A cross-sectional study on the prevalence of anxiety among municipality school area

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Abstract

Background: Adolescent mental health problems are becoming an increasingly apparent issue. Common individual behavioural effects like anxiety, stress, depression, anger, and post-traumatic stress are socially available disorders that affect students. Present study was aimed to investigate the prevalence of anxiety and factors associated with anxiety among adolescents in local municipality school. **Material and Methods:** Present study was cross-sectional questionnaire-based study, conducted among schools of municipality areas. A self-report questionnaire comprising written informed consent, questions regarding socio-demographic and lifestyle-related information, as well as psychometric scales to assess anxiety were used to collect the data. **Results:** In present study, prevalence of anxiety was 24 % (108 students). We noted level of anxiety as minimal, mild, moderate, and severe (based on GAD scoring) in 31.48 %, 39.81 % 15.74 % and 12.96 % students respectively. In present study most of students were from 16-18 years age group (53.11 %), boys (59.78 %), lower middle class (53.11 %), nuclear family (73.11 %), living with family (78.67 %) and perceived good relationship with friends (83.56 %). In students with anxiety majority of students were from 16-18 years age group (61.11 %), girls (58.33 %), nuclear family (62.96 %), living with family (62.96 %) and perceived good relationship with friends (56.48 %). In students with anxiety statistically significant difference was noted for 16-18 years age group, girls, nuclear family, students living with family and students perceiving good relationship with friends. In lifestyle-related factors, no regular physical activity, sleeping dis-satisfaction and smoking were significantly associated with anxiety in students. **Conclusion:** Anxiety is a critical issue in adolescent life, early detection and adequate intervention is crucial to reduce overall burden and disability associated with psychiatric disorder in adolescent population.
Keywords: Anxiety, adolescent life, school students, modern-day issues.

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Access this article online	
Quick Response Code:	Website: www.medpulse.in
	Accessed Date: 18 June 2021

INTRODUCTION

The prevalence of mental disorders is rising among adolescents worldwide. A systematic review and meta-analysis demonstrated that the worldwide pooled prevalence of mental disorders was 13.4% in children and adolescents.[1] Common individual behavioural effects like anxiety, stress, depression, anger, and post-traumatic stress are socially available disorders that affect students.[2] Anxiety is an emotion characterized by feeling of tension, worried thoughts and physical change like increased blood pressure. People with anxiety disorders usually have recurring intrusive thoughts or concerns. Hormonal and emotional changes, social conditions, peers, career goals etc., make an adolescent vulnerable. Childhood and adolescence is the core risk phase for the development of anxiety that may range from transient mild symptoms to full-blown anxiety disorders. Lifetime prevalence of any anxiety disorders in studies with children and adolescents is about 20%.[4] Adolescent mental health problems are becoming an increasingly apparent issue. Adolescence can prove to be a crucial time of mental development, plagued with higher risks of developing various psychiatric conditions. Anxiety disorders that remain undetected and untreated in childhood and adolescence may affect well-

being in adulthood, which challenges earlier views that high levels of anxiety are developmentally normal.[5] Anxiety disorders may also interfere with a young person's social communication, peer relationships, schooling, and family life. Present study was aimed to investigate the prevalence of anxiety and factors associated with anxiety among adolescents in local municipality school.

MATERIAL AND METHODS

Present study was cross-sectional questionnaire-based study, conducted among schools of municipality areas. Study was conducted under Department of Psychiatry, at Mahadevappa Rampure Medical College, India. Study duration was of 1 year. Present study approval was obtained from local institutional ethical committee. Three schools were identified and study was explained in brief to school administration and teachers. A pilot test was conducted on 30 students to confirm the reliability of the questionnaire, then 450 students from 9-12 class from above three schools were studied. A self-report questionnaire comprising written informed consent, questions regarding socio-demographic and lifestyle-related information, as well as psychometric scales to assess anxiety were used to collect the data. Socio-demographic data including age, gender, monthly family income, type of family, academic grade, relationship status, living together with family and perceived relationship with friends. Lifestyle-related information contains questions concerning regular physical activity, sleeping satisfaction, number of sleeping hours per night, cigarette smoking and use of internet. We used seven-item modified version (in local language) of Generalized Anxiety Disorder (GAD-7) scale was used to assess anxiety problems among the participants. GAD-7 has been found successful in identifying anxiety among different populations and thus used for its reliability.[7] In the questionnaire, the questions were used for screening anxiety state of an individual on a scale ranging from '0 = not at all sure' to '3 = nearly every day'.[8] The level of anxiety was categorized in four groups as minimal, mild, moderate, and severe based on scoring in the range of 0–4, 5–9, 10–14, and 15–21, respectively. Data was collected and compiled using Microsoft Excel, analysed using SPSS 23.0 version. Frequency, percentage, means and standard deviations (SD) was calculated for the continuous variables, while ratios and proportions were calculated for the categorical variables. Difference of proportions between qualitative variables were tested using chi-square test or Fisher exact test as applicable. P value less than 0.5 was considered as statistically significant.

RESULTS

In present study, prevalence of anxiety was 24 % (108 students). We noted level of anxiety as minimal, mild, moderate, and severe (based on GAD scoring) in 31.48 %, 39.81 % 15.74 % and 12.96 % students respectively.

Table 1: Distribution according to levels of severity of anxiety

Variable	No. of students with anxiety	Percentage
Mild (GAD score 0-4)	34	31.48
Moderate (GAD score 5-9)	43	39.81
Severe (GAD score 10-14)	17	15.74
Very severe (GAD score15-21)	14	12.96
Total	**108**	

In present study most of students were from 16-18 years age group (53.11 %), boys (59.78 %), lower middle class (53.11 %), nuclear family (73.11 %), living with family (78.67 %) and perceived good relationship with friends (83.56 %). In students with anxiety majority of students were from 16-18 years age group (61.11 %), girls (58.33 %), nuclear family (62.96 %), living with family (62.96 %) and perceived good relationship with friends (56.48 %). In students with anxiety statistically significant difference was noted for 16-18 years age group, girls, nuclear family, students living with family and students perceiving good relationship with friends.

Table 2: Socio-demographic data

Socio-demographic data	No. of students (n=450) (%)	No. of students with anxiety (%)	P value
Age group (years)			0.032
13-15	211 (46.89 %)	42 (38.89 %)	
16-18	239 (53.11 %)	66 (61.11 %)	
Gender			0.022
Boys	269 (59.78 %)	45 (41.67 %)	
Girls	181 (40.22 %)	63 (58.33 %)	
Academic Class			0.31
9th	101 (22.44 %)	13 (12.04 %)	

10th	137 (30.44 %)	26 (24.07 %)	
11th	105 (23.33 %)	33 (30.56 %)	
12th	107 (23.78 %)	36 (33.33 %)	
Socioeconomic status			0.24
Upper middle	162 (36.00 %)	38 (35.19 %)	
Lower middle	239 (53.11 %)	59 (54.63 %)	
Upper lower	49 (10.89 %)	11 (10.19 %)	
Type of family			0.042
Nuclear	329 (73.11 %)	68 (62.96 %)	
Joint	121 (26.89 %)	40 (37.04 %)	
Living with family			0.035
Yes	354 (78.67 %)	68 (62.96 %)	
No	96 (21.33 %)	40 (37.04 %)	
Perceived relationship with friends			0.019
Good	376 (83.56 %)	61 (56.48 %)	
Not good	74 (16.44 %)	47 (43.52 %)	

In lifestyle-related factors, no regular physical activity, sleeping dis-satisfaction and smoking were significantly associated with anxiety in students (p >0.05).

Table 3: Lifestyle-related information

Lifestyle-related information	No. of students (n=450) (%)	No. of students with anxiety (%)	P value
Regular physical activity			0.025
Yes	198 (44 %)	23 (21.30 %)	
No	252 (56 %)	85 (78.70 %)	
Sleeping satisfaction			.018
Yes	368 (81.78 %)	78 (72.22 %)	
No	82 (18.22 %)	30 (27.78 %)	
Sleeping status			0.072
Less than normal	179 (39.78 %)	69 (63.89 %)	
Normal (7–8 hours)	218 (48.44 %)	34 (31.48 %)	
More than normal	53 (11.78 %)	5 (4.63 %)	
Cigarette smoker			< .001
Yes	416 (92.44 %)	92 (85.19 %)	
No	34 (7.56 %)	16 (14.81 %)	
Internet use			0.634
Yes	437 (97.11 %)	106 (98.15 %)	
No	13 (2.89 %)	2 (1.85 %)	

DISCUSSION

Due to stress of study, emotional changes, social conditions adolescent age group easily fall prey to mood disturbances such as anxiety and depression compromising their quality of life. The symptoms of these three disorders can lead to poor academic performance, lack of communication with friends and family members, substance abuse, feeling of abandonment, homicidal ideation, and suicidal tendency.[9,10] Anxiety disorders have also been associated with headaches, sleep difficulties, stuttering and other speech disorders, and interfere with a young person's social, school, and family life. Anxiety manifests itself as a feeling of helplessness, uncertainty of oneself, lack of sufficient strength in the face of external factors, and exaggeration of their potency and strength.[11] In a Lancet study conducted across states of India, prevalence of anxiety disorders in both sexes increased rapidly in adolescents and young adults and was higher in females than in males in most age groups.[12] Similar findings were noted in present study. A descriptive study conducted on prevalence of stress, anxiety and its correlates among 1000 adolescents; 14.4% of boys and 17.2% of girls were having Stress. And 14.6% of boys and 18.8 % of girls were having anxiety.[13] In a school based study from an urban school in New Delhi, Kumar A *et al.*,[14] overall prevalence of depression, anxiety and stress were found to be 47.9%, 65.3%, and 51.8% respectively. Most of student suffered from moderate depression (46.8%), anxiety (33.3%) and mild stress (60.9%). It was noted that these were more common among female students, late adolescent age group, students alone/ away from family, students from separated/ single parents, consuming alcohol and family pressure to perform well in school. U Harikrishnan *et al.*,[15] studied school going adolescents from urban areas of Sonitpur district, Assam. From 561 students, 14.6% had moderate level of social anxiety, 12.8% had marked social anxiety and 2.5% of the participants had severe social anxiety. Results from the

present study showed that 38.3 % of the participants reported to have social phobia. Similar findings were noted in present study. Nag K *et al.*,[15] studied 400 school students of Class IX–XII, from schools of municipality area of Tripura. Most of the students were suffering from mild anxiety (49.4%) followed by moderate anxiety (43.3%) and severe anxiety (7.3%). The mean anxiety score of the school students was 16.90 ± 9.02. Female students (10.9%) had more severe anxiety compared to male students (3.8%) and this difference of different grades of anxiety with gender was statistically significant. The association of different grades of anxiety with a history of stressful events in the past 6 months was found to be statistically significant. Anxiety was present in each age group and females were suffering more with severe anxiety. A rise in anxiety levels is also seen with respect to increased exposure to harmful content over the Internet, reduction of physical activities and decrease in interaction levels of children with their friends as well as parents.[10] Physical activity in the form of sports and games helps improve problem-solving skills and helps the adolescents cope better with mental health problems and even prevents the onset of psychological symptoms.[17] School based mental health interventions and internet based prevention and treatment programs are effective for symptoms of anxiety and depression.[18] Screening programs, helplines, school education and life skill programs can be instrumental in bringing about diagnosis of mental illness and suicide prevention.

CONCLUSION

Anxiety is a critical issue in adolescent life, early detection and adequate intervention is crucial to reduce overall burden and disability associated with psychiatric disorder in adolescent population. Future research on preventive strategies among adolescent school students should be done to combat against this modern-day problem of anxiety and reduce the burden of anxiety disorder in this age group.

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