



STUDY OF DEPRESSION IN SCHOOL GOING ADOLESCENT STUDENTS IN VIZIANAGARAM DISTRICT, ANDHRA PRADESH.

Medical Science

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ABSTRACT

Depression is a common illness worldwide, occurring in all age groups including infants. Due to their difficulty in expressing their thoughts and reluctance to seek psychiatric treatment, it is one of the under-recognized mental health issues that affect adolescents. Aim is to study the prevalence of depression and to determine the clinical factors responsible for depression among school going adolescent students in Vizianagaram District, Andhra Pradesh. Adolescents studying 8th - 12th standard in Govt. and Pvt. Schools in Vizianagaram District, Andhra Pradesh were the subjects of this cross-sectional study, which was conducted from January 2023 to March 2023. The self-administered Beck's Depression Inventory II questionnaire was used to determine the prevalence of depression. Among 800 selected students, the prevalence of depression was found to be 57%, among which the prevalence of severe depression was 8%. Female gender was found to have significantly ($P < 0.001$) higher prevalence of depression (54.95%) than males (45.8%). In comparison to younger students, older students were found to be more depressed. Statistically significant relationship was found between participant's gender and prevalence of depression ($P < 0.05$). The main significant clinical factors responsible for depression were determined to be guilt feelings (59%) followed by sadness (50%), past failure (39%) and pessimism (34%). Depression in adolescents is frequently missed and ignored. There is a need to develop a plan to assess all the students for the mental health issues and provide them with psychological support and motivation to face the competitive world.

KEYWORDS

Depression, adolescents, mental health

INTRODUCTION:

Depression is a common illness worldwide, occurring in all age groups including infants. ^[1] World Health Organization estimates 322 million people amounting to 4.4% of the world population suffer from Depression, nearly half of these people live in the South-East Asia and West Pacific regions (which include India and China). ^[2] Depression is one of the leading causes of disease burden worldwide and ranked as the second leading cause of disability. Globally, depressive disorders are ranked as the single largest contributor to non-fatal health loss (7.5% of all YLD).

Adolescence is a unique and formative time. Physical, emotional and social changes, including exposure to poverty, risk-taking behaviors such as substance use or sexual abuse, or violence, can make adolescents vulnerable to mental health problems. Genetic predisposition can increase vulnerability, but it is often the combination of various factors that triggers depressive episodes. Common risk factors include family history of depression, stressful life events, academic pressures, social isolation, low self-esteem and conflicts within interpersonal relationships.

Over the years, it is recognized that the age of onset for depression is decreasing, now increasingly being recognized in children and adolescents. Globally it is estimated that 1 in 7 (14%) 10- to 19-year-olds experience mental health problems, yet these remain largely unrecognized and untreated.

Depression in adolescents is frequently missed, possibly owing to the prevalence of irritability, mood instability, and reactivity, unexplained physical and oscillating symptoms in this age group. Early recognition and intervention can often prevent the later development of severe depressive illness that may lead to serious social and educational maladjustments such as substance misuse, eating disorders and a major risk of suicide. There is not a single ideal screening or an assessment method for evaluating depression. The diagnosis and treatment of depression, however, frequently involves combination of most effective diagnostic tools followed by clinical interviews. The development of depression prevention and management strategies can benefit from a detailed study of the prevalence of depression and related socio-demographic characteristics in adolescents.

AIMS AND OBJECTIVES:

To study the prevalence of Depression in School Going Adolescent Students in Vizianagaram District, Andhra Pradesh. To determine the socio-demographic and clinical factors associated with depression among school going adolescent students in Vizianagaram District, Andhra Pradesh.

MATERIALS AND METHODS:

Study Design:

It is cross-sectional study conducted in Government and Private schools in Vizianagaram District, Andhra Pradesh over a period of 3 months from January 2023 to March 2023.

Study Population:

School going adolescents of 8th to 12th standard in Government and Private schools in Vizianagaram District, Andhra Pradesh were included in the study. All the students studying in 8th to 12th standards were eligible to participate in the study.

Sample Size:

Using the sample size estimation chart from the WHO practical manual, a sample size of 576 was determined to be necessary based on the 40% of teenagers enrolled in schools. The total sample size was 760, which was rounded up to 800 adolescents, considering the design effect of 1.2 and the nonresponse rate of 10%. 400 students from government schools and 400 students from private schools were finally included.

Participant Recruitment:

Eight high schools in total - 5 government-run and 3 private - were located close to MIMS in the Vizianagaram district of Andhra Pradesh. A school from each category was chosen using a basic random procedure from a table of random integers, with stratified random sampling at multiple stages used to assure equal representation. Two classes each from 8th - 12th class were selected from each of these chosen schools by simple random method. Adolescents who gave consent and were present at the time of the study were both sources of data.

Study Tool:

Self-structured proforma is used to collect general and demographic

information of the study group which includes name, age, sex, place of residence, type of school, type of family, birth order. The Beck's Depression Inventory II (BDI) is used in this study. The self-structured 21-item questionnaire comprises of multiple-choice answers and each answer being scored on a scale of values 0-3 with the maximum possible score of 63. A score of 0–13 was considered as normal, 14–19 as mild/borderline depression, 20–28 as moderate depression, and 29–63 as severe depression.

The children received the questionnaire collectively in their classes at a scheduled time. The children were instructed to read the questionnaire and provide their best responses. Researchers were present to address any questions the children had or to clarify any instructions. When a child was unable figure out the questions, an interview was conducted to finish the study.

Statistical Analysis:

GPSS version 8.4 is used for statistical analysis. For continuous variables, descriptive analyses were calculated using the mean and standard deviation, and frequency with a percentage for nominal variables. To compare categorical variables, the Pearson's chi-square test was employed.

Table No.1 Socio-demographic Data And Distribution Of Participants

Variable	Number of study participants, n (%)
Sex	
Male	480 (60)
Female	320 (40)
Standard / Class	
8	80 (10)
9	144 (18)
10	176 (22)
11	240 (30)
12	160 (20)
Age of student (years)	
14	112 (14)
15	160 (20)
16	240 (30)
17	168 (21)
18	120 (15)
Family type	
Nuclear	496 (62)
Joint	304 (38)
Birth order	
First	320 (40)
Second	224 (28)
Third	160 (20)
Fourth and above	96 (12)

Ethical Consideration:

Prior to starting the study, the principals of each chosen school were asked for their written consent by clearly outlining the study's objectives. After informing the students about the study's goals and that their replies would be kept confidential, their informed consent was obtained from each class. The Institutional Ethics Committee, MIMS, Vizianagaram gave permission for the study to be conducted.

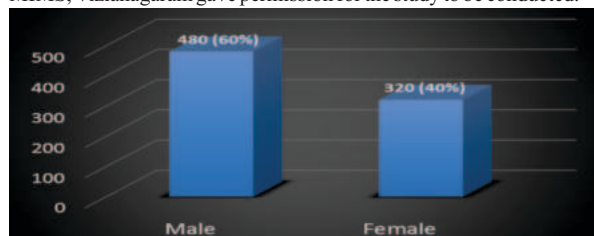


Figure 1. Gender-wise Distribution of Study Population



Figure 2. Standard / Class wise Distribution of Participants

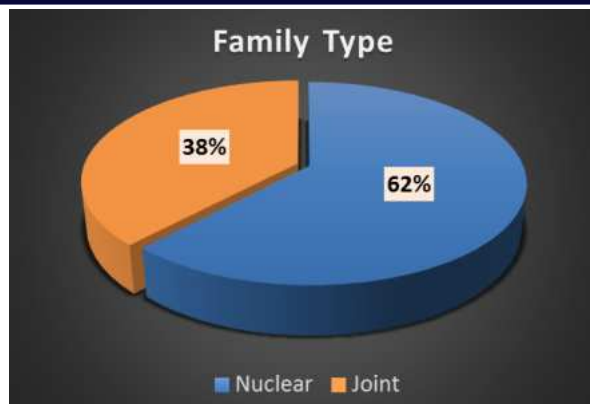


Figure 3. Type of Family

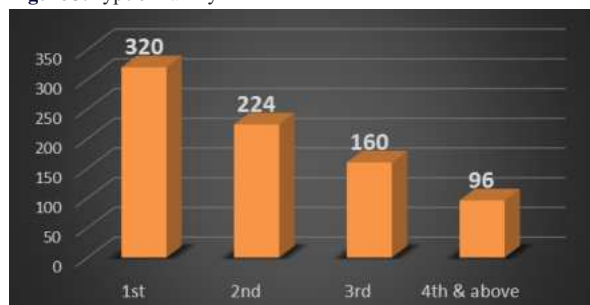


Figure 4. Birth Order wise Distribution of Participants

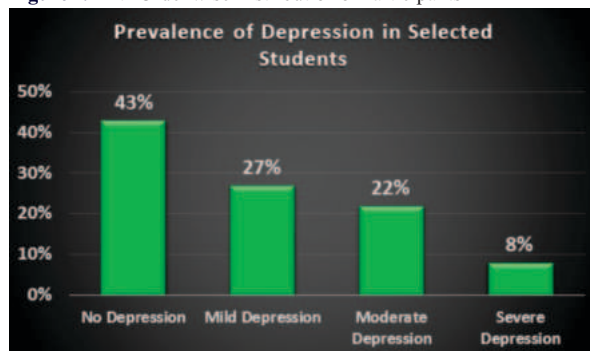


Figure 5. Prevalence Of Depression In Selected Students

RESULTS:

The study included 800 participants studying in class 8th to class 12th who submitted answers to all the questions. The mean age of selected students was 16.04 +/- 1.24 years (range 14 – 18 years). Among the participant students, 480 (60%) were Male and 320 (40%) were female. Most participants were from a nuclear family (62%). The participating students were divided as per their sex, age, class, family type and birth order in their family, as shown in Table 1 and Figure 1 to 4.

The prevalence of depression was found to be 57% overall among the sampled students, with mild depression (27%) being the most common type, followed by moderate depression (22%), and severe depression (8%). [Figure 5]

Female gender was found to have a higher prevalence of depression (54.95%; $P < 0.005$) [Table 2 and Figure 6]. Prevalence of moderate (18.10%) and severe depression (9.80%) was found to be more in joint families [Figure 7]. Students who were born first in the family had the lowest prevalence of depression. Second and third births had an increased prevalence, whereas fourth and higher births had a decline. [Figure 8]. There is an increase in prevalence of depression with increase in the Age [Figure 9]. Increased prevalence of depression is seen among 10th, 11th & 12th standard students [Figure 10]. The main factors responsible for depression were determined to be Guilt feelings (59%) followed by Sadness (50%), Past failure (39%) and Pessimism (34%) [Table 3]. The students agreed that no single reason was responsible for depression, rather it was combination of peer pressure, relationships, studies, social groups, and quarrels at home that caused depression.

Table 2. Socio-demographic Data And Severity Of Depression

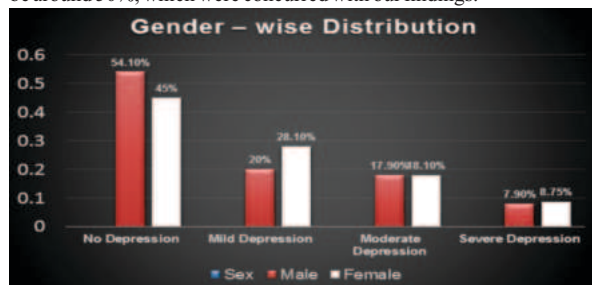
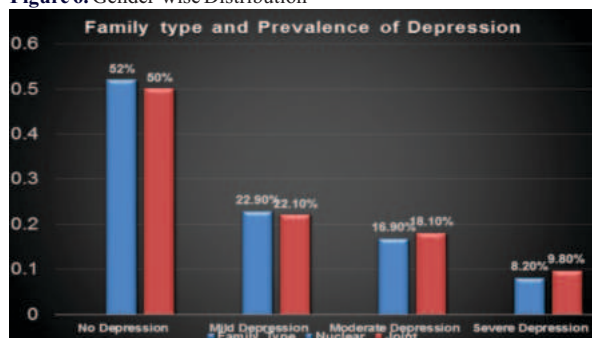
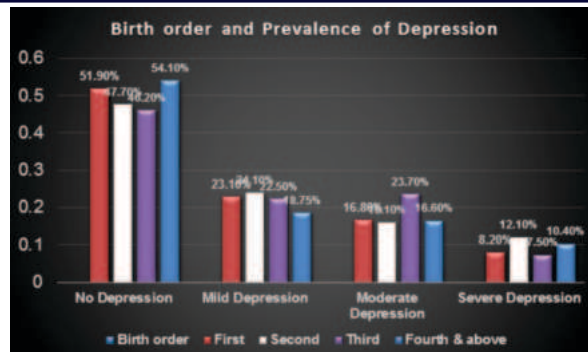
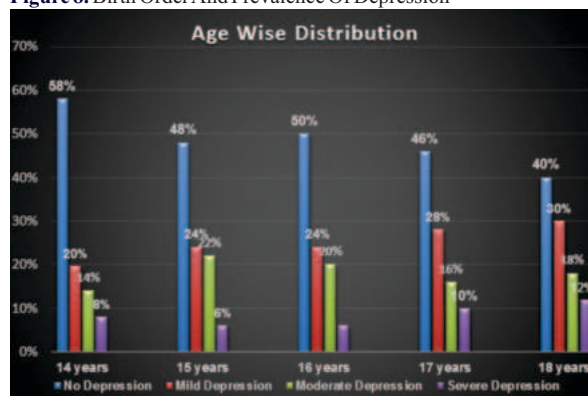
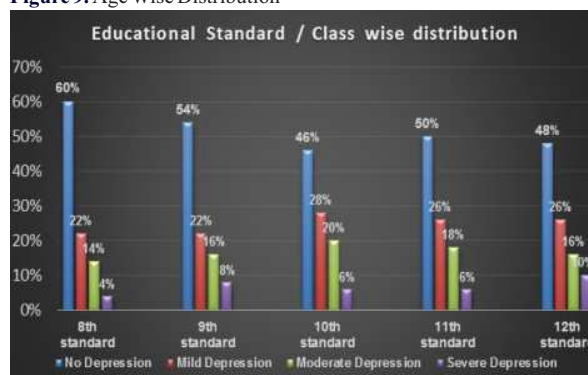
	No Depression	Mild Depression	Moderate Depression	Severe Depression	χ^2	df	P value
Sex							
Male	260 (54.1)	96 (20)	86 (17.9)	38 (7.9)	8.813	3	0.0318*
Female	144 (45)	90 (28.1)	58 (18.1)	28 (8.75)			
Total	404 (50.5)	186 (23.28)	144 (18)	66 (8.25)			
Family Type							
Nuclear	258 (52)	114 (22.9)	84 (16.9)	40 (8.2)	1.07	3	0.7844
Joint	152 (50)	67 (22.1)	55 (18.1)	30 (9.8)			
Total	410 (51.2)	181 (22.6)	139 (17.3)	70 (8.75)			
Birth order							
First	166 (51.9)	74 (23.1)	54 (16.8)	26 (8.2)	8.793	9	0.4566
Second	107 (47.7)	54 (24.1)	36 (16.1)	27 (12.1)			
Third	74 (46.2)	36 (22.5)	38 (23.7)	12 (7.5)			
Fourth & above	52 (54.1)	18 (18.75)	16 (16.6)	10 (10.4)			
Total	399 (49.8)	182 (22.7)	144 (18)	75 (9.3)			

Note: Chi square statistical test used to calculate p value, p value <0.05 considered as significant.

DISCUSSION:

Teenage depression is typically linked to poor academic performance, a hostile environment at school, school abandonment, dysfunctional relationships, a toxic home environment, substance misuse, sexual abuse, internet addiction, risky sexual activity, and financial struggles. Antisocial behavior and substance addiction problems are particularly common among young people with depression. It is crucial to determine how common depression is among school-age adolescents because of this.

Among 800 participants, 456 participants have shown the signs of depression. Overall, the prevalence of depression in selected students was found to be 57%. Severe depression 8%, Moderate depression 22%, Mild depression 27%. In studies conducted by Nagendra et al., Jha, et al., and Malik et al., the prevalence of depression was found to be around 50%, which were concurred with our findings.^[1-5]

**Figure 6. Gender-wise Distribution****Figure 7. Family Type And Prevalence Of Depression****Figure 8. Birth Order And Prevalence Of Depression****Figure 9. Age Wise Distribution****Figure 10. Educational Standard / Class Wise Distribution**

In our study, mild depression (27%) was the most prevalent type of depression, followed by moderate depression (22%), and severe depression (8%). Three studies—Jha et al. (49.2%), Naushad et al. (39.8%), and Malik et al. (26.6%)—found that mild depression was rather common. The incidence of moderate depression (41.2%) predominated in a study by Malik et al., although the prevalence of severe depression (11.4%) was consistent with our data.

The findings of the study showed a significant relationship between participant's gender in terms of the prevalence of depression ($P < 0.05$). Gender has become a key factor associated with depression. According to the findings of past studies, females were shown to have a somewhat higher prevalence of depression (54.95%) than males (45.8%). On the contrary, Naushad et al. and Malik et al. reported a higher prevalence of depression among males which might be attributed to diverse culture points, the data collection tools, and settings of survey and timings. Angold et al. also attributed the preponderance of depression in adolescent females to hormonal changes in puberty.^[6] There was increase in the prevalence of depression in 10th and 12th standards according to our study. Bhasin et al. also reported a higher prevalence of depression in 10th and 12th division students due to the pressure of academic performance in the board examinations. But Jha et al. did not find any difference between the grades.

However, the influence of birth order and family structure on the prevalence of depression was insignificant ($P > 0.05$) in our study

which was concordance with the other studies.^[3] We made an effort to pinpoint the factors responsible for high frequency of depression. The main factors responsible for depression were determined to be Guilt feelings (59%), Sadness (50%), Past failure (39%) and Pessimism (34%). It is important to raise awareness of depression-related issues among children, parents, and teachers. Our study sheds information on the severity of the issue among students and its contributing elements, which can be further assessed using qualitative and quantitative techniques.

Table 3. Prevalence Of Depression In Selected Students And Clinical Factors

Clinical features	Number of Participants, n (%)			
	No depression	Mild depression	Moderate depression	Severe depression
Sadness	336 (42)	400 (50)	40 (5)	24 (3)
Pessimism	320 (40)	272 (34)	160 (20)	48 (6)
Past failure	352 (44)	312 (39)	112 (14)	24 (3)
Loss of pleasure	432 (54)	240 (30)	88 (11)	40 (5)
Guilty feeling	240 (30)	472 (59)	72 (9)	16 (2)
Punishment feeling	456 (57)	256 (32)	56 (7)	32 (4)
Self-dislike	472 (59)	208 (26)	96 (12)	24 (3)
Self-criticalness	376 (47)	272 (34)	104 (13)	48 (6)
Suicidal thoughts	592 (74)	144 (18)	40 (5)	24 (3)
Crying	432 (54)	168 (21)	88 (11)	112 (14)
Agitation	416 (52)	224 (28)	96 (12)	64 (8)
Loss of interest	456 (57)	208 (26)	88 (11)	48 (6)
Indecisiveness	408 (51)	232 (29)	64 (8)	96 (12)
Worthlessness	568 (71)	136 (17)	56 (7)	40 (5)
Loss of energy	488 (61)	240 (30)	56 (7)	16 (2)
Change in sleeping pattern	432 (54)	232 (29)	64 (8)	72 (9)
Irritability	440 (55)	248 (31)	80 (10)	32 (4)
Anorexia	456 (57)	240 (30)	56 (7)	48 (6)
Concentration difficulty	384 (48)	216 (27)	112 (14)	88 (11)
Fatigability	512 (64)	200 (25)	56 (7)	32 (4)
Loss of libido	688 (86)	64 (8)	24 (3)	24 (3)

CONCLUSION:

To conclude, the present study revealed that more than half of the students suffered from depression, during the adolescent period. Accordingly, there is a need to develop a plan to assess all the students for the mental health issues and provide them with psychological support and motivation to face the competitive world. This in-turn could minimize the risk for progression into other serious problems like drug abuse, suicide, and violence. School Mental Health Programs which focus on prevention of childhood, and adolescent mental health problems is a comprehensive teamwork of school teachers, and primary care physician rather than sole responsibility of specialist psychiatric care. The emphasis shall be on illness prevention and promotion of positive mental health thereby the development of psychiatric disorders among adults can be avoided.

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Conflicts Of Interest: There are no conflicts of interest

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