



TO STUDY THE IMPACT OF PARENTING AND SOCIOECONOMIC STRATA IN ANXIETY RELATED DISORDERS AMONG ADOLESCENTS.

Paediatrics

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ABSTRACT

Introduction: In the wide array of mental health disorders in adolescents anxiety is one of the most common disorder which is functionally impairing. Anxiety in moderation is an adaptive response but in excess results in significant distress especially in absence of stress or challenge.

Objective: To identify the presence of Anxiety disorder among adolescents (High school, Higher secondary school and College students) of North Delhi with an objective to study the spectrum of Anxiety disorders and compare it across gender, social strata and perception of quality time with parents.

Methods: It was a community based cross sectional study with subjects selected by random sampling method. A total of 714 adolescents in the age group of 11 years to 19 years were recruited for the study. The study tools used for achieving the set objective were a custom made semi structured questionnaire for gathering information about demographic profile, socioeconomic background and time spent with parents and the 41 point version of the Screen for Child Anxiety Related Disorders (SCARED) youth questionnaire.

Statistical analysis: It was done with SPSS Version 17.0 with comparison of normally distributed continuous variables between the groups performed using students "t" test and nominal categories data between the groups were compared using chi-square test and fisher's exact test as appropriate.

Results: As per the scoring system of SCARED a total score of ≥ 25 indicates the presence of an Anxiety disorder and scores ≥ 30 were more specific. In our study population of 714 prevalence of anxiety disorder as calculated by SCARED taking a score of ≥ 30 was 270(37.8%) where as it was 329(46.1%) with a score of ≥ 25 . Large proportion of adolescents (51.9%) bonded well with their parents. Anxiety disorders were more common in middle and lower socioeconomic groups i.e. 37.5% and 50.9% respectively as compared to upper socioeconomic group i.e. 26.3%. This difference was statistically significant with $p < 0.05$.

Conclusion: The prevalence of Anxiety disorders in adolescents of North Delhi is substantially higher.

KEYWORDS

INTRODUCTION

Adolescents comprise more than a fifth of India's population – an estimated 230 million people [1] but there has been little research on their mental health. Anxiety is one of the most common and functionally impairing mental health disorders occurring in adolescents [2] and there is paucity of comprehensive data on adolescent anxiety disorders in India [3]. Community studies on emotional and behavioral disorders in children in India have yielded disparate point prevalence rates of 2.6% to 35.6%, [4-6] the most common disorder being anxiety disorder, with a prevalence rate of 54.1% among all psychiatric illness [7]. Girls tend to have more of all subtypes of anxiety disorders in studies conducted in the developed countries.[8] The study was performed to determine the prevalence and spectrum of anxiety related disorders in the adolescents of North Delhi with an objective to compare it across gender, socioeconomic strata and perception of quality time with parents.

MATERIALS AND METHODS

It was a community based cross sectional study conducted in adolescents of age 11 years to 19 years, studying in secondary schools and colleges of North Delhi, within the study period of nine months, from 1st May, 2014 to 31st January, 2015. Subjects were selected through random sampling method.

The study was approved by the Scientific and Ethical Committee of Hindu Rao Hospital, Delhi and due permission was taken from the Head of the Institute of various institutions where the study was conducted. After taking an informed valid consent, to ensure a mix of both urban and rural background, students of government school were selected. Only English medium schools were selected to ensure that students could read and understand the screening form on their own.

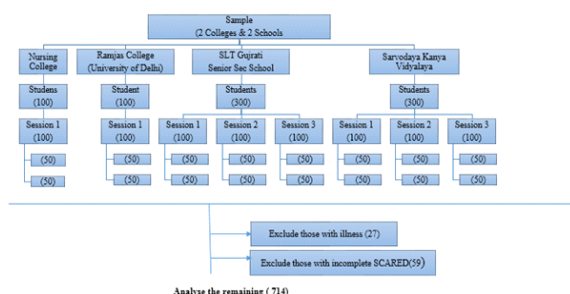
Inclusion criteria: Class VIII to 1st year college students, Voluntary participation.

Exclusion criteria: Adolescents who chose not to participate, Adolescents with known medical illness, Adolescents who did not fill

the questionnaire completely. The study tools used for achieving the set objectives were: 1. A semi-structured questionnaire, custom-made for gathering information about the demographic profile and socioeconomic background of the adolescents and their parents. The semi structured questionnaire was taken up in three sections. Section -1 contained the information regarding age, gender, school/college, any illness or any medication being taken in last 1 month. Section -2 consisted of details relating to parents occupation, total annual income and education. Section -3 had "3" questions pertaining to parental care. (a) Whether parents had time to speak in week days, (b) if the students felt comfortable in sharing their problems with their parents, (c) if they felt their parents were considerate for their feelings.

2. Screen for Child Anxiety Related Disorders (SCARED), Child Version, the 41 point questionnaire [9]. The SCARED is a child and parent self report instrument used to screen for childhood anxiety disorders. We used the child self report instrument. The SCARED consists of 41 items and 5 factors that parallel the DSMIV classification of anxiety disorders including general anxiety disorder, separation anxiety disorder, panic disorder, social phobia and school phobias[10].

Permission for using SCARED was taken from Dr. Boris Birhamer via e-mail. A prior appointment was made with the Head of the Institute of the selected schools and colleges to appraise them of the objectives of the study and to obtain their permission for data collection. The data was collected after voluntary consent of the participants, which was obtained after sharing the objectives of the study and reassuring the participants about their anonymity and the confidentiality of the information they were providing. A consent form was given to them and the same was collected duly signed prior to data collection. A total of 800 students were screened from two schools and two colleges. Hundred students were screened in each visit. All the sessions comprising of 100 students for data collection [Table/Fig-1] were performed with the same faculty, same teaching aids, same interaction, and same explanations.



[Fig-1] Sampling of adolescents from schools and colleges

STATISTICAL ANALYSIS: Statistical analysis was done with the statistical package for the social science system version SPSS 17.0. Continuous variables are presented as mean $\pm$ SD, and categorical variables are presented as absolute numbers and percentage. The comparison of normally distributed continuous variables between the groups was performed using Student's t test. Nominal categorical data between the groups were compared using Chi-squared test or Fishers exact test. For all statistical tests, a P value less than 0.05 was taken to indicate a significant difference.

RESULTS: A total number of 800 students were screened and 714 students were incorporated for the study as 59 students filled the form incompletely and 27 had medical illness who were excluded. [Fig-1] A total of 166 students (23.3%) of the population was sampled from colleges and 548 students (76.7%) from schools.

A total score of ≥ 25 with SCARED questionnaire indicates presence of an Anxiety disorder but scores ≥ 30 are more specific. In our study prevalence of anxiety disorder as calculated by using a score of ≥ 30 was 270(37.8%) whereas using a score of ≥ 25 it was 329(46.1%). However a score of ≥ 30 is more specific and there were 37.8% of such adolescents.

Prevalence of anxiety across different age group was as given in [Table-1]. Panic disorder was more common in early and late adolescents as compared to middle adolescents. Generalised anxiety disorder was more common in middle and late adolescence. Separation anxiety, Social anxiety and School avoidance was more common in early adolescence.

[Table1]: COMPARISON OF ANXIETY DISORDERS IN DIFFERENT AGE GROUP

	Age groups			P Value		
	Early (n=104) (11-13 yrs)	Middle (n=401) (14-17yrs)	Late (n=209) (18-19yrs)			
Anxiety Disorders	39	40.20%	151	37.70 %	81	38.8 0%
Panic Disorder	48	49.50%	179	44.60 %	105	50.2 0%
Generalized Anxiety Disorder	26	26.80%	134	33.40 %	68	32.5 0%
Separation Anxiety Disorder	66	68.00%	204	50.90 %	106	50.7 0%
Social Anxiety Disorder	38	39.20%	124	30.90 %	56	26.8 0%
School Avoidance	26	26.80%	80	20.00 %	34	16.3 0%

The social class as given in [Table-2] was calculated using modified kuppuswamy scale(2007). A total of 153 students did not mention the annual income of their parents. Of the remaining 561 students 451(80.39%) were in middle class, 53(9.44%) in lower class and 57(10.17%) in upper class. Anxiety disorders were more common in middle and lower socioeconomic groups i.e. 37.5% and 50.9% respectively as compared to upper socioeconomic group i.e.26.3%.

This difference was statistically significant with $p < 0.05$. For all types of anxiety disorders if taken individually the occurrence of anxiety was higher in middle and lower socioeconomic strata however statistical significance was found in separation anxiety disorder. Anxiety disorders were inversely proportional to the socioeconomic strata.

TABLE 2: COMPARISON OF ANXIETY DISORDER ACROSS DIFFERENT SOCIAL CLASS

	Socioeconomic Status			P Value
	Lower	Middle	Upper	
Total	53	451	57	
Anxiety Disorders	n 27	169	15	0.028
	% 50.90%	37.50%	26.30%	
Panic Disorder	n 30	213	21	0.115
	% 56.60%	47.20%	36.80%	
Generalized Anxiety Disorder	n 21	147	12	0.099
	% 39.60%	32.60%	21.10%	
Separation Anxiety Disorder	n 33	232	20	0.014
	% 62.30%	51.40%	35.10%	
Social Anxiety Disorder	n 22	130	14	0.109
	% 41.50%	28.80%	24.60%	
School Avoidance	n 13	91	5	0.075
	% 24.50%	20.20%	8.80%	

In perception of parental care 54 adolescents did not respond to all 3 questions. Adolescents who responded that their parents had time to speak to them during weekdays was 77% and 15.6% said they did not have time, 7.4% chose not to respond. Adolescents who were comfortable to share their problems with parents was 63.9% and 28.8% were not and 7.3% chose not to respond. Adolescents who responded yes to the question that their parents are considerate about their feelings was 75.9% as against a no of 16.5% and 7.6% chose not to respond. The prevalence of anxiety disorder was statistically higher in those who thought that their parents did not have time for them, that they were not comfortable to share their feelings with them and that their parents were not considerate about their feelings ($p < 0.05$) (Table -3). This difference was statistically significant for anxiety disorder, panic disorder, generalised anxiety disorder and separation anxiety disorder.

TABLE -3: COMPARISON OF ANXIETY ACROSS PERCEPTIONS OF PARENTAL CARE

	Response to 3 questions on perception of parental care	P Value		
		Yes to all 3 (n=371)	Yes to 2 (n=371)	Yes to 1 (n=371)
	No (n=289)			
Anxiety Disorder	175	60.80 %	179	48.20 %
Panic Disorder	150	52.10 %	154	41.50 %
Generalized Anxiety Disorder	116	40.30 %	97	26.10 %
Separation Anxiety Disorder	166	57.60 %	181	48.80 %
Social Anxiety Disorder	99	34.40 %	103	27.80 %
School avoidance	58	20.10 %	70	18.90 %

Anxiety disorders were equally common in school (38.8%) and college students (35.9%) with no significant statistical difference. Separation anxiety disorder was more common in school students (55.0%) as compared to college students (46.1%). This difference was statistically significant. Panic disorder was more common in college students, 52.7% as compared to 45.0% in school students. Generalised Anxiety Disorder was equally common in both school (32.0%) and college students (32.9%). Prevalence of anxiety disorders was more

when parents were less educated whereas it was significantly less in graduates and post graduates. This was true for all types of anxiety disorders with the difference being statistically significant in separation anxiety disorder.

DISCUSSION:

The prevalence of anxiety disorder in this study was 37.8%. This high prevalence could be attributed to urban population of Delhi from which this sample was drawn as compared to the rural population in Kerala in study by Nair et al[11]. The prevalence of anxiety disorders was very high in a study done by Rakhee [12] where it was found to be 56.8% as against 37.8% in our study.

SCARED – Screen for Child Anxiety Related Disorders, DSM-IV, TR-Diagnostic and Statistical Manual, text revised, STAI-State Trait Anxiety Inventory, DASS-42-Depression, Anxiety and Stress Scales, CAPA-Child and Adolescent Psychiatry Assessment, ICD-10DSR International Classification of Diseases, DISC- Diagnostic Interview Schedule for Children, RCMAS-Revised Childrens Manifest Anxiety Scale.

Evans, College of Nursing, University of Tennessee[19] in their study, concluded Nursing students were more anxious than students in other fields. 30% of nursing students had high test anxiety in comparison to 17% of students in the comparison populations. the mean anxiety score in our study for nursing students was 27.5 as compared to 25.4 for rest of the population.

However anxiety although was more common in girls in this study, the difference was not statistically significant. This study was comparable to study by Deb et al[13] as majority in this study were in middle

adolescence, mean age being 15.47 ± 0.58 years. In the study by Nair et al[11] age distribution was 11-19 years. In the study by Nair et al[11] 63.4% were females and 36.6% were males. Thus the sex distribution in this study was comparable to previous studies.

Similarly lower socioeconomic status and lower parental education have been associated with a greater prevalence of separation anxiety disorder. In a study on “Nontraditional lifestyle and prevalence of mental disorders in adolescents in Goa” by Pillai et al[20], majority of the population was of middle class. Similarly the distribution of social strata was 36.9% upper, 45.6% middle and 17.3% lower class in study by Deb et al[13].

LIMITATIONS:

The study relied solely on self-reports of adolescents. SCARED questionnaire which was used in this study, although validated has not been studied and evaluated in North India and region specific cut-offs may be different.

CONCLUSION:

The prevalence of Anxiety disorders in adolescents of North Delhi is substantially higher. Separation anxiety was the most common anxiety disorder (52.9%). Large proportion of adolescents (51.9%) bonded well with their parents. Anxiety disorders were inversely proportional to the socioeconomic strata

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Table -4 COMPARISON OF PREVALENCE OF ANXIETY DISORDERS IN VARIOUS STUDIES

Year	Age in yrs	Sample Size-N	Location	TOOL	Author	Prevalance
2013	11-19	501	Rural Kerala	SCARED	Nair et al[11]	8.60%
				SCARED Indian cut-off	Nair et al	25.80%
				DSM IV TR	Nair et al	14.40%
2011	Higher Secondary	100	Urban Kerala	SCARED	Rakhee AS & Aparna S [12]	56.80%
2010	13-17	460	Kolkata	STAI	Deb et al [13]	19.10%
2009	14-19	545	Abha, Saudi Arabia	DASS-42	Khalid S. Al Gelban [14]	66.20%
2007	>13	906	USA	CAPA	Bittner et Al [15]	10.60%
2005	0-16	2064(B)	Bangalore & Lucknow	ICD 10 DSR	Srinath et al [8]	12.5%
2004	4-17	1886	Peurto Rico	DISC	Canino et Al [16]	16.4%
2001	14-16	1265	New Zealand	DSM III-R	Woodward et al [17]	29.90%
2000	Dec-17	1299	Australia	RCMAS	Boyd et al [18]	21.10%
2018	11-19	714	North Delhi	SCARED	PRESENT STUDY	37.80%

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