



PREVALENCE OF DEPRESSION AMONG SCHOOL GOING ADOLESCENTS IN BAREILLY DISTRICT (URBAN)

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Abstract

Background- Depression is one of the most common global mental health problems. In adolescents, it is one of the under-recognized health problems due to the inability to disclose their feelings and reluctance to seek psychiatric help. In the last century, the medical community did not accept the existence of depressive disorders in children. It was believed that children are lacking the mature psychological and cognitive structure needed to experience symptoms related to depressive disorders.

Methods- This prospective cross-sectional survey was conducted on school going adolescents of public and private schools of Bareilly district during period of October 2016- November 2017. All the students of both genders of 10 to 18 years of age who were present on the day of visit were included in this study. The study tool used for detecting early symptoms of depression in adolescents was simple screening psychological instrument: **Beck Depression Inventory (BDI)**.

Results- This study has shown a significant level of depressive symptoms in a school sample of adolescents in a Bareilly city. Considering that 42.4% of 145 depressed adolescents in this study reported moderate to severe depression, it is understood that a considerable number of adolescents are experiencing turmoil during this phase. This could result in further problems like poor academic performance, poor coping methods and suicidal ideations.

Introduction

Depression is one of the most common global mental health problems. In adolescents, it is one of the under-recognized health problems due to the inability to disclose their feelings and reluctance to seek psychiatric help. In the last century, the medical community did not accept the existence of depressive disorders in children. It was believed that children are lacking the mature psychological and cognitive structure needed to experience symptoms related to depressive disorders. However, a growing body of evidence proved that children not only experience the whole spectrum of mood disorders but also suffer from significant morbidity and mortality associated with them.¹ Recent studies have also confirmed the prevalence of depression (10%–60%) in adolescents.^{1,2,3,4}

World Health Organization reports a rise in the burden of depression globally and a World Health Assembly resolution in May 2012 called for a coordinated response to mental disorders at country level.⁵

In India, adolescent depression is an under researched area. Psychiatric morbidity among school samples of adolescents was found in about 29% of girls and 23% of boys with depression being the most common disorder.⁶ While rates of depression increase from childhood to adolescence for all, a consistent finding is that adolescent girls are between 1.5 to 3 times more likely to develop depression than adolescent boys.⁷

Studies have shown that usual care by primary care physicians fails to recognize 30-50% of depressed patients because patients in whom depression goes unrecognized cannot be appropriately treated.⁸ Several studies from India have evaluated the risk factors for depression among adolescents^{9,10,11} but still there is a need to understand the various risk factors associated with depression among adolescents.

It is reported that more than 70% of the children with depression do not receive appropriate diagnosis or treatment for depression.¹² It is necessary to create awareness about factors associated with depression among students, parents as well as in their teachers with the help of counselors.

One way of addressing the issue of depression among adolescents in India is conducting studies that give an estimate of proportion of adolescents who experience depression at a given time. Such studies will reflect the mental health status of adolescents and can play an important part in determining and planning the kinds of mental health interventions required. This study aimed to estimate the prevalence of depression among school going adolescents in Bareilly (Urban) area.

Methods

Prospective cross-sectional survey was performed on 1000 school going adolescents of public and private schools of Bareilly district during period of October 2016- November 2017. All the students of both genders of 10 to 18 years of age who were present on the day of visit were included in this study.

Prior information to principal of school was given and due permission was sought after explaining the purpose of study. Consent and approval was taken from the school authorities. The data was collected on a predesigned, pretested, semi-structured, schedule by interview technique after obtaining informed consent from the concerned adolescent/principal of school.

The study tool used for detecting early symptoms of depression in adolescents was simple screening psychological instrument: **Beck Depression Inventory (BDI)**. BDI is a series of 21 item with each item rated with a set of four possible answer choices of increasing intensity developed to measure cognitive, behavioral, affective, and somatic component of depression. When the test is scored, a value of 0 to 3 is assigned for each answer and then the total score is compared to a key to determine the depression's severity. The sum of all BDI item scores indicates the severity of depression. Score of 1-10 was taken as No Depression, 11-20 as Mild, 21-30 as moderate and more than 30 as severe depression.³

All adolescents who scored for mild, moderate and severe depression formed the 'depression group'. Data was analyzed using Statistical Package for Social Sciences, version 23 (SPSS Inc., Chicago, IL). Results for continuous variables are presented as mean $\pm$ standard deviation, whereas results for categorical variables are presented as number (percentage). The level $P < 0.05$ was considered as the cutoff value or significance.

Results

Overall, the prevalence of depression in selected students was found to be 14.5% wherein the prevalence of severe depression was 2.1%, followed by moderate depression (4.2%), and mild depression (8.2%). The prevalence of depression was found to be higher in male.

Out of 1000 studied subject's majority (456) 45.6% were in 13 – 15 years of age group and male were prominent in our study. Parental fighting was found major reason for depression in school going adolescents.

Out of 1000 studied subject's majority (692) 69.2% were in male while female was found to be (308) 30.8% in our study.

Table No.01: Age group wise distribution of studied patients

Age group (Year)	Number of patients (N=1000)	Percentage
10-12	238	23.8%
13-15	456	45.6%
16-18	306	30.6%
Mean age	14.12 years	

While 855 (85.5%) patient were no depression, remaining 145 (14.5%) were depression.

Table No.02: Prevalence of depression in studied patients.

	Number of study subject (%)
No depression	855 (85.5)
Depression	145 (14.5)
Total	1000 (100.0)

Of 145 depressed found adolescents a great majority 82 (56.6%) were in mild depression followed by 42 (28.9%) moderate depression While 21 (14.5%) patients found to be severe depression.

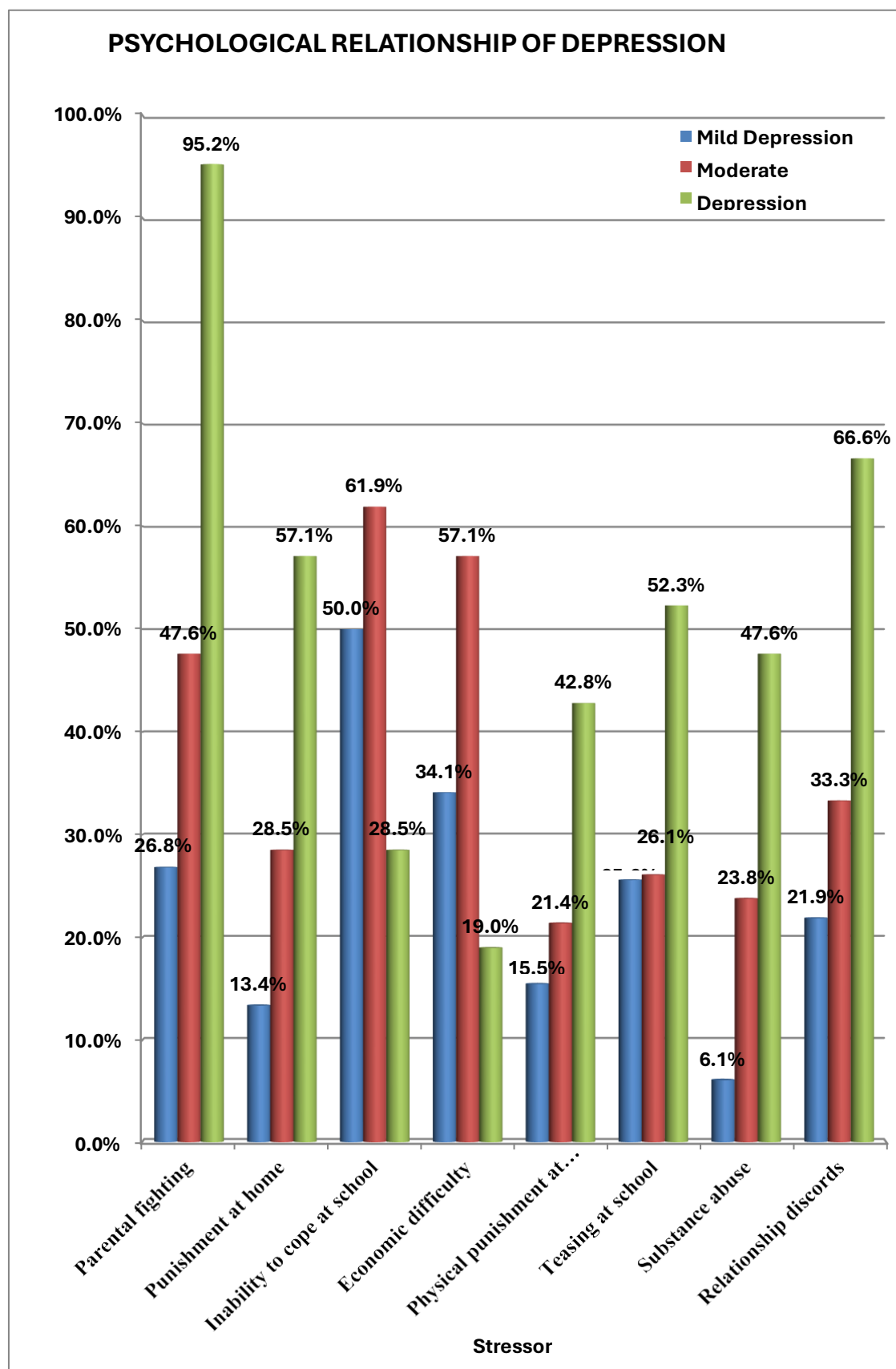
Table No.03: Categorization of depression on the basis of severity

Categorization of depression	Depressed Number of study subject (n=145) (%)	Total (n=1000) (%)
Mild depression	82	56.6
Moderate depression	42	28.9
Severe depression	21	14.5

On perusal of the data mentioned in the table we find that various stressor like, parental fighting, punishment at home, inability to cope at school, economic difficulty, physical punishment at school, teasing at school were distributed.

Table No. 04: Psychological relationship of depression

Stressor	Mild Depression (%) (n=82)	Moderate Depression (%) (n=42)	Severe Depression (%) (n=21)
Parental fighting	22 (26.83%)	20 (47.62%)	20 (95.24%)
Punishment at home	11 (13.41%)	12 (28.57%)	12 (57.14%)
Inability to cope at school	41 (50.0%)	26 (61.90%)	6 (28.57%)
Economic difficulty	28 (34.15%)	24 (57.14%)	4 (19.05%)
Physical punishment at school	13 (15.58%)	9 (21.43%)	9 (42.86%)
Teasing at school	21 (25.61%)	11 (26.19%)	11 (52.38%)
Substance abuse	5 (6.10%)	10 (23.81%)	10 (47.62%)
Relationship discords	18 (21.95%)	14 (33.33%)	14 (66.67%)



In the religion table shows that four groups were statistically highly significant $p < 0.001$.

Table No.05: Religion wise distribution of studied patients

Religion	Number of patients (N=1000)	No Depression (%)	Mild Depression (%)	Moderate Depression (%)	Severe Depression (%)	P Value
Hindu	734 (73.4%)	657 (65.7)	43 (4.3)	23 (2.3)	11 (1.1)	<0.001
Muslim	188 (18.8%)	151 (15.1)	22 (2.2)	9 (0.9)	6 (0.6)	
Sikhism	58 (5.8%)	36 (3.6)	11 (1.1)	7 (0.7)	2 (0.2)	
Others	20 (2.0%)	9 (0.9)	6 (0.6)	3 (0.3)	2 (0.2)	

Discussion

In the present study the majority 85.5% of patients did not show the signs of depression while the **prevalence of depression was reported in 14.5%** adolescents in our study, these findings were comparable with the study done by **Shukla NK et al⁸⁶** that observed depression was present in 16.6% of studied subjects, similarly study done by **Bansal V et al²⁴** reported the prevalence of depression as 15.2% of studied school- going adolescents. Another study by **Jayanthi P⁹⁴** studied a total of 2432 school going adolescents where 25% students with depression were confirmed by the Psychiatrist. Also, this was quite higher as reported in our study and Shelke **Umesh et al¹¹⁶** & **Rani Mohanraj et al⁹⁸** study.

These variations might be due to difference in the baseline characteristics of the study population conducted in different geographical regions or may be attributed to the difference in method for the assessment of depression.

Categorization of depression

Author	Severity of depression		
	Mild	Moderate	Severe
Malik M et al ³ (n=374)	39.8%	11.3%	1.8%
Kunal Kishore Jha et al ⁴⁶ (n=695)	23.4%	18.1%	7.7%
Rani Mohanraj et al ⁹⁸	37.1%	19.4%	4.3%
Jayanthi P ⁹⁴ (n=612)	25.4%	45.7%	19.6%
Present study (n=145)	56.6%	28.9%	14.5%

The association was found to be highly statistically significant as the number of Hindu (53.1%) were feeling depressed as the present study included 73.4% of Hindu in our study followed by Muslims 37(25.5%) out of 145 total depressed students and 7.6% others and the association was found to be statistically significant ($p < 0.05$) as there was a huge difference between the number of Hindu samples as compared to Muslims and others. Comparable data was observed by **Jha et al⁴⁶** who stated depression was found to be statistically significantly associated with gender and religion ($P < 0.005$)

Declaration

Funding- Nil

Conflict of Interest- None

Ethical approval -the study was approved by Institutional ethical Commiteee

Limitations

The main limitation of the study was the absence of an external criterion like a clinical examination against which the validity of the self-report measures could be judged. Obtaining additional information from other sources like parents and teachers would have enhanced validity.

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