

**STUDY ON THE RELATIONSHIP BETWEEN WORKING
CONDITIONS AND SELF-PERCEIVED
PSYCHOLOGICAL SYMPTOMS OF THE WORKFORCE
IN MALAYSIA**

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Field of Study: Occupational Health

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STUDY ON THE RELATIONSHIP BETWEEN WORKING CONDITIONS AND SELF-PERCEIVED PSYCHOLOGICAL SYMPTOMS OF THE WORKFORCE IN MALAYSIA

ABSTRACT

There is limited research as to if working conditions such as decision latitude (e.g., skill discretion and decision authority), psychological job demands, job insecurity and social support (e.g., supervisor support and co-worker support) are perpetrators of perceived psychological symptoms such as depression, anxiety and stress in the workforce, thus the need for further empirical investigation. The objective of this study is to examine the relationship between the current working conditions and self-perceived psychological symptoms of the workforce (sewerage service sector) in Malaysia. The results have been obtained via – i) descriptive analysis – where the respondents' socio-demographic profiles, respondents' perceived working conditions through Job Content Questionnaire descriptive analysis and respondents' self-perceived psychological symptoms through Depression Anxiety Stress Scales descriptive analysis have been described amicably; ii) Pearson Correlation test and, iii) Regression test used in assessing the relationships between JPP's working conditions as well as their staffs' psychological symptoms. Therefore, this study has shown statistically significant inverse relationship between the two (2) variables, wherein a significant regression equation was found for all three (3) psychological symptoms against working conditions accordingly; around 38% of the variance on depression; around 23.1% of the variance on anxiety; and around 34.6% of the variance on stress. It can be interpreted from the results found from regression analysis that job skill discretion is the most paramount significant predictor of all the psychological symptoms of workers in this study, as it cuts across the DASS scale of depression, anxiety and stress, negatively predicting them respectively.

Keywords: working conditions, psychological symptoms, job content questionnaire, depression anxiety stress scales, Malaysia.

**KAJIAN TERHADAP HUBUNGAN ANTARA KONDISI KERJA DAN GEJALA
PSIKOLOGI DIRI DI KALANGAN PEKERJA DI MALAYSIA**

ABSTRAK

Terdapat kajian yang terhad untuk mengetahui keadaan kerja seperti latitud keputusan (misalnya, kebijaksanaan kemahiran dan kuasa keputusan), tuntutan pekerjaan psikologi, ketidakamanan pekerjaan dan sokongan sosial (contohnya, sokongan penyelia dan sokongan rakan sekerja) adalah pelaku gejala psikologi yang dirasakan seperti sebagai kemurungan, kegelisahan dan tekanan dalam tenaga kerja, oleh itu perlunya penyelidikan empirikal lebih lanjut. Objektif kajian ini adalah untuk mengkaji hubungan antara keadaan kerja semasa dan gejala psikologi diri pekerja (sektor perkhidmatan pembentungan) di Malaysia. Hasilnya diperoleh melalui - i) analisis deskriptif - di mana profil sosio-demografi responden, keadaan kerja yang dirasakan responden melalui analisis deskriptif *Job Content Questionnaire* dan gejala psikologi yang dirasakan sendiri oleh responden melalui analisis deskriptif *Depression Anxiety Stress Scales* telah dijelaskan secara mesra; ii) Ujian Korelasi Pearson dan, iii) Ujian regresi digunakan untuk menilai hubungan antara keadaan kerja JPP dan juga gejala psikologi kakitangan mereka. Oleh itu, kajian ini telah menunjukkan hubungan terbalik yang signifikan secara statistik antara dua (2) pemboleh ubah, di mana terdapat persamaan regresi yang signifikan untuk ketiga-tiga (3) gejala psikologi terhadap keadaan kerja yang sewajarnya; sekitar 38% varians pada kemurungan; sekitar 23.1% dari perbezaan pada kegelisahan; dan sekitar 34.6% varians tekanan. Ia dapat ditafsirkan dari hasil yang didapati dari analisis regresi bahawa kebijaksanaan kemahiran kerja adalah peramal yang paling penting dari semua gejala psikologi pekerja dalam kajian ini, kerana ia dapat mengatasi skala kemurungan, kegelisahan dan tekanan DASS, masing-masing meramalkannya secara negatif.

Kata kunci: keadaan kerja, gejala psikologi, *job content questionnaire*, *depression anxiety stress scales*, Malaysia.

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LIST OF ABBREVIATIONS

AIB	aggressive-impulsive behaviour
ANOVA	analysis of variance
B40	household income to the bottom 40%
CarMen-Q	<i>Carga</i> Mental Workload Assessment Questionnaire
COVID-19	Coronavirus disease 2019
DASS	Depression Anxiety Stress Scales
DOSH	Department of Occupational Safety and Health
DPD	diagnostic psychiatric disorders
e.g.	<i>exempli gratia</i> (for example)
EWPS	Endicott Work Productivity Scales
etc.	used at the end of a list to indicate that further, similar items are included
GDP	Gross Domestic Product
HERO	Health Enhancement Research Organization
hrs.	hours
i.e.	<i>id est</i> (in other words)
JCQ	Job Content Questionnaire
JPP	<i>Jabatan Perkhidmatan Pembetungan</i>
JSS	Job Satisfaction Survey
km	Kilometre
MCO	Movement Control Order
MoH	Ministry of Health Malaysia
M40	household income to the middle 40%
OECD	Organization for Economic Cooperation and Development

PC	personal computer
RM	Ringgit Malaysia
SPSS	Statistical Package for the Social Sciences
T20	household income to the top 20%
USD	United States Dollar
WHO	World Health Organization

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LIST OF SYMBOLS

$\%$	percentage
$<$	less than
$>$	more than
\leq	less than and equal to
\geq	more than and equal to

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CHAPTER 1: INTRODUCTION

1.1 Introduction

This chapter explains the content, problem statement, main and specific objectives, scope and significance of this study.

1.2 Background of Study

Now than ever, rapid expansion of all sectors of the national economy, there has been a high demand for all types of workers, especially skilled labour in the manufacturing sector and well-trained professionals in the services sector have prompted to harsher working conditions with Malaysia facing with the shortages in the workforce. The economy was ever dependent on their working society to build up and down the nation's Gross Domestic Product (GDP) around the world. While this issue has affected all countries around the globe, many have gain their pace in achieving a good balance between working and living a personal's life for their working society. Nevertheless, many companies have provided multiple benefits to their employees to attain employees' satisfaction to improve their mental health and work productivity.

Studies have revealed that healthy workforces have amplified work productivity, as a result of the shared outcome on medical costs, absenteeism, work performance and turnover. Employees' well-being and the execution of various health advertising programs in the workplace aid to increase employees' health, improve morale and lessen healthcare costs imposed to the organization (Boles et al., 2004).

Besides that, numerous health risks can influence work related expenditures and productivity consequences. Health risks in the workstation can take account of these risk types such as alcoholism, malnutrition or nutritional imbalance, mental illness, physical dormancy, unsafe acts, abnormal blood pressure, high in blood glucose, high cholesterol, triglycerides, underweight or overweight, and tobacco or substance abuse. Study has

constantly established a direct link between the number of health risks and productivity loss and proposed that personnel who have higher health risks underwent absenteeism and presenteeism than personnel with lesser risks (Boles et al., 2004).

Moreover, earlier studies have suggested that emotional health risk factors such as depression and stress had the maximum effect on work productivity and therapeutic outlays (Goetzel et al., 2009). Depression in precise was discovered to be unfavourable to work performance and has adverse impacts on cognitive functioning. Efficient cognitive functioning is required to be lucrative in the workplace and cognition exercise can be thought as preventive health benefit to employed adults (Borness et al., 2013).

Therefore, the study on the relationship between working conditions and self-perceived psychological symptoms of the workforce in Malaysia is detrimental to assess whether it is a need to promote and implement good mental health practices in the workplace. Moreover, the information gained from this study will assist in promoting awareness in employers and policy makers of the importance of conducive working conditions to lower the risk of perceived psychological symptoms among workers particularly in the sewerage service sector in Malaysia.

1.3 Problem Statement

Numerous research have been conducted on healthcare service sector workers for their known high level of mental workload at the workplace but it is limited in research on other types of service sector. Therefore, this study has chosen sewerage service sector workers to determine the relationship between working conditions and self-perceived psychological symptoms of the workforce in that sector in Malaysia as sewerage service sector is also recognized to be an essential and running economic sector during this pandemic COVID-19 (Koya, 2021); and its function as Malaysia's main national sewerage service department in providing and handling various sewerage system projects

across the nation. This has put *Jabatan Perkhidmatan Pembetulan* (JPP) into a lot of works with a little working staffs at hand in the organization to accommodate the working commitments and project completion delivery for the Government.

It is still under recognition and further interrogation is needed whether working conditions such as decision latitude (e.g. skill discretion and decision authority), psychological job demands, job insecurity and social support (e.g. supervisor support and co-worker support) to be the perpetrators of perceived psychological symptoms such as depression, anxiety and stress in the workforce. Thus, this study will help evaluate the relationship between these variables.

1.4 Research Questions

This study attempts to determine the solution to the questions stated below that were based on the problem statements mentioned previously.

1. What are the working conditions perceived by the workers in the sewerage service sector (JPP staffs)?
2. What are the psychological symptoms perceived by the workers in the sewerage service sector (JPP staffs)?
3. What is the relationship between working conditions at JPP and self-perceived psychological symptoms of their staffs?

1.5 Main Objective

The objective of this study is to examine the relationship between the current working conditions and self-perceived psychological symptoms of the workforce (sewerage service sector) in Malaysia.

1.6 Specific Objectives

- a) To describe the socio demographic profiles and working conditions of the employees.
- b) To assess the perceived psychological symptoms of the employees based on depression, anxiety and stress.
- c) To determine the relationship between working conditions with self-perceived psychological symptoms of the employees.

1.7 Scope of Study

Jabatan Perkhidmatan Pembetulan was chosen due its status as the main sewerage system services provider in Malaysia. JPP is a public service sector organization and has in total of 187 employed workforce. It is located in the main administrative center of the Federal Government of Malaysia which is *Wilayah Persekutuan Putrajaya*. The scope of study encompasses the involvement of individuals that are presently working there and then are approached via social-media application namely WhatsApp to respond to an online survey questionnaire using Google Form. The questionnaire is to include study instruments such as Job Content Questionnaire (JCQ) and Depression Anxiety Stress Scales (DASS) of the respondents to identify the risk factors associated with self-perceived psychological symptoms in their workforce. Data are collected based on a probability sampling method where simple random sampling are used where the employees are engaged as voluntary participants.

1.8 Significance of Study

This study is to bring benefit to the working population especially managers/supervisors, top management, human resources department, employers and directors, even the Ministry of Health (MoH) Malaysia administrator and Department of Occupational Safety and Health (DOSH) to address and act as well as improve on

identified negative working conditions to gain job satisfaction, low turnover and employee burnout through this study.

The endorsement of awareness among policy makers of this country that may contribute to the movement of improving our working policy by discovering the impacts of unfavourable working conditions to the mental well-being of employed employees especially in the service sector.

This study can examine the likelihood of certain socio-demographics groups to likely develop the psychological symptoms and what kind of working conditions they are exposed to in their work setting.

The impact of resulted working conditions found through this study on the workers are highlighted based on their correlation with resulted self-perceived psychological symptoms given by the workers. The relationship between working conditions and psychological symptoms gained from this study which are faced by these employees can be seen in a broader view to promote and implement good mental health practices in the working environment.

This study will also provide future scholars with data on psychological workplace hazards that can contribute to psychological illness and unconducive working environment especially among sewerage service sector workers.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This chapter describes the literature review on the introduction to mental health, factors influencing mental health, effects of mental illness or disorder, psychological hazards at the workplace such as decision latitude, psychological job demands, job insecurity and social support.

2.2 Introduction to Mental Health

Reports on the global burden of disease, the release of the World Health Organization's (WHO's) World Health Report in 2001, 'Mental Health: New Understanding, New Hope,' and the release of national and international reports on mental health since 1990 have resulted in a significant increase in awareness and action to improve the outcomes for people affected by mental illnesses or at risk of becoming ill. The term well-being is included in the WHO definition of mental health and at times is regarded as synonymous with it. The science of well-being has grown over 30 years. Documents and projects from Organization for Economic Cooperation and Development (OECD), the World Economic Forum, New Economics Forum, and a political focus in the United Kingdom, France, and other countries including Bhutan consider the roots and positive feedback effects of well-being in terms of better performance at work, in families, and in the community. Well-being is proposed as a routine statistical indicator of national performance alongside economic growth (OECD; Herrman and Jane-Llopis, 2012).

Compared to medical health, mental health study is dwarf. The acceptance of the study of mental health within the public health is considered a new development in a lot of ways of the world. The inclusion of mental health practices and theory has led the study to broaden public view. The public now recognizes the importance of mental health to

overall health development. Similar to medical health, mental health encourage people to live a healthy way of living (Arole et. al., 2005; Barry & McQueen, 2005).

In the current development be it economic, socialism or education the encouragement of mental health should be considered a priority as well since it has a direct correlation between them. Lahtinen et al., (2005) have deduced that some health promotion techniques serves as a solid foundations to medical health for an example the foundation that is provided by the Ottawa Charter. Throughout the years mental illness treatment has serve as an advocacy for the purpose to increase the awareness in mental health study importance.

2.3 Factors Influencing Mental Health

Interpersonal difficulties, such as marital quarrels or other family conflicts, are the most commonly reported reasons for suicide and self-harm, accounting for 33% of the suicides in the University Hospital, Kuala Lumpur. It is also found that the six (6) most commonly reported threatening life events prior to a suicide attempt were personal illness issues, family illness or bereavement issues, interpersonal issues, work issues and other life event issues (Armitage et al., 2015).

Interpersonal issues (e.g., serious problem with a close friend, neighbour or relative; breaking off a steady relationship; and a separation due to marital difficulties) were significantly associated with suicide attempts, contributing to 94% of total cases. Self-harm was more closely associated with problems in interpersonal relationships, particularly chronic domestic strife such as marital problems, conflicts with elders or family discord. Furthermore, a diagnosis of major depression, anxiety, substance use and epilepsy worsened risk for self-harm. Similarly, in adolescents, precipitating factors for suicidal ideation included depression, anxiety, stress, substance use, being bullied and being abused at home, either physically or verbally (Armitage et al., 2015).

On the other hand, the effects on the mental exhausted individual's personal life are like family and friends while on the professional life like work and client (Niebrugge, 1994). Lastly, negative attitudinal will show in the individual's characteristics and attitude. For an example, being defensive when being asked a logical question and would not take advices from others, has a low tendency to trust people, react pessimistic and only see the bad side of things, and unwilling to accept any other views except his own is accumulated by the low level of motivation of that individual (Kahill, 1988).

2.4 Effects of Mental Illness

In the last decade, the allocation of RM 900 million (USD 262 million) for the years 2006 to 2010 by the Malaysian government under the Ninth Plan has been an important step forward in improving services for mental health problems including suicide and self-harm in Malaysia (Armitage et al., 2015).

Other than that, most of the research into suicide and self-harm have been conducted in the United States and Europe, yet the volume of research does not reflect the distribution of suicide globally, with Asia accounting for up to 60% of all suicides. The principal findings were that the prevalence of suicide in Malaysia is approximately 6 - 8 person per 100,000 population per year and that there is an excess of suicide among men, people younger than 40 years and of Indian minority group. The past-month prevalence rates of suicidal ideation, plans and attempts are 1.7%, 0.9% and 0.5%, respectively, whereas the past-year prevalence rates of suicidal ideation range between 6% and 8% (Armitage et al., 2015).

According to a prior study conducted on large corporations, it is found that mental health disorders are topmost rated cause for loss of productivity at workplace followed by absenteeism. Mental health disorders due to work stress environment can be distinct as the overload brain's reaction to excessive job demands. Stressful work culture can

disturb both psychological and physical healthiness of the employees. Stress at work can questionably be the ultimate cause of job-related illness and can have damaging effects to both the employee and employer (Leigh et al., 2000). Stress contributes to a diverse health issues including “coronary heart disease, cancer, diabetes, bacterial and viral infections and depression” (Aldana & Pronk, 2001). Jacobson & Aldana (2001) found that stressed workers were 2.22 times to be expected absent for 5 days or more while being compared to low stressed workers. Similarly, Boles et al. (2014) also reported that high stress levels gave rise to in 1% loss of working hours due to absenteeism.

2.5 Psychological Hazards at the Workplace

In current age, due to the vigorous nature of the environment, a variety of difficulties are faced by the corporations. A number of difficulties faced by a company is by pleasing its workers to better understand the challenges faced by the ever-growing environment with a non-constant and unpredictable situations of our daily life as well to be ambitious in a competitive fashion. To multiply the workers commitment, effectiveness, efficiency and productivity in the working place, the organisation will have to meet the requirements of their workers welfare by setting the proper working environment.

Spector (1997) has studied that a large number of corporations has ignored and take no notice of the employees under their care, which resulted in the inefficiency of the employees work performance. As claimed by him, a workplace will result in the well-being of the employees, appreciation for achieving their goal, encouragement, job safety, bond between the employees, and the complicit future of the company’s well-being. He furthermore claimed that an employee will recognise in the reason of their importance to the company, as they will later have an understanding that they have a growing strength of faithfulness for their company and their sense of management.

Robbins (2001) mentioned job satisfaction is affected by the workplace conditions, as where the workers are progressively worrying about the workplace being a physically comfortable area to progress. Other than that, a comfortable workplace will result in a better working performance. Arnetz (1999) propose that certain companies, bosses and employees will eventually have disputes, afterwards will have feelings of unease and not give them the respect of their stature.

The workplace is an environmental concept of being a comprehensive concept, which includes the physical and psychological, as well as the social aspect that rely on the working state. The employee personality and well-being positivity and negativity will be dictated on the workplace environment (Salunke, 2015). The working environment has become more challenging in today's society due to the workers being very skilful and understand their legal rights in the company's workplace. Furthermore, the companies must find the needs of their employees and to relieve them in order to secure their performance and their achievement are successfully met. A healthy working environment will add in the performance, efficiency, competitiveness in the workplace, degree of engagement, loyalty and will be resulted in a sense of community among the workers that will eventually benefit the company efficiency and lessen the dispute which result in the employee lack of performance.

Numerous evidence based approach to the study and interpretation of information has developed gradually in the employment content and mental exhaustion. Hackman and Oldham's job characteristics thesis hypothesized that task significance, feedback from the job, skill variety, and task identity may construct "critical psychological states" (i.e., experienced significance of the job, management for its conclusion, as well as understanding of the job solution). These conditions has correlation of escalation and de-escalation job gratification level, furthermore to truancy rise (Hackman & Oldham, 1980).

Meanwhile, Jayaratne (1984) has drawn up a convenient conceptual representation of emotional exhaustion. The lack of work factors such as promotions, comfort, as well as financial rewards will result in depersonalization and fatigues, including mentally and state of body health. In addition, this will incorporate depression, anxiety, illness, withdrawal, and irritability.

Wright, King, and Berg (1985) have also established that recognized opportunities for promotion and advancement in a corporation, lesser work-related pressure, as well as constructive performance appraisal are worthwhile correspond with work gratification. A research was conducted of estimate 2,500 individuals of social service worker shows that praising and commendations as well as an increase of wages has a powerful prediction of work gratification, which corresponded with a decrease of truancy and bankruptcy rates (Barber, 1986). Butler (1990) has deduced that the pay wage for employees is an important factor in fulfilment and recognition of employees. The outcomes of a long-term research administered by Szilagyi (1980) stipulated that appraisals and rewards given by upper management has a powerful prediction of a work fulfilment. Samantrai (1992) has established that the relationship of a determined upper management has higher impact in correlation to a productive working experience, as well as re-satisfaction for a high work load and un-satisfaction of work condition.

2.5.1 Job Decision Latitude

The question that always comes up in every management is until what degree of freedom in latitude should the management gives their employee at work. Working latitude is the opportunity of a worker to make decision on how to complete and do their own work. A major study was conducted to see the correlation between the freedom and privacy given to the employees, as opposed to managing their work on a short leash. The studies has shown higher degree of freedom decision latitude linked to better productivity, well-being and job satisfactions (e.g., Ahearne, Mathieu, & Rapp, 2005; Chen &

Klimoski, 2003; Deci & Ryan, 1985; Hackman & Oldham, 1980; Karasek, 1979; Schriesheim, Neider, & Scandura, 1998; Thomas & Velthouse, 1990).

There are also other research on this but with a more detailed parameters like explaining the boundary conditions or the freedom degree of decision latitude would be more effective (Bowen & Lawler, 1992; Chua & Iyengar, 2006; Ford & Fottler, 1995; Hunton, Hall, & Price, 1998; Lewin, Lippit, & White, 1939; Locke & Schweiger, 1979). Moreover, the study between job independence and freedom of decision latitude is mainly on motivation and the productivity of work of the individual who obtain the freedom, but close an eye to the person who gives a higher job latitude are interpreted.

The degree of freedom of job latitude is usually given by a few factors. Firstly, the experience of the worker. If the employee has done it numerous times then the employee should be savvy with the standard operating procedure of it. Secondly is the performance or productivity of the employee, if the employee has a very good performance at work then it is only logical his freedom of job latitude would be increased. Thirdly, the discipline of the employee, if the employee shows good moral standards and is a honest and loyal employee then the management would be more inclined to increase the employee's degree of freedom of the employee's job latitude. Lastly is trust. Trusting someone is a believed someone has about the other person. Trust is a fickle thing, it is hard to earned but easy to disappear. Trust can be in many forms from trusting someone's ability to trusting someone's with a more precious product. If the management trust this employee, then this employee has a very large degree of freedom of job latitude. In the correlation of the degree of freedom of job latitude and productivity, it can be seen that every person would have their own plan on how to accomplish their own goals. If the employees are given an increased amount of freedom in their job latitude, then the productivity as well as mental health would increase as well.

2.5.2 Psychological Job Demands

There is collective substantiation that Malaysia could be deindustrialising, as has been the experience of many advanced countries, like the scraping out of Middle American manufacturing sector or the change in inexperienced manufacturing out of Japan due to cost contemplations and shortage in native labour markets. This deindustrialisation evolution is in line with the goals to becoming a high income country as attempts to escalate productivity and adopting technological innovation boosts the country up the value chain to a knowledge-based higher skilled services sector-led economic stratum (DOSM, n.d.).

In the study by Armitage et al., (2015) found that there seem to be emerging trends in the means of suicide and self-harm that might be related to the move from a rural to an industrial economy. The present pattern of findings corroborates those found in neighbouring (e.g., India, China and Australia) and other developing countries, with a higher suicide rate among men than women (with the exemption of China in which suicide rates for women are higher) and a higher suicide rate among the young. Thus, the present findings concur with the broader picture of suicide and self-harm among nations described as economically “developing.”

Meanwhile, mental exhaustion can be derived from the stresses of the working life from the upper management till the lower management physically and mentally drained (Maslach & Schaufeli, 1993). In the past studies, mental fatigue has a correlation between self-imposed negativeness, negative attitude, working attitude, and toxic emotions (Truchot, Keirsebilck, & Meyer, 2000; Raquepaw & Miller, 1989; Maslach, 1976; Pines & Maslach, 1987; Piercy & Wetchler, 1987). Mental exhaustion or mental burnout can be deduced as illness applied by depersonalisation, exhaustion emotionally and the level of personal accomplishment of the individual (Maslach & Jackson, 1981).

Depersonalisation can be defined as having a severe amount of stress from work related problems, financial factors, or personal relationship problems. It is a feeling of deep depression or panic attacks until it can cause more anxiety. Exhaustion emotionally is described as an individually states as a feeling of emotionally drained or empty, this is a result of the significant amount of stress that is acquired from a long period of time in an toxic personal relationship or high stress working environment. The third factor was an individual's personal achievements, this has a deep connection with the individual emotions and feelings of achievements. The feeling of achievements will enhance an individual's confidence and bring a feeling of satisfaction of the competency in the individual's work (Wilkerson & Bellini, 2006).

Whilst, mental exhaustion or the state of feeling of burnout has a direct relation between the factors of emotions, physical state, negative behaviour, foul attitudes and interpersonal problems (Kahill, 1988). A significant amount of research has entailed the relationship between health issues, sleep insomniac and mental exhaustions (Belcastro & Hays, 1984). There is also a correlation of emotionally exhausted for an example the feeling of deep depression, the feeling of suicide and powerlessness (Niebrugge, 1994). Mental exhaustions can serve as a sign of the individual's well – being or status and has a correlation between poor work productivity and the amount of truancy (Kahill, 1988).

Other than that, sleep deprivation from long hours of working due to heavy job demands can be harmful to a person's health physically and mentally. Sleep can be a potential determinant for overall well-being mainly in the workplace, as poor sleep quality brings effect to cognition functioning, performance in an organization, plus towards an individual's health and fitness (Miriam & Mazonson, 1995; Swanson et al., 2011). Individuals that are afflicted with sleep problems have reported lower work satisfaction intensity level and gained lower job performance scores (Miriam & Mazonson, 1995); they also carry the potential to develop sleep disorder and had increased presenteeism

than the others (Swanson et al., 2011). It has been revealed that sleep disorders risen the probability of undesirable work outcomes, which involving occupational accidents, absenteeism and presenteeism (Swanson et al., 2011). Another study in Korea where the researchers have assessed the connection between sleep and work performance in a working population. The study has found that the projected cost of lost productivity time was larger in poor sleepers and had a greater yearly expense due to presenteeism. Insufficient amount of sleep time can influence work productivity, workstation injuries, absenteeism, and medical care overheads (Park et al., 2013).

2.5.3 Job Insecurity

The word job insecurity can be described in many ways. Job insecurities affect people in many sectors be it from government servants to the private sectors. Job insecurities are a feeling that individual has pertaining their professional life. For an example, when the economy went down in Malaysia due to the recent COVID-19 pandemic, even one of the biggest oil and gas company that is PETRONAS had to retrench their workers to reduce the number of workforce they have. Most people are affected by this and are left jobless (Birruntha, 2021).

A significant amount of studies has been dedicated to the evaluation done about the growing factors of job insecurities such as stress and mental exhaustion (Lazarus & Folkman, 1984; Schaufeli, Maslach, & Marek, 1993). As time passes, the mental bearing to a person unable to acquire employment has been researched numerously (Feather, 1990; Jahoda, 1982). This point is strengthened by the recent COVID-19 pandemic in relation to the increasing suicide rates in Malaysia. When an individual is pushed into a mental blocked corner, the individual's train of thought is illogical and cannot be predicted, some even have taken their own life (Zolkepli, 2021).

There are two (2) factors representing “Job Insecurity”. One of those factors revealed the sense of dread of losing one’s job and come to be jobless. The emotional distress that is burdening one’s mind can lead to mental exhaustion and even anxiety due to the fact of not being employed. Employment gives us the feeling of security that can help us in our daily life routine or saves us in times of emergencies. For an example, some companies comes with insurance, dental plans, telecommunication plans or even company cars. With the absentee of this packages, the individual might not be able to cope with the sudden changes and it will affect the individual mentally and physically. In the eyes of humanity, this concern is of great importance yet it does not garner the attention of analysts, researchers and scientists. This topic does not create a debate amongst them (Burchell, 1992). The feeling of losing one’s job will stop anyone in their step due to the need to have financial securities especially in today’s economy. Excessive repetition of workplace discontinuances are turning into a constant routine, whereas unions along with modernizing plans jeopardize the career of the working masses (Jacobson & Hartley, 1991). Another causation that can bring about the apprehension of job insecurity is the ongoing dispute relating to adaptable work contracts (Bridges, 1994).

A significant amount of studies has shown that the risk of suicide are by factors of aggressive-impulsive behaviour (AIB) and diagnostic psychiatric disorders (DPD), and by a few more co – factors for example marriage and status of employment (Yoshimasu et al., 2008). This will increased during period of crisis, such as event of pandemic that will significantly impact the relation between increasing number of unemployment and the increasing number of suicide rates. An example is when the COVID-19 hits Malaysia and we are confined to our houses, most of our businesses went bankrupt and the number of suicide rates has increased as proportional (Zolkepli, 2021).

In addition, any economical event that impacts the society significantly, such as economic crisis have been deduced to generate a fluctuation in the rate of suicide. This result varies from one country to another (Chang et al., 2009). In other studies stated that the relationship between having employment and suicide rates are proportional as well (Chen et al., 2006; Cheng et al., 2000; Foster et al., 1999; Gururaj et al., 2004).

These are supported by Schneider (2003) which the researcher has also presume one of the factors that causes suicide is unemployment. Another evidence is the psychological autopsy done in Hungary has enlightened the relationship between the rates of suicides and the concern of prospects of work according to Almasi et al., (2009). But in the recent years a new deduction has been emitted that the relationship between unemployment and suicide is countered by the stress that comes with work, for an example, the stressful working condition and working environment and their relationship with suicide rates; these studies were carried out in Japan (Tsutsumi et al., 2007), Canada (Ostry et al., 2007), and the U.S. (Feskanich et al., 2002). From the data gathered from police reports and insurance companies, the leading causes of suicides are heavy workloads and long hours of working (Amagasa et al., 2005).

2.5.4 Social Support

Arnetz (1999) mentioned that in many businesses and companies, a study can be seen when a worker would have disputes with their bosses, with that not giving them the respect of their stature. Certain top managers and bosses would show a more severe attitude towards their workers due to them not at liberty to share any innovative or achieving ideas with their respecting bosses. Additionally, he entails that top supervisors and head of companies would give their workers limited task and prevent them from forming any sense in performing in teams to ensure a higher quality of work performance.

An observation was made by Castillo and Cano (2004) about the satisfaction level of jobs between a faculty staffs of colleges and university that resulted if the correct attention is met for recognition, supervision, and interpersonal relationships, there is an increase of job satisfaction. Aids from worker's respecting bosses has resulted in job satisfaction (O'Driscoll & Beehr, 1994). Huebner (1994) study has shown that when the boss assist in a work-related issue the negativity of the tension in the workplace is buffered (in excess of workload and conflict in roles). Baird and Deibolt (1976) have studied that a beneficial relationship with supervisors and work performance grades as well as the regular conversation in the workplace is highly valuable. Satisfaction with bosses in accordance with Wood et al. (1986), the quality of the job satisfactory is dependent on the grade of work satisfactory with the basis of the worker expectations on their content with their boss's understanding and leadership for their goals.

Petterson (1998) has stated that for a company to achieve their intentions a good relationship is important between their employees. A proper communication for details and particulars are very important roles to make organization work without any problems or difficulty. It is difficult for a company to achieve their objectives if there are disputes within their employees.

Assisting other workers will give a sense of teamwork and strengthen the bonds between colleagues. Workers and employees will have a better sense of compassion as well as mutual trust. This can help the employees further study as this will enhance any psychological or relational activities for their fellow colleagues (Patway et al., 2019). For most workers after earning their colleagues trust and loyalty is a standard of achievement among professionals. This was established by Charoensukmongkol et al. (2016), who discovered that aiding a co-worker can very well enhance the self-accomplishment as well as to buffer or avert any disputes within the workplace.

Co-workers attitudes and behaviour such as friendly, supportive, and selfishness plays a major role in deciding how a worker recognise their work achievements (Purani & Sahadev, 2007). Co-worker's partnership is an important key part to have for an organization. A rise of team work between colleagues in accordance to Purba (2017), will result in the employees reacting positively with kindness.

2.6 Benefits of Good Mental Health Practices in the Workplace

The promotion of mental health will usually have additional effects on health, productivity, and social and economic conditions. The direct and indirect costs of mental ill health can exceed 4% of a country's GDP. The impact of poor mental health is pervasive and can lead to high morbidity and mortality, low productivity, social unrest, poverty, inequity, dropout from education, high unemployment, and delays in recovery and reconstruction. Five percent of the working-age population has a severe mental health condition, and a further 15% is affected by a common mental disorder. In addition, persons with severe mental disorders are six to seven times more likely to be unemployed and die on average 20 years earlier than those without. However, 80% of persons with serious mental disorders do not receive any appropriate treatment in developing countries (Herrman et al., 2017).

2.7 Conceptual Framework

The conceptual framework underlying this study is based on the literature review to determine the association between respondents' socio demographic backgrounds; (i) age, (ii) gender, (iii) ethnicity, (iv) education level, (v) marital status, (vi) personal lifestyle, (vii) working position, (viii) monthly income, (ix) working experience, and (x) working hours per week ; and, working conditions that compromises of the following; (i) decision latitude (a merged scale of skill discretion and decision authority), (ii) psychological job demands, (iii) job insecurity, and (iv) social support (a merged scale

of supervisor and co-worker support), with psychological symptoms perceived by the respondents based on these negative feelings; (i) depression, (ii) anxiety and (iii) tension/stress.

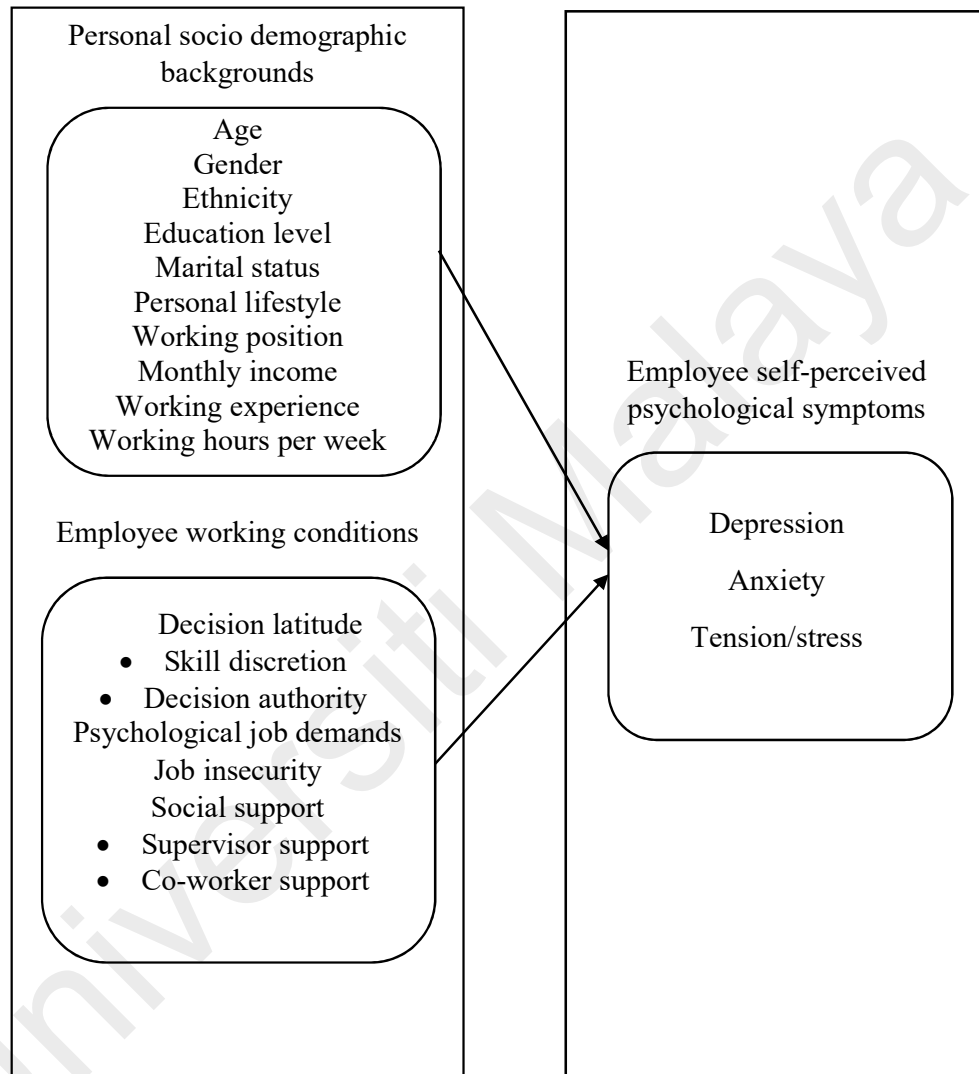


Figure 2.1: Conceptual Framework

CHAPTER 3: METHODOLOGY

3.1 Introduction

This chapter will describe the research methods used in this study. The flow of this chapter are; the study design, research design, study population and sample size, inclusion and exclusion criteria, independent variables and dependent variables of this study, study hypotheses to be tested, tools and instruments, data collection, data analysis, study flowchart, research ethics, and data storage and archiving.

3.2 Study Design

The study design is a research plan in gathering empirical evidence regarding the study issue (Mills & Gay, 2019). Chua (2014) stated that the study design refers to the implementation plan of the study which consists of data collection and analysis methods by setting the appropriate approach to answer the research questions. The selection of the study design was done based on the title, background, purpose, objectives and questions of the study (Ghazali & Sufean, 2016). The design of this study is a survey using a quantitative approach.

Therefore, this study entails a cross sectional study design using JCQ and DASS tools as study instruments to obtain the outcomes. The questionnaire comprising of closed-ended questions to measure the independent and dependant variables.

3.3 Research Design

Conferring to Leedy and Ormrod (2010), research designs can be defined as "a set of guidelines and instructions to be followed in addressing the research problem". The main purpose of research design is to grant the researcher to forecast suitable research choices to maximize the validity of the ultimate results. There are three (3) types of research design in research which are exploratory, descriptive, and causal (Hair et al.,

2007). This study was performed using the descriptive method. According to Sekaran (2003), descriptive research is appropriate at any time with the research being led because it aids to give future research context. This is further backed up by Cavana, Delahaye, and Sekaran (2000), who indicated that a descriptive study is well-matched to gaining a better grasp of the topic, using structured data gathering systematically.

Next, the method of research can be separated into quantitative and qualitative method. This study was analytically directed to find solutions to the study research questions and was performed in a cross-sectional quantitative way, where descriptive questionnaires were utilised to gather the data. Aliaga and Gunderson (2002) specified that quantitative research assembles numerical data analyses by methods founded on mathematics particularly statistics. This method is preferred as it permits the researcher to quantify the relation between hypotheses of the research.

According to Creswell (2003), quantitative research provides a deeper grasps of the factors that influence a result. This is the reason quantitative research design was selected for this study because statistical methods can be applied to assess the relationship between the variables.

The objective of this study is to examine the relationship between the current working conditions and self-perceived psychological symptoms of the workforce (sewerage service sector) in Malaysia. This study chose to adopt a survey questionnaire to gather quantitative information. The survey questionnaire incorporates closed-ended questions and Likert scales compared to interview-administered surveys. This is as proposed by Spunt (1999), self-administered surveys are more advantageous and less costly to control, eradicate investigator bias, provide confidentiality to respondents, and the outcomes can be assessed faster. The questionnaire survey permits researchers to examine a big sample that can be applied to the whole population. The survey questionnaire also utilize close-ended questions to enable respondent's scope response

control by the investigator. This is to ensure the study is valid and reliable without any unfairness (unbiased) error (Creswell, 2003).

3.4 Estimation of Study Population and Sample Size

A group of individuals who have the same criteria characteristics as the purpose of the study is known as the study population (Creswell & Creswell, 2018). Population refers to the total number of individuals present in a study site to be conducted. As noted by Cohen et al., (2000), information regarding the study population is essential because it is closely related to the process of determining the number of samples required to represent the population to be studied. Whereas a sample is defined as a subset of the population obtained through sampling methods (Sekaran & Bougie, 2016).

3.4.1 Study Population

The study population for this study is the population of employed workforce in the *Jabatan Perkhidmatan Pembetungan* (JPP) Malaysia which in total is 187 staffs. *Jabatan Perkhidmatan Pembetungan* was chosen due its status as the main sewerage system services provider in Malaysia. JPP is a public service sector and it is located in the main administrative center of the Federal Government of Malaysia which is *Wilayah Persekutuan Putrajaya*. Here, as Malaysia's main national sewerage service department in providing and handling various sewerage system projects across the country, JPP certainly has a lot of works to do with a little working staffs at hand in the organization to accommodate the working commitments and project completion delivery for the Government. The map of the study location is shown in Figure 3.1 below.

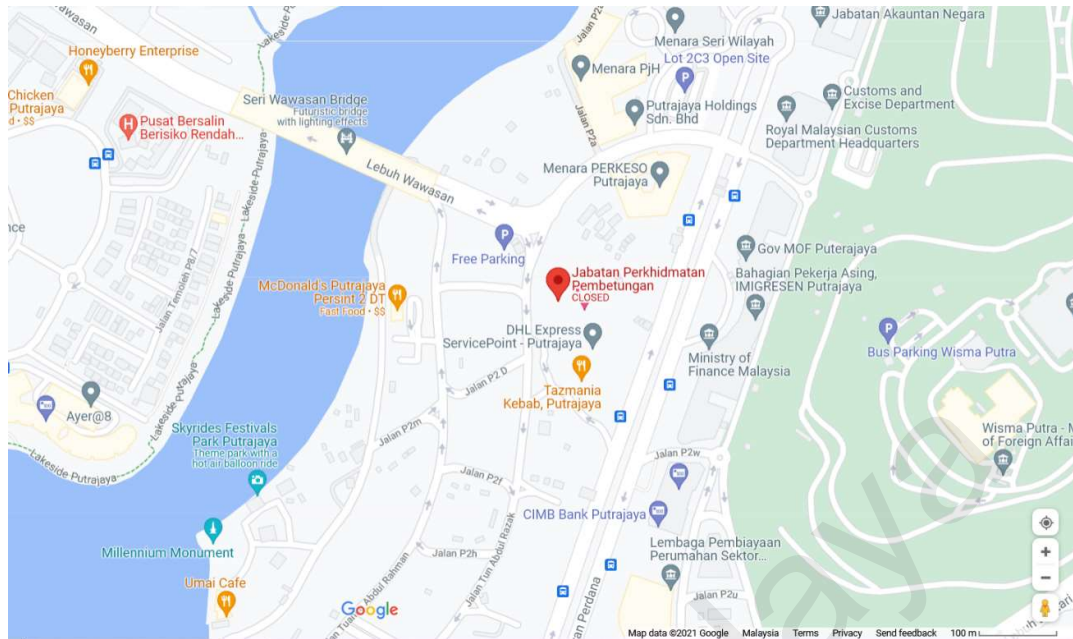


Figure 3.1: Map of Study Location

3.4.2 Sample Size

To minimize error of sample size and guarantee the level of confidence and accuracy with determining the sample size for a particular population, the sample size table of Krejcie & Morgan (1970) was utilised for this study. No calculations are needed to use the sample size table based on Krejcie & Morgan (1970). Thus, for a population of 187 workers, the highest value of sample size within the range of 180 - 190 of population size were taken which is 127 as shown in the Table 3.1 below (indicated in the circle drawn on the table). Therefore, the sample size for this study of 187 study population is 127. 127 samples were considered as sufficient sample size for this data analysis. Here, this sample size is also consistent with Roscoe's practice rules (cited in Sekaran & Bougie, 2010) which indicated that samples bigger than 30 and fewer than 500 are applicable for most studies.

Table 3.1: Table for Determining Sample Size from a Given Population

<i>N</i>	<i>S</i>	<i>N</i>	<i>S</i>	<i>N</i>	<i>S</i>
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	1000000	384

Note.—*N* is population size.
S is sample size.

Source: Krejcie & Morgan (1970)

3.5 Inclusion and Exclusion Criteria

3.5.1 Inclusion Criteria

The inclusion criteria for this study are currently employed person, from the age of 18-60 years old.

3.5.2 Exclusion Criteria

The exclusion criteria is currently unemployed person, retired, and age below 18 years old.

3.6 Independent and Dependent Variables

3.6.1 Independent Variables

The independent variables in this study are:

- a) Socio demographic profiles, i.e.:
 - Age – grouped as follows; 18-20, 21-30, 31-40, 41-50 and 51-60 years old
 - Gender – consists of two (2) sexes; male and female
 - Ethnicity – grouped as; Malay, Chinese, Indian and Others
 - Education level – subdivided into; primary school, secondary school, diploma or foundation level, bachelor or master’s degree and doctor of philosophy
 - Marital status – categorised into; single, married, divorced or widower
 - Personal lifestyle – divided into; vaping or smoking, alcohol consumption, drug abuse, irregular exercise, unhealthy diet or none
 - Working position – classified into; non-executive, executive, middle management and senior management
 - Monthly income – subdivided into; less than RM1,000, RM1,000-2999, RM3,000-4,999 and RM5,000 or more
 - Working experience – classified into; less than 5 years, 5-10, 11-20 and more than 20 years
 - Estimating working hours per week – categorised into; 40 hours per week or less, 41-46 hours per week and more than 46 hours per week

b) Working conditions perceived by working employees, i.e.:

- Decision latitude – the merging of two (2) components which are; job skill discretion and job decision making authority
- Psychological job demands
- Job insecurity
- Social support – the merging of two components (2) which are; supervisor support and co-worker support

3.6.2 Dependant Variables

The dependant variables in this study is the self-perceived psychological symptoms of the employees, i.e.:

- Depression
- Anxiety
- Stress

3.7 Study Hypothesis

Based on the research questions and research objectives, the subsequent research hypotheses have been established. The study predicts the following results:

Hypothesis 1:

Null hypothesis:

Ho: There is no relationship between working conditions on self-perceived psychological symptoms of the employees at JPP.

Alternative hypothesis:

Hi: There is a relationship between working conditions on self-perceived psychological symptoms of the employees at JPP.

3.8 Tools and Instruments

In conducting research studies, instruments are tools used to obtain data. According to Noraini (2013), instruments can be obtained through various means such as past studies, self-construction, online purchase or adaptation from other measurement tools. In the context of this study, the instruments used are listed in Table 3.2 below.

Table 3.2: Tools and Instruments Used in this Study

No.	Instrument	Source
1	Socio Demographic Profiles	-
2	Job Content Questionnaire (JCQ)	Karasek et al., (1998)
3	Depression Anxiety Stress Scales (DASS)	Lovibond & Lovibond, (1995)

3.8.1 Respondents' Socio Demographic Data (Part A)

The data to be collected from this socio demographic information of the respondents which consists of age, gender, ethnicity, education level, marital status, personal lifestyle, working position, monthly income, working experience, and estimating working hours per week. This part consists of a total ten (10) questions (refer to item 3.6.1).

3.8.2 Job Content Questionnaire (Part B)

The Job Content Questionnaire, abbreviated as JCQ is utilized worldwide and has been proven as a valid scientific instrument to measure employee work organization and psychosocial occupation content (Hurrell, JOHP, 1998). JCQ made up of a wide-ranging variation of employee job characteristic areas comprising of decision latitude (a merged scale of skill discretion and decision authority), psychological job demands, job insecurity, and social support (a merged scale of supervisor and co-worker support). This

questionnaire can be self-conducted within fifteen minutes of reading and answering time span with minimum topic guidance (JCQ Center Global, n.d.).

This part features a total of 26 questions. The question number from 11 – 33, and question number 36 are evaluated on a four-point Likert scale. Question number 11 – 33 answers are ranged from 1, implicating that the respondents assumed that "strongly disagree" with the question statement, to 4 implicating that the respondents assumed that "strongly agree" with the question statement. Then, question number 34 and 35 are evaluated based on five choices of answers given. Question number 34 choices are ranged from 1, implicating that respondents assumed their work to be "regular and steady", to 2 implicating that respondents assumed their work to be "seasonal", to 3 implicating that respondents assumed their work to be "frequent layoffs", to 4 implicating that respondents assumed their work to be "both seasonal and frequent layoffs", to 5 implicating that respondents assumed their work to be "other" than steady. While question number 35 choices are ranged from 1, implicating that respondents had possibility of facing job loss in the past to be "never", to 2 implicating that respondents assumed their possibility of facing job loss in the past to be "faced possibility once", to 3 implicating that respondents assumed their possibility of facing job loss in the past to be "faced possibility more than once", to 4 implicating that respondents assumed their possibility of facing job loss in the past to be "actually constantly", to 5 implicating that respondents assumed their possibility of facing job loss in the past to be "laid off". Lastly, question number 36 is on four-point Likert scale ranged from 1, implicating that the respondents assumed their possibility of facing job loss in the future to be "not at all likely", to 2 implicating that the respondents assumed their possibility of facing job loss in the future to be "not too likely", to 3 implicating that the respondents assumed their possibility of facing job loss in the future to be "somewhat likely", to 4 implicating that

the respondents assumed their possibility of facing job loss in the future to be “very likely”.

3.8.3 Depression Anxiety Stress Scales (Part C)

The Depression Anxiety Stress Scales, abbreviated as DASS is comprised of 42 self-report items to be finished over a timeline of five to ten minutes. Each item indicating a negative emotional symptom which later to be used to measure the three (3) related negative emotional conditions of depression, anxiety and tension/stress. Meanwhile in this study, DASS21 which made up of 21 featured questions are used to make up for a shorter time for the respondents to answer all three (3) parts of the survey. Each of DASS' feature is evaluated on a four-point Likert scale of frequency or severity of the respondents' experiences over the last week with the intent of underlining conditions over traits. These scores ranged from 0, implicating that the respondents assumed that "did not apply to them at all", to 3 implicating that the respondents assumed that "apply to them very much, or most of the time". It is also highlighted in the instructions that there are no right or wrong responses (Lovibond & Lovibond, 1995).

3.9 Data Collection

It encompasses the involvement of voluntary individuals that are presently working in JPP then are approached via social-media application namely WhatsApp using the medium of Google Form to respond to the questionnaire. Data are collected based on a probability sampling method where simple random sampling is used to gain the respondents needed. The identification of respondents are based on their working position in the organization, respondents are screened through the criteria further mentioned in item 3.10. The respondents will be contacted first through WhatsApp and asked for their consent before participating. The survey will shared as a link and then be answered using

Google Form. There will be no face to face interview as COVID-19 pandemic is rampaging across the country. This survey will be conducted online only.

The data collected for this study will undergo revision process, presented through tabulation with access to a PC using Excel file (Microsoft Office) and SPSS version 24. The quality control of data entry was executed by data cleaning and checking.

3.10 Data Analysis

The results will be expressed using – i) descriptive analysis in terms of describing the respondents' socio-demographic profiles, respondents' perceived working conditions through JCQ descriptive analysis and respondents' self-perceived psychological symptoms through DASS descriptive analysis; ii) Pearson Correlation test in order to assess the relationship between the JPP working conditions as well as their staffs' self-perceived psychological symptoms.

3.11 Study Flowchart

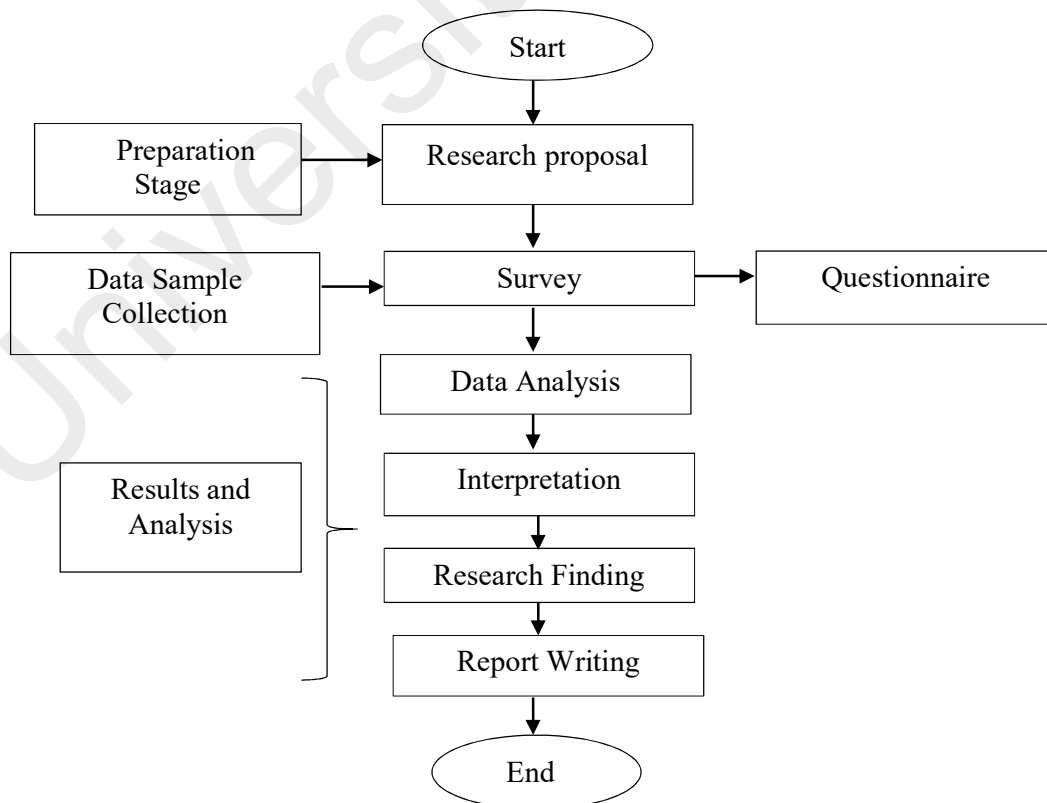


Figure 3.2: Study Flowchart

3.12 Research Ethics

Ethical issues are considered in the course of data collection. Clearance application has been successfully obtained from University of Malaya Research Ethics Committee (UMREC) with reference number UM.TNC2/UMREC_1524 (refer Appendix B) and respondents participated before the data collection. All collected data will be kept confidential and safe.

3.13 Data Storage and Archiving

During the course of the study, all study related documents are preserved in a safeguarded room at the author's residence. All data will be move into a password protected PC. Following the termination of the study, data in the PC will be copied to CDs and the data in the PC will be erased. All associated study documents, CDs and any hardcopy data will be kept and archived for seven (7) years by the author in a locked and secured location. The CDs and data will be destroyed after that period of storage. The author will retain all documentation pertaining to the study, including certificates showing that satisfactory audit and inspection procedures have been conducted. All data and documents will be made accessible if demanded by relevant authorities.

CHAPTER 4: RESULTS AND DISCUSSION

3.1 Introduction

This chapter will show and discuss the findings obtained in this study. The flow of this chapter are expressed using; i) descriptive analysis in terms of describing the respondents' socio-demographic profiles, respondents' perceived working conditions through JCQ descriptive analysis and respondents' self-perceived psychological symptoms through DASS descriptive analysis; ii) Pearson Correlation test in order to assess the relationships between the JPP working conditions as well as their staff psychological symptoms.

4.2 Descriptive Analysis

4.2.1 Respondents' Socio Demographic Profiles Data Analysis

4.2.1.1 Age

A total of 127 participants enrolled for this research study. From the data analysis conducted on the age demographics of the participants, age was grouped into four categories namely: 21-30 years old; 31-40 years old; 41-50 years old; and 51-60 years old respectively. As reported by participants and as presented in Table 4.1 below, majority of the participants (59.1%) were of the age group: 31-40 years old, while the least age group in this study was the 51-60 years old category with only 4 participants (3.1%). There was a bracket for the 2nd and 3rd positions of age categories 21-30 years old and 41-50 years old, both representing around 18.9% of the participants respectively. Figure 4.1 below gives an illustrative description of the age demographics accordingly.

Statistics		
Age		
N	Valid	127
	Missing	0
Mean		3.06
Std. Deviation		.710

Table 4.1: Age Descriptive Analysis

		Age			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	21-30 years old	24	18.9	18.9	18.9
	31-40 years old	75	59.1	59.1	78.0
	41-50 years old	24	18.9	18.9	96.9
	51-60 years old	4	3.1	3.1	100.0
Total		127	100.0	100.0	

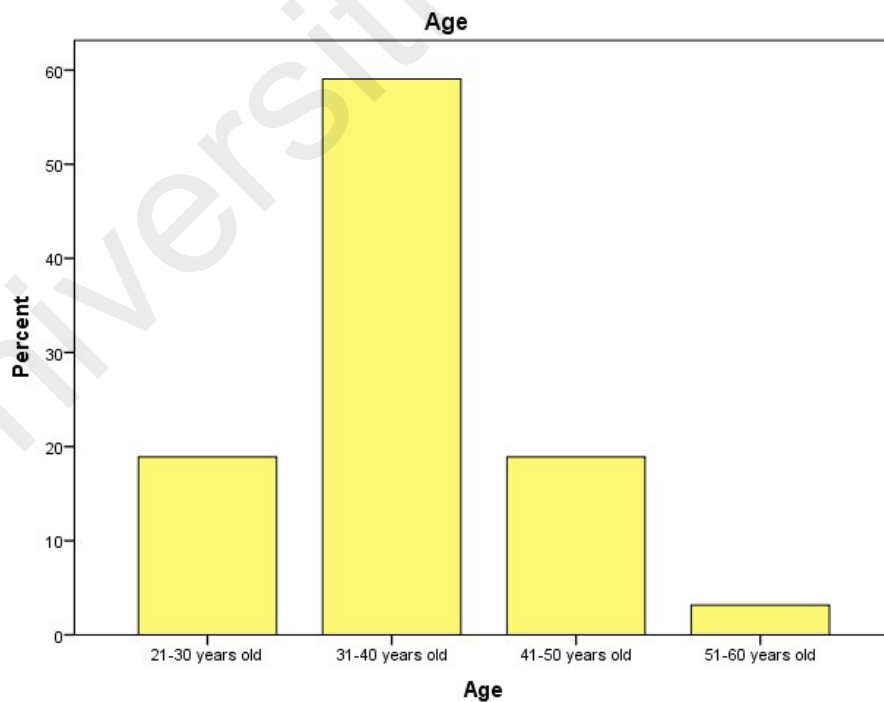


Figure 4.1: Age Demographics Bar Chart

4.2.1.2 Gender

A total of 127 participants enrolled for this research study. From the data analysis conducted on the gender demographics of the participants, gender was grouped into two categories namely: male and female respectively. As reported by participants and as presented in Table 4.2 below, majority of the participants (66.9%) were males, with the remainder reportedly females (33.1%). Figure 4.2 below gives an illustrative description of the gender demographics accordingly.

Statistics		
Gender		
N	Valid	127
	Missing	0
	Mean	1.33
	Std. Deviation	.472

Table 4.2: Gender Descriptive Analysis

		Gender			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	85	66.9	66.9	66.9
	Female	42	33.1	33.1	100.0
Total		127	100.0	100.0	



Figure 4.2: Gender Demographics Bar Chart

4.2.1.3 Ethnicity

A total of 127 participants enrolled for this research study. From the data analysis conducted on the Ethnicity demographics of the participants, the major ethnic groups in the country were used as a measurement, which comprises four categories namely: Malay; Chinese; Indian; and Others respectively. As reported by participants and as presented in Table 4.3 below, majority of the participants (88.2%) were Malays, followed by the Chinese ethnicity (6.3%) while the Indians were the least among the 3 major ethnicities with a percentage of 3.9%. However, a very small portion of participants reported to be of other ethnicities (1.6%). Figure 4.3 below presents illustrative descriptions of the Ethnicity demographics accordingly.

Statistics		
Ethnicity		
N	Valid	127
	Missing	0
Mean		1.19
Std. Deviation		.574

Table 4.3: Ethnicity Descriptive Analysis

		Ethnicity			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Malay	112	88.2	88.2	88.2
	Chinese	8	6.3	6.3	94.5
	Indian	5	3.9	3.9	98.4
	Others	2	1.6	1.6	100.0
	Total	127	100.0	100.0	

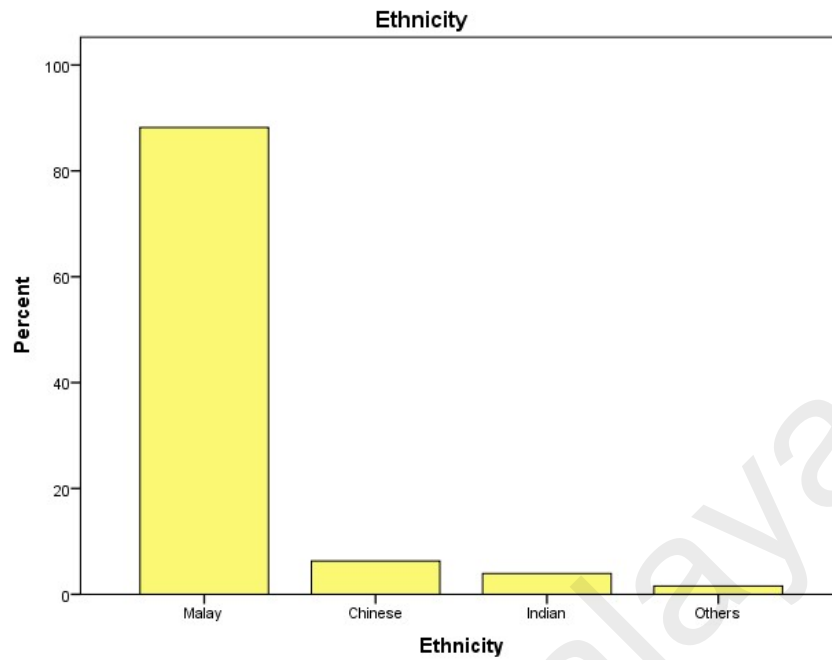


Figure 4.3: Ethnicity Demographics Bar Chart

4.2.1.4 Education Level

A total of 127 participants enrolled for this research study. From the data analysis conducted on the Education Level demographics of the participants as presented in Table 4.4 below, results indicates that most of the participants had either a Bachelor's Degree or a Master's degree (59.8%), which was followed by 38.65% of participants who had undergone Foundation/Diploma programs. However, a very small portion of the participants reported to just have a secondary school certificate (1.6%). Figure 4.5 below presents an illustrative description of the Education Level demographics for this study.

Statistics		
Education Level		
N	Valid	127
	Missing	0
	Mean	3.58
	Std. Deviation	.526

Table 4.4: Education Level Descriptive Analysis

		Education Level			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Secondary school	2	1.6	1.6	1.6
	Foundation / Diploma	49	38.6	38.6	40.2
	Bachelor's Degree / Master's Degree	76	59.8	59.8	100.0
	Total	127	100.0	100.0	

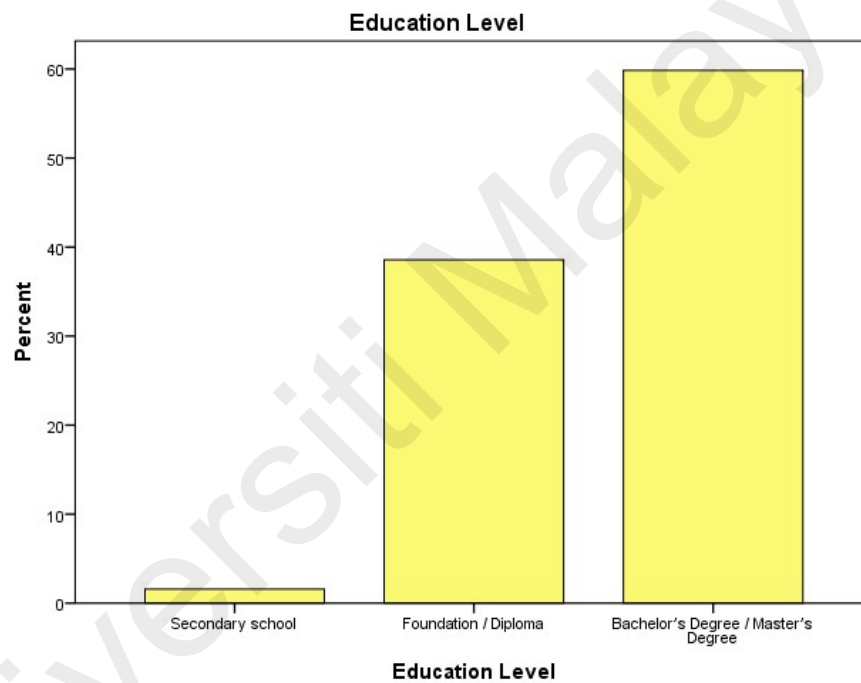


Figure 4.4: Education Level Demographics Bar Chart

4.2.1.5 Marital Status

A total of 127 participants enrolled for this research study. From the data analysis conducted on the Marital Status demographics of the participants as presented in Table 4.5 below, results indicates that most of the participants were married (80.3%), which was followed by 15% of participants reportedly single. Nonetheless, there were a few participants who were divorced (3.1%) and Widowed (1.6%) respectively. Figure 4.6

below presents an illustrative description of the Marital Status demographics for this study.

Statistics		
Marital Status		
N	Valid	127
	Missing	0
Mean		1.91
Std. Deviation		.488

Table 4.5: Marital Status Descriptive Analysis

		Marital Status			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Single	19	15.0	15.0	15.0
	Married	102	80.3	80.3	95.3
	Divorced	4	3.1	3.1	98.4
	Widower	2	1.6	1.6	100.0
Total		127	100.0	100.0	



Figure 4.5: Marital Status Demographics Bar Chart

4.2.1.6 Personal Lifestyle

The study tried to gather demographic information as regards the personal lifestyle activities engaged by the participants. A total of six (6) personal lifestyle activities were used in understanding the kind of personal lifestyle the participants practiced. In order to ensure there was no bias in the responses gathered as well as to give chance for the respondents to answer wholeheartedly, the participants were allowed to choose multiple choices from the six (6) options available. The personal lifestyle activities comprised: Vaping/Smoking; Alcohol consuming; Drug abuse; Irregular exercise; Unhealthy diet; and a last option referred to as 'None'. A multiple response analysis was conducted and 1 was coded to indicate the positive response of the participants. From Table 4.6, it is indicated that most of the participants reported to be engaging in irregular exercise (34.4%) as well as unhealthy diet (36.3%) as a personal lifestyle. This was followed by around 24% who reported that they usually engage in Vaping/Smoking. However, only a few participants (2.5%) reported to have engaged in Alcohol consuming, while 0.6% involved in Drug abuse. Notwithstanding, only very few participants (2.2%) reported to not have engaged in any of the negative personal lifestyles as stated below.

		Statistics					
		Vaping / Smoking	Alcohol consuming	Drug abuse	Irregular exercise	Unhealthy diet	None
N	Valid	127	127	127	127	127	127
	Missing	0	0	0	0	0	0
	Mean	.60	.06	.02	.86	.91	.06
	Std. Deviation	.492	.244	.125	.350	.294	.229

Table 4.6: Personal Lifestyle Frequency Analysis

		Personal Lifestyle Frequencies		
		Responses		Percent of Cases
		N	Percent	
Personal Lifestyle ^a	Vaping / Smoking	76	24.0%	59.8%

	Alcohol consuming	8	2.5%	6.3%
	Drug abuse	2	0.6%	1.6%
	Irregular exercise	109	34.4%	85.8%
	Unhealthy diet	115	36.3%	90.6%
	None	7	2.2%	5.5%
Total		317	100.0%	249.6%

a. Dichotomy group tabulated at value 1.

4.2.1.7 Working Position

A total of 127 participants enrolled for this research study. From the data analysis conducted on the Working Position demographics of the participants as presented in Table 4.7 below, results indicates that most of the participants (57.5%), occupied the position of Non-executive in their various work places. This was followed by 25.2% of the participants who reported to be occupying the position of Executives in their working places. Invariably, around 13.4% of the respondents were at the Middle management position at work, while a little fraction of the participants (3.9%), were reportedly occupying the working position of the Senior management at their work places. Figure 4.6 below presents an illustrative description of the Working Position demographics for this study.

Statistics		
Working Position		
N	Valid	127
	Missing	0
	Mean	1.64
	Std. Deviation	.861

Table 4.7: Working Position Descriptive Analysis

		Working Position			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Non-executive	73	57.5	57.5	57.5
	Executive	32	25.2	25.2	82.7

Middle management	17	13.4	13.4	96.1
Senior management	5	3.9	3.9	100.0
Total	127	100.0	100.0	

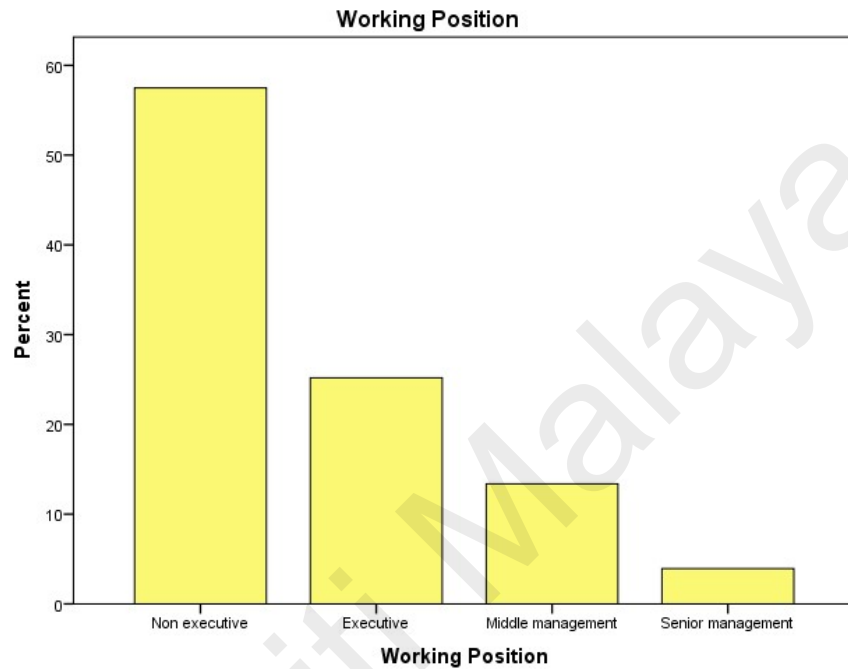


Figure 4.6: Working Position Demographics Bar Chart

4.2.1.8 Monthly Income

A total of 127 participants enrolled for this research study. From the data analysis conducted on the Monthly Income demographics of the participants as presented in Table 4.8 below, results indicates that most of the participants (42.5%), are low salary earners, reportedly collecting salaries of around RM1,000-RM2,999 monthly. This is followed by around 32.3% of participants who are average salary earners, with a reported monthly income of about RM3,000-RM4,999 respectively. Moreover, the last portion of participants, around 25.2% of them reported to be receiving a monthly income greater than or equal to RM5,000. Figure 4.7 below presents an illustrative description of the Monthly Income demographics for this study.

Statistics		
Monthly Income		
N	Valid	127
	Missing	0
Mean		2.83
Std. Deviation		.808

Table 4.8: Monthly Income Descriptive Analysis

		Monthly Income			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	RM1,000- RM2,999	54	42.5	42.5	42.5
	RM3,000- RM4,999	41	32.3	32.3	74.8
	≥RM5,000	32	25.2	25.2	100.0
	Total	127	100.0	100.0	

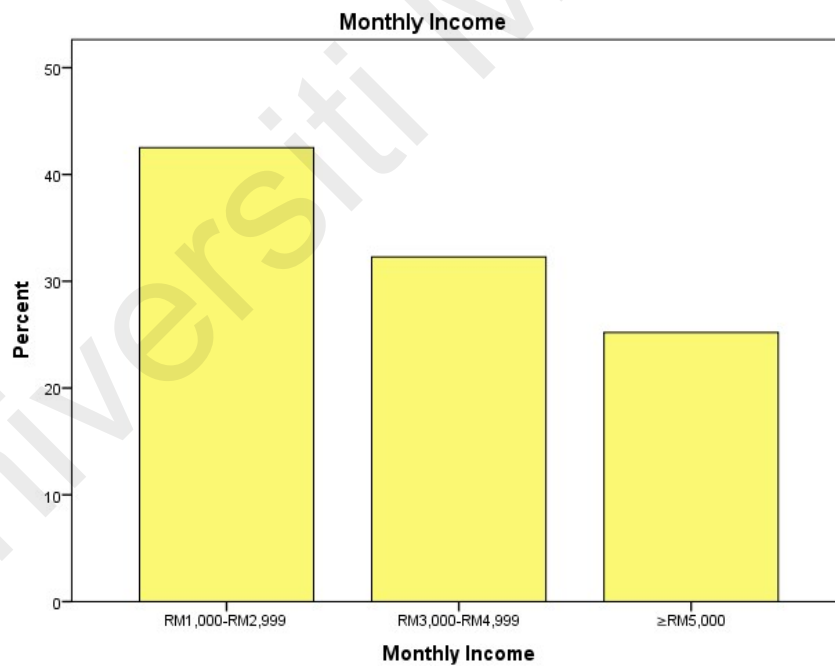


Figure 4.7: Monthly Income Demographics Bar Chart

4.2.1.9 Working Experience

A total of 127 participants enrolled for this research study. From the data analysis conducted on the Working Experience demographics of the participants as presented in Table 4.9 below, results indicates that most of the participants (50.4%), have about 11-20 years of working experience, which is quite adequate thus indicating their expertise in their various work fields. Consequently, about 29.9% of the participants reportedly have around 5-10 years of working experience, whereas 10.2% of the participants indicated that they have gathered more than 20 years of working experience. Nonetheless, there were some newbies in the working sector about 9.4% of the participants, who reported that they have acquired less than 5 years working experience. Figure 4.8 below presents an illustrative description of the Working Experience demographics for this study.

Statistics		
Working Experience		
N	Valid	127
	Missing	0
	Mean	2.61
	Std. Deviation	.797

Table 4.9: Working Experience Descriptive Analysis

		Working Experience			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 5 years	12	9.4	9.4	9.4
	5-10 years	38	29.9	29.9	39.4
	11-20 years	64	50.4	50.4	89.8
	More than 20 years	13	10.2	10.2	100.0
	Total	127	100.0	100.0	



Figure 4.8: Working Experience Demographics Bar Chart

4.2.1.10 Estimating Working Hours per Week

A total of 127 participants enrolled for this research study. From the data analysis conducted on the Estimating Working Hours per Week demographics of the participants as presented in Table 4.10 below, results indicates that most of the participants (54.3%), reportedly work for an estimated period of 41-46 hours/week. This is followed by around 26.8% of participants who indicated to have an estimating working hour of more than 46 hours/week. Corroboratively, the remaining 18.9% of the participants stated that they work for an estimate of 40 hours/week or less. Figure 4.9 below presents an illustrative description of the Estimating Working Hours per Week demographics for this study.

Statistics		
Estimating Working Hours Per Week		
N	Valid	127
	Missing	0
	Mean	2.08
	Std. Deviation	.674

Table 4.10: Estimating Working Hours per Week Descriptive Analysis

Estimating Working Hours Per Week					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	40 hours/week or less	24	18.9	18.9	18.9
	41-46 hours/week	69	54.3	54.3	73.2
	More than 46 hours/week	34	26.8	26.8	100.0
	Total	127	100.0	100.0	

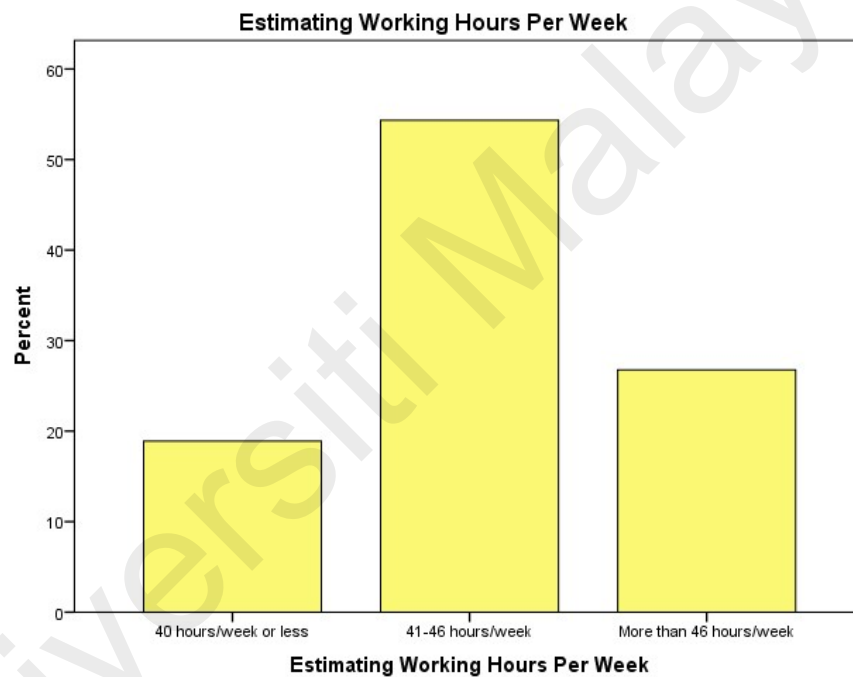


Figure 4.9: Estimating Working Hours per Week Demographics Bar Chart

4.2.2 Respondents' Job Content Questionnaire Data Analysis

Working conditions were assessed via JCQ which is comprised of four (4) major variables. These sections are namely: Job Decision Latitude, Psychological Job Demands, Job Insecurity and Social Support. For the Job Decision Latitude, two (2) constructs were used in assessing the working conditions perceptions of workers in the sewerage service sector who constituted the participants for this study. The Job Decision Latitude constructs include: Job Skill Discretion- coded as JSD with six (6) items; and Job

Decision Making Authority- coded as JDM with three (3) items, respectively. While for Psychological Job Demands- coded as JD with five (5) items. For the Job Insecurity- coded as JI with three (3) items. Lastly, Social Support section under the JCQ of the working conditions, two (2) constructs were employed to assess the perceptions of workers in the sewerage service sector with regards to their working conditions. The Social Support construct comprised: Co-worker Support- coded as CWS with four (4) items; and Supervisor Support- coded as SS with four (4) items, respectively. Data analysis was conducted via SPSS version 24 using series of descriptive analysis via comparison of mean and standard deviation values to find the working conditions perceived by the workers.

4.2.2.1 Job Decision Latitude

a. Job Skill Discretion

Table 4.11 presents the working conditions results for the Job Skill Discretion scale. In the Job Skill Discretion scale, six (6) items were used for measurement in finding the perception of the workers regarding their working conditions as concerns Job Skill Discretion. Responses were gathered via a four (4) Likert scale representing 1 as Strongly Disagree; 2 as Disagree; 3 as Agree; and 4 as Strongly Agree. All items were analysed descriptively via SPSS. The mean and standard deviation values for the Job Skill Discretion scale have been presented as well in Table 4.11 below.

Table 4.11 reveals that the item JSD4(Q15): “My Job requires a high level of skill” was most agreed by majority of the respondents (M= 3.76; SD= .426) as it has the highest mean value. This further indicates the importance of skill acquaintance by the workers in order to perform well at work. The next item which was paramount in the Job Skill Discretion construct is JSD2(Q12): “My job involves a lot of repetitive work” (M= 3.54; SD= .627). This reveals that a significant portion of the participants agreed with the

fact that they needed to repeat work many times in the course of performing their job, thus this might have some psychological effects on the workers and shows poor Job Skill Discretion. Nonetheless, the item with the least significance on the Job Skill Discretion, which also represents the lowest mean value and highest standard deviation is JSD5(Q17): “I get to do a variety of things on my job” (M= 2.27; SD= 1.050). Most of the participants did not agree with this statement, thus further verifying the previous assertions that they tend to repeat work a number of times in the course of performing their job. Table 4.12 presents the working conditions results for the Job Decision Making Authority scale.

Table 4.11: Job Skill Discretion Descriptive Analysis

Descriptive Statistics: Job Skill Discretion					
	N	Minimum	Maximum	Mean	Std. Deviation
JSD1(Q11): My job requires that I learn new things	127	3	4	3.50	.502
JSD2(Q12): My job involves a lot of repetitive work	127	1	4	3.54	.627
JSD3(Q13): My job requires me to be creative	127	3	4	3.31	.466
JSD4(Q15): My job requires a high level of skill	127	3	4	3.76	.426
JSD5(Q17): I get to do a variety of things on my job	127	1	4	2.27	1.050
JSD6(Q19): I have an opportunity to develop my own special abilities	127	2	4	3.21	.599
Valid N (listwise)	127				

b. Job Decision Making Authority

Table 4.12 presents the working conditions results for the Job Decision Making Authority scale. In the Job Decision Making Authority scale, three (3) items were used for measurement in finding the perception of the workers regarding their working conditions as concerns Job Decision Making Authority. Responses were gathered via a four (4) Likert scale representing 1 as Strongly Disagree; 2 as Disagree; 3 as Agree; and 4 as Strongly Agree. All items were analysed descriptively via SPSS. The mean and standard deviation values for the Job Decision Making Authority scale have been presented as well in Table 4.12 below.

Table 4.12 reveals that the item JDM3(Q18): “I have a lot to say about what happens on my job” was most agreed by majority of the respondents ($M= 3.68$; $SD= .469$) as it has the highest mean value. This further indicates that majority of the workers are curious of making decisions in their job, perhaps could be a factor that can help them perform well at work if they are given the chance to make their own decisions. The next item which was paramount in the Job Decision Making Authority construct is JDM1(Q14): “My job allows me to make a lot of decisions on my own” ($M= 3.35$; $SD= .596$). This reveals that a significant portion of the participants reportedly agreed that the nature of their jobs could allow them make independent decisions that might help improve the working conditions if given the opportunity. Nonetheless, the item with the least significance on the job decision making, which also represents the lowest mean value and highest standard deviation is JDM2(Q16): “On my job, I am given a lot of freedom to decide how I do my work” ($M= 1.98$; $SD= .684$). This reveals that majority of the participants are not given enough freedom on deciding the manner in which they do their work, perhaps they are mostly controlled or tied down to the order from the higher levels. Table 4.13 presents the working conditions results for the Psychological Job Demands scale.

Table 4.12: Job Decision Making Authority Descriptive Analysis

Descriptive Statistics: Job Decision Making Authority					
	N	Minimum	Maximum	Mean	Std. Deviation
JDM1(Q14): My job allows me to make a lot of decisions on my own	127	2	4	3.35	.596
JDM2(Q16): On my job, I am given a lot of freedom to decide how I do my work	127	1	4	1.98	.684
JDM3(Q18): I have a lot to say about what happens on my job	127	3	4	3.68	.469
Valid N (listwise)	127				

4.2.2.2 Psychological Job Demands

Table 4.13 presents the working conditions results for the Psychological Job Demands scale. In the Psychological Job Demands scale, five (5) items were used for measurement in finding the perception of the workers regarding their working conditions as concerns to Psychological Job Demands. Responses were gathered via a four (4) Likert scale representing 1 as Strongly Disagree; 2 as Disagree; 3 as Agree; and 4 as Strongly Agree. All items were analysed descriptively via SPSS. The mean and standard deviation values for the Psychological Job Demands scale have been presented in Table 4.13 below.

Table 4.13 reveals that the item JD2(Q21): “My job requires working very hard” was most agreed by majority of the respondents ($M= 3.88$; $SD= .324$) as it has the highest mean value. This further indicates that majority of the workers need to work very hard in order to get their job done or achieve goals set by their job. The next item which was paramount in the Job Decision Making construct is JD1(Q20): “My job requires working very fast” ($M= 3.72$; $SD= .449$). This reveals that apart from just working hard, most of the participants must have to work very fast in order to accomplish their job at work, thus

an indication as to the possibilities of if the working conditions could affect the psychological symptoms of the workers. Nonetheless, the item with the least significance on the job demands, which also represents the lowest mean value and highest standard deviation is JD3(Q23): “I have enough time to get the job done” (M= 1.28; SD= .449). This reveals that majority of the participants do not have adequate time to complete their job despite the tight schedules attached to these jobs. The next section presents the working conditions results for the Job Insecurity of the workers.

Table 4.13: Psychological Job Demands Descriptive Analysis

Descriptive Statistics: Psychological Job Demands					
	N	Minimum	Maximum	Mean	Std. Deviation
JD1(Q20): My job requires working very fast	127	3	4	3.72	.449
JD2(Q21): My job requires working very hard	127	3	4	3.88	.324
JD3(Q23): I have enough time to get the job done	127	1	2	1.28	.449
JD4(Q24): I am free from conflicting demands others make	127	1	3	1.66	.607
JD5(Q25): My job security is good	127	2	4	3.28	.603
Valid N (listwise)	127				

4.2.2.3 Job Insecurity

Table 4.14 presents the working conditions results for the Job Insecurity scale. In the Job Insecurity scale, 3 items were used for measurement in finding the perception of the workers regarding their working conditions as concerns Job Insecurity. Responses were gathered via four (4) and five (5) Likert scale based on the nature of questions. The first item had five (5) Likert scale representing 1 as Regular and Steady; 2 as Seasonal; 3 as Frequent Layoffs; 4 as Both Seasonal and Frequent Layoffs; and 5 as Others. Consequently, the second item was measured on a five (5) Likert scale representing 1 as

Never; 2 as Faced Possibility Once; 3 as Faced Possibility More Than Once; 4 as Actually Constantly; and 5 as Laid Off. For the third item, a four (4) Likert scale was preferred for measurement representing 1 as Not At All Likely; 2 as Not Too Likely; 3 as Somewhat Likely; and 4 as Very Likely. All items were analysed descriptively via SPSS. The mean and standard deviation values for the job insecurity scale have been presented as well in Table 4.14 below.

Table 4.14 reveals that the item JI1(Q34): “How steady is your work?” was the most positively answered question by majority of the respondents (M= 1.72; SD= .794) as it has the highest mean value compare to the other items. This further indicates that majority of the workers submitted to their work being seasonal as well as being regular and steady. Just a few of the workers reported their work had frequent layoffs. Corroboratively, this fact is coherent with the findings in the job demand scale where respondents indicated that they have to work very hard in order to get their job done or achieve goals set by their job. Invariably, the item with the least significance as regards job insecurity, which also represents the lowest mean value and highest standard deviation is JI21(Q35): “During the past year, how often were you in a situation where you faced job loss?” (M= 1.05; SD= .278). This reveals that although despite their work being more of regular and steady amidst some being seasonal, majority of the workers have never faced job loss, thus indicating their dedication to work in ensuring it is achieved efficiently regardless of the psychological effects. The next section presents the working conditions results for the Social Support of the workers.

Table 4.14: Job Insecurity Descriptive Analysis

Descriptive Statistics: Job Insecurity					
	N	Minimum	Maximum	Mean	Std. Deviation
Jl1(Q34): How steady is your work?	127	1	4	1.72	.794

Jl2(Q35): During the past year, how often were you in a situation where you faced job loss?	127	1	3	1.05	.278
Jl3(Q36): Sometimes people permanently lose jobs they want to keep. How likely is it that during the next couple of years you will lose your present job with your employer?	127	0	3	1.31	.515
Valid N (listwise)	127				

4.2.2.4 Social Support

The social support construct comprised: Co-worker Support- coded as CWS with four (4) items; Supervisor Support- coded as SS with four (4) items, respectively. Data analysis was conducted via SPSS version 24 using series of descriptive analysis via comparison of mean and standard deviation values to find the working conditions perceived by the workers.

a. Co-Worker Support

Table 4.15 presents the working conditions results for the Co-Worker Support scale. In the Co-Worker Support scale, four (4) items were used for measurement in finding the perception of the workers regarding their working conditions as concerns Co-Worker Support. Responses were gathered via a four (4) Likert scale representing 1 as Strongly Disagree; 2 as Disagree; 3 as Agree; and 4 as Strongly Agree. All items were analysed descriptively via SPSS. The mean and standard deviation values for the Co-Worker Support scale have been presented in Table 4.15 below.

Table 4.15 reveals that the item CWS2(Q27): “People I work with take a personal interest in me” was most agreed by majority of the respondents (M= 3.31; SD= .60) as it has the highest mean value. This further indicates that majority of the workers believe

that the people they work with or their colleagues at work have personal interest in them. The next item which was paramount in the co-worker support construct is CWS1(Q26): “People I work with are competent in doing their jobs” (M= 3.28; SD= .675). This reveals that the participants are of the perception that their co-workers are experienced or capable of the jobs that they undertake at the work place. Nonetheless, the item with the least significance as regards co-worker support, which also represents the lowest mean value and highest standard deviation is CWS4(Q29): “People I work with are helpful in getting the job done” (M= 2.49; SD= .502). This reveals that even though the majority of the participants perceive that their co-workers have personal interest in them and are competent in doing their jobs, nevertheless they are not quite helpful in getting the job done. Table 4.16 presents the working conditions results for the Supervisor Support scale.

Table 4.15: Co-Worker Support Descriptive Analysis

Descriptive Statistics: Co-Worker Support					
	N	Minimum	Maximum	Mean	Std. Deviation
CWS1(Q26): People I work with are competent in doing their jobs	127	1	4	3.28	.675
CWS2(Q27): People I work with take a personal interest in me	127	2	4	3.31	.600
CWS3(Q28): People I work with are friendly	127	1	3	2.50	.518
CWS4(Q29): People I work with are helpful in getting the job done	127	2	3	2.49	.502
Valid N (listwise)	127				

b. Supervisor Support

Table 4.16 presents the working conditions results for the Supervisor Support scale. In the Supervisor Support scale, four (4) items were used for measurement in finding the perception of the workers regarding their working conditions as concerns

Supervisor Support. Responses were gathered via a four (4) Likert scale representing 1 as Strongly Disagree; 2 as Disagree; 3 as Agree; and 4 as Strongly Agree. All items were analysed descriptively via SPSS. The mean and standard deviation values for the Supervisor Support scale have been presented as well in Table 4.16 below.

Table 4.16 reveals that the item SS2(Q32): “My supervisor is helpful in getting the job done” was most agreed by majority of the respondents (M= 2.38; SD= .654) as it has the highest mean value compare to the other items. This further indicates that majority of the workers get help from their supervisor in ensuring completion of assigned jobs, though this mean is somewhat low, thence insinuating that this might not be the case for a good number of the participants either. Invariably, the item with the least significance as regards supervisor support, which also represents the lowest mean value and highest standard deviation is SS1(Q30): “My supervisor is concerned about the welfare of those under him/her” (M= 1.60; SD= .716). This reveals that although some of the supervisors might help in getting the work done in some instance, however, majority of the supervisors are not concerned about the welfare of the workers under them. The next section shall present results for the constituents of the psychological symptoms under the Depression Anxiety Stress Scale (DASS).

Table 4.16: Supervisor Support Descriptive Analysis

Descriptive Statistics: Supervisor Support					
	N	Minimum	Maximum	Mean	Std. Deviation
SS1(Q30): My supervisor is concerned about the welfare of those under him/her	127	1	4	1.60	.716
SS2(Q31): My supervisor pays attention to what I am saying	127	1	4	1.64	.794
SS3(Q32): My supervisor is helpful in getting the job done	127	1	4	2.38	.654

SS4(Q33): My supervisor is successful in getting people to work together	127	1	4	2.34	.693
Valid N (listwise)	127				

4.2.3 Respondents' Depression Anxiety Stress Scales Data Analysis

In this study, psychological symptoms were assessed via the DASS questionnaire which comprised three (3) constructs: Depression, Anxiety, and Stress. All the three (3) scales comprised of seven (7) items each which were used in assessing the psychological symptoms of the workers in this study. Data analysis was conducted via SPSS version 24 using series of descriptive analysis via comparison of mean and standard deviation values to find the psychological symptoms perceived by the workers.

4.2.3.1 Depression

Table 4.17 presents the psychological symptoms results for the Depression scale. In the Depression scale, seven (7) items were used for measurement in finding the perception of the workers regarding their psychological symptoms as concerns depression from work. Responses were gathered via a four (4) Likert scale representing 0 as Never; 1 as Sometimes; 2 as Often; and 3 as Almost Always. All items were analysed descriptively via SPSS. The mean and standard deviation values for the depression scale have been presented as well in Table 4.17 below.

Table 4.17 reveals that the item Depression3(Q46): "I felt that I had nothing to look forward to" was most agreed by majority of the respondents (M= 2.72; SD= .499) as it has the highest mean value. This further indicates that the workers were depressed while working, as they did not aim at any other thing to achieve in life apart from their office work. This could also imply that they give much time to work while having less time for their self-management and mental health. Consequently, and worthy of note is item 7 where it was revealed that most of the participants felt that life was meaningless.

The next item which was paramount in the depression construct is Depression4(Q49): “I felt down-hearted and blue” (M= 2.64; SD= .530). This reveals that a significant portion of the participants agreed with the fact that their work was responsible for them feeling down-hearted and blue, i.e., making them feel saddened and discouraged. This could be perhaps when they are unable to achieve their work goals as the work load is much on them with limited time to complete. Nonetheless, the item with the least significance on the depression scale, which also represents the lowest mean value and highest standard deviation is Depression1(Q39): “I couldn’t seem to experience any positive feeling at all” (M= .80; SD= .790). A large proportion of participants did not agree with this statement, while some were quite indecisive in their perception thus further verifying the assertion that they felt they had nothing to look forward to. Table 4.18 presents the psychological symptoms results for the Anxiety scale.

Table 4.17: Depression Descriptive Analysis

Descriptive Statistics: Depression					
	N	Minimum	Maximum	Mean	Std. Deviation
Depression1(Q39): I couldn't seem to experience any positive feeling at all	127	0	3	.80	.790
Depression2(Q41): I found it difficult to work up the initiative to do things	127	0	3	1.46	.710
Depression3(Q46): I felt that I had nothing to look forward to	127	1	3	2.72	.499
Depression4(Q49): I felt down-hearted and blue	127	1	3	2.64	.530
Depression5(Q52): I was unable to become enthusiastic about anything	127	1	3	2.15	.725
Depression6(Q53): I felt I wasn't worth much as a person	127	0	3	1.80	.790

Depression7(Q57): I felt that life was meaningless	127	0	3	1.96	.849
Valid N (listwise)	127				

4.2.3.2 Anxiety

Table 4.18 presents the psychological symptoms results for the Anxiety scale. In the Anxiety scale, seven (7) items were used for measurement in finding the perception of the workers regarding their psychological symptoms as concerns anxiety from work. Responses were gathered via a four (4) Likert scale representing 0 as Never; 1 as Sometimes; 2 as Often; and 3 as Almost Always. All items were analysed descriptively via SPSS. The mean and standard deviation values for the Anxiety scale have been presented as well in Table 4.18 below.

Table 4.18 reveals that the item Anxiety4(Q45): “I was worried about situations in which I might panic and make a fool of myself” was most agreed by majority of the respondents (M= 2.35; SD= .730) as it has the highest mean value. This further indicates that the workers had anxiety issues which led to them being bothered about situations that made them panic to the extent of them feeling foolish of themselves. This could also imply that they worry a lot and thus their mental health might be affected. Consequently, and worthy of note is item 1 where it was revealed that most of the participants had awareness that their mouth was dry, thence making them not balanced during work as they might be anxious of completing a particular task under duress. The next item which was paramount in the anxiety construct is Anxiety7(Q56): “I felt scared without any good reason” (M= 1.65; SD= .706). This reveals that a significant portion of the participants usually feel scared unnecessarily perhaps due to pressure and the fear of getting scolded by supervisors if they fail to complete their task within the given time. Nonetheless, the item with the least significance on the anxiety scale, which also represents the lowest mean value and highest standard deviation is Anxiety6(Q55): “I was aware of the action

of my heart in the absence of physical exertion (e.g., sense of heart rate increase, heart missing a beat)” (M= .71; SD= .778). A large proportion of participants were not aware of the state of their health, especially that of the action of their heart in absence of physical exertion due to their anxious state. This could be a serious red flag on their health as it could perhaps lead to heart failure if not well monitored. Table 4.19 presents the psychological symptoms results for the Stress scale.

Table 4.18: Anxiety Descriptive Analysis

Descriptive Statistics: Anxiety					
	N	Minimum	Maximum	Mean	Std. Deviation
Anxiety1(Q38): I was aware of dryness of my mouth	127	0	3	1.70	.716
Anxiety2(Q40): I experienced breathing difficulty (e.g., excessively rapid breathing, breathlessness in the absence of physical exertion)	127	0	3	1.39	1.016
Anxiety3(Q43): I experienced trembling (e.g., in the hands)	127	0	3	1.30	.867
Anxiety4(Q45): I was worried about situations in which I might panic and make a fool of myself	127	0	3	2.35	.730
Anxiety5(Q51): I felt I was close to panic	127	0	3	1.38	.678
Anxiety6(Q55): I was aware of the action of my heart in the absence of physical exertion (e.g., sense of heart rate increase, heart missing a beat)	127	0	3	.71	.778
Anxiety7(Q56): I felt scared without any good reason	127	0	3	1.65	.706
Valid N (listwise)	127				

4.2.3.3 Stress

Table 4.19 presents the psychological symptoms results for the Stress scale. In the Stress scale, seven (7) items were used for measurement in finding the perception of the workers regarding their psychological symptoms as concerns stress from work. Responses were gathered via a four (4) Likert scale representing 0 as Never; 1 as Sometimes; 2 as Often; and 3 as Almost Always. All items were analysed descriptively via SPSS. The mean and standard deviation values for the stress scale have been presented as well in Table 4.19 below.

Table 4.19 reveals that the item Stress5(Q48): “I found it difficult to relax” was most agreed by majority of the respondents ($M= 2.61$; $SD= .535$) as it has the highest mean value. This further indicates that the workers were stressed to the extent of not being able to enjoy relaxations or leisure. This could also imply that they are stressed out by work and thus may not even think of resting for a while during work as they may be bothered of finishing the given task in time. More so, it was revealed that majority of the participants do find themselves getting agitated, i.e., they easily feel troubled in mind, disturbed and upset about issues. This could be perhaps when trying to solve a task in their work place under duress and encountering hitches, they can easily feel angry at themselves. The next item which was paramount in the stress construct is Stress6(Q50): “I was intolerant of anything that kept me from getting on with what I was doing” ($M= 2.34$; $SD= .594$). This reveals that a significant portion of the participants were not able to tolerate anything that distracts them from proceeding with the task they were doing, thus they easily get glued to their work even when they are stressed out. Nonetheless, the item with the least significance on the stress scale, which also represents the lowest mean value and highest standard deviation is Stress7(Q54): “I felt that I was rather touchy” ($M= .72$; $SD= .653$). A large proportion of participants reported to not have feelings of being touchy, that is, marked by the readiness to take offense when they are slightly provoked.

From this descriptive analysis, it is obvious that the workers in this study possess the three (3) psychological symptoms of depression, anxiety and stress with regards to their work life.

Table 4.19: Stress Descriptive Analysis

Descriptive Statistics: Stress					
	N	Minimum	Maximum	Mean	Std. Deviation
Stress1(Q37): I found it hard to wind down	127	0	3	1.53	.640
Stress2(Q42): I tended to over-react to situations	127	0	3	2.03	.642
Stress3(Q44): I felt that I was using a lot of nervous energy	127	0	3	1.63	1.053
Stress4(Q47): I found myself getting agitated	127	1	3	2.57	.661
Stress5(Q48): I found it difficult to relax	127	0	3	2.61	.535
Stress6(Q50): I was intolerant of anything that kept me from getting on with what I was doing	127	1	3	2.34	.594
Stress7(Q54): I felt that I was rather touchy	127	0	2	.72	.653
Valid N (listwise)	127				

4.3 Pearson Correlation Test

In order to assess the relationships between the JPP working conditions as well as their staff psychological symptoms, a Pearson Correlation test was conducted in SPSS. The results are presented against each constructs of the working conditions (Job Content Questionnaire) and the psychological symptoms (DASS) respectively. The working conditions at JPP, in this study which was represented by the JCQ split into four (4) parts: Job Decision Latitude comprising two (2) constructs of Job Skill Discretion (JSD) and Job Decision Making Authority (JDM); Psychological Job Demands (JD); Job Insecurity

(JI); and Social Support comprising two (2) constructs: Co-worker Support (CWS) and Supervisor Support (SS), respectively. For measuring the self-perceived psychological symptoms of the staffs, the Depression Anxiety Stress Scales (DASS) was used.

4.3.1 JCQ against DASS

4.3.1.1 Job Decision Latitude vs. DASS

a. Job Skill Discretion vs. DASS

From the Pearson Correlation analysis conducted to examine the relationship between Job Skill Discretion and the psychological symptoms components (Depression, Anxiety, and Stress), results indicates that there is a negative relationship between Job Skill Discretion and the three (3) psychological symptoms. For Depression, Job Skill Discretion had a negative relationship, moderate in strength and statistically significant ($r = -.45$, $p = .000$). Consequently, Anxiety had a negative relationship on Job Skill Discretion, moderate in strength and statistically significant ($r = -.29$, $p = .001$). Meanwhile, Stress had the highest negative relationship on Job Skill Discretion, a moderate strength, and was statistically significant ($r = -.55$, $p = .000$). Table 4.20 presents the correlation analysis conducted in assessing the relationship between Job Skill Discretion and the psychological symptoms of Depression, Anxiety and Stress respectively.

Table 4.20: Relationship between Job Skill Decision and Psychological Symptoms

		Correlations			
		Job Skill Discretion	Depression	Anxiety	Stress
Job Skill Decision	Pearson	1	-.454**	-.291**	-
	Correlation				.552**
	Sig. (2-tailed)		.000	.001	.000
	N	127	127	127	127
Depression	Pearson	-.454**	1	.662**	.783**
	Correlation				
	Sig. (2-tailed)	.000		.000	.000

	N	127	127	127	127
Anxiety	Pearson	-.291**	.662**	1	.621**
	Correlation				
	Sig. (2-tailed)	.001	.000		.000
	N	127	127	127	127
Stress	Pearson	-.552**	.783**	.621**	1
	Correlation				
	Sig. (2-tailed)	.000	.000	.000	
	N	127	127	127	127

** . Correlation is significant at the 0.01 level (2-tailed).

b. Job Decision Making Authority vs. DASS

From the Pearson Correlation analysis conducted to examine the relationship between Job Decision Making Authority and the psychological symptoms components (Depression, Anxiety, and Stress), results indicates that there is a negative relationship between Job Decision Making Authority and one (1) of the psychological symptoms: Depression., however there were no relationship between Job Decision Making Authority and the other two (2) psychological symptoms: Anxiety and Stress. For Depression, Job Decision Making Authority had a negative relationship, moderate in strength and statistically significant ($r = -.29$, $p = .001$). Consequently, Anxiety did not have any correlation with the scale of Job Decision Making Authority as it was not statistically significant ($r = -.022$, $p = .802$). Invariably, no relationship was found Job Decision Making Authority and Stress. Table 4.21 presents the correlation analysis conducted in assessing the relationship between Job Decision Making Authority and the psychological symptoms of Depression, Anxiety and Stress respectively.

Table 4.21: Relationship between Job Decision Making Authority and Psychological Symptoms

		Correlations			
		Job Decision Making	Depression	Anxiety	Stress
Job Decision Making	Pearson Correlation	1	-.293**	-.022	-.153

	Sig. (2-tailed)		.001	.802	.086
	N	127	127	127	127
Depression	Pearson	-.293**	1	.662**	.783**
	Correlation				
	Sig. (2-tailed)	.001		.000	.000
	N	127	127	127	127
Anxiety	Pearson	-.022	.662**	1	.621**
	Correlation				
	Sig. (2-tailed)	.802	.000		.000
	N	127	127	127	127
Stress	Pearson	-.153	.783**	.621**	1
	Correlation				
	Sig. (2-tailed)	.086	.000	.000	
	N	127	127	127	127

** . Correlation is significant at the 0.01 level (2-tailed).

4.3.1.2 Psychological Job Demands vs. DASS

From the Pearson Correlation analysis conducted to examine the relationship between Psychological Job Demands and the psychological symptoms components (Depression, Anxiety, and Stress), results indicates that there is a weak negative relationship between Psychological Job Demands and Depression, however there were no relationship between Psychological Job Demands and the other two (2) psychological symptoms: Anxiety and Stress. For Depression, Psychological Job Demands had a weak negative relationship, average strength and statistically significant ($r = -.19$, $p = .035$). Consequently, Anxiety did not have any correlation with the scale of Psychological Job Demands as it was not statistically significant ($r = -.17$, $p = .052$). Invariably, no relationship was found between Psychological Job Demands and Stress. Table 4.22 presents the correlation analysis conducted in assessing the relationship between Psychological Job Demands and the psychological symptoms of Depression, Anxiety and Stress respectively.

Table 4.22: Relationship between Psychological Job Demands and Psychological Symptoms

		Correlations			
		JobDemands	Depression	Anxiety	Stress
JobDemands	Pearson	1	-.187*	-.173	-.075
	Correlation				
	Sig. (2-tailed)		.035	.052	.399
	N	127	127	127	127
Depression	Pearson	-.187*	1	.662**	.783**
	Correlation				
	Sig. (2-tailed)	.035		.000	.000
	N	127	127	127	127
Anxiety	Pearson	-.173	.662**	1	.621**
	Correlation				
	Sig. (2-tailed)	.052	.000		.000
	N	127	127	127	127
Stress	Pearson	-.075	.783**	.621**	1
	Correlation				
	Sig. (2-tailed)	.399	.000	.000	
	N	127	127	127	127

*. Correlation is significant at the 0.05 level (2-tailed).
 **. Correlation is significant at the 0.01 level (2-tailed).

4.3.1.3 Job Insecurity vs. DASS

From the Pearson Correlation analysis conducted to examine the relationship between Job Insecurity and the psychological symptoms components (Depression, Anxiety, and Stress), results indicates that there is no relationship between Job Insecurity and Depression. However, there is a weak negative relationship between Job Insecurity and Anxiety, as well as a relationship between Job Insecurity and Stress significant at the 0.05 level. For Anxiety, Job Insecurity had a negative relationship, average strength and statistically significant ($r = -.21$, $p = .017$). Consequently, Stress also had a slight correlation with the scale of Job Insecurity, average strength, and statistically significant at the 0.05 level ($r = -.178$, $p = .045$). Table 4.23 presents the correlation analysis conducted in assessing the relationship between Job Insecurity and the psychological symptoms of Depression, Anxiety and Stress respectively.

Table 4.23: Relationship between Job Insecurity and Psychological Symptoms

		Correlations			
		Job Insecurity	Depression	Anxiety	Stress
Job Insecurity	Pearson Correlation	1	-.112	-.212*	.178*
	Sig. (2-tailed)		.211	.017	.045
	N	127	127	127	127
Depression	Pearson Correlation	-.112	1	.662**	.783**
	Sig. (2-tailed)	.211		.000	.000
	N	127	127	127	127
Anxiety	Pearson Correlation	-.212*	.662**	1	.621**
	Sig. (2-tailed)	.017	.000		.000
	N	127	127	127	127
Stress	Pearson Correlation	.178*	.783**	.621**	1
	Sig. (2-tailed)	.045	.000	.000	
	N	127	127	127	127

*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).

4.3.1.4 Social Support vs. DASS

a. Co-worker Support vs. DASS

From the Pearson Correlation analysis conducted to examine the relationship between Co-worker Support and the psychological symptoms components (Depression, Anxiety, and Stress), results indicates that there is no relationship between Co-worker Support and Depression, alongside the other two (2) psychological symptoms: Anxiety and Stress respectively. For Depression, Co-worker Support was not correlative, had low strength and was statistically insignificant ($r = -.002$, $p = .979$). Invariably, no relationship was found between Co-Worker Support and any of the psychological symptoms. Table 4.40 presents the correlation analysis conducted in assessing the relationship between Co-

Worker Support and the psychological symptoms of Depression, Anxiety and Stress respectively.

Table 4.24: Relationship between Co-worker Support and Psychological Symptoms

		Correlations			
		CoworkerSuppo rt	Depressio n	Anxiet y	Stres s
CoworkerSuppo rt	Pearson	1	.002	.000	.036
	Correlatio n				
	Sig. (2- tailed)		.979	.999	.689
Depression	N	127	127	127	127
	Pearson	.002	1	.662**	.783*
	Correlatio n				*
Anxiety	Sig. (2- tailed)	.979		.000	.000
	N	127	127	127	127
	Pearson	.000	.662**	1	.621*
Stress	Correlatio n				*
	Sig. (2- tailed)	.999	.000		.000
	N	127	127	127	127
Stress	Pearson	.036	.783**	.621**	1
	Correlatio n				
	Sig. (2- tailed)	.689	.000	.000	
		N	127	127	127

** . Correlation is significant at the 0.01 level (2-tailed).

b. Supervisor Support vs. DASS

From the Pearson Correlation analysis conducted to examine the relationship between Supervisor Support and the psychological symptoms components (Depression, Anxiety, and Stress), results indicates that there is no relationship between Supervisor Support and Depression, alongside the other two (2) psychological symptoms: Anxiety

and Stress respectively. For Depression, Supervisor Support was not correlative, had low strength and was statistically insignificant ($r = -.003$, $p = .969$). Invariably, no relationship was found between Supervisor Support and any of the psychological symptoms. Table 4.25 presents the correlation analysis conducted in assessing the relationship between Supervisor Support and the psychological symptoms of Depression, Anxiety and Stress respectively.

Table 4.25: Relationship between Supervisor Support and Psychological Symptoms

		Correlations			
		Supervisor Support	Depression	Anxiety	Stress
Supervisor Support	Pearson Correlation	1	-.003	-.009	.054
	Sig. (2-tailed)		.969	.920	.546
	N	127	127	127	127
Depression	Pearson Correlation	-.003	1	.662**	.783**
	Sig. (2-tailed)	.969		.000	.000
	N	127	127	127	127
Anxiety	Pearson Correlation	-.009	.662**	1	.621**
	Sig. (2-tailed)	.920	.000		.000
	N	127	127	127	127
Stress	Pearson Correlation	.054	.783**	.621**	1
	Sig. (2-tailed)	.546	.000	.000	
	N	127	127	127	127

** . Correlation is significant at the 0.01 level (2-tailed).

4.4 Regression Analysis

To further find deeper relationships existing between working conditions of the workers in this study and their psychological symptoms, multiple linear regression analysis was conducted via SPSS version 24. The multiple linear regression was conducted to detect the significant predictors of the workers psychological symptoms, which in this study is measured via the DASS scale (Depression; Anxiety; and Stress).

Also, as stated clearly in previous subsections, the working conditions are represented via (6) six independent variables comprising Job Skill Discretion; Job Decision Making; Psychological Job Demands; Job Insecurity; Co-worker Support; and Supervisor Support respectively. Consequently, each of the DASS scale serves as a dependent variable on the (6) six working conditions which represents the independent variables accordingly.

4.4.1 Depression vs. Working Conditions

Depression was taken as the first Dependent Variable representing the first psychological symptom and statistical analysis has been conducted in finding its determinants/predictors, and the results are discussed subsequently. A multiple linear regression was calculated to predict depression based on the working conditions perceived by workers in the sewerage service sector (JPP staffs), who participated in this study. Six (6) constructs represent the working conditions as thus, Job Skill Discretion; Job Decision Making; Psychological Job Demands; Job Insecurity; Co-worker Support; and Supervisor Support. Table 4.26 gives a summary of the model, while Table 4.27 present the ANOVA results with the regression equation respectively. From the presented results, a significant regression equation was found ($F(6,120) = 12.261, p < .001$), with an $R^2 = .380$. The R^2 infers that the model explains around 38% of the variance on depression.

Furthermore, Table 4.28 below presents results of the regression coefficients indicating the significant predictors of depression among the working conditions under the Job Skill Discretion; Job Decision Making; Psychological Job Demands; Job Insecurity; and Co-worker Support of the participants in this study.

Table 4.26: Regression Model Summary for Depression vs. Working Conditions

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.616 ^a	.380	.349	.34876

a. Predictors: (Constant), Job Insecurity, Supervisor Support, Job Demands, Job Skill Discretion, Job Decision Making, Co-worker Support

Table 4.27: ANOVA Results for Regression Model on Depression vs. Working Conditions

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.948	6	1.491	12.261	.000 ^b
	Residual	14.596	120	.122		
	Total	23.544	126			

a. Dependent Variable: Depression
b. Predictors: (Constant), Job Insecurity, Supervisor Support, Job Demands, Job Skill Discretion, Job Decision Making, Coworker Support

Table 4.28: Regression Coefficients for Depression vs. Working Conditions

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	7.176	.734		9.781	.000
	Job Skill Discretion	-1.016	.153	-.578	-6.630	.000
	Job Decision Making	-.245	.087	-.252	-2.816	.006
	Job Demands	-.132	.189	-.060	-.696	.488
	Coworker Support	-.099	.110	-.096	-.899	.370
	Supervisor Support	-.028	.064	-.035	-.445	.657
	Job Insecurity	-.355	.106	-.291	-3.364	.001

a. Dependent Variable: Depression

From the regression analysis conducted, participants (JPP staff/workers), predicted depression to be equal to 7.176 – 1.016 (Job Skill Discretion) - .355 (Job Insecurity) - .245 (Job Decision Making), as these three (3) independent variables were

the only significant predictors of depression based on the analysis conducted. Consequently, results reveal that among the working conditions of the staff, job skill discretion significantly predicted depression negatively ($b = -1.016, p < .001$). This indicates that job skill discretion of workers has a negative influence in causing depression for the workers. Consequently, the negative significance attained in the prediction reveals that as job skill discretion increases, the workers tend to experience a decrease in their depression, however, if they are not able to achieve their job skill discretion, they will encounter higher depression levels at work. More so, this is the highest predictor for depression among the workers based on the regression analysis conducted.

Corroboratively, results also revealed that job insecurity significantly predicted depression negatively ($b = -.355, p < .05$). This indicates that job insecurity of workers has a negative influence in causing depression for the workers. Consequently, the negative significance attained in the prediction reveals that the more workers feel insecure of their job, the higher they tend to be depressed, however, if they feel secured with their job, their depression levels could decrease. More so, this is the next significant predictor for depression among the workers after job skill discretion based on the regression analysis conducted.

Moreover, the third significant predictor of depression as revealed by findings is in job decision making which was also a negative significance ($b = -.245, p < .05$). This indicates that job decision making of workers has a negative influence in causing depression for the workers. Consequently, the negative significance attained in the prediction reveals that as workers make more decisions in their job, they tend to experience lesser levels of depression, however, if they are make less decisions at work, their depression levels could rise.

For the other three (3) variables used in representing the working conditions of workers, such as job demand, co-worker support, and supervisor support, it was revealed that they were not significant predictors of depression. This means, they do not influence depression or are not responsible for the depressive state of workers as explained from the regression equation. Thence, in summary, it can be inferred that the working conditions of workers that predict depression at work are job skill discretion, job insecurity and job decision making, respectively. Next, the regression analysis on Anxiety and the working conditions is presented.

4.4.2 Anxiety vs. Working Conditions

Anxiety was registered as the second Dependent Variable representing the second psychological symptom and statistical analysis was conducted in finding its determinants/predictors, and the results are discussed subsequently. A multiple linear regression was calculated to predict anxiety based on the working conditions perceived by workers in the sewerage service sector (JPP staffs), who participated in this study. Six (6) constructs represent the working conditions as thus, Job Skill Discretion; Job Decision Making; Psychological Job Demands; Job Insecurity; Co-worker Support; and Supervisor Support. Table 4.29 gives a summary of the model, while Table 4.30 present the ANOVA results with the regression equation respectively. From the presented results, a significant regression equation was found ($F(6, 120) = 6.023, p < .001$), with an $R^2 = .231$. The R^2 infers that the model explains around 23.1% of the variance on anxiety.

Furthermore, Table 4.31 below presents results of the regression coefficients indicating the significant predictors of anxiety among the working conditions under the job insecurity, supervisor support, job demands, job skill discretion, job decision making and co-worker support of the participants in this study.

Table 4.29: Regression Model Summary for Anxiety vs. Working Conditions

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.481 ^a	.231	.193	.37427

a. Predictors: (Constant), Job Insecurity, Supervisor Support, Job Demands, Job Skill Discretion, Job Decision Making, Coworker Support

Table 4.30: ANOVA Results for Regression Model on Anxiety vs. Working Conditions

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.062	6	.844	6.023	.000 ^b
	Residual	16.810	120	.140		
	Total	21.871	126			

a. Dependent Variable: Anxiety
b. Predictors: (Constant), Job Insecurity, Supervisor Support, Job Demands, Job Skill Discretion, Job Decision Making, Coworker Support

Table 4.31: Regression Coefficients for Anxiety vs. Working Conditions

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.753	.787		7.306	.000
	Job Skill Discretion	-.851	.164	-.503	-5.179	.000
	Job Decision Making	.104	.093	.111	1.117	.266
	Job Demands	-.112	.203	-.053	-.553	.581
	Coworker Support	-.266	.118	-.268	-2.262	.026
	Supervisor Support	-.059	.068	-.076	-.859	.392
	Job Insecurity	-.431	.113	-.367	-3.805	.000

a. Dependent Variable: Anxiety

From the regression analysis conducted, participants (JPP staff/workers), predicted anxiety to be equal to $5.753 - .851$ (Job Skill Discretion) - $.431$ (Job Insecurity) - $.266$ (Co-worker Support), as these three (3) independent variables were the only significant predictors of anxiety based on the analysis conducted. Consequently, results reveal that among the working conditions of the staff, job skill discretion significantly predicted anxiety negatively ($b = -.851, p < .001$). This indicates that job skill discretion of workers has a negative influence in causing anxiety among the workers. Consequently, the negative significance attained in the prediction reveals that as job skill discretion increases, the workers tend to experience a decrease in their anxiety, however, if they are not able to make good job skill discretion, they will feel more anxious. More so, this is the predictor with the highest significance for anxiety among the workers based on the regression analysis conducted.

Corroboratively, results also revealed that job insecurity significantly predicted anxiety negatively ($b = -.431, p < .001$). This indicates that job insecurity of workers has a negative influence in causing anxiety. Consequently, the negative significance attained in the prediction reveals that the more workers feel insecure of their job, the higher they become anxious, however, if they feel secured with their job, their anxiety levels could decrease. More so, this is the next significant predictor for anxiety among the workers after job skill discretion based on the regression analysis conducted. These results correlate with that of depression, thus indicating the important role these two (2) working conditions, job skill discretion and job insecurity plays in affecting the depression and anxiety of workers in this study.

Moreover, the third significant predictor of anxiety as revealed by findings is in co-worker support which attained a negative significance as well ($b = -.266, p < .05$). This indicates that co-worker support has a negative influence in causing anxiety among workers. Consequently, the negative significance attained in the prediction reveals that as

workers get more support from their co-workers, they tend to experience lesser levels of anxiety, however, if they are not able to get adequate necessary support from co-workers, they might get more anxious.

For the other three (3) variables used in representing the working conditions of workers, such as job demand, job decision making, and supervisor support, it was revealed that they were not significant predictors of anxiety. This means, they do not influence anxiety or are not responsible for the anxious state of workers as explained from the regression equation. Thence, in summary, it can be inferred that the working conditions of workers that predict anxiety at work are job skill discretion, job insecurity and co-worker support, respectively.

4.4.3 Stress vs. Working Conditions

Stress was registered as the third Dependent Variable representing the third and final psychological symptom and statistical analysis was conducted in finding its determinants/predictors, and the results are discussed subsequently. A multiple linear regression was calculated to predict stress based on the working conditions perceived by workers in the sewerage service sector (JPP staffs), who participated in this study. Six (6) constructs represent the working conditions as thus, Job Skill Discretion; Job Decision Making; Psychological Job Demands; Job Insecurity; Co-worker Support; and Supervisor Support. Table 4.32 gives a summary of the model, while Table 4.33 present the ANOVA results with the regression equation respectively. From the presented results, a significant regression equation was found ($F(6, 120) = 10.573, p < .001$), with an $R^2 = .346$. The R^2 infers that the model explains around 34.6% of the variance on stress.

Furthermore, Table 4.34 below presents results of the regression coefficients indicating the significant predictors of stress among the working conditions under the job insecurity, supervisor support, job demands, job skill discretion, job decision making and co-worker support of the participants in this study.

Table 4.32: Regression Model Summary for Stress vs. Working Conditions

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.588 ^a	.346	.313	.27163

a. Predictors: (Constant), Job Insecurity, Supervisor Support, Job Demands, Job Skill Discretion, Job Decision Making, Coworker Support

Table 4.33: ANOVA Results for Regression Model on Stress vs. Working Conditions

ANOVA^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.680	6	.780	10.573	.000 ^b
	Residual	8.854	120	.074		
	Total	13.534	126			

a. Dependent Variable: Stress
b. Predictors: (Constant), Job Insecurity, Supervisor Support, Job Demands, Job Skill Discretion, Job Decision Making, Coworker Support

Table 4.34: Regression Coefficients for Stress vs. Working Conditions

Coefficients^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.287	.571		9.253	.000
	Job Skill Discretion	-.791	.119	-.594	-6.633	.000
	Job Decision Making	-.051	.068	-.069	-.755	.452
	Job Demands	-.158	.147	-.095	-1.073	.286
	Coworker Support	-.066	.085	-.085	-.773	.441
	Supervisor Support	-.019	.049	-.030	-.375	.708
	Job Insecurity	.026	.082	.028	.320	.750

a. Dependent Variable: Stress

From the regression analysis conducted, participants (JPP staff/workers), predicted stress to be equal to $5.287 - .791$ (Job Skill Discretion), as job skill discretion was the only independent variables found to be a significant predictor of stress based on the analysis conducted. Consequently, results reveal that among the working conditions of the staff, job skill discretion significantly predicted stress negatively ($b = -.791$, $p < .001$). This indicates that job skill discretion of workers has a negative influence in causing stress among the workers. Consequently, the negative significance attained in the prediction reveals that as job skill discretion increases, the workers tend to experience a decrease in stress, however, if they are not able to make good job skill discretion, they will feel more stressed.

Surprisingly, the remaining five (5) variables used in representing the working conditions of workers, such as job demand, co-workers support, job decision making, supervisor support, and job insecurity were not significant predictors of stress. This means, they do not influence stress or are not responsible for the stressful state of workers as explained from the regression equation. Thence, in summary, it can be inferred that the working conditions of workers that predict stress at work is job skill discretion.

CHAPTER 5: CONCLUSION AND RECOMMENDATION

5.1 Introduction

In this study perspective, this research has achieved all the research objectives and answered all the research questions earlier mentioned in Chapter 1 and Chapter 4. Therefore, this chapter summarizes the entire study, highlighting the research findings and improvements needed to be implemented within the working environment at *Jabatan Perkhidmatan Pembedungan* as a conclusion of this study. Future recommendations for future research studies will be addressed at the end of the chapter. Lastly, limitation of this study is also provided in this chapter.

5.2 Conclusion

There is limited research as to if working conditions such as decision latitude (e.g., skill discretion and decision authority), psychological job demands, job insecurity and social support (e.g., supervisor support and co-worker support) are the perpetrators of perceived psychological symptoms such as depression, anxiety and stress in the workforce, thus the need for further empirical investigation. Hence, this study has shown statistically significant inverse relationship (i.e. negative correlation) and negative cause-and-effect between the two (2) variables.

This study has shown that the socio-demographic backgrounds of the respondents are majorly 31-40 years of age, male, Malays, married, unhealthy personal lifestyle (e.g., bad diet, irregular exercise and smoking/vaping), non-executives ranked, RM1,000-RM2,999 wage basis, 11-20 years of experience and working estimate of 41-46 hours per week.

The working conditions based on JCQ perceived by the staffs mostly agreed that for; Job Skill Discretion variable, their job requires high level of skill and a lot of repetitive work (Ahearne, Mathieu, & Rapp, 2005; Chen & Klimoski, 2003; Deci & Ryan,

1985; Hackman & Oldham, 1980; Karasek, 1979; Schriesheim, Neider, & Scandura, 1998; Thomas & Velthouse, 1990); Job Decision Making Authority variable, workers stated they have a lot to say on their jobs; Psychological Job Demands variable, the staff are required to work hard and fast on daily basis; Job Insecurity variable, seasonal and sometimes regular and steady job are obtained with them indicating to be not at all likely to lose their current job in the future (Lazarus & Folkman, 1984; Schaufeli, Maslach, & Marek, 1993); and the last variable, which is Social Support; i) Co-Worker Support, the workers mentioned that their colleagues are taking personal interest in them but are less helpful. Co-worker's partnership is an important aspect every organization should take seriously. A rise of team work between colleagues in accordance to Purba (2017), will result in the employees reacting positively with kindness; and ii) Supervisor Support, the workers stated that their supervisors are helpful in getting the job done but are not concerned with their welfare. These conditions have correlation of escalation and de-escalation with the job gratification level, furthermore leading to a truancy rise (Hackman & Oldham, 1980; Samantrai (1992).

The psychological symptoms perceived by the JPP staffs based on DASS mostly agreed that for depression, they thought that there is nothing to look forward to and feel downhearted and blue; while for anxiety, they attained the highest mean value of feeling panicky and afraid of acting foolish; lastly with regards to stress, it was found that they mostly feel hard to relax and get agitated easily.

Based on the Pearson Correlation test, results revealed only negative relationship between the working conditions and self-perceived psychological symptoms of JPP staffs except from the variable(s) of social support. All the variables that have shown relationship between them are of average in association strength (r-value) and statistically significant (p-value).

Consequently, from the regression analysis conducted, a significant regression equation was found for all three (3) psychological symptoms against working conditions accordingly; $(F(6,120) = 12.261, p < .001)$, with an $R^2 = .380$. The R^2 infers that the model explains around 38% of the variance on depression. Whilst, a significant regression equation was found for anxiety $(F(6, 120) = 6.023, p < .001)$, with an $R^2 = .231$. The R^2 infers that the model explains around 23.1% of the variance on anxiety. More so, a significant regression equation was found for stress $(F(6, 120) = 10.573, p < .001)$, with an $R^2 = .346$. The R^2 infers that the model explains around 34.6% of the variance on stress.

It can be interpreted from the regression analysis results that job skill discretion is the most paramount significant predictor of all the psychological symptoms of workers in this study, as it cuts across the DASS scale of depression, anxiety and stress, negatively predicting them respectively. Thus, workers are very concerned about their skill discretion as this affects how their job is been done and the effect to be produced at work. More so, the negative effects indicate the need to improve on the areas of job skill discretion of the workers so as to help mitigate their psychological symptoms. Consequently, it was also indicated that job insecurity is an essential working condition that affects the psychological state of the workers, with negative signification predicting powers detected in depression and anxiety. It is important that measures are put in place by the administration to ensure that the workers feel secure with their jobs as this could be impactful on their psychological state of depression and anxiety. Moreover, it was discovered that co-worker support had a negative impact on psychological symptom of anxiety on the workers in this study. Thus, team work should be encouraged as it has the potential of helping to mitigate psychological symptoms among workers.

Corroboratively, the information gained from this study will assist in promoting awareness in other organizations, employers and policy makers of the importance of conducive working conditions to lower the risk of perceived psychological symptoms among workers particularly in the sewerage service sector in Malaysia.

5.3 Recommendations for Future Research

In this study, it is aimed to examine the relationship between the current working conditions and self-perceived psychological symptoms of the workforce (sewerage service sector) in Malaysia. Therefore, further research on which working conditions tend to be psychologically hazardous in the workplace are not identified and the severity level of the workers' mental health are not calculated. Hence, future researchers can evaluate the working conditions that are deemed psychologically hazardous which can be unconducive to positive mental health. Future researchers can also quantify the severity level of the psychological symptoms of their target population in order to obtain in-depth findings of similar research.

Other than that, different tools of study can be used by future researchers such as *Carga Mental Questionnaire (CarMen-Q)* for mental workload assessment, *Job Satisfaction Survey (JSS)*, *Endicott Work Productivity Survey (EWPS)* and more for similar scope of research.

To add some more, evaluation on work burnout symptoms among other essential service sector workers or on sewerage services provider from the private line that consists of consultants or contractors during this pandemic period can be of research worth looking as well. Increase sample size can also be done if combined the two (2) public and private line. Longer research period if needed by future researchers to search for more participants from the working population and further analysis can be done and discussed as well.

5.4 Limitation of Study

The limitation of this study is during data collection due to the pandemic which restricted the movement of the author to gather information of workers for selection of respondents for screening purposes before survey distribution as it is also during the period of enforcement of Movement Control Order (MCO) within all districts and states.

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