the uncertainty.

Medical staff as the first audience during the big event, the research on mental health of medical staff emerged in an endless stream. Chew et al. (2020) conduct research on medical staff working with COVID-19 patients from five major hospitals in Singapore and India, who were invited to participate in the study. The questionnaire collected information on demographics, medical history, symptom prevalence in the past month, depression, anxiety, stress scale (DASS-21), and event impact scale revision (IES-R). He

said that during the COVID-19 outbreak, there was a significant correlation between the incidence of physical symptoms and psychological outcomes of medical staff.

Research from Kang et al. (2020) revealed that although the psychological status of 994 medical staff who participated in his questionnaire survey had significantly been affected during the epidemic period, the limitations of psychological health care services provided by psychologists and psychiatrists led to their failure to get psychological assistance in time.

Meanwhile, some researchers believe that adolescents' mental health problems should also be paid attention to as a psychologically vulnerable group during the epidemic period. Nurunnabi et al. (2020) conducted an online questionnaire survey on the anxiety status of Chinese college students affected by the spread of COVID-19 and their respective coping strategies after their school's closure. The survey results showed that 66.90% of the students reported experiencing "normal" anxiety, while 23.80% of the students called it "severe to extreme". Research from Zhou et al. (2020) shows that the government should pay more attention to teenagers' mental health while attacking COVID-19. Their results also showed that the prevalence of mental health problems was high among 8079 adolescents aged 21-18, which was negatively correlated with the cognitive level of COVID-19. Qi et al. (2020) surveyed the effect of social support on Chinese adolescents' mental health. The survey results show that the prevalence of mental health problems is high among adolescents with low and medium social support levels. From this study, we can also make reasonable conjectures that employees who work from home are more likely to have mental health problems due to lack of social support. Also, as for the general public, without any specificity, research from Wang et al. (2020), Jiang et al. (2020), Du et al. (2020) all shown that in the final stage of COVID-19 lock-in, a large proportion of general Chinese population reported symptoms of depression, anxiety and increased stress.

However, few researchers have focused on the role of employees played by ordinary people. According to the survey from the Department of Statistic, Malaysia, 41,386 participants over the age of 16, 65.4 % of respondents were still working while 42.6 percent need to work from home by the end of April 2020 (Report on Special Survey Effects of COVID-19 on Economy and Individual Round-2, 2020). However, according to researcher, people who work at home have a higher risk of mental health symptoms than those who do not work at home. Engaging in work activities can spread information about epidemics. Compared with working at home, interpersonal interaction in routine work can reduce depression and reduce the risk of mental disorder (Stafford et al., 2008; R. Wang et al., 2018).

During the pandemic, workers' health should include their physical aspects and pay the same attention to mental health problems. The overall health of workers will be greatly improved by paying more attention to employees' psychological status within the organization. However, suppose these two aspects are not taken care of. In that case, workers' burnout and uncontrollable pressure may lead to high absenteeism, poor labor relations, lack of motivation, and personal problems such as financial and family troubles, which may affect the organization's productivity(Shi et al., 2020). According to the WHO (2020), depression and anxiety have a significant global economic impact, which could cost US$1 trillion (RM4.2 trillion) per year in lost productivity.

Therefore, during the pandemic, the research on the psychological health status of employees and the PSC support from the organization is of positive significance for the organization and government to release psychological assistance or policy help in the pandemic's recovery stage.

2.3 Psychosocial Safety for Employee

Swetha & Kumar’s survey found that the earnings per share of large enterprises in the world are 3.9 times higher than that of general enterprises. The reason is that the

employees of large enterprises are more engaged in work and more dedicated. However, Bakker & Schaufeli (2015) pointed out that at present, most employees in various organizations around the world are not fully engaged in their own work.

Every enterprise wants their employees to put 100% efforts into their work to create maximum benefits for the enterprise as much as possible. While good mental health conditions, enthusiasm, and positive attitude of employees are the primary premise to achieve organizational performance. Therefore, how to encourage employees to fulfill their duties and devote more attention to their work is not only a difficult problem to be solved for all enterprises at ordinary times, but also a key issue worthy of attention in today's poor mental health condition caused by the rampant development of epidemic diseases.

"Psychosocial safety climate" is a hot topic in the field of safety organization management in recent years. It is not only a specific organizational atmosphere, but also an important organizational resource. It refers to the corresponding policies and specific practices and procedures formulated by the organization to protect the mental health and safety of employees, which can effectively prevent the possible social hazards in the workplace (M. F. Dollard & Bakker, 2010).

Dollard et al. (2012) defined psychosocial safety climate as the support, attention, and commitment of senior managers in the aspect of stress prevention and maintenance. More relevant studies have shown that psychosocial safety climate can effectively relieve the pressure rise from work, improve employees' happiness (Silla & Gamero, 2018), reduce the damage caused by mental health problems, reduce workplace bullying behavior, and improve employees' work engagement level (Law et al., 2011) and job satisfaction (Hall et al., 2013).

Due to the change of external conditions (the spread of epidemics), the members of the organization have an unbalanced understanding of the requirements of the organizational

environment and their own coping capacity, which leads to the physical and mental stress of the members of the organization. If the manager can not adjust the management policy accordingly according to this abnormal state, it will lead to the increase of employees' work pressure, such as role pressure, communication pressure, career development pressure, etc. These work pressures can lead to loss of confidence, increase anxiety and tension, reduce job satisfaction and performance, loneliness, depression, over sensitivity, or withdrawal from a relationship.

The "theory of psychosocial safety climate" established by M. Dollard & Mcternan (2011) shows that the psychosocial safety climate can provide protection and relief function in the process of employees' stress, so as to reduce the possibility of mental health problems and enhance the work engagement of employees. Law et al. (2011) proposed that the psychosocial security climate has a negative correlation with the work requirements (bullying and harassment in the workplace) and has a negative correlation with the mental health problems of employees. At the same time, the psychological and social security climate has a positive correlation with work resources through the positive correlation between psychosocial safety climate and work engagement. Finally, the psychosocial safety climate can alleviate the negative impact of bullying on mental health and work enthusiasm. Lenthall et al. (2009) investigated two groups of nurses working in remote areas at different time dimensions and concluded that nurses had higher occupational stress, including psychological distress and emotional exhaustion. They pointed out that job requirements, job control, and social support can predict the psychological stress of employees, and the psychosocial security climate is often associated with the low level of job requirements, high level of work resources supply, and social support. Therefore, the psychosocial safety climate will play a primary role in the prevention of psychological pressure.

In the view of all that has been mentioned so far, one may suppose that the psychosocial safety climate will directly affect the psychological status of employees. psychosocial safety climate can reduce the harm to employees' mental health by alleviating the negative effect of work pressure. At the same time, the psychosocial safety climate has a primary preventive effect on the psychological pressure of employees. Moreover, to a certain extent, the psychosocial safety climate can be used as a kind of work resources to enhance the employee's work engagement, and then reduce the harm caused by the abnormal working state to the employee's mental health. A high level of psychosocial safety climate has positive promoting effect on all kinds of positive behaviors of employees and the restraining effect of negative behaviors.

To conduct a questionnaire about the psychosocial safety climate, we can verify does employees satisfy with their present psychosocial safety climate of their own organization. Furthermore, to explore whether there is a correlativity between the degree of anxiety and the level of psychosocial safety climate.

2.4 Gender Difference During The COVID-19 Epidemic

With the development of society, more and more women have entered the labor market, and the status of women has increased year by year. However, since the epidemic, the inequality caused by gender has become increasingly acute. From “Statistics On Women Empowerment In Selected Domains, Malaysia” (2019), the proportion of ‘women as Professional and Technical Workers and Estimated Earned Income’ were less than men. Also as working women do more household work during the epidemic period and face increasing job insecurity, meanwhile women's ability to balance time between work and life in all areas is reduced. (Bradshaw, 2015; Bradshaw & Fordham, 2015; Mondal, 2014).

In the field of health care, women's labor force accounts for 75% of the total labor market (UNDP, 2020). Naturally, compared with men, women will undoubtedly be disproportionately affected by COVID-19 (Wenham et al. 2020). Due to the growth of

epidemic cases and the shortage of medical personnel(McLaren et al., 2020). In China, due to the sudden increase in work pressure, overwork, and inadequate protective measures during the epidemic period, the sense of frustration caused by the patient's illness has led to the emergence of health problems in the social baptism of medical staff. Moreover, in Sri Lanka, the problem is more acute due to discrimination from the community, which leads to health staff suffering unequal access to public resources such as public services, transportation, and local markets (Fonseka et al., 2020)

At the same time, no & Smith conducted a survey on the local child-care system in the UK. The results showed that women bear a greater burden of parenting in the family due to COVID-19 (No & Smith, 2020). More than that due to the closure of schools and education institutions, children need to study at home, and thus parents need to spend more time supervising their children (UN, 2020). No & Smith, (2020) also pointed out that 65.3% of childcare work in general families is done by mothers, including physical protection, supervision, feeding, education, reading, and accompanying. Compared with survey that run in the UK2015-15 time use survey (UKTUS), the difference between men and women is more obvious for the caretaker situation on weekdays and weekends. No & Smith pointed out that the share of childcare for women is 60% during weekdays and 73% during the weekend.

Although there are some researchers found that male parenting shares have increased slightly since COVID-19 in Vietnam and Australia, while the gender equity caring burden in both countries is not progressive (Craig et al., 2019; Wenham et al., 2020). In the academic productivity field, the research result from Cui et al, (2020) suggested that although the total research productivity increased by 35%, female academics' productivity dropped by 13.9% relative to that of male academics. And This widening gap is due to the impact of the pandemic, as women tend to pay more time for parenting

and housework. While all these physical and mental health impacts will affect women's productivity and their career prospects (Wenham et al., 2020).

From statistic data from *Country Fact Sheet | UN Women Data Hub*, (2019), in Malaysia, as of February 2019, women and girls over the age of 15 spend 19.1% of their time on unpaid care and housework, compared with 6% for men. From the statistical data "Statistics On Women Empowerment In Selected Domains, Malaysia" (2019) by DEPARTMENT OF STATISTICS MALAYSIA, Percentage of 'women as Professional and Technical Workers and Estimated Earned Income' were all less than men. As a result, women are also more likely to work on part-time job, usually because of existing parenting or other family responsibilities. This has also led many couples to decide to let women, not men, take a back seat during the epidemic. Wage statistics on different genders show that women are still at a disadvantage compared with men. Although both mothers and fathers face short-term family and work time reorganization. But in the long run, these changes in productivity will affect careers, and those who take less responsibility for care become the protagonists.

In modern world, gender inferiority and intimate partner violence are the key risk factors for female common mental disorders (Patel et al., 2006). Article from Sri (2020) shows that Talian Kasih (the national crisis hotline set up to respond to members of the public facing social issues) reported that the hotline of aid calls has soared by 57%, most of whom are seeking for help related to aid enquiries. By which we can see in Malaysia, mental disorders among women during the pandemic may have developed due to domestic violence. The sociodemographic data from Wang et al.(2020) show that the outbreak has a greater psychological impact on women, as well as higher levels of stress, anxiety, and depression. This finding is consistent with previous epidemiological studies, which found that women have a higher risk of mental-disorder (Lim et al., 2018; Hou et al., 2020).

On the daily work routine, positive working conditions can even offset unfavorable family arrangements. Specifically, a high degree of autonomy and low time pressure on work reduces the pressure on women to balance work and family and the negative impact on childcare needs. Thus, in this particular time that women who are already vulnerable and not treated fairly are being treated more unfairly because of the epidemic.

A research from Zhang & Liu (2020) find that: (1) the mental health level of female workers with children is significantly lower than that of the corresponding male groups; (2) the mental health level of women with minor children is the lowest among all the working groups; (3) especially the women who work at home with minor children face more trade-offs between work and children, and their mental health is significantly lower than that of other working groups.

Given the existing inequalities, the specific impact of COVID-19 and how these effects can be exacerbated, managers must take into account the existing vulnerability of women. Otherwise, with the needs of over half of the population not met, it is likely that any recovery from COVID-19 will be far off, it may even lead to new derivative problems.

2.5 Conclusion

The LITERATURE REVIEW of this research is composed of four parts: the research on the mental health of the people after the disaster in history; the study on the psychological state during the pandemic; the importance of psychosocial safety climate in good condition of ordinary people as the labor force in their respective organizations; the research on women as a vulnerable group under the disproportionate impact during the COVID-19 pandemic.

According to our literature survey after the catastrophic events in history, we found that It is very important to conduct research for the mental health of the public. Research on the mental health of the disaster victims will be helpful to the treatment in the stage of disaster recovery of the psychological disorders such as anxiety and depression caused

by the disaster. Therefore, this research conduct research on the psychological state during the period of MCO in Malaysia. Then, through the research on the psychological status of researchers in various countries during the pandemic, it is found that most scholars focus their research on the psychologically vulnerable groups such as medical staff or teenagers. Not much researcher studies the psychological status of the general public as the labor force. This paper studies the mental health status of the public as employees. Then, through the inequality of the impact of this pandemic, further research on female employees is carried out.

CHAPTER 3: METHODOLOGY

3.1 Introduction

This chapter explains the Methodology of this search, shows the solution procedure which is how we use different research methodology to conduct the research, how to use SPSS software to analysis the responses we collected, and use different to handle different kinds of data we collected.

The research methodology used in this study is a mixed-method methodology which combine quantitative and qualitative methodology. In the first stage of the study, on an online interview, a qualitative research methodology is used to explore the factors causing employees' distress during the period of work from home.

And then in the second stage of the study, ZUNG-Self Anxiety Assessment Scale is used to explore whether work from home leads to employees' anxiety, and through Psychosocial Safety Climate Scale to explore the organization's support for employees' psychosocial safety climate during work from home. Also, through the survey, we found that married women will be active as vulnerable groups during the pandemic. Therefore, in the process of data analysis, we focus on the analysis of gender, marital status, and other family-related factors.

Through qualitative and quantitative methods, on the basis of confirming that employees are indeed troubled by mental health problems, this paper explores the relationship between anxiety and satisfaction of the psychosocial security atmosphere. Detail questionnaire question and the classification of demographic information were all shown in appendix.

3.2 Research Design

The purpose of this research is to explore the influence of work from home on employees' mental health. Thus, in the early stage of the study, we should first determine the employees' attitudes on it. Therefore, in the first stage of research data collection, we

use qualitative research methodology and conduct an interview. By this interview, we intend to explore what the employees who work at home think have problems or hazards on the way to work in the early stage of MCO. Participants gave answers in the form of a free description. After that, we summarized and classified the participants' descriptive words into different types of hazards shown in Figure 3.1. According to the results of the interview, we found that among these hazards that troubled the participants, the top 3 most hazard is: physical problem (40%) consists by awkward working position, lack of work out and others; mental stress (29%) come from psychosocial stress and mental stress

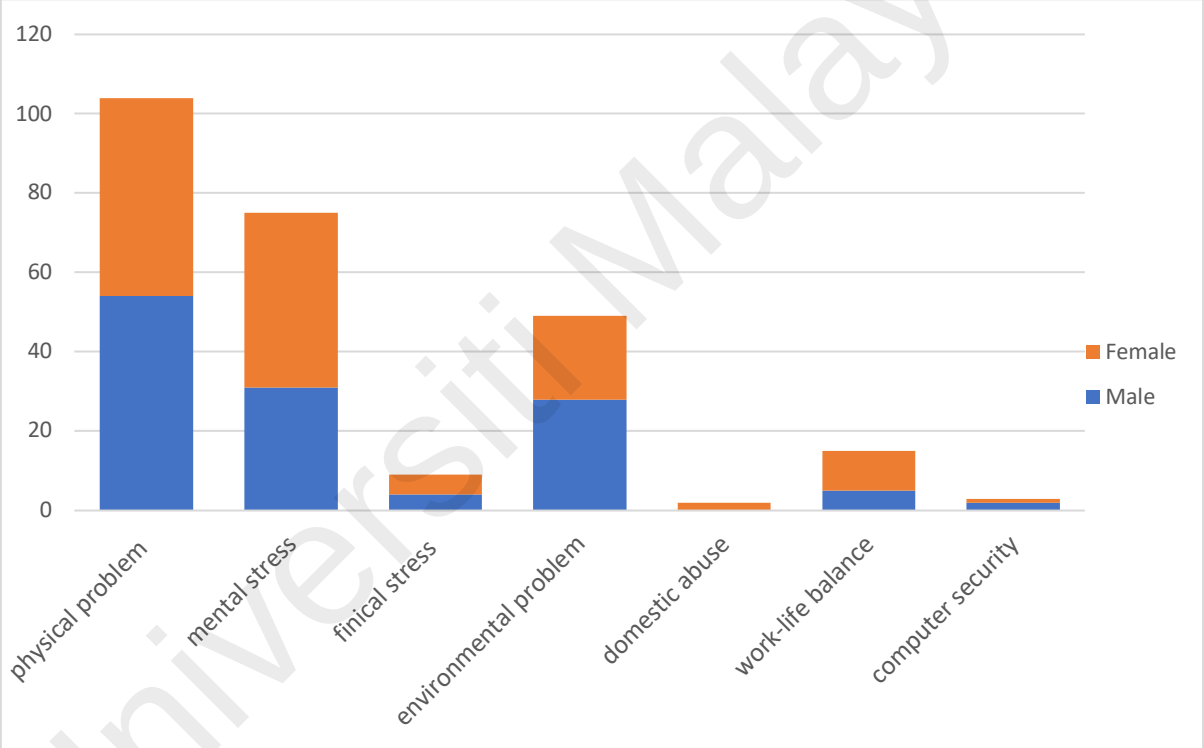

Figure 3.1: Hazards during work from home

from other family members; and environmental stress (19%) comes from noise, lack of safety insurance system form fire or any emergency during work time.

After the first phase of the study, we found that mental stress is certainly bothering employees who work from home. Therefore, in the second stage of data collection, we collect responses through an online questionnaire survey by using SASs and PSCs. The questionnaire survey is divided into three parts: demographic information, Zung Self-Rating Anxiety Scale (SAS), and Psychosocial Safety Climate Scale. Before answering

the questions, participants were asked to read the instructions at the beginning of the questionnaire carefully, so as to clarify the confidentiality and requirements of the questionnaire and answer the questions truthfully. 93 valid questionnaires were excluded. To transform qualitative research into quantitative research, the students' scores of each question were counted and the scores were calculated.

3.2.1 ZUNG Self-Rating Anxiety Scale (SAS)

In part 1 we use the ZUNG-Anxiety-Self-assessment scale to assess an employee's anxiety level. ZUNG-Anxiety-Self-assessment is a scale by which can assess employee's anxiety level. ZUNG developed an assessment device with 20 self-assessment questions, this 20-item scale has a wide range of applications and good reliability and validity. These scales have been used by many searches around the world to measure anxiety and depression (Biggs et al., 1978; Dave et al., 2014; Deb et al., 2013; Gabrys & Peters, 1985)。In this scale, the 4-point Likert scale (Likert, 1932)was used to evaluate each item (e.g. 1 = never or occasionally, 4 = always) and 5 of them are reverse scoring. The score of the SAS-scale did not show the clinical diagnosis of anxiety disorder, but rather indicated the level of anxiety that might be detected by clinical diagnosis. Non-anxious individuals usually scored <40, whereas a score of 40–60 indicated depressive and anxious symptoms and a score of 60 indicated the presence of a depression/anxiety of clinical significance (Parissis et al., 2008; Parker et al., 1984; Shiotani et al., 2002). In this study, the alpha coefficient of the Cronbach scale was 0.884.

3.2.2 Psychosocial Safety Climate Scale (PSC)

To explore do employees keep in good organization Psychosocial safety climate, we use PSC-26, which is comprised of four subscales: management commitment, organizational communication, management priority, and organizational participation.

Relevant studies have shown that PSC can effectively relieve the pressure rise from work, improve employees' happiness (Silla & Gamero, 2018), reduce the damage caused

by mental health problems, reduce workplace bullying behavior, and improve employees' work engagement level (Law et al., 2011) and job satisfaction (Hall et al., 2013). Idris et al. (2012) also used roughly the same measurement scale for both physical and psychosocial safety climate and found both scales to be reliable. Zadow et al., (2017)through the combined investigation of PSCs and other questionnaires, it was found that the maintenance of PSC in good condition can reduce the effect of business injury and improve the effect of injury reporting to a certain extent.

To develop a psychological health workplace, conduct effective measurement on PSC can be a clear starting point. PSC may be an effective intervention target to address the psychological health problems (i.e., reducing stress, anxiety, and depression) of workers and to improve positive worker motivation (i.e., increase resources and work engagement).

3.3 Participants and Distribution Status

At the early stage of MCO, we conduct a pre-survey about work from home condition and hazards during this period when employees need to work from home. And had collect 67 reply which include 34 females and 33 males, among this 67 reply, top 3 of factor that participants complain with is: 89.55%(60 person) of participants complain about their poor working environment at home is not suitable for long time working during work from home, 67.16%(45 person) complains about their psychosocial is not in good condition which mostly due to long time work from home alone and lack of social events, 44.78%(30 person) complains about that family chores and other family members makes them mentally stressed.

After pre-survey, from 1 November ~ 31 December, we given out questionnaires through Gmail and other online platforms and collect 95 replies include 40 (%) males and 55 (%) females. This questionnaire includes 3 parts: demographic information, Zung Self-Rating Anxiety Scale (SAS), Psychosocial Safety Climate assessment scale. Criteria for selecting the subject is that the participants in both surveys were employees employed by any organization or company and had worked at home during MCO.

CHAPTER 4:Results and Discussion

From the criteria set in Chapter 3, we collect 67 replies that include 34 females and 33 males in pre-interview, while since the preliminary interview is only used as an intention survey, there is no further statistical analysis on the data results of the pre-interview. For the formal research start, we have given questionnaires through Gmail and other online platforms and collected 95 replies by including 40 (%) males and 55 (%) females. Among these responses, two of them answered the same answers to all the questions, so these two participants' results were deleted, and 93 valid samples were obtained.

4.1 Reliability Analysis

Whether the questionnaire questions can reflect the purpose and intention of the survey and whether the questionnaire measures the same content and information. Simultaneously, for the reliability of the questionnaire's data, we must do the reliability analysis before the analysis starts. The reliability itself does not correlate with the accuracy of the questionnaire results. Its purpose is to test the stability of the questionnaire itself. In reliability analysis, the Cronbach α coefficient is often used to measure the reliability of the questionnaire. Generally, if the reliability coefficient of the questionnaire is above 0.9, the reliability of the questionnaire survey is great; if the reliability coefficient is above 0.8, it is acceptable; if the reliability coefficient is below 0.7, the questionnaire should be revised; if the reliability coefficient is lower than 0.5, the survey results of this questionnaire are very unreliable. The reliability of 93 questionnaires was evaluated by SPSS software. The results are as follows(Table 4.1):

Table 4.1: Reliability Analysis

	Cronbach's Alpha	**N of Items**
Psychosocial Safety Climate Scale	0.968	26
ZUNG-Anxiety-Self assessment Scale	0.884	20

From the reliability test results above, *the Cronbach's alpha* for both PSC scale and SAS scale > 0.8, indicating that the scale has acceptable reliability and good internal consistency.

4.2 Validity Analysis

The questionnaire with good reliability does not necessarily have acceptable validity, so after the reliability analysis, it is necessary to continue to test the validity of these 93 scale responses. Although SAS and PSC are both mature scales, the PSC dimension is known, thus AMOS (Arbuckle & Wothke, 1999) is selected for confirmatory factor test, while SAS dimension is unknown, so SPSS is selected for Exploratory Factor Analysis.

4.2.1 Exploratory Factor Analysis

Before factor analysis model is used in validity analysis for SAS-scale, KMO and Bartlett's Test should be carried out on questionnaire data first. The analysis results are shown in Table 4.2:

Table 4.2: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.834
Bartlett's Test of Sphericity	**Approx. Chi-Square**	822.315
	df	171
	Sig.	.000

As shown in Table 4.2, the questionnaire *KMO* > 0.8, *SIG* < 0.001, passed the KMO and Bartlett's Test at significance level of 0.05 (Pedroso et al., 2013). This result indicates that this scale is suitable for exploratory factor analysis. The results of the exploratory factor analysis are shown in Table 4.3:

Table 4.3 : Rotated Component Matrix

	Component					
	1	2	3	4	5	6
Q3	.863					
Q4	.803					
Q1	.750					

Table 4.3, continued

	Component					
	1	2	3	4	5	6
Q2	.686					
Q8	.604					
Q7		.768				
Q14		.684				
Q19		.680				
Q6		.647				
Q9			.787			
Q5			.784			
Q13			.760			
Q16				.818		
Q11				.720		
Q12				.573		
Q17					.760	
Q18					.712	
Q15					.546	
Q10						.713

NOTE:

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
A Rotation converged in 7 iterations.

According to the exploratory analysis of SPSS, for participants' responses to the SAS scale, 19 dimensions have been divided into six dimensions. The first dimension includes Q1, Q2, Q3, Q4, Q8; the second dimension includes Q6, Q7, Q14, Q19; the third dimension includes Q5, Q9, q13; the fourth dimension includes Q11, Q12, Q16; the fifth dimension includes Q15, Q18, Q17; the sixth dimension includes Q10. It can be seen from the rotated factor load matrix in the table above that all the 19 items in the SAS scale are valid. We also found that the SAS-scale has both reliability and validity, and the collected data can reflect participants' anxiety status very truly and accurately.

4.2.2 Confirmatory Factor Analysis

Confirmatory factor analysis is generally been divided into combinatorial validity, convergent validity, and discriminant validity. By importing data from PSC scale to AMOS, we get the overall goodness-of-fit tests coefficient table as shown in Table 4.4

Table 4.4: Goodness-of-fit tests coefficient

X2	df	X2/df	RMSEA	IFI	CFI
706.517	293	2.411	.107	.841	.839

According to the table above, in the results of AMOS Confirmatory factor analysis, *X2 / df* < 3 thus the adaptation is ideal; *RMSE* = 0.107 the adaptation is slightly larger; IFI and CFI are close to 0.9. in general, the original model fits well(Brown, 2015; Byrne, 2010). Then we get the Standardized Regression Weights from AMOS calculation as Table 4.5:

Table 4.5: Standardized Regression Weights

Route	Estimate	AVE	CR
A10<---F1	0.876	0.6961	0.9575
A9<---F1	0.797		
A8<---F1	0.903		
A7<---F1	0.878		
A6<---F1	0.874		
A5<---F1	0.517		
A4<---F1	0.856		
A3<---F1	0.878		
A2<---F1	0.871		
A1<---F1	0.824		
B5<---F2	0.516	0.3818	0.7067
B4<---F2	0.893		
B3<---F2	0.23		
B2<---F2	0.921		
B1<---F2	0.86		
C6<---F3	0.482	0.4956	0.8448

Table4.5, continued

Route	Estimate	AVE	CR
C5<---F3	0.788		
C4<---F3	0.848		
C3<---F3	0.335		
C2<---F3	0.78		
C1<---F3	0.825		
D1<---F4	0.826		
D2<---F4	0.848		
D3<---F4	0.779	0.6422	0.8994
D4<---F4	0.719		
D5<---F4	0.828		

As we can see from table 4.5, there are four latent variables (organizational participation and involvement, organizational communication, management priority, management support, and commitment) which hold Regression Weights greater than 0.7 for most of the questions, which indicates that each latent variable is representative for the topic of PSC-scale. Besides, the *Average Variance Extracted (AVE)*of each latent variable is close to or greater than 0.5, and the *Composite Reliability (CR)* is greater than 0.7, which indicates that the convergent validity is ideal. Following this, we need to calculate Item Discrimination among the latent variables. Therefore, we combine the four latent variables into different models through different combinations and test their discrimination validity through Amos software. The results are shown in Table 4.6.

From the table, the fitting indexes of other models are worse than those of the original model, and this result has passed the significance test with the significance at 0.001 level—indicating that the original model's discriminant validity is up to the standard.

In conclusion, the combinatorial validity, convergent validity, and discriminant validity of the PSC-scale are all acceptable, and thus we can use these to conduct a more in-depth study to explore the correlativity of these factor.

Table 4.6: Discriminant validity

NO	Model	X2	df	X2/df	RMSEA	IFI	CFI	model compare	ΔX	dp
1	original model	706.517	293	2.411	.121	.841	.839			
2	three-factor model-1	718.751	296	2.428	.125	.835	.833	2 vs 1	12.234***	3
3	three-factor model-2	721.371	296	2.437	.125	.834	.820	3 vs 1	14.854***	3
4	three-factor model-3	730.271	296	2.467	.126	.834	.832	4 vs 1	23.754***	3
5	two-factor model	741.347	298	2.488	.127	.817	.815	5 vs 1	34.839***	5
6	one-factor model	786.984	299	2.632	.133	.789	.787	6 vs 1	80.467***	6

NOTE：

*** Correlation is significant at the 0.01 level

one-factor model: F1, F2, F3, F4

three-factor model-1: F1+F2, F3, F4

three-factor model-2: F1, F2+F3, F4

three-factor model-3: F1, F2, F3+F4

two-factor model: F1+F2, F3+F4

one-factor model: F1+F2+F3+F4

4.3 Sample Distribution

According to the 93 samples collected, more detailed sample distribution is shown in Table 4.7:

Table 4.7: Demographic characteristics of the sample (*N* = 93)

	Frequency	Percent
Female	54	58%
Male	39	42%
20 ~ 29 years old	52	56%
30 ~ 39 years old	29	31%
40 ~ 49 years old	12	13%
Single	57	61%
Married/living with a significant other	35	38%
Divorced	1	1%
have child 16 years and under	24	26%
have child older than 16	5	5%
have no child	64	69%
more than 6 people	20	22%
3-5 people	52	56%
3-5 people	6	7%
1 person	15	16%
Public	16	17%
Private	77	83%
Full time	87	94%
Part time	6	7%
PhD	1	1%
Masters	24	26%
Bachelor	61	66%
degree	7	8%
Less than 30 hours	6	7%
30-40 hours	23	25%
41-50 hours	43	46%
More than 50 hours	21	23%

According to the sample distribution shown in the table above. A total of 93 people were selected for the survey, and all the subjects were employees working in Malaysia. From the statistical data, it can be clearly seen that more than male, there are 54 participants are female, accounting for 58% of the total sample, were involved in the survey; the participants were mainly 20-29 years old include 52 participants. From the perspective of marital status, status as parent and household size, 57 of the participants were single, accounting for 61% of the total number; 64 of the participants had no children, accounting for 69% of the total number; 52 of the participants had a household size of 3-5, accounting for 56% of the total number; 94% of the participants were working full-time, and 83% of the participants were employed in private sector; For education level, 61 participants had bachelor education, accounting for 66% of the total.

4.4 Descriptive Statistics

According to the 93 questionnaires received, SAS scale is named as A, PSC scale is named as B. the dimensions of questionnaire A are AF1, AF2, AF3, AF4, AF5, AF6; the dimensions of questionnaire B are BF1, BF2, BF3, BF4. After calculating the specific data of the above 10 dimensions, the descriptive statistics are shown in Table 4.8:

Table 4.8: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
AF1	93	1	3	1.73	.416
AF2	93	1	3	1.53	.636
AF3	93	1	3	1.63	.475
AF4	93	1	3	1.70	.420
AF5	93	1	3	1.58	.547
AF6	93	1	3	1.58	.547
BF1	93	1	5	3.05	1.036
BF2	93	1	5	3.08	.992
BF3	93	1	5	3.14	.842
BF4	93	1	5	3.10	.990

From the descriptive analysis results above, it can be clearly seen that the average score of all anxiety dimensions of participants is around 1.5. From the quantitative standard (e.g., 1 = never or occasionally, 4 = always), we can infer that the anxiety of 93 participants in this survey is in the middle stage of never or occasionally and sometimes. According to the PSC scale results of the participants, the scores of the four dimensions are all around 3, and the scoring standard can be concluded that the participants are in the middle stage of neutral and agree on the well-organized PSC status, as shown in Figure 4.1 below：

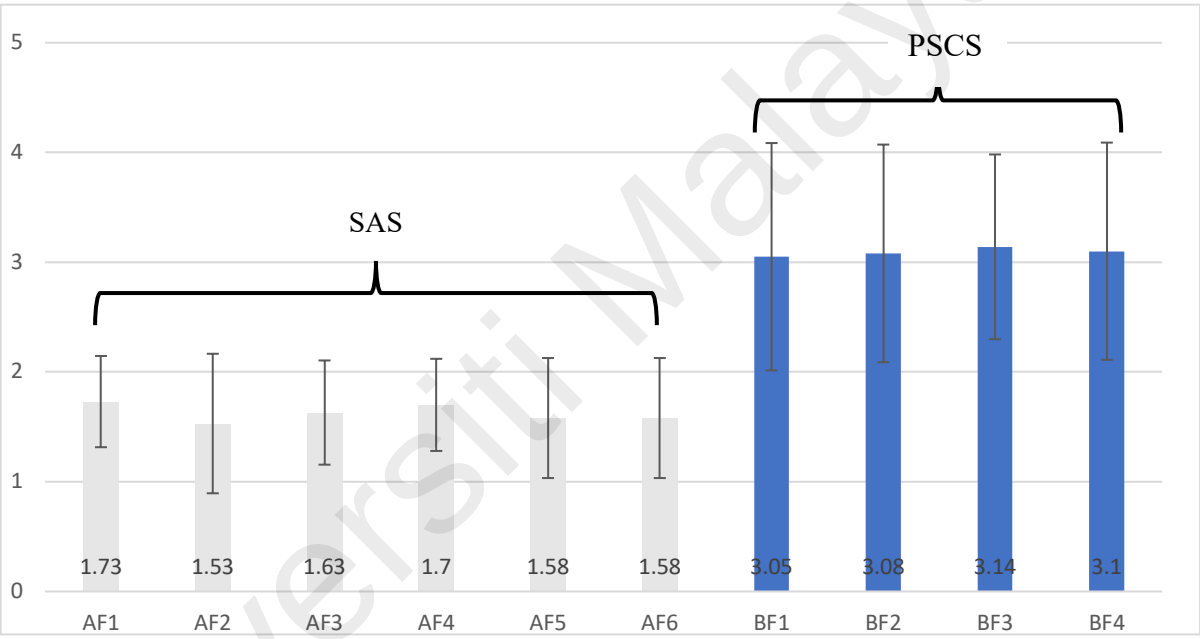

Figure 4.1: Average Grades ± SD

4.5 Differential Analysis

According to SPSS compare means program, the average scores of participants with different characteristics were obtained. The results showed that among these 93 participants, the average total score of SAS scale in different genders was 32.32, compare with the criterion score of SAS-scale said that total score more than 40 will be indicated depressive and anxious symptoms, the average score of samples in this survey was below the standard. At the same time, for SAS scale, the score of women was slightly higher than that of men, which indicated that women had higher possibility of depressive and anxious symptoms during the WFH. For the average score of SAS scale, the participants

with household size of more than six had the highest score (M = 33.8), followed by those aged 40~49 (M = 33.17). This finding is also applicable to the PSC scale average score, with the lowest score (M = 2.85) for the participants with a household size of more than six, followed by the participants aged 40~49 (M = 3.08). A detailed table of these data is shown in appendix.

4.5.1 Independent-Samples *t* Test

The independent-samples t test compares the means of two independent samples. Samples are independent if there is no relationship between them (generally meaning each participant provides data for only one sample). And since that gender, Organization sector and employment nature are two types, to comparing the differences between these two groups, independent sample t-test was selected as the statistical method. The results are as follows:

Table 4.9: Independent-Samples *t* Test

	Female	Male	T	Sig.
AF1	1.8 ± 0.456	1.64 ± 0.337	1.693	0.094
AF2	1.65 ± 0.677	1.36 ± 0.537	2.21	0.03*
AF3	1.73 ± 0.522	1.5 ± 0.369	2.309	0.023*
AF4	1.78 ± 0.465	1.59 ± 0.326	2.108	0.038*
AF5	1.69 ± 0.592	1.43 ± 0.443	2.289	0.024*
AF6	1.69 ± 0.592	1.43 ± 0.443	2.289	0.024*
SAS	32.31 ± 7.192	29.05 ± 7.623	2.106	0.038*
BF1	3.13 ± 1.047	2.95 ± 1.025	0.83	0.409
BF2	3.06 ± 0.998	3.1 ± 0.995	-0.224	0.823
BF3	3.11 ± 0.904	3.18 ± 0.756	-0.385	0.701
BF4	2.96 ± 1.063	3.28 ± 0.857	-1.546	0.126
PSC	3.19 ± 0.992	3.26 ± 0.91	-0.354	0.724

An independent-samples t test comparing the mean scores of the gender and found a significant difference between the means of the two groups. And the T between gender and AF2, AF3, AF4, AF5, AF6, SAS are all significant ($p<.05$). The mean grades

of SAS-scale of the male were significantly lower (M = 29.05, sd =7.623) than the mean of the female (M = 32.31, sd = 7.192), which indicate that female holds higher possibility of anxiety during this epidemic.

Then for the differences between the scores of each dimension, organization sector and employment nature, through independent sample t-test, it is found that there is no significant difference between these two variables and each dimension, so the data is not listed in the text, and the specific analysis results are shown in the appendix.

4.5.2 ONE-WAY ANOVA

The one-way ANOVA compares the means of two or more groups of participants that vary on a single independent variable. When we have three groups ANOVA compensates for these multiple comparisons and gives us a single answer that tells us if any of the groups is different from any of the other groups.

Due to that age, marital status, status as a parent, household size, education level and total working hour both had more than two class, and to compare the difference between multiple classes, we use this ONY-WAY ANOVA statistical techniques to compare. Result was shown in Table 4.10:

Table 4.10: ANOVA (A)

	Education level					
	1	2	3	4	F	sig.
AF1	1.77 ± 0.36	1.77 ± 0.441	1.5 ± 0.459	1.67 ± 0.416	1.925	0.131
AF2	1.35 ± 0.489	1.65 ± 0.683	1.17 ± 0.408	1.47 ± 0.636	1.953	0.127
AF3	1.56 ± 0.391	1.71 ± 0.511	1.33 ± 0.38	1.57 ± 0.475	1.558	0.205
AF4	1.7 ± 0.361	1.75 ± 0.449	1.44 ± 0.423	1.63 ± 0.42	1.116	0.347
AF5	1.45 ± 0.434	1.68 ± 0.589	1.25 ± 0.38	1.52 ± 0.547	1.804	0.152

Table 4.10, ANOVA (A) continued

	1	2	3	4	F	sig.
AF6	1.45 ± 0.434	1.68 ± 0.589	1.25 ± 0.38	1.52 ± 0.547	1.804	0.152
SAS	33.8 ± 5.736	31.29 ± 6.763	26.5 ± 7.868	27.73 ± 7.511	2.764	0.047*
BF1	2.6 ± 1.046	3.19 ± 0.908	3.33 ± 1.366	3.07 ± 1.036	1.78	0.157
BF2	2.85 ± 1.04	3.15 ± 0.826	3.33 ± 1.366	3 ± 0.992	0.609	0.611
BF3	2.95 ± 0.999	3.17 ± 0.76	3.5 ± 1.049	3.13 ± 0.842	0.726	0.539
BF4	2.9 ± 1.252	3.13 ± 0.864	3 ± 1.265	3.27 ± 0.99	0.447	0.72
PSC	2.85 ± 1.04	3.31 ± 0.805	3.33 ± 1.366	3.33 ± 0.954	1.258	0.294

Note :

1 : PhD
2 : Masters
3 : Bachelor
4 : Diploma

(B)

	Total working hour					
	1	2	3	4	F	Sig.
AF1	2 ± .	1.83 ± 0.368	1.69 ± 0.447	1.76 ± 0.252	3.042	0.033*
AF2	2 ± .	1.79 ± 0.721	1.43 ± 0.59	1.43 ± 0.535	2.223	0.091
AF3	2 ± .	1.81 ± 0.482	1.56 ± 0.476	1.6 ± 0.302	1.926	0.131
AF4	2 ± .	1.83 ± 0.383	1.64 ± 0.445	1.71 ± 0.233	1.256	0.295
AF5	2 ± .	1.8 ± 0.594	1.49 ± 0.525	1.51 ± 0.409	2.158	0.099
AF6	2 ± .	1.8 ± 0.594	1.49 ± 0.525	1.51 ± 0.409	2.158	0.099
SAS	24 ± .	32.92 ± 8.272	30.11 ± 7.097	32.43 ± 8.121	1.183	0.321
BF1	4 ± .	3.08 ± 1.248	3.02 ± 0.975	3.14 ± 0.9	0.321	0.81
BF2	4 ± .	3.08 ± 1.06	3.05 ± 0.99	3.14 ± 0.9	0.308	0.819
BF3	3 ± .	3.17 ± 1.007	3.13 ± 0.785	3.14 ± 0.9	0.019	0.996
BF4	3 ± .	2.96 ± 1.16	3.13 ± 0.957	3.29 ± 0.756	0.263	0.852
PSC	4 ± .	3.21 ± 1.062	3.21 ± 0.933	3.14 ± 0.9	0.234	0.873

Note :

1 : Less than 30 hours
2 : 30-40 hours
3 : 41-50 hours
4 : Above 50 hours

(C)

	Household size					
	1	2	3	4	F	sig.
AF1	1.77 ± 0.36	1.77 ± 0.441	1.5 ± 0.459	1.67 ± 0.416	1.925	0.131
AF2	1.35 ± 0.489	1.65 ± 0.683	1.17 ± 0.408	1.47 ± 0.636	1.953	0.127
AF3	1.56 ± 0.391	1.71 ± 0.511	1.33 ± 0.38	1.57 ± 0.475	1.558	0.205

Table 4.10, ANOVA (C) continued

	1	2	3	4	F	sig.
AF4	1.7 ± 0.361	1.75 ± 0.449	1.44 ± 0.423	1.63 ± 0.42	1.116	0.347
AF5	1.45 ± 0.434	1.68 ± 0.589	1.25 ± 0.38	1.52 ± 0.547	1.804	0.152
AF6	1.45 ± 0.434	1.68 ± 0.589	1.25 ± 0.38	1.52 ± 0.547	1.804	0.152
SAS	33.8 ± 5.736	31.29 ± 6.763	26.5 ± 7.868	27.73 ± 7.511	2.764	0.047*
BF1	2.6 ± 1.046	3.19 ± 0.908	3.33 ± 1.366	3.07 ± 1.036	1.78	0.157
BF2	2.85 ± 1.04	3.15 ± 0.826	3.33 ± 1.366	3 ± 0.992	0.609	0.611
BF3	2.95 ± 0.999	3.17 ± 0.76	3.5 ± 1.049	3.13 ± 0.842	0.726	0.539
BF4	2.9 ± 1.252	3.13 ± 0.864	3 ± 1.265	3.27 ± 0.99	0.447	0.72
PSC	2.85 ± 1.04	3.31 ± 0.805	3.33 ± 1.366	3.33 ± 0.954	1.258	0.294

Note :

1 : more than 6 people

2 : 2 people

3 : 3-5 people

4 : one person

We computed a one-way ANOVA comparing the difference between participants with different household size and education level. A significant difference was found (F= 2.764, $p < .05$). This analysis revealed that participants with bigger household size scored higher ($M = 33.8$, $sd = 5.736$) than participants who have lower household size ($M = 27.73$, $sd = 7.511$). then for the difference between different education level, result shown that participants who had higher education level scored higher ($M = 33.8$, $sd = 5.736$) compare with participants who have lower education level (M = 23.73, sd = 7.511). higher score represents higher frequency of depressive and anxious symptoms.

While for the difference between the score and age, marital status and status as a parent were not significant. Therefore, this part of the data is not put in the text, refer to appendices for more detail data.

4.6 Association Analysis

4.6.1 Pearson correlation coefficient analysis

The Pearson correlation coefficient (sometimes called the *Pearson product-moment correlation coefficient* or simply the *Pearson r*) determines the strength of the linear relationship between two variables. Pearson correlation coefficient is used to test the correlation between two continuous numerical variables, thus we selected Pearson correlation coefficient to explore the correlation between SAS-scale and PSC-scale.

For the relation between the SAS-scale and sub-dimension of PSC-scale, result was shown in Table 4.11. In this part we represent the total score of SAS-scale as a factor, to explore the correlation between these total grades with sub-item of PSC-scale, instead of discussing the relationship between sub items in SAS-scale with sub-items in PSC-scale. Similar but not same, for the relationship between SAS-scale grades and the sub item of PSC (Organizational Participation and Involvement, Organizational communication, Management Priority, Management Support and Commitment) also a moderate negative correlation we found ($r(91) = -0.408$, $p < .001$, $r(91) = -0.393$, $p < .001$, $r(91) = -0.425$, $p < .001$, $r(91) = -0.441$, $p < .001$).

The conclusion states the direction (negative), strength (moderate), value (around 0.4), degrees of freedom (91), and significance level (< .001) of the correlation. In addition, a statement of direction is included (higher in anxiety grades tends to lower in PSC grades for both dimension).

Table 4.11: Pearson Correlation Coefficient Result (SAS-scale and PSC-scale)

	SAS	BF1	BF2	BF3	BF4	PSC
SAS	1					
BF1	-.408**	1				
BF2	-.393**	.853**	1			
BF3	-.425**	.777**	.769**	1		
BF4	-.441**	.748**	.712**	.714**	1	
PSC	-.498**	.923**	.902**	.842**	.818**	1

Table 4.12: Spearman's Correlation Coefficient

	G	HS	EL	TWH	AF1	AF2	AF3	AF4	AF5	AF6	SAS	BF1	BF2	BF3	BF4	PSC
G	1	0.111	0.068	.411**	-0.18	-.219*	-.211*	-0.198	-.210*	-.210*	-.253*	-0.073	0.05	0.061	0.194	0.055
HS		1	-0.027	0.116	-0.087	0.009	-0.055	-0.068	-0.055	-0.055	-.373**	0.171	0.088	0.101	0.102	0.17
EL			1	0.188	-0.127	-.230*	-.205*	-0.16	-.208*	-.208*	-2.74*	-0.019	0.014	-0.01	0.108	-0.002

4.6.2 Spearman correlation coefficient analysis

The Spearman correlation coefficient determines the strength of the relationship between two variables. It is a nonparametric procedure. Therefore, it is weaker than the Pearson correlation coefficient, but it can be used in more situations. Spearman correlation coefficient is used to test the correlation between question which is ordinal (with rank) from low to high and scale items or two ordinal single choice items. Therefore, a Spearman rho correlation coefficient was calculated for the relationship between SAS-scale, PSC-scale, and demographic variables. And the result can be seen from Table 4.12:

A weak negative correlation was found in Table 4.12, indicating a significant relationship between the two variables. female participants tends to give higher grades for both AF2(rho (91) = -0 .219, P < .05), AF3(rho (91) = -0 .211, P < .05), AF5(rho (91) = -0 .210, P < .05), and AF6(rho (91) = -0 .210 , P < .05). Also, the female participants tend to get higher grades in SAS-scale. From this we also found that for anxiety level and household size, a weak negative correlation was found (rho (91) = -0 .373, P < .001) , which shows that participant with bigger household size will hold higher anxiety grades in SAS-scale and the participants living alone showed the lowest level of SAS-scale grades. Furthermore, from this table we also found that education level will significantly influence the grader of the sub-dimension of SAS-scale, which indicate that the participants with higher education level will give higher grades for both AF2(rho (91) = -0 .23 , P < .05), AF3(rho (91) = -0 .205 , P < .05), AF5(rho (91) = -0 .208, P < .05), and AF6(rho (91) = -0 .208 , P < .05).

While for total working hours, age, marginal status, status as a parent, organization sector and employment nature, an extremely weak correlation that was not significant was found. Indicate that there has no significant influence on these variables, so they are not shown in body paragraph and detail information was shown in appendix.

4.7 Summary

According with the whole analyzing progress and the result shown that for reliability and validity analysis, results shown that:

1. These two questionnaires are all in great reliability. And this conclusion was verified by that both Cronbach's Alpha for these two scales is around 0.9.
2. For exploratory factor analysis, result of KMO is around 0.8, which represents that the validity of these two questionnaires are all acceptable.

From the reliability and validity test result shown that the data collected can reflect participants' anxiety status in both truly and accurately dimension. For differential analysis, we choose two different analysis method for different samples, independent t test and ONE-WAY ANOVA test. The analysis result shown that:

1. Independent-Sample t test shown up that for sample without any internal relationship, gender will significantly influence the mean grades of self-rating anxiety scale. This result is evident in the mean grades for female (32.31 ± 7.192) and male (29.05 ± 7.623).
2. ONE-WAY ANOVA test result shown that for samples more than two groups, both education level and household size will significantly influence the grades of SAS. Participants with higher education level (PHD) and household size (more than 6 people), get higher grades (33.8 ± 5.736; 33.8 ± 5.736) in SAS.

From association analysis, we use Pearson Correlation Coefficient analysis and Spearman Correlation Coefficient analysis.

1. Pearson Correlation Coefficient analysis result reveal that grades for SAS will significantly influence the grades for PSC scale. Participant holds higher grades in SAS will get lower grades for there satisfaction in organization's psychosocial safety climate. And the association between these two variables was moderate (-0.498) at $P<.001$.

2. Spearman Correlation Coefficient analysis result shown that gender, household size and education level have a weak negative correction with SAS. And this result can echo with the analysis result of ONE-WAY ANOVA test.

CHAPTER 5:CONCLUSION AND LIMITATION

5.1 Conclusion

This research indicate that female employees tend to get higher grades in SAS-scale. It shows that women are more prone to psychological stress when facing emergencies. which is consistent with the previous research results(Qiu et al., 2020). Also, the proportion of high education level samples is higher than that of low education level samples, which may be related to the high education level group paying more attention to their mental health. The sample with larger household size (more than 6 people) had a higher incidence of anxiety, which may be related to the increased anxiety level caused by the stress of family members due to the long stay at home caused by WFH.

We use a internationally recognized and widely used scale to assesses anxiety state and thus the results were reliable and can truly reflect the anxiety level of Malaysian residents during WFH. From the result of this study, we found that among the demographic information of participants, gender household size, education level and total working hours have a significant correlation between PSC scale and anxiety level which is in accord with past research. Among serval dimension of PSC-scale, organizational participation and involvement ($R(91) = -0.441$, $P < 0.001$) had the highest correlation with SAS-scale result.

Through the information above, indicates that for policy maker, when providing psychological assistance to employees after the epidemic, on the basis of psychological counselling for general employees, it should provide extra assistance to female group, large household size group and high education level group. When comes to psychosocial safety climate, enhance organization participation and involvement for organization may help to reduce the anxiety level of employees to a certain extent, and the specific measures can be shown in the following aspects: encourage employees to become involved in psychological safety and health matters in organization or involve all level of organization

into stress prevention. Only when there are more departments and personnel involved in the post disaster recovery plan, to maintain the mental health and safety of employees, and improve the participation of employees at all levels, can we maintain the well-being of employees to the greatest extent and keep them in good mental health.

5.2 Shortness of this research

This research holds serval limitations. In the view of limited available resources and the sensitivity of the outbreak of COVID-19, we adopted the snowball sampling strategy. Snowball strategy is not a random selection based strategy and the sample selected by this approach does not truly reflect the actual pattern of the population. Moreover, it is more ideal if we can conduct a prospective study of the same group of participants after a period of time however due to the ethical requirements of anonymity and confidentiality, we are not allowed to collect the contact information and personal information of the respondents.

The second shortness of this research is that due to Specific peer networks (such as unmarried groups or students) are oversampled, leading to a selection bias, and thus the conclusion may not be extended through the population with a lower education level. Furthermore, this is an online survey, and we used the convenience sampling method. In addition to posting questionnaires through online platforms. The main response subjects were among young and highly educated Internet users; therefore, the sample's representativeness may be limited. To a certain extent, the participants of the questionnaire will be focused on some specific groups, which is not statistically significant for people who seldom use the Internet and have a low education level.

In the view of the reliability of the scale, the status of mental health symptoms is based on the self-report of the respondents rather than clinical diagnosis. Furthermore, Finally, the results can only reflect mental health during the epidemic. Follow up studies are still

needed to identify possible long-term mental health outcomes associated with the COVID-19 pandemic.

5.3 Recommendation for future studies

In the special situation of COVID-19, to addressing limitations that comes from the poor distribute approach of my questionnaire in my research. Firstly, we can look help from formal organization or department, by which will help us to distribute our questionnaire that less relies on internet. To ensure that our search conclusion can equally apply to the population who holds lower education level or/and with lower frequency of internet use. We can also choose to hire a market research agency, entrust them to make sure all samples are evenly distributed. This will ensure that the panel selected for the survey is truly representative. The greater advantage of this method is that after my research is finish and the survey is conclude, we can still get in touch with all respondents. This may help if we plan to conduct a contract longitudinal studies with different time dimensions. However, this method may largely increase the cost of whole research and causes a longer time to get our research well done.

It is also recommended to constructing the same research in a new context, location and/or culture. To explore if the research problem within the settings of specific context, location and/or culture. Accordingly, we can propose future studies that can study the same research problem in a different setting, context, location and/or phase. For example, to conduct research long after when the impact that comes from this epidemic has been recover as usual. And then to compare the difference whether its dramatically or not.

CHAPTER 6:REFERENCE

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