

## PREVALENCE OF DEPRESSION AND ITS ASSOCIATED FACTORS AMONG NURSING STUDENTS IN KARACHI, PAKISTAN

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### Abstract

**Background:** Nursing students have extensive challenges throughout their student life which can lead to physical and psychological problems that cause poor educational performance. Mental health of the students is very essential in order to improve their study performance. We conducted this study to determine the prevalence of depression and its associated factors among nursing students in Karachi, Pakistan.

**Methods:** An institutional based cross-sectional analytical study was accomplished among Post RN BSc. Nursing students at two Nursing Institutions of the Karachi. Data was collected with the help of validated questionnaires "Beck Depression Inventory tool" through convenient sampling technique. The total sample size was 150 participants. Data were analyzed by SPSS version 16.0. Chi-square test was applied to find out the association of depression with demographic variables. Level of significance was considered as at p-value 0.05.

**Results:** The mean age of the student was  $29.4 \pm 5.67$  years of standard deviation. Majority 78 (52%) of the participants were females. All respondents were from the Post RN BSc. Nursing program. More than half 84 (56%) of the participating students were from Semester-III. Only 4 (2.7%) of the subjects were from semester IV. A very high prevalence of depression 114 (76%) was found among nursing students. Among them, 63 (42%) had mild, 28 (18.7%) moderate, 17 (11.3%) severe and 6 (4%) were suffering from very severe depression. Participant's age and the semester was found statistically significant with depression.

**Conclusion:** Present study concluded that depression is highly prevalent in nursing students of two different institutes of Karachi. It is equally important to give counseling session to the nursing students to empower them to cope effectively with present psychological illness for maintenance of their highest educational performance.

**Keywords:** Depression, association, healthcare workers, low middle income country

## Introduction

Nursing students have extensive challenges throughout their student life which can lead to physical and psychological problems that cause poor educational performance. Mental health of the students is very essential in order to improve their study performance. Nursing has been recognized as a noble profession all around the world; however, it is identified as a very stressful profession 1. Current research studies have affirmed that education environment, faculty expectations, lifestyle, low support, financial issue, clinical areas, and family background are found to be the major risk factors for developing depression among nursing students. The prevalence of depression may be reduced by detecting early diagnosis and its treatment 2,3.

Current research study revealed 34% prevalence of depression among nursing students. Furthermore, 41% of depression has been reported in younger students and 43% of depression has been recorded in Asian students. It is documentary evident that depression is found not only in nursing students but also in non-nursing students 4. In addition, 13.3% of mental disorders have been recorded among the Hong Kong general population. Anxiety and depression were the most common type of mental disorder among them 5.

The findings of an updated study highlighted that depression among nursing students can be prevented by developing family and school based strategies and also be implemented 6. Moreover, another research study finding suggested that nursing students' may get counseling from faculty through planned strategies to enhance their mental health and well-being 7. It has been observed that female nursing students are at greater risk to mental health than male students 8.

Besides, a research study conducted on medical students in Karachi, Pakistan disclosed 35.6% of the students had suicidal ideation and 13.9% of the students had planned to attempt suicide. On the other hand, only 4.8% of them succeeded to attempt in their whole life 9. Therefore, there is a dearth of the data related to nursing students. Hence, this study was conducted to determine the prevalence of depression and its associated factors among nursing student at Karachi, Pakistan.

## Methodology

An institutional based cross-sectional analytical study was conducted in two educational institutions, College of Nursing, Jinnah Postgraduate Medical Centre and Ilmiya Institute of Nursing, Karachi. The duration of the study was six months of periods from June to November 2015. The sample size was calculated by using OpenEpi version 3.0. The calculated sample size was 150 of both genders. Post RN BSc. Nursing students were enrolled in the study. Those students who were studying in post basic specialty were excluded from the study. The non-probability convenience sampling method was used to access the participants. Participation was made on a voluntary basis after written informed consent. Departmental permission was granted from both institutions for data collection. Confidentiality of the data was assured.

Data was collected by adopted and validated questionnaire "Beck Depression Inventory tool".

Data was entered and analyzed by SPSS version 16.0. Mean and standard deviation calculated for quantitative variable like age while frequency and percentages for all qualitative variables such as gender, semester, and institution. Chi-square test was used to determine the significant association of depression with demographic variables. Level of significance was considered as 0.05.

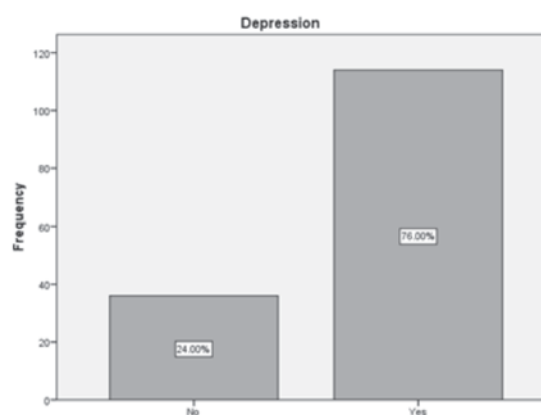
## Results

Table-1 exhibits the socio-demographic information of the participants and its association with demographic variables. In this study, there were 150 participants and their mean age was  $29.49 \pm 5.67$  years of standard deviation. Out of 150 participants, 78 (52%) were female and 72 (48%) male. More than half 85 (56.7%) of the participants were from College of Nursing Jinnah Postgraduate Medical Centre and rest of participants 65 (43.3%) were from Ilmiya Institute of Nursing Karachi. Majority 84 (56%) of the participants were studying in semester 3. Student's age ( $p$ -value=0.005) and semester ( $p$ -value=0.026) found to be statistically significant with depression.

**Table-1 Socio-Demographic factor of study participants and its association (n=150)**

Demographic factor	n	%	p-value
Age (year)			0.005
20-30	103	68.7	
31-40	40	26.7	
41-50	7	4.6	
Gender			0.397
Male	72	48.0	
Female	78	52.0	
Institute			0.026
CON JPMC	85	56.7	
IIN Karachi	65	43.3	
Semester			0.024
1st semester	53	35.3	
2nd semester	9	6.0	
3rd semester	84	56.0	
4th semester	4	2.7	
Students mean age	29.49 ± 5.67*		
* SD: Standard deviation			

Figure-1 reveals the prevalence the depression among participants. In this study, the large number of subjects 114 (76%) had depression. While, only 36 (24%) participants were found depression free.



**Figure-1 Prevalence of depression (n=150)**

Table-2 displays the severity of depression among study participants. Nearly half 63 (42%) of the participants have mild depression. While only 6 (4%), 17 (11.3%) and 28 (18.7%) have very severe, severe and moderate depression respectively.

**Table-2 Severity of depression (n=150)**

Depression Level	n	%
No depression	36	24.0
mild depression	63	42.0
moderate depression	28	18.7
severe depression	17	11.3
very severe depression	6	4.0

## Discussion

Depression is a major mental disorder among the population across the globe. It increases the burden of mental illness among the nurses students. Education possesses more depression for the students who

endure persistent studies, particularly nursing students who have clinical duties as well along study which count as a double burden. In our study total sample size was 150 subjects. Out of 150 subjects, 63 (42%) had mild, and 45 (30%) had moderate to severe depression. This result is not so far from the study conducted on medical students in Rawalpindi, where 37.46% and 14% were suffering from mild and moderate to severe depression 10. In contrast, another research study carried out in Hong Kong among Baccalaureate nursing students and their study results disclosed 24.3% of depression 2 Moreover, in the present study 15.3% nursing student had severe and very severe depression. Similarly, the study which was performed on nursing students in China where 22.9% of the study subjects had found a high score of depression 6. In this study overall prevalence of depression among responders was 114 (76%), it is very close to a study result 63.9% which was done in a government college of India 11, and a study finding 50.1% of the nursing students found to be depressed in Thailand 12. On the other hand, 30.2% of depression has been reported among final semester nursing students in Brazil 13, and 35.8% of depression documented among nurses in Hong Kong 5. In our study, the mean age of the participants was  $29.49 \pm 5.67$  years, which is in the line of a study piloted on medical students of Karachi and their mean age was  $23 \pm 2$  years 14. In the present study, only variable age and semester found statistical significance with depression, which was not supported by the study accomplished in Iran 15. In this study, gender and institution of the participants had not found statistically significant with depression. This finding also supported by a research study conducted among Chinese University Students. They have also not found statistical differences in depression with gender and University 16.

#### Limitations:

Current study was conducted only in two nursing institutes of Karachi. Secondly, non-probability convenience sampling technique and the small sample size was the second vital limitation of the study. Therefore, it is not generalize able for whole population. Furthermore, this study was conducted only in Karachi which is a major city of Sindh Province; result may not be representing the nursing students who are studying outside of the Karachi.

#### Recommendations:

- o Results of this study confirmed that some sort of programs like recreational activities should be initiated in the college along with study which helps to minimize depression.
- o This is also recommended to study on larger sample size and add more variables to address some of the issues related to socioeconomic status teacher and parents.
- o This was a descriptive study; interventional study may be conducted to reduce the mental health related problems of the students to cope with their study.
- o Keep the medical record of students and periodically checkup or screening may helpful to minimize the problem.

#### Conclusion

The current study concluded that depression is extremely high among studied nursing students. Depression can affect students' educational performance. So, it is necessary to initiate counseling session for the nursing students to cope effectively with any type of psychological problem.

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