

Relationship Between Depression, Anxiety, Stress, and Mental Healthfatigue among Staffs in A Healthcare Facility in Matu and Daro, Sarawak: A Conceptual Paper

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To Link this Article: <http://dx.doi.org/10.6007/IJARBSS/v13-i15/18813> DOI:10.6007/IJARBSS/v13-i15/18813

Published Date: 04-10-2023

Abstract

This conceptual paper examines the relationship between factors of depression, anxiety, stress, and mental health's fatigue among healthcare staffs at the health facility in Matu and Daro, Sarawak. This study employs quantitative techniques and survey involved 145 respondents from five different healthcare facilities. This study applied a descriptive method to show the level of depression, anxiety, stress, and fatigue of the respondents. Levels, prevalence, and significant relationships between the constructs were examined and discussed in relation to the respondents' mental health. Statistical inferences were induced to gauge the prevalence of mental health based upon depression, anxiety, stress, and fatigue according to the demographic characteristics. In conclusion, this study will contribute the conceptual framework as a guideline for the current study.

Keywords: Depression, Anxiety, Stress, Fatigue, Concept Paper

Introduction

The health system in a country plays an important role in providing high quality and universal health services. Due to developing and urbanized countries have created unhealthy lifestyles and created excessive stress resulting in various complex health problems including mental health (Yeap & Low, 2009). International research shows that common mental disorders such as depression, anxiety, social anxiety, stress, alexithymia and having an insecure style are mental health risk factors (Obeid et al., 2020). The provision of the best healthcare has an impact on economic achievement and the quality of life of the people in a country.

Specifically, high-quality health care helps prevent disease and improve quality of life. Therefore, health care is a critical service provided to the people of a country. Therefore, the quality of health care provided continues to be improved along with the changes that occur over time (Davis et al., 2013; Hagaman et al., 2020). Work pressure among civil servants, especially health workers, is one of the concerns that will have a long-lasting impact on the service and the psychology of employees (Braquehais et al., 2020). In addition, working in a challenging and stressful environment for long periods of time with short recovery times further worsens the situation with a risk for burnout. This will result in a person feeling too tired or losing energy, thinking negatively about his job and reduced professional efficiency (Maslach et al., 2001; Sovold et al., 2021). Some studies show that mental health problems, stress, compassion fatigue and fatigue are the main reasons that cause many staff to leave their profession (Hammig, 2018). In addition to that, the rate of suicide attempts and suicidal thoughts is increasing among medical staff in particular, women which is 1% for suicide attempts and 17% suicidal thoughts among doctors (Dutheil et al., 2019). Employees who leave the profession or commit suicide bring with them years of valuable training and experience and cannot be fully replaced by new employees (Sovold et al., 2021).

The various changes that bring transformation in the health system as described above have a direct impact on stress, depression and anxiety and in worse cases, burnout among health workers Berry (2010) and this brought into a new challenge among the healthcare staffs (Sanghera, 2020). This situation affects their mental health if the monitoring and management of the risk factors is not done as well as possible. Health facilities at the district level such as in Matu and Daro in Sarawak are also not exempt from the explosion of changes due to advances in ICT and the spread of new diseases such as Covid-19. Since the health facilities in Matu and Daro have limited capacity and resources, the study of factors that lead to mental health problems such as depression, stress, anxiety and fatigue among the health staff here should also be given serious attention. The objective in this study is:

1. Determine the level of mental health based on depression, anxiety, stress and fatigue among the staff at the Matu and Daro health facilities.
2. Determine the prevalence of mental health based on depression, anxiety, stress and fatigue among staff at Matu and Daro health facilities based on gender, age and job group factors.
3. To identify the extent of the relationship between depression, anxiety and stress with fatigue among staff at Matu and Daro health facilities.

Literature Review

Depression

Depression is a mental disorder or problem characterized by sadness, loss of interest and passion, feelings of guilt or low self-worth, disturbed sleep and appetite, feelings of fatigue, and poor concentration. This depression problem can occur for a long period of time or repeatedly and interfere with the individual's ability to work or deal with daily life. A severe state of depression will drive individuals to commit suicide. According to WHO (2017), there are two categories of depressive symptoms, which are depressive episodes or major depressive disorder and dysthymia. Depressive episodes show symptoms such as depressed mood, loss of interest and pleasure and reduced energy. Depression can be categorized as mild, moderate and severe depending on the number and severity of symptoms. Meanwhile, dysthymia is a persistent or chronic form of mild depression where the symptoms shown are the same as an episode of depression but less intense but occur for a long period of time. According to WHO (2021), depression is a common mental disorder and it is estimated that

approximately 5% of adults experience this problem. Depression is also one of the leading causes of disability in the world and is a major contributor to the overall global burden of disease.

Anxiety

Anxiety is a very common mental disorder in global society (Munir et al., 2019). Anxiety problems are characterized by feelings of worry and fear, including generalized anxiety disorder (GAD), panic, agoraphobia, social anxiety disorder, obsessive-compulsive disorder (OCD) and post-traumatic stress disorder (post-traumatic stress disorder). traumatic stress disorder, PTSD). The duration and severity of symptoms determine the anxiety category as mild, moderate and severe (WHO, 2017). According to Markowitz et al. (1989), this state of panic or excessive anxiety and fear is often followed by other physical symptoms such as chest pain, dizziness and difficulty breathing. Agoraphobia is an individual's fear of a situation such as being alone outside the home, being in a car, bus or plane, or in a crowded area with many people (Magee et al., 1996). Meanwhile, GAD usually co-occurs with other comorbid psychiatric disorders and individuals usually feel consistently worried about various aspects of their lives for at least six months (Schweizer, 1995).

Social phobia describes fear and anxiety in social situations that cause individuals to avoid social interactions (Ballenger et al., 1998). PTSD occurs when an individual who has experienced a traumatic event is excited by repeated physiological stimuli that remind him of the event. Kessler et al (1995) stated that individuals will avoid the stimulus and re-experience the event. For example, the fear of getting infected with COVID-19 again after going through a severe first infection. Next, OCD is a repetitive behavior (compulsion) aimed at reducing anxiety related to unwanted thoughts (obsessions). For example, the behavior of washing hands as a response to ensure the avoidance of infection, or repeatedly checking the work that has been done for fear that something is not perfect (Eddy & Walbroehl, 1998; Adwas et al., 2019).

Stress

Stress related to the workplace refers to physical and emotional reactions that are not good and can occur when the individual's work demands and the amount of control have exceeded their needs (Rao & Chandraiah, 2012; Shaare et al., 2022). In other words, job stress is the result of a mismatch between demands and the individual's ability to deal with or deal with urgent situations in a limited period of time (Shen & Slater, 2021; Burman & Goswami, 2018; De-Silva et al. 2017). Occupational stress has a significant impact on mental health (Holton et al., 2016). In addition to affecting the physical and psychological condition of the individual, stress also has a negative impact on the life and family of the individual concerned (Burman & Goswami, 2018). According to Selye (1976), stress actually consists of two types, namely good stress or eustress and bad stress or distress. Eustress is positive stress that promotes perception and results in motivation, better concentration, better coping skills, seronic feelings and increased performance while distress is negative stress that occurs either for a long or short term and results in anxiety, unpleasantness, decreased performance, and various mental and physical problems (Bowen et al., 2014; De-Silva et al., 2017). Therefore, stress is an important factor that helps achieve an objective but will have a detrimental effect when it exceeds the limits of the individual's ability to deal with it (Alagah, 2021; Panigrahi, 2016).

Mental Health

Mental health is a state of well-being of individuals who can use their abilities to deal with various levels of stress in life so that they can continue to be productive and contribute to society (Hassan et al., 2018). Thus, mental health is defined as a state in which mental illness does not occur and refers to the biological, psychological and social aspects of an individual to have a mental state and the ability to function in the environment (Bhugra et al., 2013; Manwell et al., 2015). The World Health Organization, on the other hand, includes aspects such as the ability to reach one's potential, the ability to deal with normal life stress and contribution to society as the main components of mental health. In addition, Health Education Authority (1997) explains mental health from the aspect of intellectual, emotional and spiritual development while Bhugra et al (2013) and the Mental Health Foundation (2008) associate it with positive self-perception, feelings of self-worth and physical health. In addition, Alonso (1960) included the aspect of intrapersonal harmony as a characteristic that explains mental health. The diversity in the definition of the concept of mental health explains that this term is complex and related to other aspects that determine the health of an individual.

Methodology**Research Design**

In this study the researchers used a quantitative approach (Gorard, 2003). Implementation of a study is guided by the research paradigm (Kuhn, 1970), which is paradigm as a view that guides thoughts, perceptions and assumptions about society and the self. It also provides a framework for seeing the world. According to Kuhn (1962), states that a paradigm is a representation of a particular way of thinking shared by a community of scientists about how to solve problems in a particular field. The selection of a particular paradigm leads to specific questions and the use of approaches that are appropriate to the systematic inquiry being used. Based on Sekaran and Bougie (2016), explained that there are several research paradigm choices such as positivism, constructivism, critical realism and pragmatism. Based on the purpose and scope of this study, the positivist paradigm is used based on observation of factual knowledge and empirical data (Wilson, 2010). Positivism was chosen because it is a scientific method to study human actions (Crotty, 1998). Through this positivist paradigm, the researcher acts as an independent observer where his values, impressions and assumptions do not influence the findings of the study (Lincoln & Guba, 1985). Therefore, the determination of the level and prevalence of depression, anxiety, stress and fatigue among health personnel is compatible with the paradigm of positivism.

Moreover, through a positivist approach, this study uses data evaluation supported by an objective approach with logical analysis to answer the research questions (Morgan, 2014). Therefore, this study was carried out based on the need to answer the research questions and achieve the research objectives that have been stated in the introduction section. The research design provides guidelines and plans to facilitate the collection and analysis of data based on the research questions that have been set (Sekaran & Bougie, 2013). In order to achieve the objectives of this study, a quantitative approach was used through the distribution of questionnaires to a sample selected from the study population. This study also used a descriptive design to assess and identify the level, prevalence and relationship between constructs that explain mental health.

Depression, Anxiety and Stress Measurement Scale

The 21-item Depression, Anxiety and Stress Scale (DASS-21) was used to determine the level of depression, anxiety and stress among study respondents (Lovibond & Lovibond, 1995). DASS-21 consists of 21 items where depression, anxiety and stress are each measured with seven items. The use of DASS-21 for this study is because this scale is used as a standard for measuring the mental health of staff in the public sector in Malaysia and by most organizations in the private sector. DASS-21 has high reliability and validity because it has been widely used. In addition, DASS-21 has also been translated into Malay and adapted to the cultural context in this country (Ramli et al., 2007). Appendix 1 shows the DASS-21 and item distribution and scoring methods to determine an individual's level of depression, anxiety and stress.

Maslach Fatigue Inventory

The Maslach Fatigue Inventory is often used in research to measure an individual's level of fatigue. This scale was developed by Christina Maslach and Susan Jackson (Maslach et al., 2001). This scale measures three different dimensions of burnout, namely emotional exhaustion, depersonalization, and personal accomplishment (Maslach & Schefauli, 1993 in D'Alessandro, 2006). Emotional exhaustion measures the psychological and emotional feeling after an individual is tired, too tense, and tired due to work to the point of not being able to support others. Depersonalization refers to feelings of cynicism, detachment from work, feelings of indifference and non-active involvement in work. Meanwhile, personal achievement is an aspect of self-evaluation of the fatigue. Personal achievement measures an individual's competence and successful achievement of his work (McMullen & Krantz, 1998; McMaslach et al., 2001).

Occupational Factors Affecting Mental Health

The development of a measurement scale for occupational factors that affect mental health is based on the working model of (Cooper & Marshall, 1976; Michie, 2002). The job factor scale consists of five dimensions where each of them is represented by four items. The dimensions are the intrinsic nature of the job, role in the organization, career development, relationships at work and structure in the organization. Intrinsic nature of work refers to physical conditions at work, workload, time constraints for doing work, and safety threats at work. Meanwhile, the role in the organization is represented by aspects such as role ambiguity, role conflict, support of resources and materials to do the work and the authority available to carry out the work. Career development also includes aspects such as promotion opportunities and following training and development courses, job security and the ability to work now to achieve one's own ambitions. Apart from that, the relationship dimension at the workplace explains the situation of work relationships with others, teamwork and the pleasure of delegating and being delegated tasks in the organization. Finally, the structure and climate of the organization is explained by involvement in the decision-making process, politics in the office, cooperation with colleagues and consultation for problem solving.

Demographic Factor

Apart from occupational factors, demographic characteristics of study respondents such as gender, age and position held were collected to determine the prevalence of depression, anxiety, stress and fatigue among health personnel. In addition, general demographic

characteristics such as race, length of work experience and academic qualifications were also collected to identify the distribution of respondents involved in this study.

Samples and Sample Instruments

Taherdoost (2016) stated that determining the population is an important matter in the study methodology. Population refers to any set consisting of people or subjects that have common observable criteria (Kumar et al., 2013). This study defined the population as staff at health facilities in Matu and Daro, Sarawak. The Human Resources Division at the Department of Health in Sarawak has a list of all staff numbering 230 in 2022. Table 3.1 shows the distribution of staff at Matu and Daro health facilities. Therefore, the population of this study is 230 people.

Table 1

Staff Distribution of Matu and Daro Facilities, Sarawak

Health Facilities	Number of Positions	No. of Positions Filled	No. of Contract Worker	No. of Vacancy
Daro Hospital	182	150	9	32
Daro Regional Health Office	18	17	1	1
Daro Health Clinic	50	43	7	7
Matu Health Clinic	18	11	2	7
Kuala Matu Health Clinic	12	9	2	3
Total	280	230	21	50

The determination of the sample size is based on Krejcie and Morgan (1970) for a population of 230 which is 145 employees. The selection of the sample was based on stratified random sampling since the study staff were spread across five different health facilities. Table 3.2 shows the number of randomly selected samples from each of the following health facilities.

Table 2

Selection of Study Samples from Health Facilities

Health Facilities	No. of Positions Filled	Sample Calculation	Size No. of Sample
Daro Hospital	150	$150/230 \times 145 = 94.6$	94
Daro Regional Health Office	17	$17/230 \times 145 = 10.7$	11
Daro Health Clinic	43	$43/230 \times 145 = 27.1$	27
Matu Health Clinic	11	$11/230 \times 145 = 6.9$	7
Kuala Matu Health Clinic	9	$9/230 \times 145 = 5.7$	6
Total	230		145

Data Collection Methods and Study Procedures

A questionnaire will be used to collect data in this study. Before carrying out the survey and distributing the questionnaire, permission from the Sarawak State Health Department was first obtained to carry out this study and then, notification to each health facility in Matu and Daro will be done. The questionnaire will be converted to a Google Form and distributed online via WhatsApp to the study respondents. Cooperation from the administration of each health facility will be obtained to distribute information about this survey and questionnaire

to staff members who are randomly selected to be involved in this study. Next, responses to the questionnaire were collected in Excel form from Google Drive.

Data Analysis

The data in this study will be analysed descriptively and inferentially using SPSS software version 26.0. Descriptive analysis provides information such as frequency, percentage, mean and standard deviation to show the distribution of data such as the respondent's background, and responses to items in each measurement scale. Descriptive analysis can also be used to show the level of depression, anxiety, stress and fatigue among respondents as well as the distribution of responses for job factors. Meanwhile, inferential analysis determined the prevalence of mental health based on depression, anxiety, stress and fatigue according to demographic characteristics such as gender, age and job group (health professionals and non-health professionals). Chi-square test, independent t-test and ANOVA were used to test hypotheses related to differences in levels of depression, anxiety, stress and lethargy according to these demographic characteristics. In addition, multiple regression analysis was used to determine the effect of each job factor on mental health (depression, anxiety, stress and fatigue). Pearson's correlation is used to determine the relationship between aspects of mental health, namely depression, anxiety, stress and fatigue.

Research Framework

Based on the readings from the previous literature review, a conceptual model was developed as a guideline for the current study. Well-being in general is a term used to describe the state of an individual or group, with reference to social, economic, psychological, spiritual or medical attention (Sfeatcu et al. 2014). Meanwhile, psychological well-being according to Bradburn (1969) is a picture of the individual's psychological health based on positive psychological functions. While Ryff (1989), on the other hand, argues that happiness and life satisfaction also support psychological well-being. This conceptual paper will create a model about the influence of depression, anxiety, stress and fatigue among employees on employee well-being as shown in the figure 1.

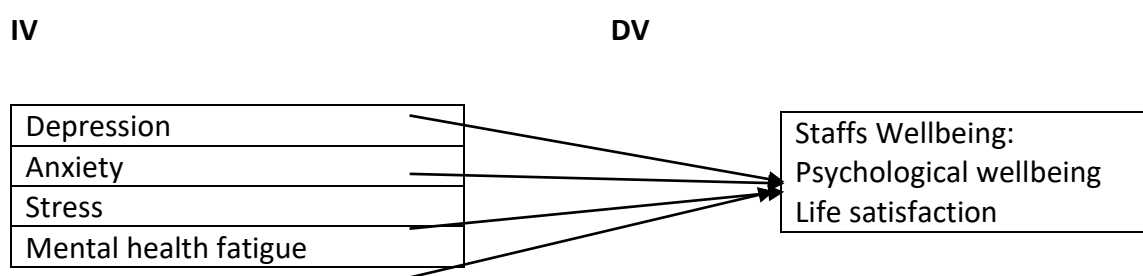


Figure 1 Conceptual framework

Source: Adapted from Work Life Balance Model (Haar et al. 2014)

Discussion

Martin et al (2022) studied depression, anxiety, stress and fatigue among nurses during the COVID-19 pandemic in Portugal and also involved the mediating construct, life satisfaction in their study. This study involved 379 nurses and data collection was done using four measurement scales, namely the Life Satisfaction Measurement, Endurance Scale, DASS and the Copenhagen Fatigue Inventory. The findings of the study analyzed using hierarchical regression showed work, personal and client fatigue at a rate of 57.3%, 57% and 35.1%

respectively. more than 70% of respondents have a normal level of depression, 66.8% a normal level of anxiety, and 33.5% with mild and moderate stress. Life satisfaction mediates the relationship of personal stress and burnout, work-related depression and burnout, and anxiety with client-related burnout. Therefore, the findings of this study show that the COVID-19 pandemic aggravates the situation in the work of nurses and thus, prompts the need to ensure that nurses can adapt to reduce the effects of stressors at work. Another study conducted in Turkey involving primary health care workers was reported by (Akova et al., 2021). This study only examines the relationship between fatigue, depression, anxiety and stress using 338 respondents. DASS-21 and Maslach Fatigue Inventory were used to collect study data. According to the findings of this study, the level of fatigue, depression, anxiety and stress is high for most respondents.

Subramaniam et al (2022), also chose to study the prevalence of fatigue and its predictive factors among 376 pharmacists in five government hospitals in Selangor. The predictive factors studied involve symptoms of stress, anxiety and depression apart from other job factors. The prevalence of burnout among pharmacists was found to be high for personal aspects (52.9%), work-related (66.0%) and patient-related (47.1%). The main predictors of burnout are gender, hours worked per week, job satisfaction, and depression. Predictors of work-related burnout for male respondents are work stress and anxiety, while for females, it is anxiety and self-confidence. Patient-related burnout was significantly predicted by working hours per week, job satisfaction and anxiety.

Celmece & Menekay (2020), have studied the effects of stress, anxiety and fatigue in professional health care for COVID-19 patients on the quality of life of health personnel but did not involve the aspect of depression. The study involved 240 health care professionals in Turkey and used four measurement scales namely the Perceived Stress Scale, the Spielberger State-Trait Anxiety Inventory, the Maslach Fatigue Inventory and the Quality of Life Scale. The findings of this study show that female employees, married and have children have high scores of stress, trait anxiety and quality of life compared to other groups. In addition, stress is positively and highly correlated with trait anxiety, positively and moderately with fatigue, and negatively and highly correlated with quality of life. Meanwhile, trait anxiety is positively and moderately correlated with fatigue and negatively and highly correlated with quality of life. Fatigue has a negative and high correlation with quality of life. In addition to confirming the relationship between constructs in this study, the negative impact of stress, anxiety and fatigue on quality of life was also proven.

Meanwhile, Guler et al (2022) also only linked stress with fatigue among nurses working in intensive care units and pandemic services during the COVID-19 pandemic in Turkey. This study involved 121 respondents and data was collected using the Maslach Fatigue Inventory and the Perceived Stress Scale. The findings of the study show that the level of stress and fatigue based on emotional exhaustion, depersonalization and personal achievement is high. In addition, a positive, significant and moderate relationship was shown by stress and fatigue.

In Malaysia, research on mental health disorders has also been carried out vigorously in recent years. Roslan et al (2021) only focused on the problem of fatigue experienced by health workers and this study used 933 respondents who completed an online questionnaire. This study shows that more than half of health workers suffer from burnout. Factors that cause fatigue are related to the direct involvement of respondents in the screening and treatment of COVID-19 patients, experiencing medical problems, and the lack of psychological support at work. In addition, workload, uncertainty due to the pandemic, challenges to work-family balance, and strained workplace relationships are among the occupational factors that

contribute to their burnout. The issue of burnout and the role of social support to help deal with this situation during the COVID-19 pandemic among health workers in Malaysia has been highlighted by Khushairi et al (2022) in their study. A total of 417 respondents were involved in this study. Findings show a high level of fatigue in the aspect of emotional exhaustion, depersonalization and a low level of personal achievement. However, social support was found to reduce the negative effects of burnout and increase personal achievement among respondents.

Juliana et al (2022) have studied the factors associated with depression, anxiety and stress among shift health workers during the COVID-19 pandemic. Factors associated with the mental health status of these workers are sleep quality, physical activity, and eating habits. Based on a sample size of 417 people, this study found that 40.7% of the respondents had one or two symptoms of depression, anxiety or stress. In addition, poor sleep quality is significantly associated with depression, anxiety and stress. Meanwhile, being inactive is significantly associated with depression and anxiety while eating habits are associated with anxiety and stress. Thus, this study shows that the predictive factors studied, namely sleep quality, physical activity, and eating habits have different effects on the mental health status of employees from the aspects of depression, anxiety and stress. Kumareswaran et al (2022) also conducted a study in the context of health workers in Johor, Malaysia where a total of 282 respondents from the Johor State Health Department were involved. This study measured the level of burnout among health workers based on emotional exhaustion, depersonalization and personal accomplishment with the Maslach Burnout Inventory. The findings of the study show that 55.8% of respondents have moderate emotional exhaustion, 55.8% have high levels of depersonalization and 62.2% have low personal achievement. Thus, the prevalence of fatigue according to different aspects of fatigue is different but still high among the health workers.

Conclusion

Thoroughly, this study discusses the background of the study, problem statement, research questions, research objectives, the importance of the study and definitions of the terms used in this study. In general, this study has provided a clear justification why this study is relevant and should be carried out at this time. In addition, giving a clear picture of the direction of this study, this study's literature review explains about the important components that explain mental health namely depression, anxiety, stress and fatigue and presents the theoretical and conceptual framework of the study. The highlights of some previous studies and the findings obtained have also been presented. This study has also shown a conceptual model framework that will be a guide in data collection and analysis. In addition, research hypotheses based on research questions and objectives as well as the framework of this conceptual model have also been presented in this study. This study also explains the research methodology used in this research. The chosen methodology has been standardized with the research questions and objectives and the conceptual model of the study and the research hypothesis. The presented methodology can answer all the research questions well and test the hypothesis that has been stated to find out the level and prevalence of mental health among the staff at the Matu da Dato health facility.

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