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THE RELATIONSHIP BETWEEN ANXIETY AND SLEEPING DISORDER AMONG STAFFS IN A SELECTED PUBLIC UNIVERSITY

¹NUR NADIA ABD MUBIN*,

nur_nadia@fbk.upsi.edu.my

²SARINA YUSUF,

³FATIMA AL-MAJDHOUB

⁴KHAIRUL AZAM BAHRI

⁵KAMARUZZAMAN ABDUL MANAN

Corresponding Author*

^{1,2,3,4,5}Department of Communication and Media, Faculty of Languages and Communication, Sultan Idris Education University, 35900 Tanjong Malim, Perak

ABSTRACT

A growing number of studies on anxiety and sleep disorder are becoming a global health concern. Majority studies were carried on a certain group of people, and a limited number of studies conducted among the faculty and staff in a public university. Therefore, the study's objectives are to identify the level of anxiety and sleep disorder among academic and non-academic staff and determine the relationship between both levels of disorders. Survey method was applied in this research and involved 102 academic and non-academic staff of a selected public university. The respondents participated in an online survey questionnaire. A series of questions were used to retrieve information from the respondents on their demographic and identify their anxiety and sleep disorder level. The study results showed a significant relationship between the level of anxiety and the level of sleep disorder at the 0.05 level. This points out that public university staff needs intervention and treatment to reduce anxiety in improving their working performance.

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INTRODUCTION

Today, we live in the age of the digital era, 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 working place often causes staff to feel fatigued and more prone to sleep disorder. Sleep disorder can be strongly associated with anxiety in the general population. Previous studies conducted often link sleep disorder to the development of anxieties. However, there was a lack of similar studies conducted in Malaysia. This study investigated the relationship between anxiety and sleep disorder in the context of Malaysia, specifically among the public university staff.

Anxiety is a major public health issue in Malaysia as the 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 biggest health issue affecting Malaysian after heart disease by 2020. People with anxieties usually have recurring intrusive thoughts or concerns. Anxieties and sleep disorders are the most common disorders affecting adults in this technology era. According to Murugesan (2019), a survey study conducted by Nielsen Malaysia shows 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 anxieties has been discussed in many studies (Spoomaker & Van den Bout, 2005; Papadimitriou & Linkowski, 2005; Teker & Luleci, 2018). Sleep disorder happens when a person has signs of irregular sleep patterns, sleep disturbance and insomnia. It is generally associated with the work demand and environment in the workplace, causing problems with functioning and distress. Common features of anxiety are frequently seen in association with sleep disorder and vice versa. The level of sleep and anxiety are both important and can affect the health and quality of life of a person. Therefore, this study is conducted to identify the level of anxiety and sleep disorder and the relationship between them, in the scope of Malaysians, specifically public university staff. People need to maintain good mental health state to enhance their performance outputs in their organisations.

Having anxiety and sleep disorders can lead to dire consequences, affecting physical, mental, and emotional functioning. This issue is scarcely 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 the level of sleep and anxiety. Therefore, this study is necessary to investigate the level of anxiety and sleep disorder among the population of academic and non-academic staff, specifically at a public university, which assumed to be a stressful group. |

LITERATURE REVIEW

|The academic and non-academic staffs in a public university are responsible for the duties that include administrative work and departmental committee work. Academic staffs are responsible for teaching, academic advising, and counselling of the students. The staffs are expected to enhance the learning process environment towards supporting the institutional mission and vision. Academicians experience higher levels of work-related stress than other stress-related works (Nor Amalina, Huda & Hejar, 2016). The stressful conditions cause them to perform below the average and 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 conditions 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 every day.

Females are more likely to develop anxiety than men (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 service than male academicians. They not only had to shoulder a large workload of service in the public university and but also carry responsibilities at home. This problem can lead to an increase in anxiety and sleep disorders among female academicians.

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Sleep disorders are not only a matter of not getting enough sleep, and it can affect the quality and quantity of sleep or causing difficulty in maintaining normal wakefulness. Insufficient sleep and insomnia are associated with multiple medical and mental health problems such as the 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 that associate to the quantity and quality of sleep. As people age, the amount of sleep starts to decline and the amount of time spent in a deep sleep. This event's consequences are that older people take a long time to fall asleep, more fragmented sleep, and waking up more often and earlier than supposed to (Miller et al., 2014).

Several studies were conducted to determine the relationship between anxieties and sleep disorder (Akçay et al., 2018; Nakamura, 2017; Teker & Luleci, 2018). Increasing the quality of sleep and lowering the level of anxiety is essential for the effects on the health of the individual and quality of life. This study's objective was to determine the level of sleep disorder and anxiety of a group of academic staff in the selected public university and examine the relationship between them.

METHODOLOGY

A quantitative approach was carried out in this study to identify the level of anxiety and sleep disorders and to uncover the relationship between the two levels of disorders. Correlation research is conducted to establish a relationship between two closely-knit entities and how one impact 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 tend to manipulate one of the variables to attain the desired results to observe whether they have a significant relationship between the two variables. Questionnaires were used as the survey instrument. 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.

POPULATION AND SAMPLING

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

RESEARCH FRAMEWORK

Figure 1 shows an 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 aims to determine the relationship between the level of anxiety and the level of sleep disorder among the academic and non-academic staff.



Figure 1. The research framework of the study

The instrument 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 type of questions. The first section consists of items regarding respondents' demographic information; the second section consists of items to identify the level of

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anxiety. The third section consists of sleep disorders checklist (SDS-CL)-17 that was adapted from Klingman, Jungquist & Perlis (2017). This study adopted two sets of scales that measure the respondents' level of anxiety and sleep disorder. The number of items measuring anxiety consists of 30 items, and 17 items were to measure sleep-disorder. The reliability coefficient for both adapted scales were .973 and .951, respectively.

DATA ANALYSIS

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

FINDINGS AND DISCUSSION

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

Majority of the respondents were male (61.8%) while female constituted 38.2%. Results show that 59.8% of the respondents were in between the age of 31 to 40. 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, 58.8% were married. Respondents who are divorced and widowed is 6.9% and 2% respectively. Respondents who had no children showed that 34.3% and 24.5% of respondents have two children. Respondents who have three children is 21.6%, and respondents who have only one child is 10.8%. Respondents have 5 and 6 children is 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% were 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

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

VARIABLES	<i>f</i>	%	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		

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 the level of anxiety is 2.02, and the standard deviation is 0.714. Therefore, the results showed that almost 40% of the total numbers of respondents have a moderate level of anxiety.

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

LEVEL	<i>f</i>	%	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, and it was 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 answers ranged from 1 to 2.33 (low level of anxiety), 2.34 to 3.66 (moderate level of anxiety) and 3.67 to 5 (high level of anxiety). The overall findings of 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 of the social situations. In conclusions, the results of this study show that the level of anxiety among respondents was moderate at 46.1%.

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LEVEL OF SLEEP DISORDER

Table 4 shows an equivalent percentage 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	<i>f</i>	%	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' answer 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 three levels of sleep disorder among the selected public university staff were equivalent to 33% on average. In conclusions, this study's results have shown that the level of sleep disorder among the selected public university staff was low at 35.3%.

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

The third objective of this study was to determine the relationship between the level of anxiety and the level of sleeping disorder among staffs as showed in Table 5.

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

VARIABLES	<i>r</i>	<i>p</i>
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, .728 is categorised as a high relationship. The direction of *r*-value is positive and indicated that the result supports the hypothesis of the study.

The result of the analysis has shown that the majority of the respondents were men. Most of the respondents are in the age of 31 to 40 years old. That 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 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

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the respondents are willing to share that they are experiencing a high level of anxiety. However, results show an equivalent percentage of a high, moderate and low level of sleep disorder among the staffs. The percentage of 30.4% shows that the respondents are experiencing a high level of sleep disorder. The percentage for a low level of sleep disorder is 35.3%, showing that it is 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 be concluded that the level of anxiety has a significant relationship with the level of sleep disorder among the academic and non-academic staff at a 0.05 level of significance. Moreover, it is believed that married respondents are having a higher possibility of having anxiety. The percentage of married respondents in this study is high, but by looking at the result, a moderate level of anxiety was reported as the highest percentage. A logical explanation to this might be that married respondents have more responsibilities and burdens towards their spouse, children, family, and work, leading to anxiety and directly leading to sleep disorder. Furthermore, most of the respondents are academicians. Therefore they have a higher possibility of experiencing anxiety.]

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 there were this study has identified that the level of anxiety has a significant relationship with the level of sleep disorder among academic and non-academic staff at the selected public university at a 0.05 level of significance.

Based on the results, it could be assumed that academic and non-academic staff could not perform well in work if they are having a problem with sleep. Since sleep problems correlated to stress and may negatively impact the staff's physical and cognitive performance, the further study looks at to help staff recognise possible factors 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 around anxiety and sleep disorder would benefit researchers in further studying this area of research. This study contributes to future researchers; more detailed sampling can be done because this study has been conducted with online survey method due to the restriction movement control order. 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 to evaluate the many types of anxiety and sleep disorder among the academic and non-academic staff. Further research can also be conducted to target on student population.]

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