

FREQUENCY OF DEPRESSION IN ADOLESCENTS IN PUBLIC AND PRIVATE HIGH SCHOOLS IN PESHAWAR CITY, PAKISTAN

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ABSTRACT

Objectives: To determine the frequency of depression in Public and Private High School adolescents in Peshawar Pakistan and to find an association between depression and age, and depression and gender.

Materials and Methods: A descriptive cross-sectional study was conducted over 6 months from April 2021 to October 2021 in public and private colleges of Peshawar city. Colleges were selected through a stratified random sampling technique. A sample of 220 adolescent students aged 16-18 was chosen through a simple random technique using the balloting method. Data from students was collected through a modified pre-tested version of Beck's Depression Inventory. Ethical approval was sought from the IREB (Institutional Review and Ethical Board) of Khyber Medical College. The chi-square test was used to find the relationship between depression and gender and depression and age of adolescent students.

Results: Out of 220 participants, 115 (52.25%) adolescents had depression, 18 (8.18 %) had extreme depression, 27 (12.27%) had severe depression, 44 (20.0%) had moderate depression, 26 (11.8%) had borderline clinical depression. The frequency of adolescents with mild mood disturbance is (18.18%). Depression was found more in female students than males (55%). There was a significant relationship between depression and gender. However, the age categories of adolescents were not statistically related to each other.

Conclusion: The frequency of depression in adolescents is an escalating public health issue. About half of the students in the study were found to have some form of depression. The study further concluded a statistically significant relationship between depression and gender with females having a higher frequency of depression 62 (55%).

Keywords: Depression, Adolescent, High Schools, Peshawar.

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INTRODUCTION

Depression is one of the most common psychiatric conditions, which involves every age group and both genders. Depression in adolescence is common worldwide but often unrecognized. The incidence in girls rises sharply after puberty and by the end of adolescence. The burden is highest in low-income and middle-income countries. Depression is associated with substantial present and future morbidity and heightens suicide risk.¹

Adolescence is an important developmental period for understanding the nature, course, and treatment of depression. Anxiety and depression represent an escalating public health problem among adolescents.² It expresses itself in multiple ways like change in appetite,

loss of energy, and insomnia along with mood changes.

Among psychiatric disorders, depression is responsible for maximum DALYs (disability-adjusted life years) and is also the most common cause of suicide. Globally it is estimated that 10 to 20 % of adolescents experience depression and it is on the rise.³ It is a sensitive transitional phase from childhood to adulthood, during which, many factors can alter the behavior of the developing child which may lead to the emergence of mental health problems in the future.⁴ Half of all people who will ever experience a mental illness in their lifetime will have had their first episode by age 18. Perhaps the greatest dilemma of our general public is that their little information about depression and shows very criticizing perspectives towards individuals with mental health disorders.⁵⁻⁷

Mental health disorders account for 16% of the global burden of disease and injury in adolescents with depressive disorders being the 4th leading cause of suicide in adolescents aged 15 to 19.⁸ In the United States of America, the prevalence of major depressive episodes in adolescents was 15.8%.⁹ Lahore has the highest prevalence (53.4%) followed by Quetta (43.9%) and Karachi (36.7%) with a frequency of 35.8% in men and 50.2% in women.^{4, 10}

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Psychosocial factors such as major life events, family income, family history of depression, marital status, occupation, education level, etc. have a greater impact on depression.¹¹⁻¹³ If these factors are correctly identified, we can come up with strategies to deal with depression keeping in view the psychosocial factors.

Although multiple studies were conducted in Peshawar city on depression they were mostly centered on pregnant women, cancer patients police officers, etc.¹⁴⁻¹⁶ After a thorough literature search, no evidence was found that addresses depression in adolescents in high schools in Peshawar city, thus we aimed to find out the prevalence of depression in high school adolescents of Peshawar city.

MATERIALS AND METHODS

A descriptive cross-sectional study was conducted over 6 months from April 2021 to October 2021 in public and private colleges of Peshawar city. A sample of 220 students was calculated using the WHO prevalence study formula.¹⁷ Colleges were selected through a stratified random sampling technique. Adolescent students aged 16-18 were chosen through a simple random technique using the balloting method. Adolescent students (aged 16-18 years) who are healthy and who have given consent and are willing to survey will be included in our research. Any adolescent with known medical conditions like asthma, T.B., or diabetes will be excluded. Data from students was collected through a modified pre-tested version of Beck's Depression Inventory questionnaire, an instrument for quantifying depression.

'BDI' is a self-reported tool that consists of 21 items, each having 4 4-point scaling range from 0(no symptoms) to 3 (symptoms very intense). Depression among adolescent school-going adolescent will be measured according to their 'BDI' score. A score from 0-10 is considered normal, from 11-16 as mild depression, from 17-20 as borderline depression, from 21-30 as moderate depression, from 31-40 as severe depression, and over 40 as extreme

depression. SPSS-26 was used for data analysis. A chi-square test was used to ascertain the association between age, gender, and depression. Ethical approval was sought from the IREB (Institutional Review and Ethical Board) of Khyber Medical College.

Results

In the sample of 220, 43 (19.54%) participants were aged 16, 61 (27.72%) participants were aged 17 and 116 (52.72%) were aged 18. Among them 116 (52.72%) were males and 114 (51.81%) were females.

Out of 220 participants, 115 (52.25%) adolescents had depression, 18 (8.18 %) had extreme depression, 27 (12.27%) had severe depression, 44 (20.0%) had moderate depression, and 26 (11.8%) had borderline clinical depression. The frequency of adolescents with mild mood disturbance is (18.18%). However, 65 (29.54%) were normal according to the Beck's Depression Inventory. See Table 1 for details.

When the chi-square test was applied to find an association between depression and gender and depression and age, it was found that there is a significant relationship between depression and gender however, age categories of adolescents are not statistically related to each other as shown in table no I.

DISCUSSION

In the United States of America, the prevalence of major depressive episodes in adolescents was 15.8%.⁹ China showed the prevalence of depression in adolescents between 17.98% and 21.73%.¹⁸ Ahmed B et al. found the prevalence of depression ranging from 22% to 60%.¹⁷

Costello et al. performed a meta-analysis comprising about 60,000 adolescents. The studies included were only those that involved interviews and the prevalence was reported to be 5.6%.¹⁹ A recent study involving 7,255 participants was conducted in China.²⁰

Table 1: Showing Frequency of Depression and its Relationship with Age and Gender

Age of Patients	No Depression		Depression				Total n (%)
	Normal n (%)	mild mood disturbance n (%)	borderline clinical de- pression n (%)	moderate depression n (%)	severe de- pression n (%)	extreme depression n (%)	
16	18(41.86)	9(20.93)	3(6.97)	9(20.93)	3(6.97)	1(2.32)	43(19.54)
17	14(22.95)	11(18.03)	8(13.11)	11(18.03)	10(16.39)	7(11.47)	61(27.72)
18	33(28.44)	20(17.24)	15(12.93)	24(20.68)	14(12.06)	10(8.6)	116(52.72)
Total	65(29.54)	40(18.18)	26(11.81)	44(20.0)	27(12.27)	18(8.18)	220(100.00)
							220(100.00)
Gender of Patients							
Male	35(30.17)	18(15.51)	14(12.06)	20(17.24)	6(5.17)	13(11.20)	116(52.72)
Female	60(50.63)	22(19.29)	12(10.52)	24(21.05)	21(18.42)	5(4.38)	114(51.81)
Total	65(29.54)	40(18.18)	46(20.90)	44(20.0)	27(12.27)	18(8.18)	220(100.00)

Jadoon NA et al. in their study also reported a high prevalence of anxiety and depression (43.89%) among medical students. Prevalence of anxiety and depression among students in the first, second, third, fourth, and final years was 45.86%, 52.58%, 47.14%, 28.75%, and 45.10% respectively. Female students were found to be more depressed than male students (OR = 2.05, 95% CI = 1.42-2.95, $p = 0.0001$).²¹

In a study conducted in the Shandong province of China, the prevalence of depression was high in school students at 52.4%. Female students exhibited a higher rate of 60.25% than male students.²² The study finding is consistent with another Indian study, which showed a higher prevalence rate of 45.3% depression among female medical students.²³ A study conducted in Greece showed a prevalence rate of 5.67 % for depressive episodes according to ICD-10 and 17.43 % for a broader definition of depressive symptoms.²⁴

All of these show a high prevalence of depression in high school-going adolescents from different regions of the world, with females having a relatively higher frequency of depression compared to males.

CONCLUSION

The frequency of depression in adolescents in Public and Private High Schools in Peshawar City is an escalating public health issue. A very high frequency of depression was found in the high school-going adolescents of Peshawar, Pakistan. The study further concluded a statistically significant relationship between depression and gender with females having a higher frequency of depression.

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Authors	Conceived & designed the analysis	Collected the data	Contributed data or analysis tools	Performed the analysis	Wrote the paper	Other contribution
Umair	✓	✗	✓	✗	✓	✗
Irfan S	✓	✓	✗	✓	✓	✗
Majid A	✗	✓	✗	✗	✓	✗
Rahim A	✓	✓	✓	✗	✓	✓
Irfan M	✓	✓	✗	✓	✓	✗

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.



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