Study of Depression among the Nursing Students in a University Medical College of Nepal

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ABSTRACT

Background

Nursing students pass through many stressful situations during their academic course. Depression is frequently observed in this student group.

Objective

To quantify and compare the level of depression among the students undertaking undergraduate and graduate level nursing education in Kathmandu University School of Medical Sciences, Nepal.

Method

A questionnaire based cross-sectional study was carried out among all the students of Proficiency Certificate Level, Bachelor in Nursing Sciences and B.Sc. Nursing in Kathmandu University School of Medical Sciences, studying in different years during the academic year (2013-14) using Beck Depression Inventory. Descriptive statistics was used for computing scores of Beck Depression Inventory while Pearson correlation was used for analysis of association.

Result

Among the total 227 students consenting for the study, 212 were amenable for analysis. All of the participants were females, with mean age 20.10 ($\pm$ 2.2). Almost 40% were found to be having depressive symptoms in variable degrees of severity (Mild-27.4%, Moderate-9%, Severe-1.4%). Frequency of depression was higher among the senior grade students. Agitation, fatigability and sadness were the items having highest mean score; (0.82 $\pm$ 0.72), (0.76 $\pm$ 0.63), and (0.74 $\pm$ 0.52) respectively, while weight loss and loss of libido had the least score, (0.10 $\pm$0.33) and (0.19 $\pm$0.55) respectively. Item on suicidal ideation was significantly correlated with age (p=0.038) and BDI score (<0.001).

Conclusion

Depression is common among the nursing students in Nepal; which may also be related to the multitude of stressors they experience during their studentship.

KEY WORDS

Academic, depression, nursing students, occupation, stress, suicidal ideation

INTRODUCTION

Depression, a mood disorder with lifetime prevalence of 15%, is the third common psychiatric disorder; and found to be present in almost 25% of women with vast range of emotional, behavioral and somatic symptoms leading to disorder of professional function, interpersonal relationship and early occupational retiredness.[1-3] Suicide is one of the most dreaded complication and emergency situation associated with it.[4] Work-related and academic stress is one of the important psychosocial risk factor for depression.[5,6] Hence, occupational mental health and affective well-being among student health professionals have been studied for last two decades.[7-9] Nursing students, in particular, pass through many stressful situations during various stages of their academic course.[9-13]

Literatures have widely discussed burn-out phenomenon among these students; and mood symptoms are the principal manifestations in such situation.[11,12,14,15]

Studies have extensively used Beck Depression Inventory (BDI) in order to quantify depressive symptoms among the nursing students.[16] More than 50% of nursing students quantified for some degree of depression in a medical University of Iran[1]; while almost 44% were found to be depressed in a Northern Greek Study[4]; and 60% in a Medical University Nursing College.[10]

Keeping these facts under consideration, we intended to conduct a questionnaire based cross-sectional study among the Nursing students of Kathmandu University School of Medical Sciences (KUSMS), Nepal aiming to evaluate for emotional stress, quantify and compare the level of depression among both the undergraduate and graduate level Nursing students in their different years of education.

METHODS

This questionnaire based descriptive cross-sectional study was carried out among all the students of Proficiency Certificate Level (PCL), Bachelor in Nursing Sciences (BNS) and B.Sc. Nursing in KUSMS, studying in different years (during the academic year 2013-14); after getting approval from the Institutional Review Committee (IRC).

The students were explained about the aims and objectives of the study being conducted in detail. Informed consent was taken after ensuring confidentiality of the information gathered in the questionnaire being used and clarifying that it would only be used for the purpose of the research intended. All the consenting students were taken up for the study.

Beck Depression Inventory (BDI)was used for the study.[16] It is a 21-item self-report instrument for measuring severity of depression in adults and corresponds with the DSM-IV diagnosis of depressive disorder.[3] Responses to items for the present study covered the 'past two weeks, including today'. Responses on the BDI items range from 0 to 3 with higher values indicating higher severity. The total score (63) can be divided into categories reflecting severity of depression. Accordingly, the minimal range of depression (Normal or No Depression) is 0–11, the mild range is 12-19, the moderate range is 20–26 and the severe range is 27–63. The internal reliability analysis of BDI is indicated as α-coefficient of 0.827. Item nine of the scale has been used to examine suicidal tendency associated with the depressive symptomatology.[4,16]

SPSS Version 20 was used for data entry and statistical analysis. Descriptive statistics was used to analyze socio-demographic factors, compute mean and total scores of BDI items and grade severity of depression while Pearson Correlation was used for analysis of association between the variables, and to recognize the statistical significance of the differences.

RESULTS

Total 227 students consented for the study. Fifteen of the students submitted the incomplete questionnaire which was removed before analysis. In four questionnaires, response to the BDI item 21 was found missing. This item incorporates the statement on 'sexual interest' which might have been inconvenient to be responded by the particular subjects. These four questionnaires with missing response to this statement were, however, taken up. The students undergoing research activities and community posting (BNS 3rd Year and B.Sc. Nursing 4th Year) did not participate in the study because of their unavailability during the study period. Ultimately, the total sample size came out to be 212.

Tabulation of the demographic variables (Table-1) revealed that above 50% of the students belonged to the age group 20-24 years; B.Sc. Nursing students comprised more than half of the study sample, and almost all of the senior level students had consented for the study. The mean age of the sample was 20.1 (±2.2) while the median age was 20. In the study, 19 of the subjects did not wish to declare their caste. Among the 193 who entered their caste/ ethnic group, almost 35 % were Newars followed by 30% Brahmins. All of the Nursing students were females; so, gender wise comparison was not possible in this study.

Calculation of the mean scores of the individual items of BDI (Table-2) shows the maximum mean score in item 11-agitation (0.82 ± 0.72) and item 17- fatigability (0.76 ± 0.63), followed by item 1- sadness (0.7 4± 0.52). Item 9- suicidal thoughts had mean score 0.19 (±0.43). Item 19- loss of weight and item 21- loss of interest in sex had the least mean score, (0.10 ±0.33) and (0.19 ±0.55) respectively.

On quantifying the severity of depression according to total BDI score (Table-3), almost two-fifth of the nursing students were found to be having various degrees of

Table 1. Sociodemographic variables of the nursing students in the study

Demographic Variables		Frequency (%) N=212
Age group*	< 19 years	101 (47.6)
	20 - 24 years	111(52.4)
Nursing stream	PCL Nursing	58 (27.4)
	BNS	47 (22.2)
	BSc. Nursing	107 (50.5)
Years of study	PCL 1st Year	8 (3.8)
	PCL 2nd Year	13 (6.1)
	PCL 3rd Year	37(17.5)
	BNS 1st Year	23 (10.8)
	BNS 2nd Year	25 (11.8)
	BSc. Nursing 1st Year	26 (12.3)
	BSc. Nursing 2nd year	28(13.2)
	BSc. Nursing 3rd Year	52 (24.5)
Caste/Race	Brahmin	62 (29.2)
	Chhetri	30 (14.2)
	Newar	73 (34.4)
	Mongolion	25 (11.8)
	Terai/Madhesi	1 (0.5)
	Others	2 (0.9)
	Not entered	19 (9.0)

*Mean (± Standard Deviation) =20.10 (±2.235); Median Age = 20.00

Table 2. Mean scores of the individual items in the BDI scale

BDI Items (N=212*)	Minimum	Maximum	Mean	Std. Deviation
1. Sadness	0	2	0.74	0.52
2. Pessimism	0	3	0.31	0.56
3. Past Failure	0	3	0.27	0.54
4. Loss of pleasure	0	3	0.56	0.62
5. Guilty feelings	0	5	0.58	0.69
6. Punishment feelings	0	3	0.59	0.84
7. Self-dislike	0	2	0.38	0.52
8. Self-criticalness	0	3	0.54	0.72
9. Suicidal thoughts	0	2	0.19	0.43
10. Crying	0	3	0.61	0.96
11. Agitation	0	3	0.82	0.72
12. Loss of interest	0	3	0.67	0.70
13. Indecisiveness	0	3	0.59	0.82
14. Worthlessness	0	3	0.31	0.63
15. Loss of energy	0	3	0.55	0.68
16. Changes in sleeping pattern	0	3	0.43	0.76
17. Fatigability	0	3	0.76	0.63
18. Changes in appetite	0	3	0.45	0.63
19. Loss of weight	0	2	0.10	0.33
20. Worry	0	3	0.67	0.58
21. Loss of interest in sex (*N=208)	0	3	0.19	0.55

Table 3. Severity of depression among the nursing students in different years of nursing stream

Stream	Years	Grading of Depression			
		No Depression N=132(62.3%) Number (%)	Mild Depression N=58(27.4%) Number (%)	Moderate Depression N=19 (9%) Number (%)	Severe Depression N=3(1.4%) Number (%)
PCL	1st	4 (3)	4 (6.9)	0	0
	2nd	9 (6.8)	4 (6.9)	0	0
	3rd	24 (18.2)	8 (13.8)	3 (15.8)	2 (66.7)
BNS	1st	17 (12.9)	2 (3.4)	4 (21.1)	0
	2nd	14 (10.6)	7 (12.1)	4 (21.1)	0
B.Sc.	1st	14 (10.6)	9 (15.5)	2 (10.5)	1 (33.3)
	2nd	16 (12.1)	9 (15.5)	3 (15.8)	0
	3rd	34 (25.8)	15 (25.9)	3 (15.8)	0

Table 4. Inter-correlations among the different variables with the total and mean BDI score and the item on 'suicidal thought'

Variables (N=212#)	Mean BDI Score		Total BDI Score		Suicidal thoughts (BDI Item-9)	
	Correlation coefficient	p- value	Correlation coefficient	p- value	Correlation coefficient	p-value
Age Group	-0.013	0.854	-0.006	0.925	-0.142	0.038*
Nursing Stream	0.007	0.921	0.010	0.887	-0.096	0.162
Years of Study	0.012	0.863	0.015	0.828	-0.117	0.088
Caste/Race (#N=193)	-0.026	0.716	-0.024	0.736	0.015	0.833
Suicidal thoughts (BDI Item-9)	0.564	0.000***	0.571	0.000***	-	-

*p<0.05, **p<0.01, ***p<0.001

depressive symptoms (Mild- 27.4%, Moderate- 9%, Severe- 1.4%). Comparing among their respective streams, most mild depression scores were observed among B.Sc. Nursing students (15.5% each among 1st year and 2nd year, and 25.9% among 3rd year), while moderate depression scores were seen among most of the BNS students (21.1% each in the 1st and 2nd year). Severe depression scores were however found only among three students (Two of PCL 3rd year and one of B.Sc. Nursing 1st year).

On analyzing the inter-correlation between different variables and the mean and total BDI scores, as well as that with the item-9 illustrating suicidal thoughts (Table-4), no significant correlation of total and mean score was found with the demographic variables like age and caste; while item on suicidal thought (item-9) was significantly correlated with age (p=0.038), and also with the mean and total BDI score (both having p<0.001).

DISCUSSION

Stress among the nursing students may be predisposed by: a) academic pressure, i.e., long hours of study, frequent examinations and assignments, lack of leisure time, fear of failure; and, b) social circumstances, i.e., working environment, frequent contact with debilitated and dying patients and their caregivers, interpersonal conflicts, personal competence, work overload.[11,12] Furthermore, anxiety related to future professional, academic and economical career may have the cumulating effect.[7,15] Such stressors may turn out to be one of the important psychosocial risk factors resulting in the high frequency of mood disorders like depression in this student group, as evidenced in different studies around the world.[1,4,9,10]

Considering these facts, we attempted to explore the level of depression among the nursing students in different streams of nursing program in a University teaching hospital, the institute involved in both the undergraduate and graduate level nursing education.

We tried to examine the depressive symptoms using a well-accepted screening questionnaire[16]; and both the groups of the students (undergraduate and graduate) consented to participate in the study. The mean age of these students corresponded to that of the other studies among the nursing students; hence our study cohort seems to be comparable to the other study population.[4,9] However, these students were only the females, so no gender comparison was possible as in the researches quoted earlier.

Frequency of depression among the different streams of students was almost similar to that of the earlier studies; conducted among both the Eastern and Western student population.[1,4,9,10] Depression seemed to follow an ascending order; more among the senior students in the particular stream, keeping with the findings in the above-mentioned Greek study[9]; as well as that of an independent study among the Turkish University students.[17] In contrast to these findings, fresh nursing students were found having significant depression in an Iranian study.[10] Similarly, in a Scottish study among two student cohorts placed at different clinical settings, first year students exhibited more distress and affective symptoms.[18] This may be related to their ambivalence towards career choice, preparatory phase anxiety or initial adjustment problems in the college. This phenomenon is further supported by the results of a recent Greek study showing the lowest depression score among the second year students[4]; and has been justified with the fact that these students are socially and academically well-adjusted, and their decision to continue the nursing education is more established in comparison to the students in their freshmen years. Our finding, on the other hand, showing higher frequency of depression among the senior students, may be the result of their future career related worries as they approach their graduation; after which they have to start job-hunting.

Although we obtained high frequency of mild and moderate depression scores among our nursing students, severe depression was seen only in three. Absence of lower prevalence of severe depression was also observed in other studies.[4,9,10] It can be explained by the fact that the students having mild to moderate depressive symptoms seek the help of the psychiatrists available in their university hospital; hence, very few tend to be severely depressed.

Analysis of the mean scores of individual items of the BDI scale revealed that mood symptoms like sadness and agitation, and fatigability (anergia) loaded maximally for depression; fitting appropriately with the major criteria of the depression.[2,3] Somatic symptoms like 'weight loss' and 'loss of libido' had the minimal score, which may be related to the social taboo pertaining to sex. Thoughts related to suicide (item-9) had less loading. However, it was strongly correlated with the total and mean score on BDI, as was seen in the study from Greece.[4] Furthermore, this item was also significantly correlated with age. It shows that our nursing students think less about suicide even when they are depressed; but, this thought may come up with the advancement in their age. Nevertheless, the strong positive correlation between the suicidal thought and depression score validates our finding that depressive symptomatology is also a common phenomenon among the nursing students in Nepal.

However, these results should be interpreted with caution. The single-centered cross-sectional design prevents from generalizing the findings to all the nursing students. Similarly, questionnaire based research can only provide the screening prevalence while definitive diagnosis of depression is solely based on the interview by the consultant psychiatrist. Clinical evaluation of the students with high scores on BDI would have been more confirmative in this regard. Furthermore, comparative study among the different nursing colleges would have been useful to get the overall picture. Future researches should be guided to minimize these limitations.

CONCLUSION

Depression is common among the nursing students which may be related to the multitude of stressors they experience during their studentship. Counselling in the entry phase may help them tackle the preparatory worries and adjustment difficulties; while regular psychotherapeutic intervention throughout the academic period is necessary to maintain their academic and clinical performance and prepare for their future career as a nurse.

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