Prevalence of Depression, Anxiety and Stress

Name

Institution:

Introduction

There are no doubts depression is one of the leading contributors to the global disease burden, with its high levels in students, work environments and medical sector. The mental disease, depression is characterized by loss of interest and pleasure, reduced levels of energy and low self-esteem (Ngasa, et al., 2017). In addition, there are other mental health conditions that tend to affect people, which include stress and anxiety. Various factors are linked to the above mental conditions, which include daily life stressors, such as pressure to perform in work places and school, insufficient sleep, age, and past horrific experiences. Therefore, the main objective of this study is to determine the prevalence of depression, anxiety and stress and its associated factors.

Specific Objectives:

1. To describe the sociodemographic factors of the postgraduate University students in Phantopia.
2. Determine the prevalence of depression and to describe the depression score among the postgraduate University students in Phantopia.
3. Determine the prevalence of anxiety and to describe the anxiety score among the postgraduate University students in Phantopia.
4. Determine the prevalence of stress and to describe the stress score among the postgraduate University students in Phantopia.
5. Determine the factors associated with depression category among the postgraduate University students in Phantopia.
6. Determine the factors associated with anxiety category among the postgraduate University students in Phantopia.
7. Determine the factors associated with stress category among the postgraduate University students in Phantopia.

Statistical Analysis Plan

Postgraduate students from a university in Phantopia were invited to complete an online survey containing questions about their sociodemographic and other related factors, such as age, gender, internet connection, among others that might contribute to their mental health state (depression, anxiety and stress). Moreover, a pretested interviewer-administered Depression Anxiety Stress Scale 21 (DASS-21) questionnaire was administered to evaluate the depression, anxiety, and stress levels among the students. The DASS-21 is a psychological screening instrument which is capable of differentiating symptoms of depression, anxiety, and stress (Lovibond & Lovibond, 1995). Notably, each of the symptoms comprises of seven items, where participants were asked to indicate the presence of symptoms in each domain scoring from 0 (Never) to 3 (Almost always). The final score was multiplied by 2 and classified to the DASS manual as normal, mild, moderate, severe, and extremely severe (Table 1).

The Statistical Package for Social Science version software was used to analyze the data. Descriptive statistics and frequency distribution were performed to expose the fundamental characteristics of the data. Moreover, chi-Square test of association was performed to find the association of each mental health state and its factors. A 0.05 level of significance was used to perform the above tests.

Table 1: DASS Manual

|  |  |  |  |
| --- | --- | --- | --- |
| Manual | Depression | Anxiety | Stress |
| Normal | 0-9 | 0-7 | 0-14 |
| Mild | 10-13 | 8-9 | 15-18 |
| Moderate | 14-20 | 10-14 | 19-25 |
| Severe | 21-27 | 15-19 | 26-33 |
| Extremely severe | 28+ | 20+ | 34+ |

(Lovibond & Lovibond, 1995).

Results

1. To describe the sociodemographic factors of the postgraduate University students in Phantopia.

2678 participants were included in the study and the overall response rate where majority of respondents were female (1367 [51%]) and had mean (± standard deviation) age of participants was 44.19 years (±5.549); besides, they had mean (± standard deviation) sleeping hours of 6.57 hours (±2.424). With regard to nationality, 2001 (74.7%) respondents were Malaysian and 677 (25.3%) respondents were Non-Malaysian. Consequently, the majority of respondents (1671 (62.4%)) were Malay followed by Indian (501 (18.7%)) (Table 2).

Figure 1: Histogram of Age

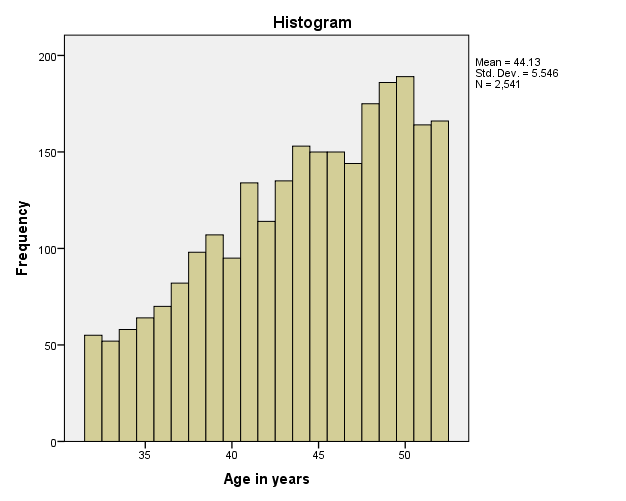


Figure 1 above shows age being skewed to the left, where most students are above 40 years of age.

Figure 2: Histogram of Hours of Sleeping

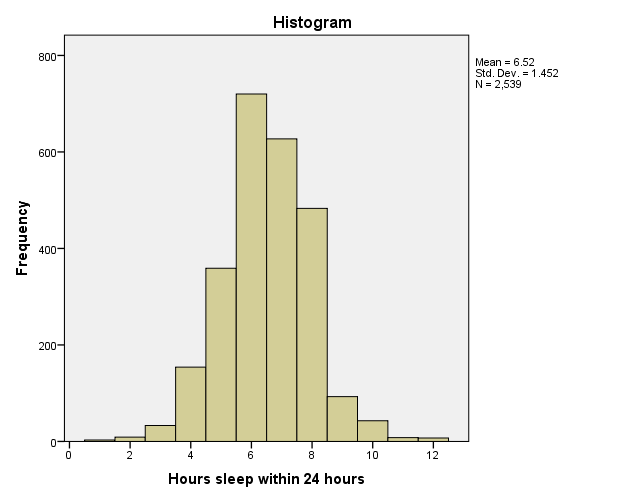


Figure 2 show hours spent sleeping being normally distributed with many spending 5 to 8 hours

Table 2: Social Demographic Characteristics and School Attributes

|  |  |  |  |
| --- | --- | --- | --- |
| Variables | n=2678 |  |  |
| Quantitative Variables |  | Mean | SD |
| Age in years |  | 44.19 | 5.549 |
| Hours of sleep within 24 hours |  | 6.57 | 2.424 |
| Categorical Variables |  | Frequency | Percent |
| Gender | Female | 1367 | 51 |
|  | Male | 1311 | 49 |
| Nationality | Malaysian | 2001 | 74.7 |
|  | Non-Malaysian | 677 | 25.3 |
| Marital status | Divorced/Widowed | 81 | 3 |
|  | Married | 2299 | 85.8 |
|  | Not married | 196 | 7.3 |
|  | Total | 2576 | 96.2 |
| Religion | Buddhism | 254 | 9.5 |
|  | Christianity | 175 | 6.5 |
|  | Hinduism | 417 | 15.6 |
|  | Islam | 1726 | 64.5 |
|  | Others | 21 | 0.8 |
| Hyperion | No | 1289 | 48.1 |
|  | Yes | 1389 | 51.9 |
| Diabetes Mellitus | No | 1603 | 59.9 |
|  | Yes | 1075 | 40.1 |
| Ever Smoking | Ever smoked | 1770 | 66.1 |
|  | Never smoked | 819 | 30.6 |
| Current Smoking | Yes | 1385 | 51.7 |
|  | No | 383 | 14.3 |
| Ethnic | Malay | 1671 | 62.4 |
|  | Chinese | 310 | 11.6 |
|  | Indian | 501 | 18.7 |
|  | Bumiputera Sabah | 82 | 3.1 |
|  | Bumiputera Sarawak | 108 | 4 |
|  | Orang Asli | 1 | 0 |
|  | Others | 5 | 0.2 |
| Type of postgraduate studies | Master | 1981 | 74 |
|  | Doctorate | 697 | 26 |
| Science | Non-science | 1360 | 50.8 |
|  | Science | 1318 | 49.2 |
| Internet connectivity level | Poor | 1895 | 70.8 |
|  | Moderate | 689 | 25.7 |
|  | Good | 94 | 3.5 |
| Level of thought about overall assignments | Too little | 98 | 3.7 |
|  | Okay | 705 | 26.3 |
|  | Too many | 1875 | 70 |
| Environment at home | Conducive | 2341 | 87.4 |
|  | Not conducive | 337 | 12.6 |
| Level of difficulties using online platform | Very difficult | 1772 | 66.2 |
|  | Difficult | 703 | 26.3 |
|  | Neutral | 188 | 7 |
|  | Easy | 14 | 0.5 |
|  | Very easy | 1 | 0 |

School Attributes of Participants

Among the 2678 students pursuing postgraduate studies, 1981 (74%) respondents purse Masters and 697 (26%) pursue Doctorate. With regard to internet connectivity (1895 (70.8%)) of the respondents claim to have poor connectivity. Consequently, the majority of respondents (1772 (66.2%)) were claim to have very difficult experience in using online platform followed by (703 (26.3%)) (Table 2).

1. Determine the prevalence of stress and to describe the stress score among the postgraduate University students in Phantopia.

Stress was computed by summing and multiplying by 2 the following scales d1, d6, d8, d11, d12, d14 and d18. Among the students, 411 (15.3%) had normal levels, 551 (20.6%) had mild, 1047 (39.1%) had moderate, 622 (23.2%) had severe, and 47 (1.8%) extremely severe (Table 3).

1. Determine the prevalence of anxiety and to describe the anxiety score among the postgraduate University students in Phantopia.

Anxiety was computed by summing and multiplying by 2 the following scales d2, d4, d7, d9, d15, d19 and d20. Among the students, 25 (0.9%) had normal levels, 33 (1.2%) had mild, 374 (14%) had moderate, 603 (22.5%) had severe, and 1643 (61.4%) extremely severe (Table 3).

1. Determine the prevalence of depression and to describe the depression score among the postgraduate University students in Phantopia.

Depression was computed by summing and multiplying by 2 the following scales d3, d5, d10, d13, d16, d17 and d21. Among the students, 51 (1.9%) had normal levels, 205 (7.7%) had mild, 1093 (40.8%) had moderate, 926 (34.6%) had severe, and 403 (15%) extremely severe (Table 3).

Table 3: Prevalence of depression, anxiety, and stress

|  |  |  |  |
| --- | --- | --- | --- |
| Variables | n=2678 | Frequency | Percent |
| Stress Levels | Normal | 411 | 15.3 |
|  | Mild | 551 | 20.6 |
|  | Moderate | 1047 | 39.1 |
|  | Severe | 622 | 23.2 |
|  | Extremely Severe | 47 | 1.8 |
| Anxiety Levels | Normal | 25 | 0.9 |
|  | Mild | 33 | 1.2 |
|  | Moderate | 374 | 14 |
|  | Severe | 603 | 22.5 |
|  | Extremely Severe | 1643 | 61.4 |
| Depression Levels | Normal | 51 | 1.9 |
|  | Mild | 205 | 7.7 |
|  | Moderate | 1093 | 40.8 |
|  | Severe | 926 | 34.6 |
|  | Extremely Severe | 403 | 15 |

Factors Associated with Stress, Anxiety and Depression

Table 4: Chi-Square test of Association

|  |  |  |  |
| --- | --- | --- | --- |
|  | Chi-Square Tests P-values | | |
| Variables | Depression | Anxiety | Stress |
| Gender | 0.153 | 0.504 | 0.776 |
| Nationality | 0.255 | 0.797 | 0.326 |
| Ethnic | 0.060 | 0.245 | 0.482 |
| Hypertension | 0.093 | 0.321 | 0.351 |
| Diabetes Mellitus | 0.889 | 0.372 | 0.136 |
| Internet connectivity level | 0.709 | 0.762 | 0.980 |
| Type of postgraduate studies | 0.967 | 0.975 | 0.759 |
| Science or non-science | 0.178 | 0175 | 0.111 |
| Level of thought about overall assignments | 0.002 | 0.507 | 0.485 |
| Environment at home | 0.180 | 0.209 | 0.309 |
| Level of difficulties using online platform | 0.838 | 0.416 | 0.629 |
| Age Levels | 0.770 | 0.544 | 0.903 |
| Hours of sleep levels | 0.037 | 0.473 | 0.707 |

1. Determine the factors associated with depression category among the postgraduate University students in Phantopia.

A chi-square test of association exhibits the association between depression, anxiety, and stress with their factors (Table 4). With regard to depression, Level of thought about overall assignments (p=0.002) and hours of sleep levels (p=0.037) were significantly associated with depression (Table 4)

1. Determine the factors associated with anxiety category among the postgraduate University students in Phantopia.

With regard to anxiety, all the factors considered recorded p-values greater than 0.05 thus there is no significant association between the factors and anxiety (Table 4).

1. Determine the factors associated with stress category among the postgraduate University students in Phantopia

With regard to stress, all the factors considered recorded p-values greater than 0.05 thus there is no significant association between the factors and stress (Table 4).

Discussion

The current study is to determine the prevalence of depression, anxiety and stress and its associated factors. As evident, the students have a high level of anxiety whereby 61.4% recorded extremely severe. Consequently, Level of thought about overall assignments and hours of sleep levels were significantly associated with depression; however, there was no significant association between the factors and both stress and anxiety.

According Robertas, et al., (2014) depression is independently associated with marital status and with lower education; besides, it is shown that anxiety disorders are independently associated with female gender and insomnia. Past psychological trauma, insufficient income and a family history of depression are significant risk factors linked to depression (Bhimji & Manji, 2018). The current study indicates that level of thought about overall assignments and hours of sleep levels were significantly associated with depression with not significant association between the factors and stress.

A study by Kılınçel, et al., (2020) exhibits that the closure of schools and home‐quarantine during pandemic had a significant impact on anxiety among the young people in Turkey. However, the current study exhibited insignificant association between the factors and stress. Generally, the students had normal to moderate levels of depression and stress but recorded but most had high levels of anxiety.

References

Bhimji, K., & Manji, K. (2018). Prevalence and Associated Factors of Depression in an Asian Community in Dar es Salaam, Tanzania. *Pschiatry Journal*. doi:https://doi.org/10.1155/2018/9548471

Kılınçel, Ş., Kılınçel, O., Muratdağı, G., Aydın, A., & Usta, M. (2020). Factors affecting the anxiety levels of adolescents in home‐quarantine during COVID‐19 pandemic in Turkey. *Asian-Pacific Psychiatry Journal*. doi:https://doi.org/10.1111/appy.12406

Lovibond, S., & Lovibond, P. (1995). *Manual for the Depression Anxiety & Stress Scales.* Sydney: Psychology Foundation.

Ngasa, S., Sama, C.-B., Dzekem, B., Neba, K., Toindong, M., Aroke, D., & Dimala, C. (2017). Prevalence and factors associated with depression among medical students in Cameroon: a cross-sectional study. *BMC Psychiatry*. doi:https://doi.org/10.1186/s12888-017-1382-3

Robertas, B., Vilma, L., Jurate, P., Nijole, R., Adomas, B., & Narseta, M. (2014). Factors affecting the presence of depression, anxiety disorders, and suicidal ideation in patients attending primary health care service in Lithuania. *Scandinavian Journal of Primary Health Care*, 24-29. doi:10.3109/02813432.2013.873604