

Research Article

Anxiety among Adolescent Students and its Association with Socio Demographic Variables in a Rural Block of Haryana

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Abstract

Background: Anxiety is one of the most common psychological disorders in school-aged children and adolescents worldwide. Anxiety is associated with substantial negative effects on children's social, emotional and academic success.

Objectives: To find out the prevalence of anxiety among adolescent students and its association with sociodemographic factors in rural block Beri.

Methods: It was a cross sectional study taking the sample size of 600 (300 males and 300 females) studying in class 8th to 12th. A pre-designed, pre-tested tool SCL 90 R containing 90 items was used to screen anxiety in these students. Anxiety is one of the psychiatric morbidities screened by this tool. Cut off point of estimated raw score of 1 was used to label as anxiety.

Results: It was observed that nearly 18.5% adolescents suffered from anxiety. Anxiety was highest in 17-19 years age group (30.4%) followed by mid adolescence phase (13-16 years). Anxiety was maximum in 10th and 12th standard students which were 19.3% and 24% respectively. It was significantly high among females (23.7%) than males (13.7%). Anxiety was maximum in upper and lower socio-economic class of students with 24.1% and 22.3% respectively. It was more among students whose mothers were unemployed (19.5%) than those whose mothers were employed (14.6%).

Conclusion: More than one – third (35%) of study subjects who were apparently healthy suffered from unnoticed anxiety. Appropriate counseling through school-based screening programme is the urgent need of the hour.

Keywords: Adolescent, Anxiety, School adolescents

Introduction

in school-aged children and adolescents worldwide.¹ The prevalence rates range from 4.0% to 25.0%, with an average rate of 8.0%.^{2, 3} Increasing concern has been expressed

Anxiety is one of the most common psychological disorders

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about the mental health of students in higher education. Concerns have been articulated by students themselves and by the academic staff who teach them.⁴ The World Health Report has quoted India as having a substantial prevalence of childhood and adolescent mental health disorders.⁵

Anxiety is one of the determinants of human behavior. It is most likely to arise from internal response or behavior that conflict with the satisfaction of other needs or motives. The concept of anxiety is utilized for explaining many psychological problems and has become a useful construct in the field of psychology.

Generally, anxiety can be either a trait anxiety or a state anxiety. A trait anxiety is a stable characteristic or trait of the person. A state anxiety is one which is aroused by some temporary condition of the environment such as examination, accident, punishment etc. Academic anxiety is a kind of state anxiety which relates to the impending danger from the environments of the academic institutions including teachers, certain subjects like Mathematics, Science, Language etc.

In India, the main documented cause of anxiety among school children and an adolescent is parents' high educational expectations and pressure for academic achievement.⁶ Quality of performance has become the key factor for personal progress. Parent's desire is that, their children climb the ladder of performance to as high a level as possible. This desire for high level of achievement put a lot pressure on students, teachers and school and in general, the educational system itself. In a culture that judges an individual's intellectual abilities and ascribes status on the basis of academic performance, it is perhaps not surprising that students become more anxious over their academic success and failures as they age.

Anxiety is associated with substantial negative effects on children's social, emotional and academic success.⁷ Specific effects include poor social and coping skills, often leading to avoidance of social interactions, loneliness, low self-esteem, perceptions of social rejection, and difficulty forming friendships.^{8,9} Importantly, in students, high level of anxiety could have an impact on working memory, decreased problem-solving & reasoning abilities, school avoidance, and lower academic achievement.^{10, 11} Anxiety is considered to be a universal phenomenon existing across cultures, although its contexts and manifestations are influenced by cultural beliefs and practices.¹² Additionally, anxiety in students can affect their physical and psychological characteristics causing panic attacks, which makes them, go blank during exams, feel helpless/cold/nervous, have sweaty palms/fast breath/palpation and could even cause stomach upset.

Childhood anxiety disorders tend to be chronic and rarely remit without treatment and additional anxiety disorders

may develop in adolescence and adulthood. Anxiety is highly comorbid with depression and other psychological disturbances within community and clinical populations.^{1,} ^{13, 14} A longitudinal study in New Zealand found that adolescents with anxiety disorders experienced elevated rates of anxiety, major depression, illicit-drug dependence, and educational underachievement when they entered young adulthood.¹⁵ Anxiety disorders in childhood are also predictive of other disturbances in later life including personality psychopathology, suicidality and increased substance abuse.^{15, 16} Thus, keeping in view the harmful impact of anxiety, the present study has been planned to find out the prevalence of anxiety among school going adolescents in rural block of Haryana. Also, this study will find out the association of anxiety with socio-demographic variables like age, sex, class of students, literacy level of parents, socio-economic status and employment of mothers.

Methods

The study was conducted in a rural block of Haryana. Study duration was one year from October 2016 to September 2017. School going studying in 8th to 12th standards from both government and private secondary and senior secondary schools in the rural block comprised the study population. The study was undertaken between the period of October 2016 to July 2017.

One of recent meta-analysis carried out on schoolbased studies in the year 2013 on prevalence of child and adolescent psychiatric disorders in India, done by Patra et al¹⁷ reported the prevalence to be 23.33%. Taking prevalence to be 23% and allowable error to be 15% of prevalence, the sample size was thus calculated to be 595. So, for the purpose of present study 600 subjects were selected.

List of schools were obtained from DEO (District Education Officer). Prior permission from the DEO was obtained for the present study after briefing him about study purpose and objectives. All the senior secondary schools in that block were stratified into two groups i.e. government and private. A total of 3 schools from each stratum were selected randomly by lottery method from list of all eligible schools.

All those schools which had strength of more than 100 students from 8th to 12th class and at least 20 students in each of these classes qualified the eligibility criteria were included in the study for the purpose of adequacy of sample size. A total of six schools were selected. A total of 600 students, 100 from each school and 20 from each class were selected taking both boys and girls from each class in equal proportion. Simple random sampling technique using lottery method was used to select students from each class.

Prior permission was obtained from the concerned principals of the selected schools after briefing them about the study and its objectives. A written informed consent from parents of the selected students was obtained one day prior to conducting the study through principal/class teacher. Verbal assent of students under the age of 18 years and written consent of students aged 18 years & above and of parents in case of minor students was obtained. Students who did not consent or those who were absent on the day of survey as well as those having gross hearing impairment, diagnosed organic brain pathology or articulation disorders were not considered for the study purpose.

Symptom checklist-90 Revised version was used to assess different symptoms and states of the mind.¹⁸ It comprises of 90 questions. This scale measures somatization, obsessive-compulsive disease, inter-personal sensibility, depression, anxiety, hostility, phobic anxiety, paranoid thoughts, psychotic and additional symptoms on 5-point Likert scale (0=none and 4=too much). The SCL-90 takes between 12 and 20 minutes to complete.

Raw score of SCL 90 R subscales was calculated by dividing the sum of scores for a dimension by number of items in the dimension. A cut off of each subscale scores >1 as suggestive of possible psychopathology was used based on the study of Siri C and his colleagues.¹⁹ In addition, the whole study group was subdivided into three categories within each subscale to better characterize differences between students with and without psychopathological symptoms i.e. Students without the symptom = scores <1; with mild symptoms = scores 1-2; with moderate - severe symptoms = scores >2.

The SCL 90 R has 3 global indexes: Global Severity Index (GSI) that measures the extent or depth of the individual's psychiatric disturbances; Positive Symptom Total (PST) counts the total number of questions rated above 1 point; Positive Symptom Distress Index (PSDI) is calculated by dividing the sum of all items values by the PST. The global severity index (GSI) for SCL-90 R is calculated as the average score of the 90 items of the questionnaire.

was studied to know the association of those factors with anxiety.

Additionally, the modified B G Prasad scale was used to assess socioeconomic status of study population.²⁰

The data were analyzed using SPSS V.20.0 (Statistical package for social sciences) software. After analysis of the data, individuals with high cut off value was referred to Psychiatrist for detailed evaluation and for further management.

Results

Table 1 describes the various socio-demographic details of the study population. There was equal distribution of students between government and private schools in terms of class and gender. Maximum number of students belonged to age group of 13-14 years (50%) followed by 15-16 years (40.7%) and 17-18 years (9.33%) in both government and private schools. In government school 40.2% of students were from lower middle class followed by lower class (27.6%) but in private school maximum number of students (28%) was from middle class followed by upper middle class (25.3%). In government school only 0.7% students were from upper class as compared to private schools where 18.7% students were from upper class. It was observed that fathers of 64.7% of the students in private school were educated up to 11-12 class and above followed by 9-10 class (29.3%), 1-8 class (5.3%) and only 0.7% were illiterate. Whereas in government schools, fathers of 40.7% of the students were literate till 9-10 class followed by 1-8 class (32.3%), 11-12 class and above 21.7% and 5.3% were illiterate. Mothers of 51% of students in government schools were educated up to 1-8 class followed by 9-10 class, only 7% were educated till 11-12 class and above and 16.7% were illiterate. Comparatively, in private school, mothers of 46.3% of students were educated till 9-10 class followed by 11-12 class and above (36.7%) and only 2.7% mothers were illiterate. In government school mothers of 16% were employed which was slightly less in comparison to private school where 18.3% student's mother were employed.

Additionally, the socio demographic level of each student

Table 1.Distribution of students according to socio demographic profile	
among students of government and private schools	

Variables	Government Sr. Sec. Schools (%) n = 300	Private Sr. Sec. School (%) n = 300	Total	
	Age			
13-14 years	143 (47.5%)	157 (52.3%)	300 (50%)	
15-16 years	127 (42.2%)	117 (39%)	244 (40.7%)	
17-19 years	30 (10.0%)	26 (8.7%)	56 (9.33%)	
Class				
8 th class	60 (20%)	60 (20%)	120 (20%)	

9 th class	60 (20%)	60 (20%)	120 (20%)
10 th class	60 (20%)	60 (20%)	120 (20%)
11 th class	60 (20%)	60 (20%)	120 (20%)
12 class	60 (20%)	60 (20%)	120 (20%)
· · · · ·	Gender		
Males	150 (50%)	150 (50%)	300 (50%)
Females	150 (50%)	150 (50%)	300 (50%)
Soc	io economic status (According to	Modified B.G Prasad scale)	
Upper class	2 (0.7%)	56 (18.7%)	58 (9.7%)
Upper middle class	25 (8.3%)	76 (25.3%)	101 (16.8%)
Middle class	69 (22.9%)	84 (28.0%)	153 (25.5%)
Lower middle class	121 (40.2%)	64 (21.3%)	185 (30.8%)
Lower class	83 (27.6%)	20 (6.7%)	103 (17.2%)
·	Literacy level of	father	
Illiterate	16 (5.3%)	2 (0.7%)	18 (3%)
1-8 class	97 (32.3%)	16 (5.3%)	113 (18.8%)
9-10 class	122 (40.7%)	88 (29.3%)	210 (35%)
11-12 class and	65 (21.7%)	194 (64.7%)	259 (43.1%)
above			
	Literacy level of	1	
Illiterate	50 (16.7%)	8 (2.7%)	58 (9.7%)
1-8 class	153 (51.0%)	43 (14.3%)	196 (32.7%)
9-10 class	76 (25.3%)	139 (46.3%)	215 (35.8%)
11-12 class and above	21 (7.0%)	110 (36.7%)	131 (21.8%)
Mother's employment status			
Employed	48 (16.0%)	55 (18.3%)	103 (17.1%)
Unemployed	252 (84%)	245 (81.7%)	497 (82.9%)

Table 2.Distribution of grades of anxiety among study subjects

Subscale	Frequency (n = 600)	Percentage
No Anxiety	489	81.5
Mild Anxiety	109	18.2
Moderate to severe Anxiety	2	0.3
Total	600	100%

Table 3.Distribution of anxiety among study subjects according to type of school

Variable	Government school (%) n = 300	Private school (%) n = 300
No anxiety	241(80.3%)	248 (82.7%)
Mild anxiety	58(19.3%)	51(17.0%)
Moderate to severe anxiety	1 (0.3%)	1 (0.3%)

Test Statistics: x² = 0.550, df = 2, p = 0.760.

Variable	Students without anxiety	Students with anxiety	Level of significance	
	Age	2		
13-14 years	246(82.0%)	54 (18%)	x ² = 5.687, df = 2, p = 0.058	
15-16 years	203(83.2%)	41 (16.8%)		
17-19 years	39 (69.6%)	17 (30.4%)		
	Clas	s		
8 th class	99 (82.5%)	21 (17.5%)	^{x2} = 3.331, df = 4, p = 0.504	
9 th class	100(83.3%)	20 (16.7%)		
10 th class	96(80.7%)	23 (19.3%)		
11 th class	101 (84.2%)	19 (15.8%)		
12 class	92 (76%)	29 (24%)		
Gender				
Males	259 (86.3%)	41 (13.7%)	^{x2} = 9.880, df = 1, p = 0.002	
Females	229 (76.3%)	71 (23.7%)		
Soc	cio economic status (According	to Modified B.G Prasad sc	ale)	
Upper class	44(75.9%)	14 (24.1%)	^{x2} = 3.043, df = 4, p = 0.551	
Upper middle class	85 (84.2%)	16 (15.8%)		
Middle class	125 (81.7%)	28 (18.3%)		
Lower middle class	154 (83.2%)	31 (16.8%)		
Lower class	80 (77.7%)	23 (22.3%)	_	
	Literacy leve	l of father		
Illiterate	15 (83.3%)	3 (16.7%)	^{x2} = 0.681, df = 3, p = 0.878	
1-8 class	89 (78.8%)	24 (21.2%)		
9-10 class	171 (81.4%)	39 (18.6%)		
11-12 class and above	213 (82.2%)	46 (17.8%)		
	Literacy level	of mother		
Illiterate	46 (79.3%)	12 (20.7%)	^{x2} = 6.940, df = 3, p = 0.074	
1-8 class	171 (87.2%)	25 (12.8%)		
9-10 class	170 (79.1%)	45 (20.9%)		
11-12 class and above	101 (77.1%)	30 (22.9%)		
	Mother's emplo	yment status	·	
Unemployed	400 (80.5%)	97 (19.5%)	x ² = 1.379, df = 1, p = 0.240	
Employed	88 (85.4%)	15 (14.6%)		

Table 4.Distribution of anxiety on basis of socio demographic profile of the study subjects

In table 2, shows that, nearly 18.5% adolescents suffered from anxiety out of which 18.2% suffered from mild anxiety and 0.3% suffered from moderate to severe anxiety.

As depicted in table 3, in government school 19.3% students had mild anxiety and 0.3% had moderate to severe anxiety whereas in private school students 17% had mild anxiety and 0.3% had moderate to severe anxiety. This difference was found statistically non-significant (p = > 0.05).

In table 4, it was found that anxiety was highest in late

adolescent phase (30.4%) followed by 13-14 years (18%) and minimum in age group of 15-16 years (16.8%) but this variation was statistically non- significant. Anxiety was maximum in 10th and 12th standard students which were 19.3% and 24% respectively but this difference was statistically non- significant. Anxiety was significantly high among females (23.7%) than males (13.7%). Anxiety was maximum in upper and lower socio-economic class of students with 24.1% and 22.3% respectively but this was statistically non-significant. Anxiety was more among students whose mothers were unemployed (19.5%) than those whose mothers were employed (14.6%) but this association was non-significant. Distribution of anxiety with literacy level of father and mother was found statistically non-significant.

Discussion

In the present study, the overall prevalence of anxiety was 18.5% with mild anxiety to be 18.2% and moderate to severe anxiety to be 0.3%. The results are in line with the finding of a study done among German adolescents by Essau C et al., where they found prevalence of anxiety to be 18.6%.⁷ Last CG et al. in his study concluded that anxiety disorder was 16% among children.¹⁶ In the study conducted by Deb S et al., anxiety was prevalent in 20.1% of boys and 17.9% of girls.²¹ Beesdo K et al. in his study stated that the lifetime prevalence of any anxiety disorder in children or adolescents is about 15% to 20%.²²

In the present study, it was observed that government school students (19.3%) have more anxiety than private school students (17%) but this association was non-significant. The study conducted by Bihari S et al. found out that mean score of anxiety among government school adolescents was significantly higher than private school students.²⁸ Anxiety is more in government school adolescents as in India, the facilities for better education is less available in government schools and in present competitive scenario, they may lag behind. So they are at more stress and thus suffer more from anxiety.

In the present study, the distribution of anxiety was significantly more among females (n = 71, 23.7%) as compared to males (n = 41, 13.7%) with p value of 0.002 (<0.05). The finding was similar to the study done by Michalčáková R et al., where girls reported a higher number and intensity of fears and anxiety compared to boys.²³ According to King NJ et al. females reported more fear and anxiety than males.²⁴ Essau C et al. in his study done on German adolescents found that anxiety was more among adolescent girls than adolescent boys.⁷ In Indian scenario there is gender inequality in most of the families; boys were given comparatively more freedom, independence and opportunities to come out with their inherent qualities in comparison to girls. So, girls were unable to express freely about their feelings and problems and thus were at more stress. They were supposed to stay at home after their school hours and managed household responsibilities along with their studies. They were also less supported emotionally by other members of family like grandparents and thus felt lonelier and stressed. That was why girls were comparatively more prone to develop anxiety.

The association of anxiety with regards to gender was different from our study where prevalence was more in males than females as revealed by some other studies. Deb S et al. reported in his study that males were having more anxiety than females.²¹ According to Rao JVRC, mean anxiety score in case of adolescent boys was slightly higher than in adolescent girls.²⁵ It may be because boys continue to face more pressure regarding their proper choice of vocation and future career.

In the present study, anxiety was maximum in 12th class student (24%) followed by 10th class student (19.3%). It was almost equally distributed among 8th, 9th and 11th class students but this association was found to be non-significant. The finding is similar to study conducted by Bhasin SK et al., where mean rank of anxiety was significantly higher among board classes students i.e. 10th and 12th class as compared to 9th and 11th class.²⁶ 10th and 12th class students are having more anxiety as parents put pressure on their children for better performance because of their concern for the welfare of their children and their awareness of the competition for getting admission in reputed institutions.

In the present study, late adolescents (17-19 years - 30.4%), were having more anxiety in comparison to mid adolescents (15-16 years- 16.8% and 13-14 years – 18%). The finding was in accordance with study done by Nair MKC et al., where higher the age of the adolescent, more was the severity of phobia and anxiety among them.²⁷ Beesdo K et al. in his study also found that prevalence estimates tend to further increase with age among children and adolescents.²² As in our culture, an individual's intellectual abilities are judged and status is ascribed on the basis of academic performance, thus students become more anxious over their academic success and failures as they age.

In the present study, anxiety was more among students who belonged to upper class (24.1%) and lower class (22.3%) but the distribution of anxiety according to socio economic status was found to be significantly non-significant. Deb S et al. in his study found that anxiety was highest in middle SES group followed by lower SES group and then higher SES group.²¹

Groups belonging to lower class are having more anxiety due to their insecurity about their future, stress of getting better education due to economic constrain, responsibility of earning bread apart from their academic performance. Adolescents belonging to upper class are economically and socially more developed. Parents are having more desires and expectations from their child in order to hold their social position, thus leading to anxiety among their children.

In the present study anxiety was more among adolescents whose mothers were non-working (19.5%) as compared to adolescents whose mothers were employed. Children of employed mothers often experience less anxiety as adolescents appear to be socially mature since employed mothers are more inclined than unemployed mothers to grant their children independence and autonomy when their youngsters are ready for it. When mothers have stimulating jobs, they receive adequate social support from their husbands and other close associates, and are highly committed to being a parent, they have generally favorable impressions of their children, rely less on power assertion to control their behavior, and are inclined to take an authoritative approach to child rearing – precisely the parenting style so often associated with favorable cognitive, social and emotional outcomes.

This finding of present study was different to the finding of Deb S et al., where mean anxiety score of adolescents whose mothers were working was higher than non-working mothers.²¹ According to Bhasin SK et al., level of anxiety was higher among students with working mothers than students whose mothers were housewives.²⁶

In the present study, anxiety was not affected by mother's literacy level. According to Bhasin SK et al. also no significant association of anxiety was observed with mother's literacy level.²⁶

Conclusion

The study concludes that about one-fifth of the adolescents suffers from anxiety. Females tend to suffer more of anxiety than males. Adolescents of 10th and 12th class who have to appear in their board exams suffer more anxiety than other adolescents. Late adolescence students suffer more of anxiety than mid adolescence students. Adolescents who belong to upper and lower class are at higher risk of anxiety than other socio-economic class of students. Adolescents whose mothers are unemployed are at greater risk of anxiety than students whose mothers are employed.

Recommendations

The relationship between an adolescent's academic success and anxiety is curvilinear – a minimal amount of anxiety tends to enhance academic performance, but excessive anxiety undermines academic performance.

As it is evident that cognitive-behavioral treatment and skills can reduce levels of anxiety among adolescents, they should be taught how to manage stress and anxiety at schools.

Parent education is specifically required to deal with educational pressure and to avoid comparison of the performance of one's own child with the best ranked students.

Conflict of Interest: None

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