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THE RELATIONSHIP BETWEEN ANXIETY AND SLEEPING DISORDERS AMONG STAFF IN A SELECTED PUBLIC UNIVERSITY

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ABSTRACT

The increasing prevalence of anxiety and sleep disorders has emerged as a significant global public health concern, with substantial implications for individual well-being and organizational performance. Despite extensive research in this domain, existing studies have predominantly focused on specific population groups, with limited attention to academic and non-academic staff within public universities. Accordingly, this study aimed to assess the levels of anxiety and sleep disorders among university personnel and to examine the relationship between these two conditions. A quantitative survey design was employed, involving 102 academic and non-academic staff from a selected public university. Data were collected using an online questionnaire comprising demographic items and standardised measures of anxiety and sleep disorder levels. Statistical analysis revealed a significant positive relationship between anxiety and sleep disorder levels ($p < 0.05$). These findings underscore the need for targeted institutional interventions to mitigate anxiety, which may consequently improve sleep quality and enhance overall job performance among university staff..

Keywords: academician, anxiety, non-academician, public university, sleep disorder

1. INTRODUCTION

Today, we live in the digital age, where tremendous changes in the workplace and environment entail continuous decision-making in the course of one's career. Prolonged mental or physical activity in the workplace often causes fatigue and increases the risk of sleep disorders. Sleep disorders are strongly associated with anxiety in the general population. Previous studies have linked sleep disorders to the development of anxiety. However, similar studies have not been conducted in Malaysia. This study investigated the relationship between anxiety and sleep disorders in the Malaysian context, specifically among public university staff.

Anxiety is a major public health issue in Malaysia, as cases are on the rise. According to the National Health and Morbidity Survey in 2015, the prevalence of mental health disorders among adults increased from 11.2% in 2006 to 29.2% (Institute

for Public Health, 2015). It is expected to be the second leading health issue affecting Malaysians after heart disease by 2020. People with anxiety usually have recurring intrusive thoughts or concerns. Anxiety and sleep disorders are the most common disorders affecting adults in the current technological era. According to Murugesan (2019), a survey study conducted by Nielsen Malaysia showed that nine out of ten Malaysians (89%) suffer from one or more sleep problems. Anxiety is caused by feelings of stress, worried thoughts, and physical changes (Major et al., 1999) and causes insomnia (Demir, 2018), one of the symptoms of a sleep disorder.

The relationship between sleep disorders and anxiety has been discussed in many studies (Spoormaker & Van den Bout, 2005; Papadimitriou & Linkowski, 2005; Teker & Luleci, 2018). Sleep disorders occur when a person has signs of irregular sleep patterns, sleep disturbance, and insomnia. It is generally associated with work demands and the work environment, causing problems with functioning and distress. Common features of anxiety are frequently seen in association with sleep disorders, and vice versa. The levels of sleep and anxiety are both important and can affect the health and quality of life of a person. Therefore, this study was conducted to identify the levels of anxiety and sleep disorders and the relationship between them, in the context of Malaysians, specifically public university staff. People need to maintain good mental health to enhance their performance outputs in their organisations.

Anxiety and sleep disorders can have dire consequences, affecting physical, mental, and emotional functioning. This issue has scarcely been researched in specific populations exposed to different stress levels. Studies should be conducted with different groups of respondents to expand knowledge of the relationship between sleep and anxiety levels. Therefore, this study is necessary to investigate the levels of anxiety and sleep disorders among the populations of academic and non-academic staff, specifically at a public university, which is assumed to be a stressful group.

2. LITERATURE REVIEW

Academic and non-academic staff in a public university are responsible for duties that include administrative work and departmental committee work. Academic staff are responsible for teaching, academic advising, and counselling of students. Staff are expected to enhance the learning process environment to support the institutional mission and vision. Academicians experience higher levels of work-related stress than other stressed populations (Nor Amalina, Huda, & Hejar, 2016). Stressful conditions cause them to perform below average, eventually affecting their productivity. This matter can also have an impact negatively on their life, behaviour and health. Anxiety has become the most frequent psychiatric condition in the general population. According to Folk (2018), there are over 100 symptoms associated with anxiety. Individuals with anxiety have a different and unique set of anxiety symptoms. For most people, anxiety changes how they function daily.

Females are more likely to develop anxiety than males (Farrell & Seengelaub, 2015). A previous study by Altemus et al. (2014) proved that females are more exposed to be negatively affected by anxieties and often experience symptoms to a greater degree. Evidence from a study by Guarino and Borden (2017) suggested that female academicians outperform their male counterparts. They not only had to shoulder a large workload of service in the public university but also carry responsibilities at home. This problem can lead to an increase in anxiety and sleep disorders among female academicians.

Sleep disorders not only refer to insufficient sleep, but can also affect the quality and quantity of sleep, or cause difficulty in maintaining normal wakefulness. Insufficient sleep and insomnia are associated with multiple medical and mental health problems, such as an increased risk for psychiatric disorders, suicide, and chronic health conditions, such as obesity, diabetes, cardiovascular disease, and chronic pain (Vishnu et al., 2011). Age is another factor associated with the quantity and quality of sleep. As people age, the amount of sleep declines and the amount of time spent in deep sleep. The consequences of this event are that older people take a long time to fall asleep, have more fragmented sleep, and wake up more often and earlier than expected (Miller et al., 2014).

Several studies have been conducted to determine the relationship between anxiety and sleep disorders (Akçay et al., 2018; Nakamura, 2017; Teker & Luleci, 2018). Increasing the quality of sleep and lowering the level of anxiety are essential for the health and quality of life of individuals. This study aimed to determine the level of sleep disorders and anxiety among a group of academic staff in a selected public university and examine the relationship between them.

3. METHODOLOGY

This study used a quantitative approach to identify the levels of anxiety and sleep disorders and to uncover the relationship between the two levels of disorders. Correlation research was conducted to establish a relationship between two closely knit entities and how one impacts the other. Without assuming various aspects, a relationship between two groups or entities must be established. Therefore, the researcher used a quantitative research design to correlate the two variables using the software SPSS for statistical analysis methods. The researcher tended to manipulate one of the variables to attain the desired

results to observe whether they had a significant relationship between the two variables. Questionnaires were used as the survey instruments. The questionnaire was posted on a Google Form, and the survey invitation was sent via e-mail and WhatsApp messages to academic staff. Participation in the survey was voluntary, and consent was obtained before the start of the survey. Respondents were assured of their answers' confidentiality.

3.1 Population and Sampling

The study population comprised academic and non-academic staff at a selected public university, and the target amount was 100 respondents. According to Ghauri and Gronhaug (2005), with a simple random sample, every case in the population has an equal probability of inclusion in the sample. Therefore, the type of probability sampling used in this study was simple random sampling.

3.2 Research Framework

Figure 1 presents the operational research framework for this study. This study consists of two variables: 1) independent variable and 2) dependent variable, which is the level of anxiety and level of sleep disorder, respectively. This study aimed to determine the relationship between the levels of anxiety and sleep disorders among academic and non-academic staff.

Figure 1. The research framework of the study

The instrument used in this study was developed based on the scales used in related literature from previous studies. The instrument contained three sections, involving close-ended and open-ended questions. The first section consisted of items regarding respondents' demographic information, and the second section consisted of items to identify the level of anxiety. The third section consisted of the Sleep Disorders Checklist (SDS-CL)-17, which was adapted from Klingman, Jungquist, and Perlis (2017). This study adopted two sets of scales that measured the respondents' levels of anxiety and sleep disorders. The number of items measuring anxiety consisted of 30 items, and 17 items were used to measure sleep disorders. The reliability coefficients for both adapted scales were .973 and .951, respectively.

3.3 Data Analysis

An online questionnaire in the form of a Google Form link was sent to 110 academic and non-academic staff through their WhatsApp or e-mail accounts. After two weeks, only 102 of the 110 forms collected were eligible for data analysis. Before conducting the data analysis, a normality test was performed. The normality test for anxiety and sleep disorder showed skewness and kurtosis values of +/- 2.0, indicating normally distributed data.

4. FINDINGS AND DISCUSSION

The results showed that 102 surveys out of 115 distributed were usable. The data were processed to identify the demographic profile of respondents which included information about the respondent's gender, age, marital status, number of children, level of management, and working experience in years.

Most of the respondents were men (61.8%), while women constituted 38.2% of the total. Results show that 59.8% of the respondents were in the age range of 31 to 40 years. Respondents between the ages of 41 and 50 were 25.5%, and 10.8% were between the ages of 21 and 30. The age of above 50 years old constituted 3.9% which was the lowest percentage in this category.

A percentage of 32.4% of respondents were single, and 58.8% were married. The percentages of respondents who are divorced and widowed are 6.9% and 2%, respectively. 34.3% and 24.5% of respondents had no children and two children, respectively. Respondents with three children accounted for 21.6%, and those with only one child accounted for 10.8%. Respondents with 5 and 6 children accounted for 4.9% and 1%, respectively.

The data also showed that the highest percentage of the respondent's level of management in the university level (42.2%) followed by 31.4% in the administrative level, 19.6%), support staff and 6.9% were in the top management level. The result shows that 60.8% of respondents have been working for the public university for 1 to 5 years, 27.5% of respondents for 6

to 10 years, 7.8% of respondents for 11 to 15 years, 2 % of respondents for 16 to 20 years, and 2% of respondents served for more than 20 years.

Table 1. Descriptive statistic of staff's profile (n=102)

VARIABLES	*f*	%
Gender		
Male	63	61.8
Female	39	38.2
Marital Status		
Single	33	32.4
Married	60	58.8
Divorced	7	6.9
Widowed	2	2.0
Level of management		
Top management	7	6.9
Administrative level	32	31.4
Educational level	43	42.2
Support staffs	20	19.6

Table 2: Descriptive statistic of staff's profile (n=102)

VARIABLES	*f*	%	MEAN	%
Age (years)			2.23	6.88
21-30	11	10.8		
31 - 40	61	59.8		
41 - 50	26	25.5		
> 50	4	3.9		
Marital Status			2.67	1.524
0	35	34.3		
1	11	10.8		
2	25	24.5		
3	22	21.6		
4	3	2.9		
5	5	4.9		
6	1	1.0		
Working experience (years)			1.57	837
1 - 5	62	60.8		
6 - 11	28	27.5		
11 - 15	8	7.8		
16 - 20	2	2.0		
> 20	2	2.0		

4.1 Level Of Anxiety

Table 3 shows the staff's level of anxiety based on their responses in the survey forms. Unpredictably, the data showed that majority of respondents (46.1%) were at a moderate level of anxiety, and only 24.5% of the respondents reported a high level of anxiety. The table shows low scores for anxiety is 22.5%. The overall mean for anxiety level was 2.02, and the standard deviation was 0.714. Therefore, the results showed that approximately 40% of the respondents had a moderate level of anxiety.

Table 3: The level of anxiety (n=102)

LEVEL	*f*	%	MEAN	SD
Level of Anxiety			2.02	.714
Low (1 ± 2.33)	23	22.5		
Moderate (2.34 ± 3.66)	47	46.1		

High (3.67 ± 5)	25	24.5

The respondents' responses measured using a series of social situations that may cause them unease, stress or nervousness. There were 30 items in total, divided into five dimensions, such as interactions with strangers speaking in public or talking with people in authority, interactions with the other gender, criticism and embarrassment, and assertive expression of annoyance, disgust, or displeasure. Responses ranged from 1 to 2.33 (low anxiety level), 2.34 to 3.66 (moderate anxiety level), and 3.67 to 5 (high anxiety level). The overall findings on the level of anxiety in this study indicated that a majority of the respondents chose scale 3. These respondents sometimes feel uneasy about reflecting their answers in all social situations. In conclusion, the results of this study show that the level of anxiety among respondents was moderate at 46.1%.

4.2 Level Of Sleep Disorder

Table 4 presents the equivalent percentages of the three levels of sleep disorder among respondents. The table shows 35.3% of respondents were at a low level of sleep disorder, 34.3% of respondents were at a moderate level of sleep disorder, while 30.4% of respondents were at a high level of sleep disorder. The mean for the level of sleep disorder was M=1.95, and the standard deviation was SD=0.813.

Table 4: The level of sleep disorder (n=102)

LEVEL	***f***	**%**	**MEAN**	**SD**
Level of Sleep Disorder			1.95	.813
Low (1 ± 2.33)	36	35.3		
Moderate (2.34 ± 3.66)	35	34.3		
High (3.67 ± 5)	31	30.4		

Respondents' answers ranged from 1 to 2.33 (low level of sleep disorder), 2.34 to 3.66 (moderate level of sleep disorder), and 3.67 to 5 (high level of sleep disorder). The overall findings of the sleep disorder level in this study indicated that the percentages of the three levels of sleep disorder among the selected public university staff were equivalent to 33% on average. In conclusion, the results of this study showed that the level of sleep disorder among the selected public university staff was low at 35.3%.

4.3 THE RELATIONSHIP BETWEEN THE LEVEL OF ANXIETY AND THE LEVEL OF SLEEP DISORDER

The third objective of this study was to determine the relationship between anxiety levels and sleep disorder prevalence among staff, as shown in Table 5.

Table 5: Correlations between Anxiety and Sleeping Disorder (n=102)

VARIABLES	***r***	***p***
Anxiety	.728	.000
Sleeping Disorder		

As shown in Table 5, there is a significant relationship between the level of anxiety and the level of sleep disorder. The *r*-value is .728, while the significant *r*-value is .000. According to Gilford's Rule of Thumb, a value of.728 is categorised as a high relationship. The positive direction of the r-value indicates that the result supports the study's hypothesis.

The results of the analysis have shown that the majority of the respondents were men. Most of the respondents are in the age group of 31 to 40 years. This shows why the majority of the respondents have been in service with the public university for 1 to 5 years. The respondents are in the age group where they are mostly married, but most of them have no children

yet. Majority of the respondents are academic staff, which means the number of hours of work, and workload and responsibility at the workplace are mainly higher than the respondents are the non-academic staff.

The results show that the majority of the respondents are at a moderate level of anxiety. Even though the percentage shows 24.55% among the respondents have a high level of anxiety, this is still a concerning result knowing that some of the respondents are willing to share that they are experiencing a high level of anxiety. However, the results showed an equivalent percentage of high, moderate, and low levels of sleep disorders among the staff. A 30.4% percentage indicated that the respondents were experiencing a high level of sleep disorder. A 35.3% percentage indicated a low level of sleep disorder, which was not as high as the level of anxiety.

Based on the findings that have been obtained, anxiety and sleeping disorder are shown correlated. It can thus be concluded that the level of anxiety was significantly related to the level of sleep disorder among academic and non-academic staff at a 0.05 level of significance. Moreover, it is believed that married respondents had a higher possibility of having anxiety. The percentage of married respondents in this study was high; however, a moderate level of anxiety was reported as the highest percentage. A logical explanation for this might be that married respondents have more responsibilities and burdens towards their spouse, children, family, and work, leading to anxiety and, consequently, to sleep disorders. Furthermore, most of the respondents were academicians. Therefore, they had a higher possibility of experiencing anxiety.

5. CONCLUSION

The study conducted shows that academic and non-academic staff are suffering at a moderate level of social anxiety. The most important finding was that this study identified a significant relationship between anxiety levels and sleep disorder prevalence among academic and non-academic staff at the selected public university at a significance level of 0.05.

Based on the results, it can thus be assumed that academic and non-academic staff could not perform well at work if they have sleep problems. As sleep problems are correlated with stress and may negatively impact staff members' physical and cognitive performance, further study is needed to help staff recognise possible factors related to sleep and anxiety problems. Further research can also be conducted to design intervention and treatment to reduce anxiety, and at the same time, reducing their sleep disorders to in order to improve their working performance.

In conclusion, several gaps in knowledge regarding anxiety and sleep disorders would benefit researchers further studying this area of research. This study contributes to future research by demonstrating that more detailed sampling can be conducted because this study was conducted using an online survey method due to restrictions on movement control. It is recommended that the management of the university plan and implement job stress prevention programs with an emphasis on time management and working strategies to improve the situation and evaluate the many types of anxiety and sleep disorders among academic and non-academic staff. Further research can also be conducted to target the student population.

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