



Faculty of Medicine and Health Sciences

**THE PREVALENCE OF PSYCHOLOGICAL STRESS AND ITS
ASSOCIATED FACTORS AMONG SECONDARY SCHOOL
TEACHERS IN SAMARAHAN AND ASAJAYA DISTRICT**

Mardhiyyah binti Azmi

Master of Public Health

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LIST OF ABBREVIATIONS

NHMS	National Health and Morbidity Survey
DASS	Depression Anxiety Stress Scale
TSI	Teachers Stress Inventory
PSS	Perceived Stress Scale
GHQ	General Health Questionnaire
JCQ	Job Content Questionnaire
COPSOQ	Copenhagen Psychosocial Questionnaire
SPSS	Statistics Package for Social Science
MOE	Ministry of Education
UNIMAS	Universiti Malaysia Sarawak
PT3	Penilaian Tingkatan 3
SPM	Sijil Pelajaran Malaysia
STPM	Sijil Tinggi Pelajaran Malaysia
STAM	Sijil Tinggi Agama Malaysia

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The Prevalence of Psychological Stress and Its Associated Factors Among Secondary School Teachers in Samarahan And Asajaya District

ABSTRACT

Introduction: The 2015 National Health and Morbidity Survey (NHMS 2015) reported that the prevalence of Malaysian adults with mental health problems showed an increasing trend with nearly three times from 1996 to 2015. Psychological stress is one of the important contributors to mental health problems in Malaysia. A wide range of occupations have been associated with psychological stress with the teaching profession has been considered as one of the most stressful jobs. This study aims to determine the prevalence of psychological stress and its associated factors among secondary school teachers. **Methodology:** A cross-sectional study was conducted among secondary school teachers in Samarahan and Asajaya district using self-administered questionnaires. The status of psychological stress was measured using the Malay version of DASS-21. Teachers Stress Inventory was adapted to identify the psychosocial factors. This study used Chi-square, and logistic regression to test for the association of the variables. **Results:** The overall prevalence of psychological stress from this study was 19.5%. Out of 241 teachers, 9.1% had mild stress, 7.1% had moderate stress, and 3.3% had severe to very severe stress. The prevalence of psychological stress was significant among younger teachers, single, divorced or widowed, and those with least household income. Only the years of experience has a significant relationship with psychological stress among occupational factors. From logistic regression, four elements were selected as the predictors for mental stress,

notably household income, anxiety, depression and time management. **Conclusion:**

The burden of psychological stress among school teachers can be associated with either individual factors or work-related factors. The responsibility in managing mental stress among teachers does not lie with the individual but at every level in the organisation. The surveillance systems for early detection of psychological stress can be implemented at the school level.

Keywords: *Psychological Stress, Teachers, Secondary School, Associated Factors*

**Kadar Tekanan Psikologi dan Faktor-faktor yang Berkaitan di Kalangan
Guru-guru Sekolah Menengah di Daerah Samarahan dan Asajaya**

ABSTRAK

Pengenalan: Bancian Tahap Kesihatan dan Morbiditi 2015 (NHMS 2015) melaporkan bahawa kadar masalah kesihatan mental di kalangan orang dewasa di Malaysia menunjukkan peningkatan hampir tiga kali ganda dari tahun 1996 sehingga tahun 2015. Tekanan psikologi merupakan salah satu daripada penyumbang kepada masalah kesihatan mental di Malaysia. Pelbagai jenis pekerjaan dikaitkan dengan tekanan psikologi di mana kerjaya guru dianggap sebagai salah satu pekerjaan yang memberi tekanan. Kajian ini bertujuan bagi menentukan kadar tekanan psikologi and faktor-faktor yang berkaitan di kalangan guru-guru sekolah menengah. **Metodologi:** Kajian keratan rentas telah dijalankan di kalangan guru-guru sekolah menengah di daerah Samarahan dan Asajaya menggunakan isian borang soal selidik. Status tekanan psikologi diukur menggunakan borang DASS-21 versi Bahasa Melayu. Inventori Tekanan Guru telah disesuaikan bagi mengenal pasti faktor-faktor psikososial. Kajian ini menggunakan ujian Chi-square and regresi logistic bagi menguji perkaitan antara pemboleh ubah. **Keputusan:** Kadar tekanan psikologi di dalam kajian ini adalah 19.5%. Daripada 241 orang guru, 9.1% adalah tekanan ringan, 7.1% adalah tekanan sederhana, dan 3.3% adalah tekanan teruk dan sangat teruk. Kadar tekanan psikologi sangat ketara di kalangan guru-guru yang muda, bujang, balu/duda atau bercerai, dan mereka dengan pendapatan isi rumah yang paling rendah. Hanya bilangan tahun pengalaman yang mempunyai hubungan yang ketara dengan tekanan psikologi

daripada faktor-faktor pekerjaan. Daripada ujian regresi logistik, empat faktor telah dipilih sebagai penentu bagi tekanan mental iaitu pendapatan isi rumah, kegelisahan, kemurungan dan pengurusan masa. **Kesimpulan:** Beban psikologi di kalangan guru sekolah boleh dikaitkan dengan faktor-faktor individu atau faktor-faktor pekerjaan. Tanggungjawab mengurus tekanan mental di kalangan guru-guru tidak terletak pada individu sahaja tetapi pada setiap peringkat di dalam organisasi. Sistem pengesanan awal bagi mengesan tekanan psikologi boleh dilaksanakan di peringkat sekolah.

Kata kunci: Tekanan Psikologi, Guru, Sekolah Menengah, Faktor berkaitan

CHAPTER 1 : INTRODUCTION

1.1 Background of The Study

Psychological stress covers a broad spectrum, ranging from normal feelings of vulnerability, sadness, and fears to problems that can become disabling, such as depression, anxiety, extensive worries, negative thoughts, or social isolation (Zimmermann, 2015). It also implies to as an emotional distress or negative emotional state (Brotman, Golden and Wittstein, 2007). Psychological stress among workers occurred as a result of inability to cope effectively with various work demand (Blix *et al.*, 1994).

Even though a wide range of occupations had been associated with psychological stress in many kinds of literature, the teaching profession had been considered as one of the occupations at risk of psychological stress (Eaton *et al.*, 1990; Stansfeld *et al.*, 2011; Mukosolu *et al.*, 2015; Woodward, Lipari and Eaton, 2017). In a review paper by Kassim, Ismail, and Ismail (2018), among the top five occupations in Malaysia with the highest prevalence of psychological stress, three were of educational background namely primary school teachers, secondary school teachers, and university academicians.

The role of teachers in the academic sector is vital. Teachers are responsible for ensuring that their students achieve the study objectives and gain adequate knowledge to be used in the present or for the future. Although this may be the primary role of teachers, they are now required to multitask in school. The culture of teaching evolved in the current years compared to the traditional way of teaching with the addition of managerial tasks. They also involve in planning and developing the

contents of lessons, take part in assessing students' performance, classroom management and discipline, take on the role of an instructor and coordinator for extra-curricular activities, and communicating with parents whenever needed (Kaur, 2011). These additional functions could be the stressors for these teachers and may affect the primary role of the teachers who are supposed to teach students.

Kyriacou (2001) defined a psychological stress among teachers as the unpleasant experience or emotion and negative state experience, which leads to anger, tension, depression, and disappointment which are caused by teaching responsibilities. Usually, psychological stress happens when they cannot meet the demand of the teaching profession and fail to adapt or cope with the challenges (Blix *et al.*, 1994). Frequently, people who experience psychological stress will present with various manifestations. These manifestations include psychological manifestations such as emotional symptoms and behavioural symptoms or physical manifestations such as fatigue symptoms, cardiovascular symptoms, and gastronomic symptoms (Fimian, 1988). Emotional symptoms include the feeling of insecurity, vulnerability, poor coping skills, depression, and anxiety (Fimian, 1988).

Symptoms of fatigue, such as sleepiness, procrastinating, easily tired, physical exhaustion, and physical weakness, can affect an individual (Fimian, 1988). Teachers who are vulnerable to psychological stress were associated with occupational fatigue and subsequently were less committed to their job (Fitchett *et al.*, 2019). Quite frequently, teachers complained about musculoskeletal pain such as neck pain, shoulder pain, or back pain. A high prevalence of musculoskeletal pain among teachers was found to be associated with psychological stress (Zamri, Moy and Hoe, 2017; Hoe *et al.*, 2018). Another study also found a relationship between musculoskeletal

disorders and depression (Ng, Voo and Maakip, 2019). Similar findings were found in a survey that was conducted in Brazil (Constantino Coledam *et al.*, 2018) and a cohort study by Nahit *et al.* (2003).

Cardiovascular manifestations are quite common among people with psychological stress. Normal physiological response toward psychological stress by the autonomic nervous system will cause an increase in heart rate and blood pressure (Ziegler, 2012). There was a significant difference between a group with uncontrollable work stress and controllable work stress in changes in blood pressure (Steptoe, Cropley and Joeke, 1999). In more severe cases such as stress-induced panic disorder, an increase in heart rate can be observed (Petrowski *et al.*, 2010). Different kinds of manifestations brought a wide range of definition and discussion of psychological stress. Understanding the common presentations and associated factors will help in planning and managing the rise in psychological stress among teachers.

Furthermore, the psychological stress had been associated with other negative outcomes such as burnout, job dissatisfaction, poor teacher's performance and physical illness. A study conducted in Australia showed the association between psychological stress and burnout among teachers (McCormick and Barnett, 2011). Burnout is referred to as the prolonged response to chronic emotional stressors and is associated with interpersonal stressors on the job. It can be explained in the three dimensions, which are exhaustion, reduced professional accomplishment, and cynicism, or depersonalisation (Neckel, Schaeffner and Wagner, 2017). Burnout can cause both personal and social functional impairment (Maslach and Leiter, 2016). Burnout is a multi-factor occurrence that can be caused by individual factors as well as environmental factors (Neckel, Schaeffner and Wagner, 2017).

Similar stressors such as time pressure and student motivation can lead to psychological stress and burnout (Skaalvik and Skaalvik, 2017). It was found that burnout is more common among ‘helping profession’ namely teachers, counsellors and social workers (Neckel, Schaeffner and Wagner, 2017). Therefore, it is crucial to understand the mechanism of stress and associated factors that contribute to the psychological stress among teachers as chronic or prolonged stress will lead to burnout (McCormick and Barnett, 2011; Aflakseir and Nemati, 2018).

Under those circumstances, mentally-exhausted teachers can cause psychological stress to the students. In one study, the teachers’ burnout caused a significantly higher morning cortisol level in students (Oberle and Schonert-Reichl, 2016). Cortisol levels had been used to predict the stress response in many studies (Berger *et al.*, 2016; Cameron *et al.*, 2017). Teachers’ stress has been found to affect students’ performance at school and students’ satisfaction (Manabete *et al.*, 2016). Moreover, other teacher’s factors, such as teacher motivation and negative feedback to students have been associated with the outcomes of students’ performance and adjustment at school (Wentzel, 2002).

In addition to that, another important issue related to psychological stress is job satisfaction among teachers. From time to time, teachers juggle multiple responsibilities along with their main teaching job and working under increasingly stressful conditions. To begin with, they have been involved in planning and developing the contents of lessons, evaluating students’ performance, managing classroom and student’s discipline, taking part in coordinating the extra-curricular activities, as well as communicating with parents whenever needed (Kaur, 2011). This situation frequently leads to job dissatisfaction among them (Darmody and Smyth,

2016). Importance to realise, the job dissatisfaction will influence the personal performance either teachers themselves as well as school performance as a whole (Ilyas and Abdullah, 2016; Chun, Choi and Song, 2019). Teachers who were stress due to the bad working environment, poor leadership, and heavy workload subsequently showed a negative relationship with job satisfaction (Mwakasangula and Mwita, 2020).

As shown above, psychological stress eventually can affect teaching quality at school (Manabete *et al.*, 2016). Measurement of productivity loss usually associated with absenteeism and presenteeism. High level of perceived stress among teachers had been associated with absenteeism and presenteeism (Howard and Howard, 2020). Absenteeism was defined as ‘the absence of a worker due to illness which either due to a personal illness or as a caretaker for a sick dependent’. Meanwhile, presenteeism was defined as ‘an action when employees who are reasonably ill but continue to come to work’ (Howard, Howard and Smyth, 2012). In an article, the absenteeism was listed together with psychological stress and job satisfaction as the variables that had been used to express work-related health among teachers (Bogaert *et al.*, 2014).

On the negative side, psychological stress has been associated with physical illness. Teachers who are exposed to psychological stress were associated with occupational fatigue and subsequently were less committed to their job (Fitchett *et al.*, 2019). A high prevalence of musculoskeletal pain among teachers was found to be associated with psychological stress (Zamri, Moy and Hoe, 2017; Hoe *et al.*, 2018). Normal physiological response toward psychological stress by the autonomic nervous system will cause an increase in heart rate and blood pressure (Ziegler, 2012).

1.2 Statement of Problems

In recent years, there is an increase in focus on mental health issues among the adult population worldwide. Stress theory explained the role of psychological stress in negatively affecting mental health (Aneshensel and Phelan, 2006). At the national level, the trend of mental health problems among Malaysians showed a disturbing pattern which may lead to the potential beginnings of a public health crisis. The 2015 National Health and Morbidity Survey reported that the prevalence of Malaysian adults with mental health problems showed an increasing trend with a nearly three times increase from 10.7% in 1996 to 29.2% in 2015 (Institute for Public Health, 2015). In the latest 2019 National Health and Morbidity Survey Report, the prevalence of Malaysian adults with depression were 2.3% of the total adult population (National Institutes of Health, 2019). In a previous meta-analysis study, the clinically depressed respondents showed higher cortisol level compared to non-depressed respondents. Cortisol level had been used as a measurement of psychological stress in that study (Burke *et al.*, 2005). Therefore, it is important to identify the burden of psychological stress as it could affect the individual's mental health.

In the previous studies the teaching profession had been considered as one of the occupations at risk of psychological stress (Eaton *et al.*, 1990; Stansfeld *et al.*, 2011; Mukosolu *et al.*, 2015; Woodward, Lipari and Eaton, 2017). The prevalence of psychological stress among secondary school teachers ranged between 19.6% (Zamri, Moy and Hoe, 2017) and 34.0% (Hadi *et al.*, 2009). The percentage was slightly higher compared to the prevalence of stress among educators from higher learning institutions (colleges and universities), which ranged from 21.7% (Mukosolu *et al.*, 2015) to 25.9% (Ismail, Abd Rahman and Zainal Abidin, 2014).

In Malaysia, the total number of school teachers is higher than the total number of higher institutions' educators with the primary school teachers was seven times higher and secondary school teachers were five times higher than lecturers in tertiary institutions (MOE, 2018). In spite of this fact, most of the recent studies on teachers' stress were conducted among educators or lecturers in tertiary education centre. Despite the lack of study, there appears to be a cause for concern regarding the occurrence of psychological stress among secondary teachers in Malaysia.

Besides the frequently reported socio-demographic risk factors (age, sex, education level, and marital status), occupational risk factors (teaching experience, administrator job, workload, and student misbehaviour), psychosocial factors (job demand, job security, and interpersonal relationship) and other risk factors such as personal lifestyle (smoking and alcohol consuming), there were other potential unexplored contributors to stress among teachers. Other factors such as physical activity, underlying medical problems, placement policy, time management, and students' factors are hard to be found in local studies.

This study was conducted to explore the burden of psychological stress and possible associated factors among the targeted population. Subsequently, the proper and effective interventions can be planned for prevention and control. In general, the teacher stress interventions can be divided into four main categories include knowledge-based intervention, cognitive-behavioural intervention, mindfulness and behavioural intervention (von der Embse *et al.*, 2019). Some of the interventions had been proven to have a positive effect on managing psychological stress among teachers.

For example, a mindfulness-based professional development program called Cultivating Awareness and Resilience in Education (CARE) by Garrison Institute in United States of America showed a positive effect in helping the participants controlling their negative emotion and improving their mental wellbeing (Schussler *et al.*, 2016). Another study in Japan showed a significant correlation between workplace occupational mental health activities in reducing the prevalence of psychological stress (Eguchi *et al.*, 2012). In addition, a study conducted among vocational high school teachers in East Nusa Tenggara, Indonesia presented the significant reduction of the mean of stress level among teachers following the muscle relaxation intervention with music and aromatherapy (Dewi, Margawati and Mu'in, 2018).

Until now, teachers had been loaded with multiple responsibilities along with their main teaching job, which caused them to work under increasingly stressful conditions. For the purpose of reducing the workload among teachers in the country, one of the shifts of education transformation in Malaysia Education Blueprint 2013-2025 is to focus teachers on their core function of teaching by reducing administrative burden (Ministry of Education, 2013). This initiative could help in reducing the psychological stress among teachers in Malaysia. Meanwhile, the adjustment in education module showed a significant reduction in the mean score of job dissatisfaction among teachers (Umar *et al.*, 2015).

A multilevel approach is the most appropriate approach for intervention in school. The initiatives such as increasing principal support and teacher association are recommended in reducing psychological stress among teachers (Ouellette *et al.*, 2018). Another term for interventional approach at the school setting is the “upstream” intervention. In order to maintain occupational mental health, the administrators and

school leaders should establish the initiatives that can promote the mental health of their entire teachers instead of focusing exclusively on the individual level (Fitchett *et al.*, 2019). Therefore, this study was intended to give additional supporting evidence for future interventions and preventive programs.

1.3 Research Objective

1.3.1 General Objective:

To determine the prevalence of psychological stress and its' association with socio-demographic factors, occupational factors, psychosocial factors, and health status among secondary school teachers in Samarahan and Asajaya District.

1.3.2 Specific Objectives:

1. To determine the prevalence of psychological stress among secondary school teachers in Samarahan and Asajaya District.
2. To determine the association between psychological stress with socio-demographic factors, selected occupational factors, psychosocial factors, and health status.
3. To determine the association between psychological stress with anxiety and depression.
4. To determine the predictors of psychological stress among secondary school teachers in Samarahan and Asajaya District.

1.4 Research Questions

1. What is the prevalence of psychological stress among secondary school teachers in Samarahan and Asajaya District.?
2. What is the association between psychological stress with socio-demographic factors?
3. What is the association between psychological stress with selected occupational factors?
4. What is the association between psychological stress with selected psychosocial factors?
5. What is the association between psychological stress with selected health status?
6. What is the association between psychological stress with anxiety and depression status?
7. What are the predictors of psychological stress among secondary school teachers in Samarahan and Asajaya District?

1.5 Research Hypothesis

1. There is an association between psychological stress with socio-demographic factors.
2. There is an association between psychological stress with selected occupational factors, selected psychosocial factors, health status, anxiety and depression status.

1.6 Conceptual Framework

The conceptual framework for this study was developed based on the research objectives and previous literature. The objective of the study is to determine the relationship between a dependent variable and independent variables. Recent studies suggested that multiple factors could influence the psychological stress among teachers. Therefore, the dependent variable for this study is psychological stress; and five groups of independent variables had been identified, namely (i) socio-demographic factors, (ii) occupational factors, (iii) psychosocial factors, (iv) health status, and (v) anxiety and depression. Their relationships are illustrated in **Figure 1.1** below. However, the actual processes of the interactions have not been explored.

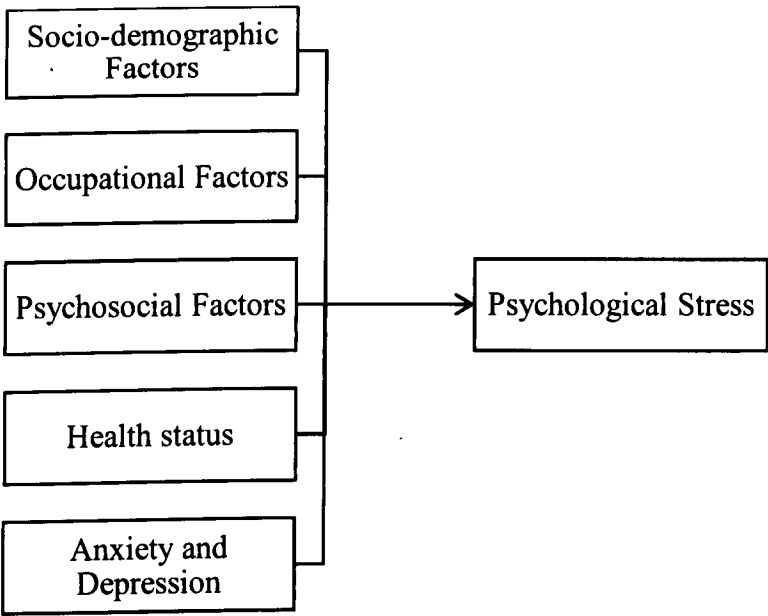


Figure 1.1 Diagram of the conceptual framework

CHAPTER 2 : LITERATURE REVIEW

This chapter discussed the definition of psychological stress, the prevalence from previous studies and its associated factors. The factors related to psychological stress can be divided into socio-demographic characteristics (Azizah *et al.*, 2016; Othman and Sivasubramaniam, 2019), occupational factors (Hadi *et al.*, 2009; Ismail and Noor, 2016), psychosocial factors (Ismail, Abd Rahman and Zainal Abidin, 2014; Mukosolu *et al.*, 2015) and health-related behaviour (Marchand and Marie-Ève, 2011; Balakrishnan, Bahari and Paul, 2017). Some studies showed the different factors associated with psychological stress such as coping skills (Mukosolu *et al.*, 2015), violence (Moon *et al.*, 2015), life events (Marchand and Marie-Ève, 2011; Mukosolu *et al.*, 2015) and a person's perception of the career (Hamjah *et al.*, 2015).

2.1 Psychological Stress

2.1.1 Prevalence of psychological stress

According to Zimmermann (2015), psychological stress covers a broad spectrum, ranging from normal feelings of vulnerability, sadness, and fears to problems that can become disabling, such as depression, anxiety, extensive worries, negative thoughts, or social isolation. Psychological stress is also implied to as negative emotional state or emotional distress (Brotman, Golden and Wittstein, 2007). Meanwhile, the ongoing psychological stress that is associated with workplace commonly known as occupational stress (Kaur, 2011). It also refers to the inability of individual to cope effectively with various work demands (Blix *et al.*, 1994). This

definition assisted in the conceptualisation of psychological stress among teachers as a result of the mismatch between job demands and teachers' abilities to cope with the request (Hakanen, Bakker and Schaufeli, 2006). Consequently, Kyriacou (2001) defined teacher's stress as "the experience of unpleasant and negative states, such as anger, tension, disappointment or depression, which arise from teaching responsibilities".

A wide range of occupations have been associated with psychological stress, as described in many kinds of literature, with the teaching profession being regarded as one of the most stressful jobs (Eaton *et al.*, 1990; Stansfeld *et al.*, 2011; Mukosolu *et al.*, 2015; Woodward, Lipari and Eaton, 2017). Moreover, among the top five occupations in Malaysia with the highest prevalence of psychological stress, three are of educational background namely primary school teachers, secondary school teachers, and university academicians (Kassim, Ismail and Ismail, 2018). A cohort study among trainee teachers in England presented that almost half (46%) considered the teaching profession as a stressful job based on their observation. Meanwhile, about 38% of this cohort described their teaching experience during practicum as very stressful (Chaplain, 2008).

In the previous study among secondary school teachers in Klang by Hadi *et al.* (2009), the prevalence of psychological stress based on DASS-21 was 34.0%. Another study in 2017 among similar group in Penang showed lower prevalence of psychological stress (19.6%) compared to the earlier study. Meanwhile, the prevalence of psychological stress among educators from higher learning institutions (colleges and universities), ranged from 21.7% (Mukosolu *et al.*, 2015) to 25.9% (Ismail, Abd Rahman and Zainal Abidin, 2014). On the other hand, a study conducted in Selangor

revealed that the mean score for stress test among secondary school teachers (mean=2.54, SD=0.834) was significantly higher than teachers from primary school (mean=2.13, SD=0.558), with the secondary school teachers scoring higher in all stress factors that were included in the study (Kavita and Hassan, 2018).

2.1.2 Relationship between stress, anxiety and depression

High levels of psychological stress are associated with depression and anxiety (Mukosolu *et al.*, 2015; Hoe *et al.*, 2018; Othman and Sivasubramaniam, 2019). A study conducted among University Putra Malaysia academic staff reported that those who had depression or anxiety are 2.6 times more likely to develop stress than those with no depression or anxiety (Mukosolu *et al.*, 2015). Additionally, a study conducted among primary, preparatory and secondary school Egyptian teachers presented a positive correlation between psychological stress with anxiety and depression (Desouky and Allam, 2017). Whereas, in another study by Othman and Sivasubramaniam (2019), the prevalence of secondary school teachers with depression and anxiety were higher than the prevalence of teachers with stress. Unfortunately, in this study, they did not proceed with the hypothesis testing and logistic regression to determine the predictors of stress or association between stress, depression and anxiety.

2.1.3 Assessment tools for psychological stress

Various assessment tools have been developed for the measurement of stress level. The most common instrument being used in many studies for the psychological stress among educators in Malaysia is the Depression Anxiety Stress Scale (DASS) (Hadi *et al.*, 2009; Mukosolu *et al.*, 2015; Ismail and Noor, 2016; Zamri, Moy and

Hoe, 2017; Othman and Sivasubramaniam, 2019). The Depression Anxiety Stress Scale (DASS) was developed to measure depressive, anxiety and stress levels concurrently (Lovibond and Lovibond, 1996). It had been translated into Malay version by Musa, Fadzil and Zain (2007). There are two versions of the instrument, long version DASS-42 and short-version DASS-21 (Antony *et al.*, 1998). The DASS had good psychometric values that help in analysing the internal consistencies and confirmatory factors for the negative emotional state of an individual (Musa, M.A and M, 2009).

Other than that, several different instruments are being used to measure stress levels, which includes the General Health Questionnaire (Punch and Tuettemann, 1990; Bannai, Ukawa and Tamakoshi, 2015), Occupational Stress Indicator (Othman, Lamin and Othman, 2014; Yaacob and Sang Long, 2015), Perceived Stress Scale (Yu *et al.*, 2011; Riaz *et al.*, 2016) and Teacher Stress Inventory (Ghani, Che Ahmad and Ibrahim, 2014). Goldberg *et al.* developed the General Health Questionnaire-28 (GHQ-28). The scale will show the respondent's mental state for the past 2-3 weeks and consists of four subscales: somatic symptoms, anxiety and insomnia, social dysfunction and severe depression (Goldberg and Hillier, 1979). Meanwhile, the Occupational Stress Indicator (OSI) was developed by Dr Karen Belkic August. By using the Occupational Stress Indicators, the researchers can make a comparison regarding the total burden between occupation and the nature of the occupational stress burden (Williams and Cooper, 1997).

The Perceived Stress Scale (PSS) was initially created in 1983 by Cohen *et al.* It is used to assess a person's perception of stress by measuring the feeling and thoughts in the past month based on different situations (Cohen, Kamarack and

Mermestein, 1983). The Perceived Stress Scale is an easy-to-use instrument with good psychometric properties in measuring the individual stress level (Lee, 2012). Lastly, the Teacher Stress Inventory (TSI) was developed by Michael J. Fimian to precisely measure the strength of occupational stress among teachers. The Teacher Stress Inventory measures stress level based on ten factors which consist of five elements representing the sources of stress and five factors representing clinical manifestations (Fimian, 1988). Frequently, the factors for sources of stress were more often seen than the stress manifestation (Fimian and Fastenau, 1990).

2.1.4 Mental health program in Malaysia

Under the Ministry of Education Malaysia (MOE), there is a program that focuses on teachers' mental wellbeing called '3A: Aware, Alert, Action'. The program aims to identify the mental health status among teachers, to recognise the early signs and symptoms of mental health problems, to increase the awareness on the importance of mental health and to learn on the correct ways in managing mental health and wellbeing (MOE, 2019). Another special program called Mental Health Literacy for Teachers. It is a collaborative program between MOE and Universiti Tunku Abdul Rahman. The main objectives of the program are to improve the mental health literacy among secondary school teachers and counsellors, to improve their attitudes towards mental health issues and to improve mental health support system in secondary school for adolescents (*Mental Health Literacy for Teachers*, 2020). Even though the primary focus is to increase teachers' knowledge and to improve their behaviours in handling mental health affairs among students, it is an excellent opportunity for them to improve their mental health in general.

2.2 Socio-demographic Factors

Local studies showed a significant association between psychological distress and socio-demographic factors such as age, sex, marital status and education level among Malaysian (Hadi *et al.*, 2009; Ghani, Che Ahmad and Ibrahim, 2014; Ismail, Abd Rahman and Zainal Abidin, 2014; Azizah *et al.*, 2016). This association can also be found in several studies conducted globally (Kaur, 2011; Darmody and Smyth, 2016; Dawn *et al.*, 2016).

2.2.1 Age

The prevalence of stress had been associated with age in some of the studies. The secondary school teachers in the younger age group (35.2%) were feeling more stressed compared to those in the older age group (27.6%) (Othman and Sivasubramaniam, 2019). This trend can also be seen in the general population whereby the younger generation are more prone to have symptoms of depression compared to older-aged group (Siaw Leng, Hutagalung and Poh Li, 2017). On the other hand, in a study conducted by Hadi *et al.* (2009), the regression analysis showed that the stress scores were higher among the older group of secondary school teachers. On the contrary, another study reported that both primary and secondary school teachers in the middle age group experienced more stress than the younger age and older age group (Kavita and Hassan, 2018). However, some other studies showed no significant difference between the level of stress and age among special education teachers (Ghani, Che Ahmad and Ibrahim, 2014) and university lecturers (Mukosolu *et al.*, 2015). The younger group are usually associated with lack of experience, poorer adjustment and adaptation skills, financial issues, an early stage of marriage, and exposure to the new environment.

2.2.2 Gender

The prevalence of psychological stress among male and female teachers or educators was significantly different in some of the studies. A study among lecturers in one of the public universities in Malaysia showed that female lecturer was four times more prone to experience occupational stress compared to the male lecturer (Nur Aqilah and Juliana, 2012). Whereas, Tai, Ng and Lim (2019) reviewed 22 studies that were conducted among educators from a different level of school in Malaysia and found that male respondents had a higher prevalence of stress compared to female respondents. However, several studies pointed out that there was no significant difference between male and female in terms of stress status even though the percentage was slightly higher in female compared to male (Ghani, Che Ahmad and Ibrahim, 2014; Mukosolu *et al.*, 2015; Ismail and Noor, 2016).

2.2.3 Marital status

Several studies looked at the comparison between marital status and educational level with stress and depression (Kaur, 2011; Mukosolu *et al.*, 2015; Ismail and Noor, 2016). Being married, single or divorced influenced the stress level. A study by Ismail and Noor (2016) among research university lecturers reported that more of the single respondents presented with stress (34.8%) than married (21.1%) and widowed (16.7%) respondents. Meanwhile, according to the National Health and Morbidity Survey 2015, single adults showed a higher prevalence of mental health problems (32.1%) than widowers or divorcees (29.3%) followed by married adults (27.5%). On the other hand, another study presented that among primary and secondary teachers in Selangor, married teachers had more stress than different categories of marital status (Kavita and Hassan, 2018). Despite the differences in the

prevalence of stress, most studies revealed that there was no significant difference between stress level and marital status (Mukosolu *et al.*, 2015; Azizah *et al.*, 2016; Ismail and Noor, 2016).

2.2.4 Education level

Education level is one of the important socio-demographic factors in teachers' stress. Psychological stress was more common among secondary school teachers with the lowest educational status (Othman and Sivasubramaniam, 2019). A similar result was found in a study that was conducted among university lecturers, whereby stress was more common among the master degree holder (24.4%) than PhD holder (21.7%) (Ismail and Noor, 2016). A study of the occupational stress among primary, preparatory and secondary school Egyptian teachers showed a significant difference ($p < 0.001$) between occupational stress score and teacher's qualification with master and higher degree holder had higher mean stress score (163.9, SD=21.0) than diploma (150.1, SD=32.8) and bachelor (140.1, SD=10.8) degree holder (Desouky and Allam, 2017).

However, a local study among both primary and secondary school teachers in Selangor showed no significant difference between stress score and education level of the teachers (Kavita and Hassan, 2018). On the contrary, another review of the association between educational attainment and occupational stress among the general public in the United States reported that higher education attainment was associated with a lower level of occupational stress (Assari and Bazargan, 2019).

2.2.5 Other factors: ethnicity, religion and household income

Other factors that had been included in many studies are ethnicity (Ismail and Noor, 2016; Assari and Bazargan, 2019; Othman and Sivasubramaniam, 2019), religion (Mukosolu *et al.*, 2015) and household income (Azizah *et al.*, 2016; Desouky and Allam, 2017). A review by Tai, Ng and Lim (2019) identified ethnicity and religion as the socio-demographic risk factors for psychological stress among lecturers in tertiary institution together with gender and education level. In a local study that was conducted among academicians in a research university, Non-Malay respondents presented with stress more frequently than Malay respondents (Ismail and Noor, 2016).

Similar findings can be found in a study among secondary school teachers (Othman and Sivasubramaniam, 2019) and among university staff (Mukosolu *et al.*, 2015). Buddhism reported presenting with the highest prevalence of stress among religions in Malaysia (Mukosolu *et al.*, 2015). As for the household income, it is a common risk factor associated with occupational stress among teachers and educators (Tai, Ng and Lim, 2019). Psychological stress is more common among teachers and educators with the lowest monthly income (Azizah *et al.*, 2016; Othman and Sivasubramaniam, 2019).

2.3 Occupational Factors

2.3.1 Years of teaching experience

A study conducted by Hadi *et al.* (2009) among secondary school teachers in Kota Bharu showed a significant association between work duration and stress. Their finding indicated that teachers with more work experience had a higher level of stress.

A more recent study by Othman and Sivasubramaniam (2019) presented the highest prevalence of psychological stress among secondary school teachers was among those with the vastest teaching experience, which is of more than ten years. The same findings were discovered in the study that was conducted among university lecturers (Azizah *et al.*, 2016; Ismail and Noor, 2016). Similarly, teachers with more years of teaching experience scored higher in occupational stress score in a study conducted among Egyptian teachers (Desouky and Allam, 2017).

2.3.2 Role at school

Teachers who were appointed as a headmaster or school principal tend to be more stressed than regular teachers (Dawn *et al.*, 2016). Meanwhile, a study among primary school principals in Ireland showed that the stress level was higher among newly appointed principals (Darmody and Smyth, 2016). Another study suggested that role stress was associated with intention to leave with the presence of mediating factors such as job satisfaction and commitment (Conley and You, 2009). In a local study, teachers' job responsibility showed no significant association with teachers' stress (Samad *et al.*, 2011). The job responsibility refers to additional tasks such as appointment as subject coordinator, classroom teacher and school administrator. Similarly, a study by Hadi *et al.* (2009) showed no significant relationship between psychological stress and involvement with the school committee.

2.3.3 Type of school and distance from home

In a study among secondary school teachers in Kota Bharu, Kelantan, the prevalence of psychological stress was higher among teachers in the urban areas compared to those in the rural areas (Hadi *et al.*, 2009). Meanwhile, a different study

among primary school teachers in Klang Valley, Selangor showed no correlation between school location and stress level among teachers (Samad *et al.*, 2011). Furthermore, the distance between home and school had been reported to play a role in teachers' stress. A study by Othman and Sivasubramaniam (2019) showed a higher prevalence of psychological stress among teachers whose home was nearer to school. In contrast, a study conducted in India reported that teachers who travelled more than one hour to school were more stressed than those who travelled less than one hour from their home (Dawn *et al.*, 2016).

2.3.4 Working environment

Psychological stress had been associated with the number of classes. The prevalence of psychological stress was higher among teachers, with a large number of classes (Desouky and Allam, 2017). However, a study done by Hadi *et al.* (2009) showed that the number of classes was not a predictor of psychological stress. A review by Haaren-Mack *et al.* (2019) on sources of stress among physical education teachers divided the workplace sources into three categories: most important, moderate and low importance sources.

The most important sources of stress were curriculum, facilities and equipment, and students' discipline. Meanwhile, the factors that were of moderate importance include interaction or relationship with colleagues, physical strain, and administrative support. Lastly, elements such as the lack of students' motivation and assessment of students' performance were deemed as low importance sources of stress. Also, psychological stress had been associated with long working hours. Male teachers, who worked more than 60 hours per week showed a significant increase in

the risk of developing psychological stress compared to those who worked less than 40 hours per week (Bannai, Ukawa and Tamakoshi, 2015).

2.4 Psychosocial factors

The psychosocial factor was found as one of the factors which were associated with psychological stress (Hadi *et al.*, 2009; Ismail, Abd Rahman and Zainal Abidin, 2014; Zamri, Moy and Hoe, 2017). Psychosocial factors are psychological sensations or experiences that relate to the individual's physical and social status. In order to identify the major dimension of psychosocial effects in teacher's stress, several factor analytic studies were conducted (Boyle *et al.*, 1995; Chan, 1998; Conley and You, 2009; Nübling *et al.*, 2011; Skaalvik and Skaalvik, 2017).

Among the factors that were commonly described in the literature are time management (Fimian, 1988; Samad *et al.*, 2011; Skaalvik and Skaalvik, 2017), workload or work-related stressor (Boyle *et al.*, 1995; Chaplain, 2008; Ahsan *et al.*, 2009; Desouky and Allam, 2017), students' discipline (Boyle *et al.*, 1995; Skaalvik and Skaalvik, 2017; Aflakseir and Nemati, 2018; Haaren-Mack *et al.*, 2019), professional investment and development (Conley and You, 2009; Mukosolu *et al.*, 2015; Darmody and Smyth, 2016; Malik, Björkqvist and Österman, 2017), and professional distress (Fimian, 1988; Boyle *et al.*, 1995; Iqbal *et al.*, 2016; Malik, Björkqvist and Österman, 2017).

In addition, the researchers also found the relationship between psychological stress and quantitative and emotional demands (Nübling *et al.*, 2011; Stansfeld *et al.*, 2011; Othman, Lamin and Othman, 2014; Arvidsson *et al.*, 2016), social relationship and leadership (Boyle *et al.*, 1995; Ahsan *et al.*, 2009; Mukosolu *et al.*, 2015; Malik,

Björkqvist and Österman, 2017), and other specific aspects such as verbal and physical violence, noise and voice strain as well as organisation and parents support (Marchand and Marie-Ève, 2011; Nübling *et al.*, 2011).

The increasing demands in the teaching profession, which led to an increase in workload, and limited-time had been associated with stress level among teachers (Hadi *et al.*, 2009). The number of workloads had been related to the level of stress among school teachers (Raman and Othman, 2017). Teachers with heavier workload experienced more stress compared to those with lighter work (Ghani, Che Ahmad and Ibrahim, 2014; Hamjah *et al.*, 2015). In a different study, the organisational factors such as decision latitude, psychological job demand, social support and job insecurity are presented with a significant relationship with occupational stress among respondents in the study (Ismail, Abd Rahman and Zainal Abidin, 2014).

A study conducted among university lecturers in Finland and Pakistan showed a positive correlation between work bullying and psychological stress. Meanwhile, there was a negative correlation between job stress and promotion opportunities, social support and good working environment (Malik, Björkqvist and Österman, 2017). An interpersonal relationship, such as supportive supervisor and co-workers, give a positive impact on mental health among teachers. Teachers who receive good superior support and co-worker support were less stressed compared to those who received poor social support from superiors or co-workers (Ismail, Abd Rahman and Zainal Abidin, 2014; Mukosolu *et al.*, 2015).

Not to mention, teachers who dealt with problematic students have a higher risk to experience stress while teaching (Mcintyre, McIntyre and Francis, 2017). Behavioural misconduct among students such as verbal or physical violence was

significantly correlated with the emotional stress among teachers (Samad *et al.*, 2011; Moon *et al.*, 2015). There was a study that links socioeconomic status of the community with the level of teachers' stress and student's misbehaviour. The study reported that teachers in schools situated in low socioeconomic areas experience more stress related to student's misconduct than teachers in schools located in higher socioeconomic areas (Richards, 2012). Also, a study conducted among special education teachers showed that they experienced moderate stress due to the misbehaviour of students, time management, interpersonal relationships and work recognition (Ghani, Che Ahmad and Ibrahim, 2014).

2.4.1 Assessment tools for psychosocial factors

There are a variety of question instruments that have been used to measure the psychosocial factors that focused on workplace and work environment. One tool that was specifically designed to detect sources of stress related to psychosocial factors among teachers is the Teachers Stress Inventory (Fimian, 1988). Michael J. Fimian developed the teacher Stress Inventory Questionnaire with 49 items which subsequently divided into ten factors: five factors represent the sources of stress, and the remainders represent the clinical manifestation of stress (Fimian, 1988). The five sections that describe the psychosocial aspects of teachers' stress include time management, work-related distress, professional distress, students' discipline and professional investment (Fimian, 1988).

Other tools that are commonly used to measure psychosocial factors are Job Content Questionnaire (JCQ) (Karasek *et al.*, 1998), Copenhagen Psychosocial Questionnaire (COPSOQ) (Kristensen *et al.*, 2005) and Bristol Stress and Health at Work Study (Smith *et al.*, 2000). Professor Robert Karasek developed the Job Content

Questionnaire as a tool for psychosocial job assessment. It consists of several aspects such as skill utilisation, decision authority, psychological job demands, social support and job insecurity (Karasek *et al.*, 1998). Among the psychosocial factors that were analysed in the Job Content Questionnaire, the psychological job demands were in particular shown to possess a strong relationship with psychological stress among teachers in many studies (Hadi *et al.*, 2009; Ismail, Abd Rahman and Zainal Abidin, 2014; Mukosolu *et al.*, 2015). Psychological job demands were related to time management and productivity. Other aspects such as decision latitude, social support and job insecurity were also shown to have an association with teachers' stress in a study conducted by Ismail, Abd Rahman and Zainal Abidin (2014).

Another instrument that had been used in finding the association of psychosocial factors and stress is the Copenhagen Psychosocial Questionnaire (Kristensen *et al.*, 2005). It had been used to look for the relationship of a person's wellbeing, job satisfaction and interpersonal relationship with depressive symptoms in a study conducted among secondary school teachers in Bristol, England. These factors were associated with moderate to severe depressive symptoms (Kidger *et al.*, 2016). A local study conducted among university lecturers using the Copenhagen Psychosocial Questionnaire revealed a strong relationship between role ambiguity and social support with stress (Mukosolu *et al.*, 2015).

2.5 Health status

Teachers' health status is one of the factors that have been associated with mental health wellbeing. The physical activities had a strong association with occupational health. It was found in a study among Flemish secondary school teachers,

those who involved with more physical activities during leisure time were more resistant to psychological stress (Bogaert *et al.*, 2014). Furthermore, the frequency of physical activities resulted in different levels of psychological stress. A study among pre-service teachers in Perak by Balakrishnan, Bahari and Paul (2017) noted that a person who rarely exercise had a higher prevalence of psychological stress compared to the individual who exercised once a week. Logistic regression from the same study showed that those who did not exercise were nine times more likely to present with psychological stress and those who exercised a few times a week reduced the risk by 76%.

In addition, a long-standing medical illness could be a mediating factor between occupation and common mental health problems (Stansfeld *et al.*, 2011). Moreover, cardiovascular manifestations are quite common among people with psychological stress. The normal physiological response to psychological stress by the autonomic nervous system will result in increased heart rate and blood pressure (Ziegler, 2012). In more severe cases such as panic disorder caused by stress, an increase in heart rate may be observed (Petrowski *et al.*, 2010). Other lifestyle behaviours associated with psychological stress is smoking and alcohol consumption. In the study by Balakrishnan, Bahari and Paul (2017), it was shown that there was a significant difference in stress levels between smokers and non-smokers but not among alcohol consumers and non-alcohol consumers. Even though smoking was associated with stress, the status of smoking or non-smoking did not predict the stress level in a person (Hadi *et al.*, 2009).

CHAPTER 3 : METHODOLOGY

3.1 Study Area

The study was conducted in Samarahan and Asajaya District. Samarahan and Asajaya District are located in the Samarahan Division, one of the twelve divisions in Sarawak (**Figure 3.1**). The Samarahan district was selected as Samarahan is one of the main districts in Sarawak. At the same time, not many studies on psychological stress among teachers were found from this region. Asajaya district was chosen as it falls under the same authority, Samarahan Education Office.

This study was conducted at secondary schools in Samarahan and Asajaya District. The list of schools was obtained from the Samarahan District Education Office. The total number of secondary schools under the authority of the Samarahan District Education Office was nine. However, only eight schools were included for sampling based on the location (**Figure 3.3**). One school was excluded as it was located under Kuching district. The total number of secondary schools in Asajaya district was five and in Samarahan district was three, , based on the location.



Figure 3.1 Sarawak map.

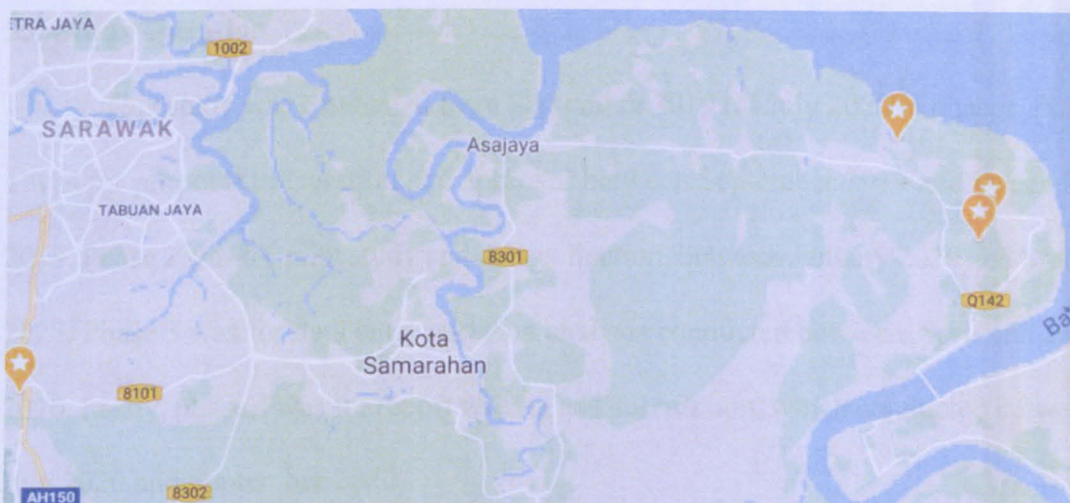


Figure 3.2 Samarahan and Asajaya District

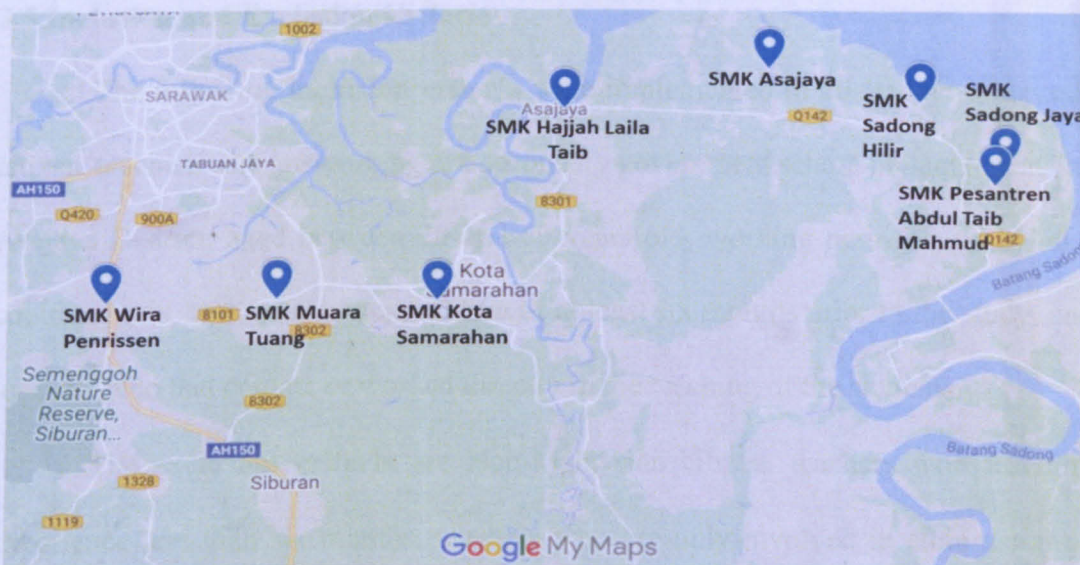


Figure 3.3 Secondary schools in Samarahan and Asajaya District

3.2 Study Design

This study utilises the cross-sectional study design.

3.3 Study Population

The study population in this study were secondary school teachers in Samarahan and Asajaya District. The total number of teachers in all eight secondary schools was 813 teachers.

3.4 Study Duration

This study was conducted from September 2019 till July 2020 in phases. Phase 1 was for proposal preparation and approval between September 2019 and December 2019. Phase 2 was for pilot study and data collection, between January 2020 and March 2020. Phase 3 was for data entry and data analysis conducted between April and June 2020. Lastly, phase 4 was for report writing and submission, which conducted between July 2020 and September 2020.

3.5 Inclusion and Exclusion Criteria

The following **inclusion criteria** were implemented in this study: Malaysian citizen, teachers who are working in a secondary government school in Samarahan and Asajaya District, aged between 20 and 60 years old, working permanently or on a contract basis, with teaching experience of at least six months prior to the study, and teachers who had contact or worked directly in the teaching of the students.

The **exclusion criteria** are Non-Malaysian citizen, teachers with teaching experience less than six months, teachers who are only involved in administrative work, and teachers who are on study leave, maternal leave, unrecorded leave or unpaid leave throughout the study period.

3.6 Sample Size

A prevalence study of stress among secondary school teachers was planned. The sample size was obtained using the Epi Info version 7.2.3.1 based on 95% Confidence Interval with an acceptable margin of error 5%, design effect one and reference of 32.3% prevalence of stress from previous studies. Therefore, the number

of samples required in this study was 262 from the total number of teachers, 813. The sample size includes 10% of possible drop out.

$$n = \frac{P(1-P)}{d^2} \times DEFF$$

$z = 1.96$ (z-score for 95% Confidence Interval)

P = prevalence from literature review

N = population size

d = precision/ margin of error, 5%

DEFF = design effect

3.7 Sampling Method

Sampling was conducted by multi-stages sampling. This method is a combination of cluster and systematic random sampling. The first step was to group all teachers into clusters according to the schools. The total number of secondary schools in Samarahan and Asajaya district is eight. The second step was to divide the total required sample size by eight secondary schools. Hence, the total sample size needed from each school was 32 to 33 participants. Subsequently, from each school, systematic sampling is applied. The teachers' names were arranged in alphabetical order. Every fifth name was selected until all the 32 to 33 participants were identified.

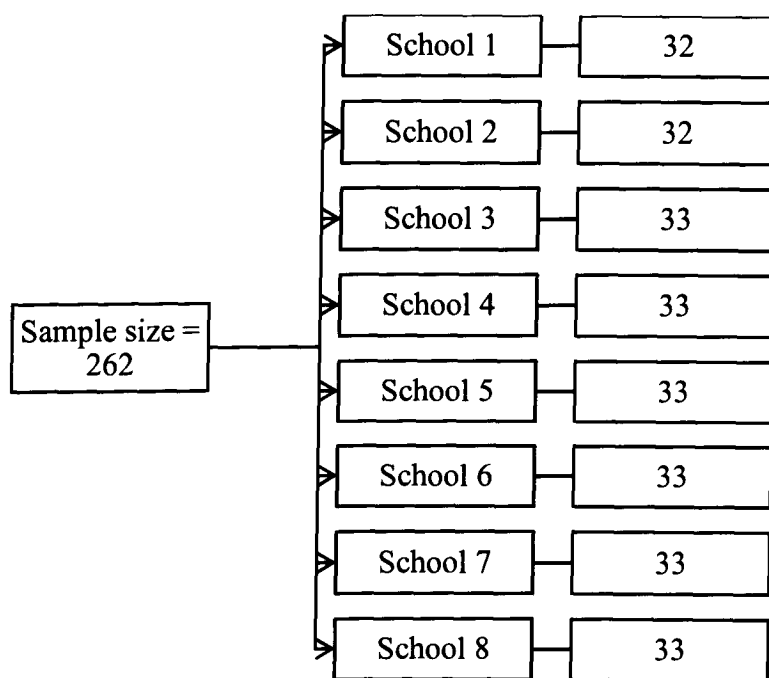


Figure 3.4 Multi-stage sampling

3.8 Research Instruments

The Malay version of the self-administered questionnaire was used in this study (**Appendix 6**). The questionnaire consists of five sections. **Section A** consists of eight socio-demographic items including age, gender, ethnicity, religion, educational level, marital status, number of children and monthly family income. **Section B** consists of six occupational items including school name, school type, years of teaching experience, the average number of students in a class, involvement in teaching exam class and distance between home to their school. **Section C** consists of four health status, including medical illness, smoking status, alcohol consumption and physical activity. **Section D** measured teachers' stress level using the Twenty-One Questions on Depression, Anxiety and Stress Scale (DASS-21) (Lovibond and Lovibond, 1996). **Section E** focused on the psychosocial aspects of the workplace as

sources of stress, which includes 29 items adapted from the Teacher Stress Inventory (Boyle *et al.*, 1995).

Depression, Anxiety and Stress 21 Items Questionnaire (DASS-21)

The Depression, Anxiety and Stress 21 Items Questionnaire (DASS-21) was used to measure the level of stress in this study. The questionnaire was developed by Lovinbond and Lovinbond (1996) and had been translated into Malay version by Musa, Fadzil and Zain (2007). The Malay version of DASS-21 is widely used in many studies in Malaysia to assess the negative emotional state of depression, anxiety and stress (Hadi *et al.*, 2009; Moy *et al.*, 2014; Mukosolu *et al.*, 2015; Faisal and Radeef, 2017; Zamri, Moy and Hoe, 2017). This version had commendable Cronbach's alpha values for each subscale, depression, anxiety and stress, which were 0.84, 0.74 and 0.79, respectively (Musa, Fadzil and Zain, 2007). The questionnaire was validated to be used either among the general population or clinical subjects (Musa, Fadzil and Zain, 2007; Musa, M.A and M, 2009; Musa *et al.*, 2011).

There are twenty-one items or questions in the questionnaire. All questions were scored using a 4-point Likert scale. The rating scale for each item consists of 0 (did not apply to me at all), 1 (applied to me to some degree or some of the time), 2 (applied to me to a considerable degree or a good part of the time) and 3 (applied to me very much or most of the time). The total score for each subscale will be calculated, and the level of severity will be classified as normal, mild, moderate, severe and very severe.

Score calculation for DASS-21 are as follow:

- i. For depression subscale, the items number 3, 5, 10, 13, 16, 17, and 21 were added up, and then the total score was referred to the scoring scale.

- ii. For anxiety subscale, the items number 2, 4, 7, 9, 15, 19, and 20 were added up, and then the total score was referred to the scoring scale.
- iii. For stress subscale, the items number 1, 6, 8, 11, 12, 14, and 18 were added up, and then the total score was referred to the scoring scale.

Table 3.1 DASS-21 scoring scale

	Depression	Anxiety	Stress
Normal	0-5	0-4	0-7
Mild	6-7	5-6	8-9
Moderate	8-10	7-8	10-13
Severe	11-14	9-10	14-17
Very Severe	15+	11+	18+

The use of this Malay version of Depression, Anxiety and Stress 21 Items Questionnaire in this study is to measure the stress level among teachers in secondary school. Therefore, only the total score of stress subscale will be used as a dependent variable in this study.

Psychosocial factors questionnaires

In this study, only 29 items were adopted from the Teacher Stress Inventory to measure the psychosocial factors that were related to the source of teachers' stress. These 29 items were divided into five sections. The five areas include time management, work-related distress, professional distress, students' discipline and professional investment. Michael J. Fimian developed the teacher Stress Inventory Questionnaire with 49 items which subsequently divided into ten factors: five factors represent the source of stress. In contrast, the other five factors represent the clinical manifestation of stress (Fimian, 1988). The questionnaire was translated and validated into the Malay language to measure the psychosocial stressors for teachers' stress. The reliability of the translated version was checked by measuring the internal consistency.

This translated version of psychosocial factors questionnaire had estimable Cronbach's alpha values for each element, time management, work-related distress, professional distress, students' discipline and professional investment, of 0.78, 0.73, 0.76, 0.84 and 0.72 respectively. The overall alpha value was 0.92.

The response for each item used the Likert Scale ranging from 1 to 5. 1 mark was given for "Not noticeable", 2 for "barely noticeable", 3 for "moderately noticeable", 4 for "very noticeable" and 5 for "extremely noticeable". The calculation is that the mark for each item will be added up, then divided by the total number of items in that section to get a mean. The psychosocial stressors were identified based on the mean for each section (Fimian, 1988).

Scores calculation for psychosocial factor subscales were as follows:

- i. For time management, the items number 1 through 8 were added up then divided by 8.
- ii. For Work-related stressors, the items number 9 through 14 were added up then divided by 6.
- iii. For Professional distress, the items number 15 through 19 were added up then divided by 5.
- iv. For student's discipline, the items number 20 through 25 were added up then divided by 6.
- v. For Professional investment, the items number 26 through 29 were added up then divided by 4.

3.9 Operational Definition

- i. The teacher refers to a person who is currently teaching students at secondary school in Samarahan or Asajaya district during the study period either on a contract or permanent employment under the Ministry of Education Malaysia.
- ii. Stress level is a categorised level based on the total score of stress subscale using Malay version of Depression, Anxiety and Stress 21 Items Questionnaire (DASS-21).
- iii. Normal stress is defined as the mental health status of a person (in this study a teacher) who scored between 0 to 14 marks in a total score of stress subscale using Malay version of Depression, Anxiety and Stress 21 Items Questionnaire (DASS-21).
- iv. Psychological stress is defined as the mental health status of a person (in this study a teacher) who scored more than 14 marks in a total score of stress subscale using the Malay version of the Depression, Anxiety and Stress 21 Items Questionnaire (DASS-21).
- v. Mild stress is defined as the mental health status of a person (in this study a teacher) who scored between 15 to 18 marks in a total score of stress subscale using the Malay version of the Depression, Anxiety and Stress 21 Items Questionnaire (DASS-21).
- vi. Moderate stress is defined as the mental health status of a person (in this study a teacher) who scored between 19 to 25 marks in a total score of stress subscale using the Malay version of the Depression, Anxiety and Stress 21 Items Questionnaire (DASS-21).

- vii. Severe stress is defined as the mental health status of a person (in this study a teacher) who scored between 26 to 33 marks in a total score of stress subscale using the Malay version of the Depression, Anxiety and Stress 21 Items Questionnaire (DASS-21).
- viii. Very severe stress is defined as the mental health status of a person (in this study a teacher) who scored more than 33 marks in a total score of stress subscale using the Malay version of the Depression, Anxiety and Stress 21 Items Questionnaire (DASS-21).
- ix. The secondary school refers to the school for students aged between 13 to at least 17 years old or more and consists of Form 1 until at least Form 5.
- x. The government school is a school directly authorised by the Ministry of Education Malaysia.
- xi. Medical illness refers to the disease or medical condition that a person already has and received treatment from medical doctors.
- xii. Work related stressors refers to the workload, time constraints, personal role and additional role.
- xiii. Students' discipline refers to the classroom discipline, monitoring, teacher's authority and students' motivation.
- xiv. Professional investment refers to the opportunities for giving opinion, involvement in decision making, problem-solving and innovation.
- xv. Professional distress refers to the opportunities for promotion, salary increment, recognition, status and respect.

3.10 Data Collection Procedure

After receiving permission from the Ministry of Education (MOE), a letter of approval was forwarded to the Sarawak Education Department. The letter of permission and invitation for the study was submitted to the Samarahan Education Officer before being distributed to all eight secondary schools in Samarahan and Asajaya District.

The list of schools was obtained from the Samarahan Education Officer, and the teachers' name list in each school was obtained from the school management authorities based on the inclusion and exclusion criteria. After the samples had been identified, the self-administered questionnaires were distributed to all 260 teachers. The questionnaires were given along with a letter explaining the purpose of the study, consent form and empty envelope. Teachers who agreed to participate was required to answer the questionnaires and return them in a sealed envelope to the school's counsellor or assigned representative. All the responded questionnaires were collected from the school's counsellor or appointed representative. Data collection was conducted between January and March 2020.

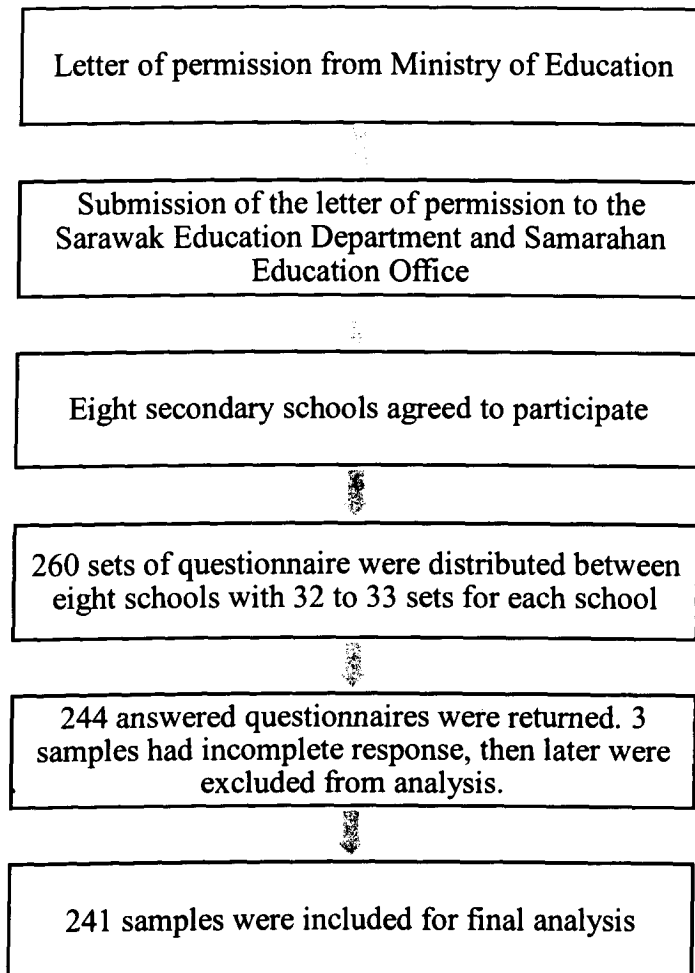


Figure 3.5 Flow chart for data collection

3.11 Pilot Study

Prior to data collection, a pilot study was conducted among 31 teachers from one of the secondary schools in Samarahan District in January 2020. The pilot study was intended to test the Malay version of the self-administered questionnaire. This version was designed to be used in this study. During this proses, the questionnaire was tested for content clarity, systematic sequence, comprehension and duration of completion. The reproducibility of the scored questionnaires was measured with internal consistency.

For the set of the Malay version of Depression, Anxiety and Stress 21 Items Questionnaire (DASS-21), the overall Cronbach's alpha was 0.93 and the alpha values for each subscale, depression, anxiety and stress, were 0.87, 0.82 and 0.83 respectively. Meanwhile, the translated version of psychosocial factors questionnaire had estimable Cronbach's alpha values for each element, time management, work-related distress, professional distress, students' discipline and professional investment, with 0.78, 0.73, 0.76, 0.84 and 0.72 respectively. The overall alpha value was 0.92.

3.12 Statistical Analysis

Data transformation and coding was done before proceeding with the normality tests. The normality tests showed that the numerical data were normally distributed. Meanwhile, the descriptive data was presented in frequency and percentage. Continuous variables were presented as means with their standard deviation. Categorical variables were tested for associations using Pearson's chi-square. Meanwhile, the Fisher's exact test was used for the variables with an expected count less than 5.

The most important variables with statistically significant p -value <0.25 were entered in the logistic model. This present study used p -value <0.25 to select the variables following the recommendation by Hosmer-Lemeshow as the p -value <0.05 sometimes are unable to recognise some essential variables (Hosmer and Lemeshow, 2000). While controlling the cofounders, a multivariate analysis was performed using binary logistic regression to determine the predictors of stress. The assumptions on selected variables must be checked before the further logistic regression analysis.

Multivariate analysis was carried out using multiple logistic regression as the dependent variable is categorical regardless of the type of independent variables. The binary multiple logistic regression was selected as the dependent variable is measured on a dichotomous scale. The result of regression analysis was expressed as adjusted odds ratio with a 95% confidence interval. This study set the level of significance at 5% (p -value <0.05). All data were analysed using the Statistical Package for Social Sciences (SPSS) version 22.

3.13 Ethical Consideration

Ethical approval was obtained from the Ethics Committee of the Universiti Malaysia Sarawak. The letter of permission was obtained from the Malaysia Ministry of Education before conducting the study. Consequently, informed consents and written consents were received from the respondent. The following information was provided to all respondents:

1. The research topic.
2. The purpose of the study.
3. The benefit of the research to the participants and others.
4. Absolute confidentiality of the information obtained.
5. The need for a referral if an abnormal finding is observed during data analysis (particularly DASS score); and
6. The right to withdraw from the study at any time without affecting the participant's current situation.

CHAPTER 4 : RESULTS

4.1 Introduction

This chapter describes the findings from the analysis of the data of the distributed questionnaires. The data are presented in a systematic manner to answer the research objectives and research questions. The tables are included to help in the description of the findings. There are five main sections in this chapter explaining the overall result from this study:

- i. Socio-demographic characteristics
- ii. Occupational characteristics and health status
- iii. Prevalence of psychological stress
- iv. Factors associated with psychological stress
- v. Logistic regression

4.2 Socio-demographic Characteristics

A total of 260 questionnaires were distributed among secondary school teachers in Samarahan and Asajaya District. At the end of the data collection, 244 questionnaires were returned, giving a response rate of 93.8%. There were three incomplete questionnaires, making only 241 samples entered into the final analysis.

The mean age of the respondents was 41.7 years ($SD=8.36$) with predominantly female teachers (63.1%). Most of the respondents were in the age group of 40-49 years (41.1%), followed by age 30-39 years (31.1%), ≥ 50 years of age (19.9%) and lastly 20-29 years of age (7.9%). The majority of the respondents were Malay (56.8%), followed by Iban (14.9%), Chinese (13.3%), Bidayuh (11.6%), Melanau (2.5%) and others (2.5%). Moreover, most of the respondents were Muslims

(65.1%), married (81.7%) and had a bachelor degree (85.1%). The mean household income of the respondents was RM8,225.54 (SD=3977.954) with the highest percentage of respondents (41.9%) having a monthly household income of more than RM8000. A small number of respondents were Diploma holders (1.2%), singles, divorced or widowed (18.3%), Buddhists and local religion (6.6%) and with a household income of RM2000-4000 per month (15.4%). **Table 4.1** describes the socio-demographic characteristics of the respondents.

Table 4.1 Socio-demographic characteristics of the respondents

Characteristics		n	%
Gender	Male	89	36.9
	Female	152	63.1
Age (years)	20-29	19	7.9
	30-39	75	31.1
	40-49	99	41.1
	≥50	48	19.9
Ethnicity	Malay	137	56.8
	Chinese	32	13.3
	Iban	36	14.9
	Bidayuh	28	11.6
	Melanau	6	2.5
	Others ^a	2	0.8
Religion	Islam	157	65.1
	Christian	68	28.2
	Others ^b	16	6.6
Educational Level	SPM/STPM/STAM	4	1.7
	Diploma	3	1.2
	Bachelor	205	85.1
	Master/ PhD	29	12.0
Marital Status	Single/Divorced/Widowed	44	18.3
	Married	197	81.7
Household Income (RM)	2000-5000	59	24.5
	5001-8000	81	33.6
	>8000	101	41.9

^aOthers: Kedayan, Serani, ^bOthers: Buddhist, local religion

4.3 Occupational Characteristics and Health Status

The median years of teaching experience of the respondents were 16 years with 29.5% had an experience of less or equal to 10 years, 35.7% had experienced between 11 to 20 years, while 34.9% had more than 20 years' experience in teaching. Among the respondents, 146 (60.6%) teach more than 30 students per class and 94 (39.0%) teach around 21 to 30 students per class. The majority of respondents taught students for the national exam (81.7%) such as PT3, SPM, STPM and STAM.

More than half of the respondents (65.6%), travelled from home to school for less or equal to 20 km, 22.4% travelled between 21 to 40 km, 7.9% around 41-60km and about 4.1% travelled more than 60km from home to school. In addition to this, 49 (20.3%) respondents were having medical illness and were currently under follow up for a variety of medical conditions namely, diabetes mellitus, hypertension, asthma, cancer and hyperlipidaemia. The majority of respondents did not smoke (95.0%), and only 8 (3.3%) were taking alcohol. The percentage of respondents involved with physical activity was 57.7%. **Table 4.2** describes occupational characteristics and health status of the respondents.

Table 4.2 Occupational characteristics and health status of the respondents

Characteristics		n	%
Years of Experience	0-10	71	29.5
	11-20	86	35.7
	>20	84	34.9
Average numbers of student	10-20	1	0.4
	21-30	94	39.0
	>30	146	60.6
Teaching exam subject	Yes	197	81.7
	No	44	18.3
Distance from home (km)	0-20	158	65.6
	21-40	54	22.4
	41-60	19	7.9

Table 4.2 Continued

Characteristics		n	%
	>60	10	4.1
Medical illness	Yes	49	20.3
	No	192	79.7
Smoking	Yes	12	5.0
	No	229	95.0
Alcohol	Yes	8	3.3
	No	233	96.7
Physical activity	Yes	139	57.7
	No	102	42.3

4.4 Prevalence of Psychological Stress

The overall prevalence of psychological stress among secondary school teachers in Samarahan and Asajaya district was 19.5%. Out of 241 teachers, 47 (19.5%) were having stress based on the DASS-21 score where 9.1% had mild stress, 7.1% had moderate stress, 2.9% had severe stress, and 0.4% had very severe stress. While the remaining 194 (80.5%) teachers did not report of having stress.

Table 4.3 Prevalence of stress among secondary school teachers in Samarahan and Asajaya District

Stress level	n	%
Normal	194	80.5
Mild	22	9.1
Moderate	17	7.1
Severe	7	2.9
Very Severe	1	0.4

4.5 Socio-demographic Factors Associated with Psychological Stress

A chi-square independent test was used to determine the association between psychological stress and observed variables in this study. The prevalence of psychological stress was higher among female teachers (21.1%) compared to male teachers (16.9%). Younger teachers aged between 20 to 29 years had the highest

prevalence of psychological stress (42.1%) compared to older age groups. Meanwhile, the lowest prevalence of psychological stress can be seen among teachers aged more than 50 years old (6.3%). Among ethnicities, Chinese respondents showed a higher percentage of psychological stress (25.0%) compared to Malay (20.4%) and Bumiputera Sarawak (Iban, Melanau and Bidayuh) (14.3%). The prevalence of psychological stress was higher among Muslims (19.7%) compared to Christians (14.7%). Meanwhile, for other believers such as Buddhists and local religion, the percentage of psychological stress was much higher than the two previous religions (37.5%).

Teachers with a bachelor degree (21.0%) were more stressed than other degree holders. Moreover, teachers that are single, divorced or widowed (34.1%) were more stressed compared to those who are currently married (16.2%). The prevalence of psychological stress was highest among teachers who earn between RM2000 to RM5000 (33.9%) followed by those with a monthly income of RM5001-8000 (16.0%). The lowest prevalence of psychological stress was among those that earn more than RM8000 per month (13.9%).

Overall, there was a significant association between psychological stress and age ($\chi^2(3) = 13.520, p < 0.01$), marital status ($\chi^2(1) = 7.298, p < 0.01$), and household income ($\chi^2(2) = 10.451, p < 0.01$). Meanwhile, there was no significant relationship between psychological stress and other socio-demographic factors such as gender ($\chi^2(1) = 0.630, p > 0.05$), ethnicity ($\chi^2(5) = 5.303, p > 0.05$), religion ($\chi^2(2) = 4.304, p > 0.05$), and level of education ($\chi^2(3) = 1.333, p > 0.05$). **Table 4.4** shows the association between respondents' psychological stress and socio-demographic characteristics.

Table 4.4 Association between respondents' psychological stress and socio-demographic characteristics

Variables	With stress		Without stress		χ^2	df	p-value
	n	%	n	%			
Overall	47	19.5	194	80.5			
Gender					0.630	1	0.427
Male	15	16.9	74	83.1			
Female	32	21.1	120	78.9			
Age (years)					13.520	3	0.004**
20-29	8	42.1	11	57.9			
30-39	19	25.3	56	74.7			
40-49	17	17.2	82	82.8			
≥50	3	6.3	45	93.8			
Ethnicity					5.303	5	0.338
Malay	28	20.4	109	79.6			
Chinese	8	25.0	24	75.0			
Iban	5	13.9	31	86.1			
Bidayuh	3	10.7	25	89.3			
Melanau	2	33.3	4	66.7			
Others ^a	1	50.0	1	50.0			
Religion					4.304	2	0.116
Islam	31	19.7	126	80.3			
Christian	10	14.7	58	85.3			
Others ^b	6	37.5	10	62.5			
Educational Level					1.333	3	0.642
SPM/STPM/STAM	0	0.0	4	100.0			
Diploma	0	0.0	3	100.0			
Bachelor	43	21.0	162	79.0			
Master/ PhD	4	13.8	25	86.2			
Marital Status					7.298	1	0.007**
Single/ Divorced/ widowed	15	34.1	29	65.9			
Married	32	16.2	165	83.8			
Household Income (RM)					10.451	2	0.005**
2000-5000	20	33.9	39	66.1			
5001-8000	13	16.0	68	84.0			
>8000	14	13.9	87	86.1			

^aOthers: Kayan, Serani, ^bOthers: Buddhist, local religion

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

4.6 Occupational Characteristics and Health Status Associated with Psychological Stress

A significant association was found between psychological stress and years of experience ($\chi^2(2) = 11.882, p < 0.01$). Respondents with fewer years of teaching experience presented with psychological stress more frequently than respondents with more experience. It can be seen when 32.4% of teachers with years of experience between 0 to 10 years presented with psychological stress. Whereas teachers who had been teaching for 11 to 20 years showed the prevalence of psychological stress of about 17.4% followed by teachers with more than 20 years' experience (10.7%). In contrast, no significant association was found between psychological stress and other occupational factors such as average numbers of student ($\chi^2(2) = 0.764, p > 0.05$), teaching exam subject ($\chi^2(1) = 0.060, p > 0.05$), and distance from home ($\chi^2(3) = 3.253, p > 0.05$). Nonetheless, psychological stress was more common among teachers with average numbers of student between 21 to 30 per class (21.3%), those who taught students for national examination (19.8%) and those who travelled more than 20 km to school (25.3%).

Among the health status and health-related behaviours that had been observed in this study, alcohol consumption ($\chi^2(1) = 4.903, p < 0.05$), anxiety ($\chi^2(1) = 57.386, p < 0.001$) and depression ($\chi^2(1) = 85.967, p < 0.001$) were significantly associated with psychological stress. That is to say, 50% of respondents who consumed alcohol presented with psychological stress. Not to mention, 42.9% of respondents with anxiety and 68.9% of respondents with depression presented with psychological stress. However, no significant relationship was found between psychological stress and existence of medical illness ($\chi^2(1) = 1.935, p > 0.05$), smoking ($\chi^2(1) = 1.003, p > 0.05$),

and physical activity ($\chi^2(1) = 0.133, p > 0.05$). Nevertheless, psychological stress was more common among teachers with medical illness (26.5%), non-smokers (20.1%) and those who were not involved with physical activity (19.9%). **Table 4.5** describes the association between respondents' psychological stress and occupational factors, health status, anxiety and depression.

Table 4.5 Association between respondents' psychological stress and occupational factors, health status, anxiety and depression

Variables	With stress		Without stress		χ^2	df	p-value
	n	%	n	%			
Year of Experience (years)					11.882	2	0.003*
0-10	23	32.4	48	67.6			
11-20	15	17.4	71	69.2			
>20	9	10.7	75	89.3			
Average numbers of student					0.764	2	0.694
10-20	0	0.0	1	100.0			
21-30	20	21.3	74	78.7			
>30	27	18.5	119	81.5			
Teaching exam subject					0.060	1	0.807
Yes	39	19.8	158	80.2			
No	8	18.2	36	81.8			
Distance from home (km)					3.253	3	0.352
0-20	26	16.5	132	83.5			
21-40	14	25.9	40	74.1			
41-60	5	26.3	14	73.7			
>60	2	20.0	8	80.0			
Medical illness					1.935	1	0.164
Yes	13	26.5	36	73.5			
No	34	17.7	158	82.3			
Smoking					1.003	1	0.316
Yes	1	8.3	11	91.7			
No	46	20.1	183	79.9			

Table 4.5 (Continued)

Variables	With stress		Without stress		χ^2	df	<i>p</i> -value
	n	%	n	%			
Alcohol					4.903	1	0.027*
Yes	4	50.0	4	50.0			
No	43	18.5	190	81.5			
Physical activity					0.133	1	0.715
Yes	26	18.7	113	81.3			
No	21	19.9	81	79.4			
Anxiety					57.386*	1	<0.001*
Anxiety	42	42.9	56	57.1			
No anxiety	5	3.5	138	96.5			
Depression					85.967*	1	<0.001*
Depression	31	68.9	14	31.1			
No depression	16	8.2	180	91.8			

p*<0.05, *p*<0.01, ****p*<0.001

4.7 Psychosocial Factors Associated with Psychological Stress

Five psychosocial factors had been observed in this study include time management, work-related stressors, students’ discipline, professional investment and professional distress. Work-related stressors focused on workload, time constraints, personal role and additional role, including administrative work. Moreover, students’ discipline includes classroom discipline, monitoring, teacher’s authority, as well as students’ motivation. Professional investment summarised the opportunities for giving an opinion, involvement in decision making, emotionally and intellectually stimulation and improvement. Meanwhile, the professional distress includes the opportunities for promotion, salary increment, recognition, status and respect. **Table 4.6** shows the association between psychological stress and psychosocial factors.

Table 4.6 Association between psychological stress and psychosocial factors

Variables	With stress		Without stress		χ^2	df	<i>p</i> -value
	n	%	n	%			
Time management					43.222	1	<0.001***
High stressor	28	50.0	28	50.0			
Low stressor	19	10.3	166	89.7			
Work-related stressors					15.231	1	<0.001***
High stressor	33	30.6	75	69.4			
Low stressor	14	10.5	119	89.5			
Students' Discipline					20.275	1	<0.001***
High stressor	34	32.7	70	67.3			
Low stressor	13	9.5	124	90.5			
Professional Investment					23.771	1	<0.001***
High stressor	29	37.7	48	62.3			
Low stressor	18	11.0	146	89.0			
Professional Distress					17.238	1	<0.001***
High stressor	23	37.7	38	62.3			
Low stressor	24	13.3	156	86.7			

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

A significant association was found between psychological stress and time management factors ($\chi^2(1) = 43.222, p < 0.001$), work-related stressor ($\chi^2(1) = 15.231, p < 0.001$), students' discipline ($\chi^2(1) = 20.275, p < 0.001$), professional investment ($\chi^2(1) = 23.771, p < 0.001$), and professional distress ($\chi^2(1) = 17.238, p < 0.001$). To point this out, the respondents with high time management stressor (50.0%) more commonly presented with psychological stress than the respondents with low time management stressor (10.3%). There were 33 (30.6%) respondents with high work-related stressor who presented with psychological stress compared to only 10.5% of those with the low stressor of the same factor.

Moreover, the prevalence of psychological stress was higher among respondents with the high stressor of students' discipline (32.7%) compared to those who had low stressor of students' discipline (9.5%). Comparatively, the respondents with high professional investment stressor (37.7%) presented with psychological stress more frequent than the respondents with low professional investment stressor (11.0%). Lastly, the prevalence of psychological stress was higher among respondents with the high stressor of professional distress (37.7%) than respondents with the low stressor of the same factors (13.3%).

4.8 Predictors of Psychological Stress

Multiple logistic regression was carried out to determine the possible factors that can be the predictors of psychological stress while controlling for cofounders. In this study, the dependent variable, psychological stress was measured on a dichotomous scale. This study had at least one independent variables (all are categorical), and the independent of observation and dependent variable had mutually exclusive and exhaustive. These assumptions had been met before binary multiple logistic regression was executed.

From the factors that had been identified from the chi-square independent test, the factors with statistically significant p -value were selected as the most critical variables to be entered in the logistic regression model. This present study used p -value <0.25 to choose the variables following the recommendation by Hosmer-Lemeshow as the traditional p -value <0.05 sometimes are unable to recognise some essential variables (Hosmer and Lemeshow, 2000). Fourteen items had been included in the logistic regression model including age, religion, marital status, household income, year of experience, medical illness, alcohol, anxiety, depression, time

management, work-related stressors, students' discipline, professional distress, and professional investment. **Table 4.7** describes the result of the multivariate analysis for the prediction relationship between psychological stress and selected factors.

From the multiple logistic regression model, the positive predictors of psychological stress were anxiety, depression, time management, and household income. In the final analysis, the regression model shows those who were anxious are 12 times more likely to present with psychological stress than those with no anxiety (OR=12.186, 95% CI=3.450, 43.039, $p < 0.001$). Similarly, those who were depressed are 11 times more prone to be stressed than those without depression (OR=10.596, 95% CI=3.287, 24.162, $p < 0.001$). Meanwhile, respondents with the high stressor in time management are four times more likely to be stressed compared to those with the low stressor (OR=4.354, 95% CI=1.246, 15.209, $p < 0.05$).

The respondents with household income RM2000 to RM5000 are eight times more likely to be stressed compared to those with more than RM8000 household income per month (OR=8.035, 95% CI=1.658, 38.932, $p < 0.01$). Similar to the respondent with household income between RM5001 to RM8000, they are four times more frequent to present with psychological stress (OR=4.050, 95% CI=1.064, 15.418, $p < 0.05$). For the goodness of fit of the logistic regression model, we referred to the Hosmer-Lemeshow test. The p -value in the Hosmer-Lemeshow test is not significant, which is greater than 0.05, which indicates the model is fit ($\chi^2(8) = 2.257$, $p = 0.972$). The model explained about 39.8% (Cox & Snell $R^2=0.398$) to 63.4% (Nagelkerke $R^2=0.63.4$) of the variance and correctly classified 88.8% of the psychological stress status.

Table 4.7 Multiple logistic regression for the predictors of psychological stress

Factors	B	SE	p-value	AOR	95% CI	
Age						
20-29	1.178	1.492	0.430	3.249	0.174	60.542
30-39	0.961	1.181	0.416	2.615	0.259	26.442
40-49	1.119	0.907	0.217	3.062	0.518	18.115
≥50				1		
Religion						
Islam				1		
Christian	-0.593	0.632	0.348	0.553	0.160	1.908
Others	-0.263	1.135	0.817	0.769	0.083	7.111
Marital status						
Single/Divorced/ Widowed	-1.386	0.822	0.092	0.250	0.050	1.253
Married				1		
Household income						
2000-5000	2.084	0.805	0.010**	8.035	1.658	38.932
5001-8000	1.399	0.682	0.040*	4.050	1.064	15.418
>8000				1		
Year of experience						
0-10	0.473	1.121	0.673	1.605	0.178	14.429
11-20	-0.057	0.735	0.938	0.944	0.224	3.989
>20				1		
Medical illness						
No				1		
Yes	0.136	0.643	0.833	1.145	0.325	4.036
Alcohol						
No				1		
Yes	2.590	1.448	0.074	13.333	0.781	227.680
Anxiety						
No				1		
Yes	2.500	0.644	<0.001***	12.186	3.450	43.039
Depression						
No				1		
Yes	2.361	0.597	<0.001***	10.596	3.287	34.162

Table 4.7 (Continued)

Factors	B	SE	p-value	AOR	95% CI	
Time management						
Low stressor				1		
High stressor	1.471	0.638	0.021*	4.354	1.246	15.209
Work-related stressors						
Low stressor				1		
High stressor	-0.220	0.616	0.721	0.803	0.240	2.682
Students' Discipline						
Low stressor				1		
High stressor	0.280	0.636	0.660	1.323	0.380	4.607
Professional Investment						
Low stressor				1		
High stressor	0.439	0.608	0.471	1.551	0.471	5.108
Professional Distress						
Low stressor				1		
High stressor	0.247	0.630	0.695	1.280	0.372	4.401

B= beta coefficient, SE= standard error, AOR= adjusted odd ratio,
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

CHAPTER 5 : DISCUSSION

This chapter discussed the findings of the study based on the research objectives and research questions. The discussion highlighted the prevalence of psychological stress and its associated factors among secondary school teachers in Samarahan and Asajaya district. It also included the comparison with previous studies and the implications of the finding in assisting the policymakers either from the education sector or health sector in managing the mental health issues among secondary school teachers.

5.1 Prevalence of Psychological Stress

The overall prevalence of psychological stress among secondary school teachers in Samarahan and Asajaya district from this study was 19.5%. Out of 241 teachers, 47 (19.5%) were having psychological stress based on the DASS-21 score, where 9.1% had mild stress, 7.1% had moderate stress, 2.9% had severe stress, and 0.4% had very severe stress. This finding was similar to the study done among secondary school teachers in Penang, where the prevalence of psychological stress was 19.6% (Zamri, Moy and Hoe, 2017). In a study among university staff in one of the local universities, they found that the prevalence of psychological stress was 21.7%. The study showed 6.7% of respondents had mild stress, 8.6% had moderate stress, and 6.5% had severe to very severe stress (Mukosolu *et al.*, 2015). In that same study, they compared the prevalence of psychological stress between academicians and non-academician, where 23.1% of the academic staff were more stressed than non-academic staff.

A study by Ismail and Noor (2016) reported that the prevalence of psychological stress was 22.1% among academicians in a research university. As can be seen, the percentage in this study was slightly lower compared to the other studies among higher institution lecturers. The difference in rate may be due to the variations in respondents' work natures and working environment. In a survey among a similar targeted group in Klang, the prevalence of psychological stress was higher. They found that 32.3% of teachers had psychological stress, of which 25.3% of them were mild to moderate stress, and 7.0% were severe to very severe stress (Othman and Sivasubramaniam, 2019). The difference in percentage is most likely due to the dissimilarity of the school environment and students' background. A comparison study by Kavita and Hassan (2018) described the secondary school teachers had more stress than primary school teachers. The difference was influenced by seven factors, namely student attitude, workload, time constrain, recognition and support, rapport with parents, rapport with a co-worker, and lack of resources (Kavita and Hassan, 2018).

Amongst the various occupation studied, occupations such as police officers, doctors, and nurses are among the stressful jobs in Malaysia. The prevalence of psychological stress among 932 nurses in a teaching hospital was 14.4%, slightly lower than the prevalence in this study (Ghawadra *et al.*, 2019). Similarly, a finding among medical officers in public hospitals showed a lower percentage compared to this study, where only 7.9% of them reported to be stressed based on DASS-21 (Yahaya *et al.*, 2015). However, the prevalence of high emotional exhaustion among doctors was high (25.4%) based on the score from the Perceived Stress Scale (Khoo *et al.*, 2017). Meanwhile, the prevalence among police officers doubled the prevalence in this study, where 38.8% of them reported having psychological stress of 18.0%, 14.9%, and 5.9%

reported as mild, moderate, and severe stress, respectively (Masilamani *et al.*, 2013). This comparison suggests that different types of occupation and respondents' background can give a different outcome of psychological stress.

5.2 Socio-demographic Factors

In this study, for socio-demographic factors, there was a significant association between psychological stress and age, marital status, and household income. The youngest age group, 20 to 29 years old, had the highest prevalence of stress (42.1%) compared to older age groups where 25.3% of teachers aged 30 to 39 years old, 17.2% of teachers aged 40 to 49 years old and 6.3% of aged more than 50 years old were found to be stressed. A similar pattern can be seen in a study among school teachers in Klang, where younger teachers were more stressed than the older group (Othman and Sivasubramaniam, 2019). On the other hand, in a study conducted by Hadi *et al.* (2009), the regression analysis showed that the stress scores were higher among the older group.

While in a different study, a middle-age group teacher experienced more stress than the younger age group and older age group (Kavita and Hassan, 2018). Additionally, in a study among the special education teachers, there was no association between psychological stress and the age of the respondents (Ghani, Che Ahmad and Ibrahim, 2014). In general, the younger group is usually associated with a lack of experience, inadequate adjustment and adaptation skills, and exposure to the new environment (Lobanova, 2020). Hence, the high prevalence of psychological stress (57.1%) among young doctors during their internship had been associated with a lack of experience and new to the workplace environment (Shahrudin *et al.*, 2016).

Moreover, this present study showed that teachers who were single, divorced, or widowed (34.1%) were more stressed compared to those who were married (16.2%). A similar finding was found in a study among university staff where the prevalence was highest among the single staff (24.3%), followed by 22.2% of the widowed and 21.3% of the married staff (Mukosolu *et al.*, 2015). A study among the general population showed that married people had lower cortisol levels than the unmarried or previously married (Chin *et al.*, 2017). Cortisol levels were used to predict the stress response in many studies (Berger *et al.*, 2016; Cameron *et al.*, 2017). Yet, in other studies, the marital status did not play an essential role in the association with psychological stress among teachers (Samad *et al.*, 2011; Ghani, Che Ahmad and Ibrahim, 2014). On the other hand, a study by Othman and Sivasubramaniam (2019) did not describe the marital status. Instead, they compared the prevalence of psychological stress in terms of marriage duration, where it was higher among teachers with shorter marriage duration.

In this study, female teachers (21.1%) were more stressed than male teachers (16.9%). Using the General Health Questionnaire, the finding from a study in Japan presented the result in the same way where female teachers (57.8%) were more stressed than male teachers (47.8%) (Bannai, Ukawa and Tamakoshi, 2015). Female lecturers were found to have a higher mean job stress score in a study that compared respondents from Pahang and Jogjakarta (Safaria *et al.*, 2011). To summarize, being female and single had a higher percentage of psychological stress. Comparatively, in a study on the prevalence of burnout among female teachers, they found that the single teachers scored higher than married teachers in all three dimensions of burnout, namely emotional exhaustion, depersonalization, and personal accomplishment

(Mukundan and Ahour, 2011). Generally speaking, every individual trait could contribute to the different ways of adjustment and coping skills.

In terms of household income, teachers with a lesser monthly income had a higher prevalence of psychological stress. Teachers with a household income range of RM2000-RM5000 (OR=8.035, 95% CI=1.658, 38.932) and RM5001-RM8000 (OR=4.050, 95% CI=1.064, 15.418) are eight times and four times, respectively, more likely to be stressed compared to those with more than RM8000 household income per month. This finding was slightly different from the outcome among university staff, where the middle-income group was more stressed than lower and higher income groups (Mukosolu *et al.*, 2015). On the contrary, a study in India described that the stress level was high, with the most higher-paid teachers (Dawn *et al.*, 2016). Different ranges of income are usually associated with varying degrees of commitment. Therefore, it could affect other groups in different ways depending on their lifestyle and number of households.

Meanwhile, other socio-demographic factors such as ethnicity, religion, and level of education showed no association with psychological stress. However, between ethnicities, Chinese shows a higher percentage of psychological stress (25.0%) compared to Malay (20.4%) and Bumiputera Sarawak (14.3%). In the studies by Othman and Sivasubramaniam (2019) and Mukosolu *et al.* (2015), psychological stress was more common among Indians than Malay or Chinese. The difference in prevalence was due to the difference in the demographic background of the respondents. As a matter of fact, ethnicity in Sarawak is more diverse compare to other states in Malaysia. Therefore, ethnicity in this study was slightly different than the studies conducted in Peninsular Malaysia.

5.3 Occupational Factors

This study observed the occupational factors in terms of the years of experience, the average number of students, teaching exam subjects, and distance from home. A significant association was found between psychological stress and years of experience. Teachers with fewer years of experience presented more frequently with psychological stress than more senior teachers. To point out, 32.4% of teachers with years of experience between 0 to 10 years presented with psychological stress. Meanwhile, teachers who had been teaching for more than ten years showed a lesser percentage of psychological stress. Both primary and secondary school teachers in a study by Kavita and Hassan (2018) presented a comparable pattern with this present study.

Whereas in different articles by Samad *et al.* (2011) and Othman and Sivasubramaniam (2019), the psychological stress was more common among teachers with the vastest teaching experience. A corresponding finding was reported in a study among Egyptian teachers (Desouky and Allam, 2017). Comparing their roles and workload at school, it could be explaining the possible reasons for this difference. Egyptian teachers who had more experience were associated with higher workloads. Nevertheless, the risk of developing psychological stress improves with experience based on the evidence where a one month increase in the working duration of the house officers was associated with a 7% decrease in risk of developing stress (OR=0.93, 95% CI=0.88, 0.98, $p=0.006$) (Shahrudin *et al.*, 2016).

In contrast, no significant association was found in other occupational factors such as the average number of students, teaching exam subjects, and distance from home. Nonetheless, psychological stress was more common among teachers with the

average number of students between 21 to 30 per class (21.3%), who were teaching students for the national exam (19.8%) and who travelled more than 20 km to school (25.3%). Comparatively, a study on depression among school teachers showed a significant association between the mean depression scores and the numbers of the student (Dilekmen and Erdem, 2013). Different roles in the teaching profession have been linked to psychological stress. Teaching subjects for the national school examinations exert more pressure on teachers as it is associated with students' and school's performance. At the same time, teachers who are working out of their subject area were presented with workplace fatigue (Fitchett *et al.*, 2019). The distance from home was associated with the time of travel. In that case, teachers who travelled more than one hour to reach their school were more stressed in comparison to the teachers who travel less than one hour to their school (Dawn *et al.*, 2016).

5.4 Health Status, Anxiety and Depression

Among the health status that had been observed in this study, alcohol consumption, anxiety and depression were significantly associated with psychological stress. That is to say, 50% of teachers who consumed alcohol presented with psychological stress. In the same way, the consumption of alcohol was a factor associated with depression among adolescents, with 18% of them presented with depressive symptoms (Latiff *et al.*, 2016). Conversely, alcohol use was found not to be preferred by teachers as a stress management strategy in a study among Tanzanian teachers (Mwakasangula and Mwita, 2020). However, in this present study, the evaluation of alcohol dependence was not carried out to clarify the association between psychological stress and alcohol consumption. Furthermore, the use of alcohol among

teachers in this study was low (3.3%), which could obscure the actual relationship. It was a good sign as alcoholism usually associated with the absenteeism and presenteeism in the workplace (Howard, Howard and Smyth, 2012).

Additionally, 49 (20.3%) of the teachers reported having underlying medical illnesses. From those numbers, 26.5% of them presented with psychological stress. As a matter of fact, a long-standing physical condition could be a mediating factor between occupation and common mental health problems (Stansfeld *et al.*, 2011). Another upcoming issue among teachers is related to sickness presenteeism. Sickness presenteeism is defined as a 'decreased on-the-job performance due to the presence of health problems' (Schultz and Edington, 2007). A study in German showed 67.7% of teachers with the bad general state of health reported sickness presenteeism, and it was two times more common among teachers who are suffering from exhaustion or fatigue (Dudenhöffer *et al.*, 2017). A similar finding was found from a local study among employee in the urban areas where those with feeble mental health 17 times more likely to present with presenteeism (Wee *et al.*, 2019).

At the same time, psychological stress can give a negative impact on health. A study by Wee *et al.* (2019) presented, 63.2% of employees reporting being unwell due to stress for the past 12 months. Many studies had described that psychological stress was associated with reported musculoskeletal pain among teachers (Zamri, Moy and Hoe, 2017; Hoe *et al.*, 2018; Ng, Voo and Maakip, 2019). Psychological stress was associated with a doubling of the risk of reported musculoskeletal pain (Nahit *et al.*, 2003). Also, in a study in India, the prevalence of high school teachers with hypertension was 45.4%. The prevalence of hypertension had a significant association with psychological stress (Chetia, Gogoi and Baruah, 2018). Likewise, this present

study showed the prevalence of psychological stress was more common among teachers who were non-smokers (20.1%) and who did not engage in physical activities (19.9%). It is similar with the study done by Balakrishnan, Bahari and Paul (2017) where they described smoking reduced the risk of stress by 90% (OR=0.09; 95% CI=0.02, 0.35) while those who do not exercise were nine times more likely to develop psychological stress (OR=9.4; 95% CI=2.8, 31.4).

There was a significant association between psychological stress and anxiety and depression status. This study reported, 42.9% of teachers with anxiety and 68.9% of teachers with depression presented with psychological stress. This finding supported the result from another study done among university staff in a local university (Mukosolu *et al.*, 2015). This association might be due to the heavy workload and high job demands. Logistic regression in this study showed that both anxiety and depression could predict the incidence of psychological stress. Anxious teachers are 12 times more likely to present with psychological stress than those with no anxiety (OR=12.186, 95% CI=3.450, 43.039).

Similarly, those who were depressed are 11 times more prone to be stressed than those without depression (OR=10.596, 95% CI=3.287, 24.162). Although this may be true, these three negative emotional states could present concurrently, which explained the strong relationship between them (p -value<0.001). A comparable study in Pakistan among 131 teachers found that depression, anxiety and stress had a significant positive relationship between each other as well as a positive mediating effect between job strain and turnover intention (Husain *et al.*, 2016). Also, a significant positive correlation was found among Egyptian teachers in a study done by Desouky and Allam (2017).

5.5 Psychosocial Factors

The psychological stress was significantly associated with psychosocial factors ($p < 0.001$): namely, time management, work-related stressors, students' discipline, professional investment and professional distress. To point this out, teachers with high time management stressor (29.1%) more commonly presented with psychological stress than teachers with low time management stressor (16.7%). That is to say, those with high time management stressor was four times more likely to be stressed compared to those with the low stressor (OR=4.354, 95% CI=1.246, 15.209). This finding supported the previous study where they found the time management was associated with the feeling of control over time and the job strain (Jex and Elacqua, 1999). A more recent study by Grissom, Loeb and Mitani (2015) also reported the school's principals with strong time management skill presented with lower psychological stress.

As a matter of fact, there was an association between time management skills and the teacher's performance at school. A previous study showed a significant positive correlation between teacher's performance and time management techniques, namely engaging time, perceived control over time, lesson planning techniques, and pacing of instruction (Khan *et al.*, 2016). At the same time, the impact of teachers' time management was found to be proportionate with the students' performance (Sahito *et al.*, 2016). Improvement in time management could improve the students' performance. Moreover, in a different study, teachers' stress had been found to affect students' performance at school and students' satisfaction (Manabete *et al.*, 2016). Given this point, psychological stress could be a mediating factor between time management and student's performance.

In this study, there was an association between psychological stress and work-related stressors. Teachers with the high stressor in work-related factors (23.9%) presented more frequently with psychological stress than those with the low stressor. Work-related stressors focused on workload, time constraints, personal role and additional role include administrative work. A similar finding was found in a study among university staff done by Alboliteeh (2019). In a study using the Job Content Questionnaire by Hadi *et al.* (2009), a similar finding was shown where there was an association between psychological stress and job demand. Increase in workload and time constraint leads to chronic pressure in achieving job demand (Samad *et al.*, 2011). In the long run, heavy workload increases the risk of burnout among teachers (Mukundan and Khandehroo, 2010; Mukundan and Ahour, 2011). The workload was also a predictor for depression and anxiety among school teachers in Egypt (Desouky and Allam, 2017). Furthermore, psychological stress related to workload and working environment had a negative relationship with job satisfaction (Mwakasangula and Mwita, 2020).

In a study among Korean teachers done by Moon *et al.* (2015), they found that students' verbal and non-contact physical aggression was strongly correlated with teachers' emotional stress. In this present study, 24.4% of teachers with high stressors of students' discipline had a higher prevalence of psychological stress than those with low stressor. Students' discipline includes classroom control, monitoring, teacher's authority, as well as students' motivation. A previous study identified students' misbehaviour as the top stressor associated with psychological stress among primary school teachers in Klang (Samad *et al.*, 2011). Consequently, stress attributed to student misbehaviour was found to be a predictor of the three dimensions of burnout

(McCormick and Barnett, 2011). Meanwhile, teachers who had greater classroom control were less susceptible to psychological stress (Fitchett *et al.*, 2019).

Comparatively, the respondents with high professional investment stressor (36.4%) more commonly reported to be stressed than the respondents with low professional investment stressor (15.7%). Professional investment summarized the opportunities for giving an opinion, involvement in decision making, critical thinking and problem-solving as well as being innovative and creative. A similar finding reported that 26.2% of the lecturers in a local university who had low scores of decision latitude experienced high psychological stress (Nur Aqilah and Juliana, 2012). Decision latitude is 'the ability to use his or her skills on the job and have the authority to make a decision regarding how the work was done and to set the schedule for completing work'. This factor is closely related to leadership skill. A previous study suggested that teachers with high job control were associated with reduced emotional exhaustion (Aronsson *et al.*, 2017). Furthermore, improvement in psychological stress related to leadership will increase job satisfaction among teachers (Mwakasangula and Mwita, 2020).

Lastly, this study found a significant association between psychological stress and professional distress. The professional distress includes the opportunities for promotion, salary increment, recognition, status and respect. Among teachers with high professional distress stressors, 31.0% of them presented with psychological stress. To put it another way, the researchers also looked at the relationship between psychological stress and career development. Career development was found to be the primary source of psychological stress among lecturers in research universities. The pressure in completing the research and publication for promotion influenced the high-

stress score among them (Ismail and Noor, 2016). Reward and recognition are equally important as the predictor of psychological stress.

Other factors could also be associated with psychological stress. Ryan *et al.* (2017) listed test-based accountability as a predictor for psychological stress, burnout and turnover intention. They also related teacher stress with teacher turnover, both attrition and migration. A study found the relationship between psychological stress and hazardous working condition as well as the lack of material and resources for teaching (Alson, 2019). Furthermore, job insecurity had been considered as one of the workplace sources of psychological stress among teachers (Manabete *et al.*, 2016). Last but not least, teachers who received a high level of social support, particularly organisation support and co-workers support, had a negative correlation with psychological stress (Marchand and Marie-Ève, 2011; Riaz *et al.*, 2016; Malik, Björkqvist and Österman, 2017).

As had been noted, a wide range of factors could be associated with psychological stress. The final analysis identified four positive predictors, namely household income, anxiety, depression and time management. From previous studies, psychological stress was also associated with the incidence of burnout, job satisfaction, turnover intention, teachers' commitment and teachers' performance as well as students' performance. Therefore, immediate control and prevention measures should be applied to help teachers manage their mental health, mainly psychological stress.

Quick and Henderson (2016) suggested different types of approaches in managing psychological stress among workers include individual approach and organisation approach. The preventive measures could be primary, secondary or tertiary prevention. Some of the interventions had been proven to have a positive effect

on managing psychological stress among teachers. In general, the teachers' stress interventions can be divided into four main categories include knowledge-based intervention, cognitive-behavioural intervention, mindfulness and behavioural intervention (von der Embse *et al.*, 2019). Selection of the intervention must be based on the risk factors and severity of the psychological stress.

CHAPTER 6 : CONCLUSION AND RECOMMENDATION

6.1 Conclusion

This study gives an overview of the burden of the psychological stress and its associated factors among secondary school teachers in Samarahan Division. Overall, the prevalence of psychological stress among secondary school teachers in Samarahan and Asajaya district was 19.5%, predominantly among female. The prevalence of psychological stress was significant among younger teachers, single, divorced or widowed, and among those with least household income. Only the years of experience had a significant relationship with psychological stress among occupational factors. Anxiety and depression showed significant association with psychological stress. There was a significant association between psychological stress and psychosocial factors.

After controlling the confounders, four factors were selected as the predictors for psychological stress, notably household income, anxiety, depression and time management. These four predictors need to be addressed while discussing the types of measures to reduce or mitigate the prevalence of psychological stress among teachers. From this study, it showed that psychological stress is preventable, and the risk factors are mostly manageable. With this in mind, the exploration of the risk factors helped prioritise the elements for the interventions.

6.2 Strengths and Limitations

This study intended to be presented as baseline data for the local research in East Malaysia as there were limited studies with the same topic conducted in this region. Not to mention, it could be used as a comparison study between West and East Malaysia. Besides, this study was envisioned to be used as a part of the evidence to help in intervention development. The school management can use it as well as the education department or Ministry of Education. This study design lies in its repeatability in other regions, covering all factors within the workplace, and enabling comparisons to be made.

However, being a cross-sectional study where the causation association cannot be proven, the result may not be conclusive for certain risk factors. This limitation can be improved by conducting a cohort study for selected elements in the future. Apart from that, there were small numbers of the variable for occupational characteristics which led to the partial understanding of occupational factors and its association with psychological stress. The use of more specific instruments could improve the outcome of the study.

6.3 Recommendations

In conclusion, the burden of psychological stress among school teachers can be associated with either individual factors or work-related factors. Also, it could not only affect individual performance but the school as well as students' performance as a whole. Given this, the responsibility in managing psychological stress among teachers does not lie with the individual but at every level in the organization: namely school administration, District Education Office and Ministry of Education as well as

Ministry of Health. The identified associated factors should be the priority in implementing the control and preventive measures.

There are rapid changes and reformations in the education system from time to time. Therefore, every teacher must be prepared with excellent coping skills and ability to adapt to the new policy. Surveillance systems for early detection of psychological stress can be implemented at the school level. Moreover, teachers need to be more capable of managing stress to provide excellent services and outstanding performance.

The best example of the reformation in education systems can be seen during the current pandemic of coronavirus (COVID-19). The Malaysia Government implemented the Movement Control Order as one of the mitigation measures during the recent outbreak. It includes the closure of the school in the whole country (*COVID-19: Movement Control Order*, 2020). Following that, the education leaders had to implement the adaptive response to the new challenges during this period.

The transformation in the education system changed the roles of teachers in various ways. Following the school reopening, teachers are responsible for ensuring the practice of physical and social distancing, hand hygiene, health screening and classroom arrangement (*SOP PKP Pemulihan: Sektor Pendidikan*, 2020). These new tasks increase the workload among teachers and possibly leads to psychological stress. Therefore, as one of the preventive measures to maintain mental wellbeing is to do mental health screening to all teachers involved. Any abnormality can be managed as early as possible by detecting it earlier. A proper job description is essential to ensure the understanding among teachers about their workload and helping them to be mentally prepared.

There are three types of career interventions to promote happiness and mental wellbeing; namely guidance and counselling interventions, organisation interventions and policy interventions (Redekopp and Huston, 2019). Firstly, it was suggested that counselling intervention includes pre-employment and career development will help teachers on self-awareness, decision- making and values prioritisation. This type of intervention is leading to career preparedness mainly to the new employee in reducing the development of depressive symptoms (Ahola *et al.*, 2012). Besides, the stress management program can be included under counselling intervention. The teachers need to understand the work-related stressors as demands to be cope rather than unsolved problems. The stress management intervention was proven to be effective in reducing the job-related burnout and distress among teachers (Ugwoke *et al.*, 2018).

Secondly, the organisation intervention focuses on creating healthy work condition. One of the approaches is to improve the leadership among the school leaders. Good leadership was found to be correlated with increase wellbeing and reduce absenteeism among workers (Lindberg *et al.*, 2017). In addition, good leadership practices by the principals such as continuous improvement of instruction, cooperation and collaboration will improve a teachers' commitment (Kean, Kannan and Piaw, 2017).

Lastly, under career intervention is policy intervention. The policymakers should develop a more proactive and protective plans and strategies which focus on bettering the work environment. One initiative in Malaysia Education Blueprint 2013-2025 is to focus teachers on their core function of teaching by reducing administrative burden (Ministry of Education, 2013). This initiative should help in reducing the psychological stress among teachers in the country. Another policy that could be

implemented is the development of Teacher's Mental Health System that includes the 'hot-line' counselling centre, systematic screening and in-office services such as school counsellor or health teachers (Kim, 2016).

In addition, the multisectoral collaboration is important in managing the mental health problems among teachers. The Mental Health System must be integrated with health care services to ensure a proper management and intervention can be delivered to the teachers with high risk of psychological stress or mental illness. A proper referral system from the school counsellors or health teachers to the primary care staff must be included in the program together with the follow up and continuous monitoring from both sides.

After all, even though this study did not explore the consequences of psychological stress, there are numbers of research that showed the possible condition that can be affected by the teachers' stress. The most compelling evidence for the effects of psychological stress is burnout. A study showed that chronic or prolonged stress would lead to burnout among high school teachers (Aflakseir and Nemati, 2018). In addition to that, psychological stress frequently associated with job dissatisfaction (Yaacob and Sang Long, 2015) and turnover intention (Ryan *et al.*, 2017). Similarly, it had been correlated to the prevalence of absenteeism and presenteeism (Howard and Howard, 2020).

Therefore, more factors should be included in the future study mainly on the organisation factors, work-related factors, social interaction, and coping skills. Other methods in measuring the level of stress such as heart rate, blood pressure and salivary cortisol level can be included to give more supporting evidence of psychological stress. Besides, the related factors such as job satisfaction, burnout, turnover intention,

absenteeism and presenteeism can be explored further in understanding the effects of psychological stress. These factors could help the authority in understanding more about the possible risk factors and impacts of psychological stress and subsequently assist them in the planning and development of the mental health program.

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APPENDIX 1

Letter of Permission from the Ministry of Education Malaysia



KEMENTERIAN PENDIDIKAN MALAYSIA
BAHAGIAN PERANCANGAN DAN PENYELIDIKAN DASAR PENDIDIKAN
ARAS 1-4, BLOK E8
KOMPLEKS KERAJAAN PARCEL E
PUSAT PENTADBIRAN KERAJAAN PERSEKUTUAN
62604 PUTRAJAYA

TEL : 0388846591
FAKS : 0388846579

Ruj. Kami : KPM.600-3/2/3-eras(6189)
Tarikh : 2 Januari 2020

MARDHIYYAH BINTI AZMI
NO. KP : 880521035494

LOT 6441 [SL19] PALM VILLA PHASE, LORONG 9, JLN DATUK MOH,
KOTA SAMARAHAN 94300 KOTA SAMARAHAN
SARAWAK

Tuan,

**KELULUSAN BERSYARAT UNTUK MENJALANKAN KAJIAN :
KADAR STRESS DAN FAKTOR-FAKTOR BERKAITAN DIKALANGAN GURU-GURU SEKOLAH MENENGAH DI DAERAH
SAMARAHAN DAN ASAJAYA.**

Perkara di atas adalah dirujuk.

2. Sukacita dimaklumkan bahawa permohonan tuan untuk menjalankan kajian seperti di bawah telah diluluskan dengan syarat :

" TIADA SURAT PENGESAHAN STATUS PELAJAR / PENYELIDIK TERKINI. "

3. Kelulusan adalah berdasarkan kepada kertas cadangan penyelidikan dan instrumen kajian yang dikemukakan oleh tuan kepada bahagian ini. Walau bagaimanapun kelulusan ini bergantung kepada kebenaran Jabatan Pendidikan Negeri dan Pengetua / Guru Besar yang berkenaan.

4. Surat kelulusan ini sah digunakan bermula dari **13 Januari 2020** hingga **31 Mei 2020**

5. Tuan dikehendaki menyerahkan senaskhah laporan akhir kajian dalam bentuk *hardcopy* bersama salinan *softcopy* berformat pdf dalam CD kepada Bahagian ini. Tuan juga diingatkan supaya mendapat kebenaran terlebih dahulu daripada Bahagian ini sekiranya sebahagian atau sepenuhnya dapatan kajian tersebut hendak diterbitkan di mana-mana forum, seminar atau diumumkan kepada media massa.

Sekian untuk makluman dan tindakan tuan selanjutnya. Terima kasih.

"BERKHIDMAT UNTUK NEGARA"

Saya yang menjalankan amanah,

Ketua Sektor
Sektor Penyelidikan dan Penilaian
b.p. Pengarah
Bahagian Perancangan dan Penyelidikan Dasar Pendidikan
Kementerian Pendidikan Malaysia

salinan kepada:-

JABATAN PENDIDIKAN SARAWAK

APPENDIX 2

Request Letter to Sarawak Education Department

• UNIMAS/NC-21.02/04-02/07 Jld. 4 (72)

16 Januari 2020

Pengarah Pendidikan Sarawak
Jabatan Pendidikan Negeri Sarawak
Jalan Diplomatik Off Jalan Bako
Petra Jaya
93050 Kuching, Sarawak

Tuan,

Permohonan Kebenaran Mendapatkan Maklumat Berkaitan Penyelidikan
Ilmiah Pelajar Pascasiswazah UNIMAS
-Mardhiyyah bt. Azmi (No. Matrik:19030243)

Dengan segala hormatnya perkara di atas adalah dirujuk.

Dimaklumkan bahawa penama di atas merupakan pelajar pascasiswazah bagi program Sarjana Kesihatan Awam di Fakulti Perubatan dan Sains Kesihatan, Universiti Malaysia Sarawak sedang menjalankan satu kajian bertajuk; **Kadar Stres dan Faktor-Faktor Berkaitan di Kalangan Guru-Guru Sekolah Menengah di Daerah Samarahan dan Asajaya.**

Kajian ini akan melibatkan sekolah-sekolah menengah di bawah PPD Samarahan seperti berikut;

1. SMK ASAJAYA
2. SMK ASAJAYA NO.2
3. SMK SADONG HILIR(SEMERA)
4. SMK PESANTREN ABDUL TAIB MAHMUD
5. SMK SADONG JAYA
6. SMK KOTA SAMARAHAN
7. SMK MUARA TUANG
8. SMK WIRA PENRISSEN

Dilampirkan bersama adalah surat kelulusan daripada Bahagian Perancangan dan Penyelidikan Dasar Pendidikan, Kementerian Pendidikan Malaysia untuk rujukan pihak tuan.

Semua maklumat yang akan diberikan hanya akan digunakan bagi tujuan penyelidikan sahaja dan sebarang maklumat lanjut boleh berhubung dengan pelajar tersebut di talian 013-9190409.

Kerjasama dan perhatian pihak tuan amatlah dihargai dan didahului dengan ucapan terima kasih.



Sekian.

Yang benar.

A handwritten signature in black ink, consisting of a series of loops and a final flourish.

Prof. Dr. Haji Kamarudin bin Kana
Dekan

s.k. Penyelaras Program MPH – Prof. Madya Dr. Jeffery Stephen

APPENDIX 3

Letter of Permission from Sarawak Education Department



Ruj Kami : JPNSW.SKPP.LAT.600-1/1/1 Jld.6(65)
Tarikh : 23 Januari 2020

Mardhiyyah Binti Azmi

Lot 6441 [SL19] Palm Villa Phase
Lorong 9, Jln Datuk Mohd Musa
94300 Kota Samarahan
Sarawak

Puan,

**KEBENARAN UNTUK MENJALANKAN KAJIAN DI SEKOLAH-SEKOLAH, INSTITUT-
INSTITUT PERGURUAN, JABATAN PENDIDIKAN DAN BAHAGIAN-BAHAGIAN DI
BAWAH KEMENTERIAN PENDIDIKAN MALAYSIA**

Dengan hormatnya saya diarah merujuk perkara di atas.

2. Sukacita dimaklumkan bahawa pada dasarnya Jabatan Pendidikan Negeri Sarawak **tiada halangan** untuk membenarkan puan menjalankan kajian bertajuk :

“ Kadar Stress dan Faktor-Faktor Berkaitan Dikalangan Guru-Guru Sekolah Menengah di Daerah Samarahan dan Asajaya ”

3. Diingatkan bahawa sepanjang tempoh kajian tersebut, puan adalah tertakluk kepada peraturan yang sedang berkuatkuasa dan menjalankan kajian seperti tajuk yang diluluskan oleh Bahagian Perancangan dan Penyelidikan Dasar Pendidikan, Kementerian Pendidikan Malaysia melalui surat bil. KPM.600-3/2/3-eras(6189) bertarikh 2 Januari 2020. Surat kelulusan ini sah digunakan bermula dari **13 Januari 2020 hingga 31 Mei 2020**.

4. Jabatan ini memohon agar sesalinan laporan kajian dihantar ke Unit Pengurusan Bakat, Jabatan Pendidikan Negeri Sarawak sebaik sahaja selesai untuk tujuan rekod dan rujukan.

Sekian, terima kasih.

“BERKHIDMAT UNTUK NEGARA”

Saya yang menjalankan amanah,


(MOHAMAD ISWANI BIN SEKAWI)
Sektor Sumber Manusia
b.p. Pengarah Pendidikan
Jabatan Pendidikan Negeri Sarawak.

s.k.

Pegawai Pendidikan Daerah
Pejabat Pendidikan Daerah Samarahan

Pengetua
SMK Asajaya

Pengetua
SMK Asajaya No.2

Pengetua
SMK Sadong Hilir (Semera)

Pengetua
SMK Pesantren Abdul Taib Mahmud

Pengetua
SMK Sadong Jaya

Pengetua
SMK Kota Samarahan

Pengetua
SMK Muara Tuang

Pengetua
SMK Wira Penrissen

Fail (**Latihan**)

APPENDIX 4

Ethical Approval from UNIMAS Ethical Committee

UNIMAS/NC-21.02/03-02 Jld.4 (41)

22 Januari 2020

Dr Mardhiyyah bt Azmi

Fakulti Perubatan Dan Sains Kesihatan
Universiti Malaysia Sarawak
94300 Kota Samarahan,
Sarawak.

Dr,

Kelulusan Mesyuarat Etika Perubatan Untuk Kajian:

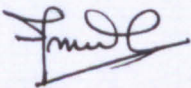
- *The Prevalence Of Psychological Stress And Its Associated Factors Among Secondary School Teacher In Samarahan And Asajaya District.*

Dengan segala hormatnya perkara di atas dirujuk.

Sukacita dimaklumkan bahawa kertas kerja penyelidikan seperti di atas yang dijalankan oleh Dr Mardhiyyah bt Azmi dan diselia oleh Dr Ayu Akida Bt Abdul Rashid telah diluluskan dalam Mesyuarat Jawatankuasa Etika Perubatan Fakulti bil 01/2020 pada 7 Januari 2020.

Sehubungan itu, penyelidikan tersebut boleh dimulakan dan diharap ia dapat dijalankan seperti yang dirancang.

Yang benar,



Professor Dr Lela Hj Su'ut
Pengerusi
Jawatankuasa Etika Perubatan
Fakulti Perubatan dan Sains Kesihatan



APPENDIX 5

Gantt Chart

	2019				2020								
	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sept
Proposal preparation and approval													
Pilot study													
Data collection													
Data entry and data analysis													
Report writing													
Report submission													

APPENDIX 6

Questionnaire in Malay Version



KAJIAN KADAR STRES PSIKOLOGI DAN FAKTOR-FAKTOR YANG
BERKAITAN DIKALANGAN GURU-GURU SEKOLAH MENENGAH DI
DAERAH SAMARAHAN DAN ASAJAYA
**RISALAH MAKLUMAT PESERTA DAN BORANG PERSETUJUAAN
PESERTA**

1. Tajuk Kajian:

Kadar stres psikologi dan faktor-faktor berkaitan dikalangan guru-guru sekolah menengah di daerah Samarahan dan Asajaya

2. Nama penyelidik:

Dr Mardhiyyah Binti Azmi (19030243)
Pelajar Sarjana Kesihatan Awam UNIMAS

3. Name of supervisor (Nama penyelia):

Dr Ayu Akida Binti Abdul Rashid
Pensyarah Fakulti Perubatan dan Sains Kesihatan UNIMAS

4. Institusi:

Fakulti Perubatan dan Sains Kesihatan, Universiti Malaysia Sarawak
(UNIMAS)

5. Nama penaja:

Penajaan sendiri

6. Pengenalan:

Borang ini menjelaskan hal-hal berkenaan penyelidikan tersebut dengan lebih mendalam dan terperinci. Amat penting anda memahami mengapa penyelidikan ini dilakukan dan apa yang dilakukan dalam penyelidikan ini. Sila ambil masa yang secukupnya untuk membaca dan mempertimbangkan dengan teliti penerangan yang diberikan sebelum

anda bersetuju untuk menyertai penyelidikan ini. Jika ada sebarang kemusykilan ataupun maklumat lanjut yang anda ingin tahu, anda boleh bertanya dengan kakitangan yang terlibat dalam penyelidikan ini. Setelah anda berpuas hati bahawa anda memahami penyelidikan ini, dan anda berminat untuk turut serta, anda dikehendaki menandatangani Borang Persetujuan atau Keizinan Peserta, pada muka surat akhir risalah ini.

Penyertaan anda dalam penyelidikan ini adalah secara sukarela. Anda tidak perlu menyertai penyelidikan ini jika anda tidak mahu. Anda juga mempunyai hak untuk tidak menjawab mana-mana soalan. Anda juga boleh menarik diri daripada penyelidikan ini pada bila-bila masa sahaja. Jika anda menarik diri, segala maklumat yang telah diperolehi sebelum anda menarik diri tetap akan digunakan dalam penyelidikan ini.

7. Apakah tujuan kajian ini dijalankan?

Kajian ini bertujuan bagi menentukan kadar stres psikologi dan kaitannya dengan faktor-faktor socio-demografi, faktor-faktor pekerjaan, faktor-faktor psikososial dan faktor-faktor kesihatan dan gaya hidup.

Kajian ini akan dijalankan selama 8 bulan (Januari 2020 hingga Ogos 2020). Pengumpulan data akan dijalankan antara bulan Januari 2020 hingga April 2020. Dianggarkan seramai 300 orang peserta diperlukan bagi kajian ini.

8. Apakah tanggungjawab saya semasa menyertai penyelidikan ini?

Amat penting untuk anda menjawab kesemua soalan yang dikemukakan oleh kakitangan penyelidikan dengan jujur dan lengkap yang akan mengambil masa selama 10 minit hingga 15 minit. Kajian ini melibatkan soal selidik/temu bual dan anda akan diberikan borang kaji selidik untuk dijawab. Borang ini mengandungi lima (5) bahagian yang akan menanyakan tentang ciri-ciri sosio-demografi, maklumat pekerjaan, maklumat kesihatan dan gaya hidup, saringan kesihatan minda dan saringan faktor psikososial.

9. Apakah risiko atau kesan sampingan dengan menyertai kajian ini?

Penyertaan dalam penyelidikan ini tidak akan menjejaskan kedudukan dan pencapaian pengajaran anda di sekolah anda. Maklumat peribadi adalah rahsia dan tidak akan dikongsi dengan pihak berkuasa sekolah dan

Pejabat Pendidikan. Anda berhak untuk tidak menjawab mana-mana soalan kajian jika rasa tidak selesa dengan soalan kajian tersebut.

10. Apakah kebaikan dengan menyertai kajian ini?

Apabila anda selesai menjawab soal selidik ini, jawapan akan dianalisa dan diemail kepada anda. Berdasarkan keputusan soal selidik, anda dapat mengetahui tahap stres anda. Jika keputusan memerlukan pemeriksaan lanjut, anda akan dirujuk ke klinik kesihatan terdekat. Maklumat yang diperoleh daripada kajian ini akan membantu penyelidik mencapai objektif kajian dan menjana lebih kajian berkaitan tajuk ini di masa akan datang.

11. Adakah maklumat saya akan dirahsiakan?

Segala maklumat anda yang diperolehi dalam penyelidikan ini akan disimpan dan dikendalikan secara sulit, bersesuaian dengan peraturan-peraturan dan/ atau undang-undang yang berkenaan. Sekiranya hasil penyelidikan ini diterbitkan atau dibentangkan kepada orang ramai, identiti anda tidak akan didedahkan tanpa kebenaran anda terlebih dahulu. Individu yang terlibat dalam kajian ini, pemantau yang berkecuali dan juruaudit, dan pihak berkuasa kerajaan atau pengawal selia boleh memeriksa data kajian, jika sesuai dan perlu.

12. Siapakah yang perlu saya hubungi sekiranya mempunyai pertanyaan?

Jika anda mempunyai sebarang pertanyaan berkaitan kajian ini atau memerlukan penerangan lanjut, sila hubungi Dr Mardhiyyah Azmi di nombor 013-9190409 atau melalui email mardhiyyahazmi@gmail.com

...Terima Kasih...

KAJIAN KADAR STRES DAN FAKTOR-FAKTOR YANG BERKAITAN DIKALANGAN GURU-GURU SEKOLAH MENENGAH DI DAERAH SAMARAHAN DAN ASAJAYA

Borang kaji selidik ini mempunyai LIMA (5) bahagian; Bahagian 1: maklumat peribadi (8 soalan), Bahagian 2: maklumat pekerjaan (6 soalan), Bahagian 3: maklumat kesihatan dan gaya hidup (5 soalan), Bahagian 4: saringan kesihatan minda (21 soalan), Bahagian 5: saringan faktor psikososial (29 soalan).

Anda diminta menjawab SEMUA soalan di SEMUA Bahagian. Terima Kasih.

BAHAGIAN 1: MAKLUMAT PERIBADI

1. **Berapakah umur anda pada tahun ini?** (nyatakan dalam tahun)
.....
2. **Apakah jantina anda?**
☐ Lelaki ☐ Perempuan
3. **Apakah bangsa anda?**
☐ Melayu ☐ Bidayuh
☐ Cina ☐ Melanau
☐ India ☐ Lain-lain (Nyatakan
☐ Iban)
4. **Apakah agama anda?**
☐ Islam ☐ Hindu
☐ Kristian ☐ Lain-lain
☐ Buddha
5. **Apakah tahap pendidikan tertinggi anda?**
☐ SPM/STPM/STAM ☐ Sarjana (Master)
☐ Diploma ☐ Doktor Falsafah (Phd)
☐ Sarjana Muda
6. **Apakah taraf perkahwinan anda?**
☐ Bujang ☐ Bercerai
☐ Berkahwin ☐ Duda/Balu
7. **Berapakah bilangan anak anda (jika ada)?**
.....

8. Berapakah jumlah pendapatan isi rumah anda sebulan?

RM

BAHAGIAN 2: MAKLUMAT PEKERJAAN

9. Nyatakan nama sekolah yang anda sedang bertugas sekarang.

.....

10. Apakah jenis sekolah anda?

☐ Bandar

☐ Luar Bandar

11. Berapa lamakah anda bekerja sebagai guru? (nyatakan dalam tahun)

.....

12. Berapakah purata bilangan murid dalam SATU kelas yang diajar?

☐ <10 orang

☐ 21-30 orang

☐ 10-20 orang

☐ >30 orang

13. Adakah anda mengajar mata pelajaran bagi peperiksaan utama (PT3/SPM/STPM/STAM)?

☐ Ya

☐ Tidak

14. Berapakah jarak sekolah dengan rumah anda? (nyatakan dalam kilometer.km)

..... km

BAHAGIAN 3: MAKLUMAT KESIHATAN DAN GAYA HIDUP

15. Adakah anda sekarang menghidapai penyakit yang dalam rawatan doktor?

☐ Ya

☐ Tidak (sila ke soalan 17)

16. Apakah penyakit yang sedang anda hidapi? (boleh tanda lebih daripada satu (1) pilihan)

☐ Kencing Manis (*Diabetes Mellitus*)

☐ Kanser (Nyatakan)

☐ Darah Tinggi (*Hypertension*)

☐ Kemurungan (sedang dalam rawatan doktor)

☐ Asma

☐ Lain-lain (Nyatakan)

17. Adakah anda seorang perokok?

☐ Ya

☐ Tidak

18. **Adakah anda mengambil minuman keras/ minuman beralkohol (arak)?**

☐ Ya

☐ Tidak

19. **Adakah anda terlibat dengan aktiviti fizikal di luar waktu bekerja?**

(Aktiviti seperti badminton, mendaki gunung, berbasikal, jogging, aerobik, zumba, berenang, berkebun dan lain-lain)

☐ Ya

☐ Tidak

BAHAGIAN 4: SARINGAN KESIHATAN MINDA (DASS21)

Sila baca setiap kenyataan di bawah dan bulatkan pada nombor 0,1,2 atau 3 bagi menggambarkan keadaan anda sepanjang minggu yang lalu. Tiada jawapan yang betul atau salah. Jangan mengambil masa yang terlalu lama untuk menjawab mana-mana kenyataan.

Skala pemarkahan adalah seperti berikut:

0 Tidak pernah 1 Sedikit/ jarang-jarang 2 Banyak/ kerapkali 3 Sangat banyak/ sangat kerap

1.	Saya dapati diri saya sukar ditenteramkan	0	1	2	3
2.	Saya sedar mulut saya terasa kering	0	1	2	3
3.	Saya tidak dapat mengalami perasaan positif sama sekali	0	1	2	3
4.	Saya mengalami kesukaran bernafas (contohnya pernafasan yang laju, tercungap-cungap walaupun tidak melakukan senaman fizikal)	0	1	2	3
5.	Saya sukar untuk mendapatkan semangat bagi melakukan sesuatu perkara	0	1	2	3
6.	Saya cenderung untuk bertindak keterlaluan dalam sesuatu keadaan	0	1	2	3
7.	Saya rasa menggeletar (contohnya pada tangan)	0	1	2	3
8.	Saya rasa saya menggunakan banyak tenaga dalam keadaan cemas	0	1	2	3
9.	Saya bimbang keadaan di mana saya mungkin menjadi panik dan melakukan perkara yang membodohkan diri sendiri	0	1	2	3
10.	Saya rasa saya tidak mempunyai apa-apa untuk diharapkan	0	1	2	3
11.	Saya dapati diri saya semakin gelisah .	0	1	2	3
12.	Saya rasa sukar untuk relaks	0	1	2	3
13.	Saya rasa sedih dan murung	0	1	2	3
14.	Saya tidak dapat menahan sabar dengan perkara yang menghalang saya meneruskan apa yang saya lakukan	0	1	2	3
15.	Saya rasa hampir-hampir menjadi panik/cemas	0	1	2	3
16.	Saya tidak bersemangat dengan apa jua yang saya lakukan.	0	1	2	3
17.	Saya tidak begitu berharga sebagai seorang individu	0	1	2	3
18.	Saya rasa yang saya mudah tersentuh	0	1	2	3
19.	Saya sedar tindakbalas jantung saya walaupun tidak melakukan aktiviti fizikal (contohnya kadar denyutan jantung bertambah, atau denyutan jantung berkurangan)	0	1	2	3
20.	Saya berasa takut tanpa sebab yang munasabah	0	1	2	3
21.	Saya rasa hidup ini tidak bermakna	0	1	2	3

BAHAGIAN 5: SARINGAN PSIKOSOSIAL (29 soalan)

Berikut adalah faktor-faktor tekanan. Sila kenal pasti faktor-faktor yang menyebabkan anda berasa tertekan (stres) pada kedudukan anda sekarang. Baca dengan teliti pernyataan yang diberikan dan sila tentukan adakah anda berasa tertekan dengan pekerjaan anda sekarang. Kemudian, nyatakan tahap kuatnya perasaan tersebut apabila anda mengalaminya mengikut skala 1 hingga 5.

1= tidak ketara 2= hampir tidak ketara 3= sederhana ketara 4= ketara 5= sangat ketara

1.	Saya mudah memaksa diri melakukan sesuatu melebihi kemampuan.	1	2	3	4	5
2.	Saya menjadi tidak sabar sekiranya orang lain membuat apa-apa pekerjaan dengan perlahan.	1	2	3	4	5
3.	Saya terpaksa mencuba untuk melakukan lebih daripada satu tugas pada satu masa.	1	2	3	4	5
4.	Masa saya untuk berehat adalah sangat terhad.	1	2	3	4	5
5.	Saya berfikir tentang perkara yang tidak berkaitan semasa perbualan.	1	2	3	4	5
6.	Saya berasa tidak selesa jika membuang masa.	1	2	3	4	5
7.	Saya tiada masa untuk menyudahkan tugas saya.	1	2	3	4	5
8.	Percakapan/perbualan saya sering terburu-buru.	1	2	3	4	5
9.	Saya tidak mempunyai masa yang mencukupi untuk menyediakan bahan pengajaran.	1	2	3	4	5
10.	Saya mempunyai terlalu banyak kerja untuk dilakukan.	1	2	3	4	5
11.	Waktu persekolahan berlalu begitu pantas.	1	2	3	4	5
12.	Bilangan pelajar yang diajar adalah terlalu ramai.	1	2	3	4	5
13.	Keperluan peribadi saya tidak mendapat perhatian kerana kekangan masa disebabkan kerja.	1	2	3	4	5
14.	Terlalu banyak kertas kerja pentadbiran dalam kerja saya.	1	2	3	4	5
15.	Saya kurang peluang kenaikan pangkat atau kemajuan kerjaya.	1	2	3	4	5
16.	Saya tidak maju dalam pekerjaan saya secepat yang saya idamkan.	1	2	3	4	5

17.	Saya memerlukan lebih banyak status dan hormat dalam pekerjaan saya.	1	2	3	4	5
18.	Gaji saya tidak mencukupi berbanding dengan kerja yang saya lakukan.	1	2	3	4	5
19.	Saya tidak menerima pengiktirafan untuk kerja tambahan/pengajaran yang baik yang saya lakukan.	1	2	3	4	5
20.	Saya berasa kecewa kerana masalah disiplin di dalam kelas saya.	1	2	3	4	5
21.	Saya berasa kecewa apabila terpaksa memantau perlakuan pelajar.	1	2	3	4	5
22.	Saya berasa kecewa kerana sesetengah pelajar akan lebih cemerlang jika mereka mencuba.	1	2	3	4	5
23.	Saya berasa kecewa dengan cubaan untuk mengajar pelajar yang kurang bermotivasi.	1	2	3	4	5
24.	Saya berasa kecewa dengan masalah disiplin yang kurang jelas.	1	2	3	4	5
25.	Saya berasa kecewa apabila kuasa saya ditolak oleh pelajar atau pihak pengurusan.	1	2	3	4	5
26.	Pendapat peribadi saya kurang didengari.	1	2	3	4	5
27.	Saya kurang kawalan ke atas keputusan yang dibuat mengenai perkara berkaitan kelas/sekolah.	1	2	3	4	5
28.	Saya tidak terangsang secara emosi/intelektual dalam pekerjaan.	1	2	3	4	5
29.	Saya kurang mendapat peluang untuk peningkatan profesional.	1	2	3	4	5

Alamat email:

***(bagi tujuan memberi maklum balas keputusan ujian kesihatan minda)**

~ Terima kasih atas kerjasama anda ~

..... SOALAN TAMAT