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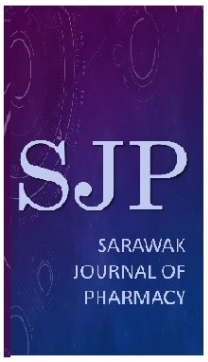

Depression and anxiety among provisionally registered pharmacists (PRP): a cross sectional study

Chong Hui Ting[1], Cindy Wong Xi Chia[1], Kong San Chee[1], Lim Hui Ming[1], Ng Zheng Lin[1], Kamarudin Ahmad[1,2]

[1]*Pharmacy Department, Miri Hospital, Sarawak*

[2]*Clinical Research Centre Miri*

Corresponding author name and email: Lim Hui Ming (limhuiming@moh.gov.my)

ABSTRACT

Introduction: Presence of psychological morbidity in provisionally registered pharmacist has been reported from various hospitals. Therefore, the presence of anxiety and depression among PRP assessed using AKUADS scale and the association with factors such as age, facilities, gender, race, religion, marital status, financial burden, family history and family were identified.

Objective: To assess the prevalence of anxiety and depression among housemen and provisional registered pharmacists, taking different factors into consideration, like age, genders, religion, marital status, family income and family history into account.

Method: Thirty-six provisionally registered pharmacists throughout Hospital Sarawak recruited through convenient method of sampling. A structured proforma used to assess socio-demographic variables. The Aga Khan University Anxiety and Depression Scale (AKUADS) used to assess anxiety and depression.

Results: In terms of depression and anxiety status, all 36 participants scored 19 or more in AKUAD score which concluded 100% participants with depression and anxiety. Chi-square or Fisher-test cannot be conducted as data heavily secluded thus association between different factors with depression and anxiety cannot be evaluated.

Conclusion: This study suggests that provisionally registered pharmacist experience anxiety and depression which can influenced by different factors such as age, facilities, gender, race, religion, marital status, financial burden, family history and family. There is a need for the counselling services or other strategic plans to be made available to the provisionally registered pharmacists to control their anxiety and depression.

Keywords: Depression, Anxiety, Provisionally Registered Pharmacist, AKUADS

INTRODUCTION

Depression is one of the most prevalent mental disorders today, and it is characterised by episodes of low mood associated with loss of interest in daily activities. According to the World Health Organisation (WHO), depression is the third most common disabling disorder, especially among females (1) .

Anxiety in people characterised as anything that upsets the usual individual's physical or mental well-being. Sometimes, anxiety occurs because of the inability of patients to achieve their goals and desires (1).

Depression and anxiety have been reported among provisionally registered pharmacists as they exposed to stressors like logbook targets, exams, inability to cope with new environment and people, assignments, presentations and heavy workload. This can lead to mental distress and have adverse effects on their cognitive functioning, which will cause negative impacts on the work performance, physical health, and psychological health.

A study conducted in Japan among hospital pharmacists in the country discovered many the individuals suffered from psychological stress and compassion fatigue, as well as burnout. Intriguingly, the study revealed that work-related stress may become ‘more manageable’ with years of experience (2).

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 provisionally registered pharmacists (PRP) (3).

In our study, we measured the level of depression and anxiety among provisionally registered pharmacies in hospitals in Sarawak, which includes General Hospital Kuching, Hospital Sibu, Hospital Miri and Hospital Bintulu.

METHODS

This is a cross-sectional study with convenient sampling using a set of questionnaires taken from the Aga Khan University Anxiety and Depression Scale (AKUADS). The study conducted among provisionally registered pharmacists throughout Hospital Sarawak from March to May 2018, where questionnaires distributed via google link. AKUADS consists of 25 questions that equally attribute to depression and anxiety. 36 participants took part in our study.

Aga Khan University Anxiety and Depression Scale (AKUADS), which is a validated screening tool, developed indigenously for use in population which understands Urdu, was used. The scores of 19 or greater on AKUADS considered as cut-off for anxiety and depression. At a cut off score of 19 points, AKUADS has specificity of 81%, sensitivity of 74%, a positive predictive value of 63%, and negative predictive value of 88%, which is higher than other available scales (like Self Reporting Questionnaire -SRQ).

The questionnaire included a proforma containing information on socio demographic characteristics like age, gender, race, religion, marital status, financial burden and family history of anxiety and depression. Data analysed descriptively while association calculated by using chi square or fisher exact test, with significant value of $p<0.005$. Below shows the questionnaire we used for this research.

RESULTS

We recruited provisionally registered pharmacists (PRP) from hospitals in Sarawak (N=26), with a mean age of 26.5 years old and average working experience of the participants is about 1 month to 12 months. The timelines and AKUAD scores explored via descriptive statistics.

Majority of the participants are female and about 4:1 ratio of the participants is single to in a relationship. Most of the participants are Chinese and Christian as shown in Table 1. The timelines shown in more detail in Table 1, including the values by gender, financial burden and family history.

We explore the prevalence of depression and anxiety among the participants using the calculated total score of AKUAD questionnaire and their frequencies divided into 2 categories - depressed and anxious and not depressed and anxious.

To conclude, the sample of anxious and depressed patients included 36 (100%) participants who scored 19 or more on AKUAD score. Chi-square or Fisher-test cannot be conducted as data heavily skewed thus association between different factors with depression and anxiety cannot be evaluated.

Table 1: Descriptive statistics sociodemographic factors for provisionally registered pharmacists (PRP) that participated in the study (n=36).

Variables	N (%)	Mean ± SD
Age		
Less or equal to 25	32 (88.9%)	26.5 ± 2.45
26-30	4 (11.1%)	
Facilities		
Hospital Umum Sarawak	26 (72.2%)	-
Hospital Sibu	1 (2.8%)	-
Hospital Miri	7 (19.4%)	-
Others	2 (5.6%)	-
Gender		
Male	3 (8.3%)	-
Female	33 (91.7%)	-
Race		
Malay	4 (11.1%)	-
Chinese	30 (83.3%)	-
Others	2 (5.6%)	-
Religion		
Muslim	5 (13.9%)	-
Christian	22 (61.1%)	-
Buddhist	8 (22.2%)	-
Others	1 (2.8%)	-
Marital status		
Single	29 (80.6%)	12 ± 14.93
In a relationship	6 (16.7%)	

Married	1 (2.8%)	
Financial burden		
Car loan	5 (13.9%)	-
PTPTN	4 (11.1%)	-
House loan/rental	3 (8.3%)	-
Car loan + House loan	6 (16.7%)	-
PTPTN + House loan + Others	2 (5.6%)	-
Car loan + Others	1 (2.8%)	-
PTPTN + Others	1 (2.8%)	-
Others	2 (5.6%)	-
No loan at all	12 (33.3%)	-
Family History		
No	35 (97.2%)	18 ± 24.04
Yes	1 (2.8%)	
Average working experience (months)		6.5 ± 7.78

DISCUSSION

Provisionally registered pharmacists (PRP) go through higher levels of emotional and mental disturbance. They expected to master a huge amount of knowledge and skill and they undergo regular pressures and the overwhelming burden barely leaves them with any time to relax. Along with the work burden, they face a highly competitive environment that requires social and personal sacrifice. Our results show that all PRP in Hospital Sarawak that involved in the study scored >19 on AKUADS. This shows that PRP have some element of stress and anxiety. This finding is similar to a study conducted in government hospitals situated in Miri,

Sarawak whereby the prevalence for moderate to extremely severe depression, anxiety and stress are 31%, 47.6%, and 21.4% respectively among healthcare professionals (4). This study emphasises the need for hospitals to develop strategies for recognition and management of stress in provisionally registered pharmacist.

Anxiety and depression is an important indicator of mental health of an individual; a treatable disorder, which can cause adverse effect on both, mental and physical health of an individual and hence considered an important health issue (5). It seen that training in different hospitals and age did not significantly affect the prevalence of anxiety and depression. Depression and anxiety seen in all participants from both age group of ≤ 25 years and 26-30 years. This finding is consistent with the systematic review that combined evidence from 48 previous reviews of studies which showed that young adults under the age of 35 were more often affected by anxiety disorders (6). In addition, this can be due to the transition from college as students to a more challenge and competitive environment as PRPs undergoing training. Furthermore, adaptation to a completely new environment, increase workload and demand of PRP training can contribute to tension and without cope the stress well, it may lead to anxiety and depression (7).

On the other hand, results obtained also showed that female gender is at a greater risk of developing anxiety and depression. This is noteworthy, particularly because more than half of the PRPs in Sarawak are females. Previous studies also emphasised on the fact that females are at greater risk of developing anxiety and depression (8, 9). The results supported by the fact that female is twice as likely as men to have general anxiety and other related conditions with a female to male ratio of 1.9:1 (8). Possible reasons for this disparity can be less effective coping mechanisms to deal with anxiety and depression in females, higher proportion of females in pharmacy field as PRPs, stress due to self-expectation, feeling of lack of competence, and males being more forgetful and less expressive about their feelings

of anxiety and depression (6, 10). Apart from that, females are more likely to report concern and have a tendency to over report medical and psychological symptoms compared to males (10, 11).

With regard to race background, a previous study reported that adolescents in Malaysia of Chinese ethnicity (20.2%) more depressed compared with Malay adolescents (15.2%) (12). Similarly, our study found that Chinese PRP (83.3%) were more depressed compared with Malay PRP (11.1%). However, there were insufficient data from the survey to investigate the role of this factor further (12).

Previous studies showed that religion inclination can have a net positive effect on reducing the level of depression and anxiety among students. Believing in God as a source of power and hope can be the main reason for the low level of depression and anxiety among more religious students (13). Increase in the time spent in religious activities resulted in decrease in the scores of depression, trait and state anxiety and probably, in decrease of substance abuse (14). In our study, Christian had highest prevalence of anxiety and depression (61.1%) followed by Buddhist (22.2%) and Muslim (13.9%). However, there are no studies identified there is association between different religion and anxiety and depression level.

Marriage is associated with longer life and better health in both men and women. Regardless of gender, married people enjoy better mental health. Marriage connects people to other individuals, to social groups, and to other social institutions, which are additional sources of social benefit. In our study, it revealed that PRP with married status had lowest prevalence of anxiety and depression (2.8%) followed by PRP in a relationship (16.7%) and PRP in single status had highest prevalence of anxiety and depression. Another study by Beatrice et al also revealed the similar finding that the relationship between levels of anxiety

and depression and marital status significantly associated which found most of individuals who did not have levels of anxiety and depression were married. Studies found being alone increases up to eight times the chance of developing signs of anxiety and/or depression (15).

Anxiety studied in this paper in association with financial burden, which include car loan, PTPTN, house loan or rental, and others. Significant improvements relative to the comparison condition were found in terms of decreased symptoms of anxiety and depression and enhanced quality of life (16).

The prevalence of mental disorders comes at a substantial financial cost (17). Greater financial anxiety is associated with higher debt, fewer assets, and fewer financial resources with which to weather an emergency (18). Moreover, financial anxiety is not just associated with total asset and debt levels, but also with the financial habits related to building assets and managing debt (18).

The increased risk of major depression in the offspring of depressed parents is well known (19). In this study, all the participants do not have the family history of anxiety and depression, but only one participant claimed his or her mother has working stress. Hence, this study cannot interpret whether presence of family history will lead to anxiety and depression among PRPs.

From the results obtained, the high prevalence of anxiety and depression could be explained with the fact that PRPs have to deal with stressors specific to PRP training in addition to normal stressors of daily life. These include difficult cases, lack of leisure time, and pressure of work and information overload (6). In addition, PRPs absorption into government sector as permanent pharmacist had been replaced with contract-based setting and this might raise higher pressure in PRPs due to the competitive environment in which the assessments and performances are compared and assessed.

The limitations of this study include sample size and sample characteristics. Small sample size obtained might not be representative of the all PRP in Hospital Sarawak. Apart from that, the different number of PRPs in each category of different characteristics in terms of age, gender, facilities, race, religion, marital status, financial burden and family history might lead to biasness of results. However, it is difficult to have the similar number of PRPs in each category for all characteristics. For instance, most undergraduates completed their study at the age of less than or equal to 25 years old.

On top of that, AKUADS scale with a cut off score of 19 points was the validated instrument that used to assess the presence of anxiety and depression among PRP. However, severity of anxiety and depression was not able to be graded which make the results incomparable. Other than that, the reasons behind the anxiety and depression among PRPs were not identified; and the risk factors for anxiety and depression and their effect on working performance of PRPs cannot be determined from this study. Hence, further studies should take all these limitations into consideration and explore the factors that influence anxiety and depression among PRPs and its impact on their working performance.

CONCLUSION

This study suggests that provisionally registered pharmacist experience anxiety and depression which can be influenced by different factors such as age, facilities, gender, race, religion, marital status, financial burden, family history and family. There is a need for the counselling services or other strategic plans to be made available to the provisionally registered pharmacists to control their anxiety and depression.

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APPENDIX

Anxiety and depression among housemen and provisionally registered pharmacists: a cross-sectional study.

1	Age	≤25	26-30	≥30		
2	Gender	Male	Female			
3	Race	Malay	Chinese	Indian	Others	
4	Occupation	PRP	Housemen			
5	Religion	Muslim	Christian	Buddhist	Hindu	Others
6	Marital status	Single	In a relationship	Married	Divorced	
7	Financial burden (PTPTN loan, car loan, house loan, etc)	Yes	No			
8	Family history of depression and anxiety	Yes	No			

		Never (0)	Sometimes (1)	Mostly (2)	Always (3)
1	Have you been sleeping less?				
2	Have you had lack of interest in your daily activities?				
3	Have you lost interest in your hobbies?				
4	Have you been anxious?				
5	Have you had a sensation of impending doom?				
6	Have you had difficulty in thinking clearly?				
7	Have you preferred to be alone?				
8	Have you felt unhappy?				
9	Have you felt hopeless?				
10	Have you felt helpless?				
11	Have you been worried?				
12	Have you cried?				
13	Have you thought of taking your life?				
14	Have you had loss of appetite?				
15	Have you had retrosternal burning?				
16	Have you had indigestion?				
17	Have you had nausea?				
18	Have you had constipation?				
19	Have you felt difficulty in breathing?				
20	Have you felt tremulous?				
21	Have you felt numbness of hands and feet?				
22	Have you felt a sensation of tension in your neck and shoulder?				
23	Have you had headaches?				
24	Have you felt pain all over your body?				
25	Have you passed urine more frequently?				