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Depression, anxiety and stress among healthcare professionals (DASHCP): A cross sectional study

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Abstract

Introduction: Depression, anxiety and stress are common among healthcare professionals as they need to deal with patients' health condition from time to time.

Objective: The purpose of the study is to determine the prevalence of depression, anxiety and stress among doctors, pharmacists and nurses working in Hospital Miri, Sarawak, and its association with other sociodemographic factors.

Method: This cross-sectional study using a two-section questionnaire containing individual sociodemographic information and a validated questionnaire – Depression, Anxiety and Stress Scale (DASS) 21 conducted among healthcare professionals (doctors, pharmacists and nurses), from September to November 2017 in male and female medical wards in Hospital Miri.

Results: In terms of depression status, more than half (59.5%) of the participants scored normal while 9.5%, 11.9%, 4.8% and 14.3% reported mild, moderate, severe and extremely severe respectively. The average depression score is 11.19 (± 10.46) and categorised as mild depression. For anxiety status, 33.3% of the participants reported normal level, while 19%, 14.3%, and 2.4% of participants reported mild, moderate and severe level respectively. However, almost one third (31%) of the participants reported extremely severe anxiety. The average anxiety score is 11.71 (± 8.83) and it categorised as moderate anxiety. For stress status, 64.3% of participants reported normal level of stress while 14.3% scored mild and severe. Only 2.4% and 4.8% of the participants scored moderate and extremely severe stress level. The average stress score is 13.81 (± 10.44) and categorised as normal stress level. Prevalence for moderate to extremely severe depression, anxiety and stress are 31%, 47.6%, and 21.4% respectively. Higher average working hours has significant association with higher level of depression and stress ($p=0.004$).

Conclusion: This study has showed the prevalence of depression and anxiety among healthcare professionals are concerning. High level of depression, anxiety and stress may have detrimental effect to the performance of healthcare professionals which can lead to negative outcomes. This should warrant needs for strategic plans to ease depression, anxiety and the stressors especially in medical field.

Keywords: Depression, Anxiety, Stress, Healthcare professional, DASS

Introduction

Depression, anxiety and stress are common among healthcare professionals as they need to deal with patients' health condition from time to time. This usually occurs at places where there is inadequate staffing, limited resources, long working hours, and occupational hazardous. These psychological distresses can be significant and might cause negative influence in their job performance and productivity which may subsequently put patients' life in risk (1). Serious mental health problems might also cause interference to healthcare professionals' emotion, cognitive behaviour and social abilities (2).

Many researches had shown how significant this issue is nowadays. A cross-sectional study carried out in China to examine the prevalence of depression among 1592 nurses showed that 61.7% had mild depressive symptoms whereas 25.1% had moderate to severe symptoms (3). Another study in South Korea examined the relationship between job-induced stress and depressive symptoms among 441 female nurses. According to the results, around 38% of these nurses had depressive symptoms (4).

Nevertheless, stress itself is not completely dangerous. Favourable stress plays a vital role to enhance their adapting and learning process to transform them into experienced healthcare professionals. On the other hand, overwhelming unfavourable stress may influence the learning and decision making of a healthcare professional (5).

The purpose of the study is to determine the prevalence of depression, anxiety and stress among doctors, pharmacists and nurses working in Hospital Miri, Sarawak, and its association with other sociodemographic factors.

Methods

This cross-sectional study using a two-section questionnaire containing individual sociodemographic information and a validated questionnaire – Depression, Anxiety and Stress Scale (DASS) 21 was conducted among healthcare professionals (doctors, pharmacists and nurses), from September to November 2017 in male and female medical wards in Hospital Miri. DASS21 consists of 21 questions that equally attribute to depression, anxiety and stress. A sample of 42 included to estimate for depression, anxiety and symptoms of stress as measured by a short version of Depression Anxiety and Stress Scale (DASS 21).

The questions rated from 0 to 3 which indicate how much the statement applied to healthcare professionals over the past week. A rating scale of (0) means “did not apply to me at all”, scale of (1) means “applied to me to some degree, or some of the time”, scale of (2) means “applied to me to a considerable degree or a good part of time”, while a scale of (3) means “applied to me very much or most of the time”.

The final score for DASS21 for depression, anxiety and stress will then multiplied by 2 before categorised to their respective severity as shown in Table 1.

Table 1:Severity of depression, anxiety and stress. (6)

Severity	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+

Data will be analyzed descriptively while association is calculated by using chi square or fisher exact test, with significant value of $p < 0.005$.

Results

We recruited staff from both male and female adult medical wards (N=42), with age ranging 23 to 42 years old. Majority of the participants are female and about 2:1 ratio of the participants are in a relationship to single. Most of the participants are Chinese and Christian as shown in Table 2.

The average working experience of the participants is about 5 years ranging from 1 month to 19 years. In addition, participants had on average 6 hours of sleep per day and average 9 hours of work per day.

We explore the prevalence of depression, anxiety and stress among the participants, the total score of DASS questionnaire are calculated and their frequencies divided into 5 categories according to their severity – normal, mild, moderate, severe, and extremely severe, as per Table 3.

In terms of depression status, more than half of the participants scored normal. The average depression score conclude as mild depression.

For anxiety status, a third of the participants reported normal level, however, almost one third also reported extremely severe level of anxiety. The average anxiety score is categorised as moderate anxiety.

For stress status, more than half of participants reported normal level of stress, only eight participants suffer severe stress. The average stress score is categorised as normal stress level.

We attempted to examine potential association between sociodemographic factors as listed on Table 2 and depression, anxiety and stress with Chi-Square Test and Fisher's Exact Test. Our finding did not suggest any significant association between religion, race, age, gender, relationship status, origin state, occupation, perceived overwork, average sleeping hours and working experience with depression, anxiety, stress.

Table 2: Descriptive statistic sociodemographic factors for healthcare professionals that participated in the study (n=42).

Variables	N (%)	Mean $\pm$ SD
Age	-	29.38 $\pm$ 4.89
Gender		
Male	6 (14.3)	-
Female	36 (85.7)	-
Relationship status		
Single	13 (31.0)	-
In a relationship	29 (69.0)	-
Race		
Malay	9 (21.4)	-
Chinese	12 (28.6)	-
Indian	2 (4.8)	-
Iban	11 (26.2)	-
Others	8 (19.0)	-
Religion		
Islam	14 (33.3)	-
Buddhism	4 (9.5)	-
Christianity	21 (50.0)	-
Hinduism	1 (2.4)	-
Others	1 (2.4)	-
None	1 (2.4)	-
State of origin		
Peninsular Malaysia	10 (23.8)	-
East Malaysia	32 (76.2)	-
Occupation		
Doctor	11 (26.2)	-
Pharmacist	2 (4.8)	-
Nurse	29 (69.0)	-
Perceived overwork		

Yes	28 (66.7)	-
No	14 (33.3)	-
Average sleeping hours/day	-	6.21 ± 1.20
Average working hours/day	-	9.14 ± 2.39
Working experience (years)	-	4.72 ± 4.54

Table 3: Prevalence of depression, anxiety and stress among healthcare professionals in adult medical wards (n=42).

Variables	Number (%)	Mean ± Std Deviation
Depression		
Normal	25 (59.5)	
Mild	4 (9.5)	
Moderate	5 (11.9)	11.19 ± 10.46
Severe	2 (4.8)	
Extremely Severe	6 (14.3)	
Anxiety		
Normal	14 (33.3)	
Mild	8 (19.0)	
Moderate	6 (14.3)	11.71 ± 8.83
Severe	1 (2.4)	
Extremely Severe	13 (31.0)	
Stress		
Normal	27 (64.3)	
Mild	6 (14.3)	
Moderate	1 (2.4)	13.81 ± 10.44
Severe	6 (14.3)	
Extremely Severe	2 (4.8)	

Discussion

The objective of the study is to determine the prevalence of depression, anxiety and stress among healthcare professionals in Hospital Miri, Sarawak. In this study, prevalence for moderate to extremely severe depression, anxiety and stress are 31%, 47.6%, and 21.4% respectively. This finding is similar to a study conducted in several government hospitals situated in Kota Kinabalu, Sabah whereby the prevalence for anxiety is the highest (77.5%) among intern (7).

No association between religion, race, age, gender, relationship status, origin state, occupation, perceived overwork, average sleeping hours and working experience with depression, anxiety, stress. These findings are comparable to conclusions from previous studies done on the matter (8, 9).

In addition, higher average working hours has significant association with higher level of depression and stress ($p=0.004$). Long working hours has negative impact on work performance, leading to poor decision making, fatigue and emotional distress (10).

However, we did not investigate relationship status and social life has invariably been associated with depression, anxiety and stress. It has been shown that individuals, who are satisfied with their social life and thus, a good social support, has a good social support, has shown more resilience to stressors in life, hence acting as a life buffer. This minimizes the risk of developing depression (11, 12).

The limitations of this study include sample size and sample characteristics. Associations among all these might not be representative of the general population because this study is only focus on medical wards in hospital setting where the level of depression, anxiety and stress tend to be higher due to the nature of the work. However, we attempted to reduce the bias by using universal sampling.

Considering the relevant research limited, there is a need to do a more comprehensive study on the study to be able to address the issue in a more holistic approach.

Conclusion

In conclusion, this study has showed the prevalence of depression and anxiety among healthcare professionals are concerning. High level of depression, anxiety and stress may have detrimental effect to the performance of healthcare professionals which can lead to negative outcomes. This should warrant needs for strategic plans to ease depression, anxiety and the stressors especially in medical field.

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