



Assessment of Magnitude and Grades of Depression among Adolescents in Raipur City, India

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Abstract

Adolescent depression not only interferes with emotional, social, and academic functioning but also is a proven risk factor for school absenteeism, educational under achievement, substance abuse and suicidal behaviour. But scanty literature is available regarding the various social determinants that have an impact on adolescents' state of mental well-being. The current study was thus undertaken to assess the prevalence and grade of depression among school student of class 12 studying in various Boards of Education in Raipur city. The study also looks into the various social factors that may have an association with depression. A cross sectional questionnaire based study was carried out among 321 students studying in class 12 across various boards of education in Raipur city. Study tool consisted of questionnaire having two parts, first part contains 16 questions about general information of students and second part contains 20 questions of centre for epidemiological studies-depression scale (CES-D). The data was tabulated and analysed using SPSS v16. Chi square (X²) test was applied. A total of 321 students were included in the study. 40.49% students were found to be mildly depressed and 19% had major depression. Depression was found more in females 59.49% as compare to male 56.24%. The percentage of depressed students was highest among students of I.C.S.E. board (48.33%). Among the various factors examined for association with depression, statistically significant factors identified were working mothers, students staying away from home, poor relationship with family and self or parental dissatisfaction with academic achievement. Peer pressure also had significant association. Having a hobby acted as a protection against depression. Based on the identified factors, proactive steps should be taken at school and community levels to ensure healthy school and family environments. Emphasis should also be on IEC activities to ensure recognition of even mild symptoms of depression and their early treatment.

Keywords: Depression, adolescents, centre for epidemiological studies-depression scale (CES-D).

Introduction

For ages, it was a popular notion that children do not suffer from depression. Teenagers with depression were more often than not labelled as being just "difficult" or "moody". It is only recently that the world is awakening to the fact that up to 20% of world's children and adolescents suffer from disabling mental illnesses including depression. WHO has included depression as one of the priority mental disorders in childhood and adolescence¹. Adolescent depression not only interferes with emotional, social, and academic functioning but also is a proven risk factor for school absenteeism, educational under achievement, substance abuse and suicidal behaviour.

Various studies from India have tried to assess the prevalence of depression among adolescents. Results vary from around 11 to 15%²⁻⁵. But scanty literature is available regarding the various social determinants that have an impact on adolescents' state of mental well-being⁵. This lacunae needs to be urgently addressed. Only then steps can be taken to augment the protective factors and minimise the negative risk factors. This would go a long way to improving and sustaining good adolescent mental health.

The current study was thus undertaken to assess the prevalence and grade of depression among school student of class 12 studying in various Boards of Education in Raipur city. The study also looks into the various social factors that may have an association with depression.

Material and Methods

A cross sectional questionnaire based study was carried out among 321 students studying in class 12 across various boards of education in Raipur city. Adolescents studying in class 12 were included as students in this age are believed to be in maximum stress due to the approaching board examination as well as other competitive entrance examinations to various professional courses. Students from five schools were included. Two of the schools were affiliated to CBSE, 2 others to the Chhattisgarh board and one school to the ICSE. It was used as a proxy of socio economic status with ICSE and CBSE boards being used as the higher socio economic status and the state board as the middle and lower status. Permission was obtained from principals of respective schools after explaining them about the purpose of survey. Students were told not to write

their names to maintain confidentiality. After briefing the class about the intention of the study and taking into confidence regarding issues of confidentiality, verbal consent of students was obtained. Students not present on the day of the study or not giving consent were excluded from the study.

Study tool consisted of questionnaire having two parts, first part contains 16 questions about general information of students and second part contains 20 questions of centre for epidemiological studies-depression scale (CES-D). CES-D measure level of adolescent depression, and designed to cover major symptoms like depressed mood, feeling of guilt, worthlessness, feeling of helplessness and hopelessness, psychomotor retardation, loss of appetite, sleeping disorders. The 20 questions are related to feelings and behaviour related to depressive symptoms with Sensitivity-72%, specificity-85% and accuracy-82%⁶.

According to Center for Epidemiologic Studies Depression Scale (CES-D), NIMH, scores range from 0 to 60 with less than 15, interpreted as normal, 15 to 21, interpreted as mild depression and more than 21, interpreted as major depression.

Study technique adopted was written questionnaire to be filled by students. For testing of proforma pilot survey was done among students of 12th class. On the basis of experience, redesigning and modification of pretested proforma was done for main survey. Predesigned and pretested proforma was distributed and filled proforma were collected in a ballot box.

The data was tabulated and analysed using SPSS v16. Chi square (X²) test was applied.

Results and Discussion

A total of 321 students were included in the study. There was a mild over representation of boys (185) than girls (136) in the current study. The mean (SD) age of the adolescents was 16.7(0.6) with a range of 15 to 18 years. 153 (47.66%) students in this study were from C.G. board, 108 (33.64%) students from C.B.S.E. and 60 (18.69%) students from I.C.S.E. Study consists of 47.66 % students in math stream; 33.65% students in other (commerce) and 18.70% students in biology stream.

21.5% student's mothers were working outside. 93.45% of students reside within their home compare to 6.54% who live in any other mode of accommodation.38 % students have access to social sites with male predominance.

40.49% students were found to be mildly depressed and 19% had major depression. Depression was found more in females 59.49% as compare to male 56.24%.The percentage of depressed students was highest among students of I.C.S.E. board (48.33%). Among the various factors examined for association with depression, statistically significant factors identified were working mothers, students staying away from

home, poor relationship with family and self or parental dissatisfaction with academic achievement. Peer pressure also had significant association. Having a hobby acted as a protection against depression.

Table-1

Grade	Number (%)		Total (%)
	Male	Female	
Normal	81 (43.8)	49 (36.02)	130 (40.49)
Mild Depression	66 (35.7)	64 (47.05)	130 (40.49)
Major Depression	38 (20.54)	23 (16.9)	61 (19.0)

Discussion: Depression is recognized as a common mental health morbidity experienced by many adolescents. The current study revealed 40.49% students to be mildly depressed, while 19% had major depression. This study confirmed the suspicion that there is considerable amount of unrecognised depression among adolescents in India. This is in consonance with other studies which have reported such findings²⁻⁵. However the incidence of 40.49% in this sample is much higher than that reported by others (table 1).

The participants included in this study were all students of class 12. One possible explanation for the higher rate of depression identified could be the perceived stress of approaching board examination of class 12. This period is believed to be decisive time in one's future academic and professional career and apparently equates to great amounts of stress on adolescents. In a study from Delhi, Depression, anxiety and stress were found to be significantly higher among the 'board classes' i.e., 10th and 12th as compared to the classes 9th and 11th ⁷. The other possibility of the large proportion of students with mild depression being missed in other studies cannot be ruled out.

In a study among high school students from Saudi Arabia, the prevalence of depression 22.4% for moderate, 7.3% for severe, 3.7% as very severe⁸. In a similar study from Trinidad, the prevalence of depression was around 25%⁹. Perhaps more large scale studies are needed to decide on the magnitude of depression among school children in India.

In the current study various social factors were analysed for association with depression (table 2). In our study, depression was found more in females 59.49% as compared to males of 56.24%. The study from Saudi Arabia also revealed a clear predominance of prevalence of depression in girls than in boys (1.5 times)⁸.

In the current study, depression was found in students irrespective of boards, streams or socio economic status. But family seems to be an important factor in the mental well-being of adolescents. The current study demonstrates poor relationship with family, students staying away from home, mothers working

outside, and parental dissatisfaction with academic achievement of children as being significantly associated with prevalence of depression. The importance of healthy family life is reinforced by other studies also where parental fights, beating at home, inability to cope up with studies and economic difficulty have been shown to be significantly associated with distress and depression⁵. A study from Trinidad also identifies separation from parents and threat of violence from parents as aiding development of depression⁹.

Other important factors identified in the current study were lack of self-satisfaction with academic achievements and negative peer pressure. Thus school environment and friends play an

important role in genesis of adolescent depression as reiterated in other studies where physical punishment at school, teasing or bullying at school were significantly associated with depression^{5,10}.

Having a hobby served as a protective factor from depression. Though internet usage is emerging as an important leisure time activity among adolescents, in the current study, it did not have a statistically significant association with depression. In a recent study from India, 0.7% of students were found to be internet addicts and those with excessive use internet were found to have more anxiety and depression¹¹.

Table-2

Characteristics		Grading of Depression			X ²	df	P value
		Normal N (%)	Major Depression N (%)	Mild Depression N (%)			
GENDER	Male	81 (43.8)	38 (20.54)	66 (35.7)	4.215	2	
	Female	49 (36.02)	23 (16.90)	64 (47.05)			
Education Board	C.G	71 (46.40)	23 (15.03)	59 (38.56)	7.039	4	
	C.B.S.E	39 (36.11)	27 (25.00)	42 (38.89)			
	I.C.S.E	20 (33.33)	42 (38.89)	29 (48.33)			
Stream	Biology	25 (41.67)	8 (13.33)	27 (45.00)	5.514	4	
	Mathematics	65 (42.50)	35 (22.88)	53 (34.64)			
	Others	40 (37.03)	18 (16.67)	50 (46.30)			
Status of mother	Working	18 (26.08)	5 (7.24)	46 (66.66)	25.762	2	*
	Home maker	112 (44.44)	56 (22.22)	84 (33.33)			
Using social networking sites	Yes	50 (41.00)	26 (21.31)	46 (37.80)	0.942	2	
	No	80(40.20)	35 (17.59)	84 (42.22)			
Residential status	Home	124 (41.33)	57 (19.00)	119 (39.67)	1.573	2	*
	Hostel	6 (28.58)	4 (19.04)	11 (52.38)			
Self academic satisfaction	Yes	63 (57.80)	22 (20.20)	24 (22.00)	26.235	2	*
	No	67 (31.60)	39 (18.40)	106 (50.00)			
Academic parental satisfaction	Yes	44 (49.44)	19 (21.35)	26 (29.21)	6.659	2	*
	No	86 (37.69)	42 (18.10)	104 (44.83)			
Relationship with family	Good	123 (44.73)	60 (21.89)	92 (33.46)	39.987	2	*
	Poor	7 (15.22)	1 (2.17)	38 (82.61)			
Having boy friend or girl friend	Yes	22 (31.10)	13 (18.31)	36 (50.70)	4.405	2	
	No	108 (43.20)	48 (19.20)	94 (37.60)			
Addiction	Yes	9 (23.68)	8 (21.05)	21 (55.26)	5.424	2	
	No	121 (42.75)	52 (18.73)	109 (38.52)			
Peer pressure	Yes	18 (24.00)	12 (16.00)	45 (60.00)	16.233	2	*
	No	112 (45.53)	49 (19.92)	85 (34.55)			
Hobby	Yes	106 (46.70)	41 (18.06)	80 (35.24)	13.002		*
	No	24 (25.53)	20 (21.27)	50 (53.20)			

The current study suffers from a few limitations. As already pointed out, the study population included was students of class 12 as they are believed to be under maximum academic pressure. Also the study was a one point assessment. The other problem is of recall bias as is common with any measurement, reporting retrospective events. This probably limits the generalizability of the current results. More extensive studies are required with greater diversity of students with multiple assessments at different times of the year as per the academic curriculum.

In spite of the limitations, this study unambiguously highlights the prevalence of depression in adolescence. It also brings to light the category of students with mild depression, which forms a large proportion of the sample.

Conclusion

This study highlights the prevalence of depression among adolescent school students. It also identifies important positive and negative risk factors associated with adolescent depression. Based on the identified factors, proactive steps should be taken at school and community levels to ensure healthy school and family environments. Emphasis should also be on IEC activities to ensure recognition of even mild symptoms of depression and their early treatment.

Only happy and confident adolescents are likely to grow into happy and confident adults, who can maximally contribute to the building of a prosperous nation.

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