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Academic anxiety a growing concern among urban mid adolescent school children

Dr. Mohan Joshi^{a*}, Dr. R. Gumashta^b, Dr. N.B. Kasturwar^c, Dr. A.V. Deshpande^d

^aAssociate Professor, ^{b,d} Resident, ^c Professor & Head, Department of Community Medicine, NKP Salve Institute Of Medical Sciences & Research Centre, Nagpur, India 440019

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ABSTRACT

Adolescence, being the developmental phase with enormous challenges of life situations coupled with pressure for fulfilment of parental expectations, is marked by definite noticeable anxieties. A careful study of mid adolescence can reveal the existing scenario for timely and appropriate interventions leading to minimization of undesirable losses, temporary & permanent, to the families and communities. This cross sectional study, conducted on 410 school students in mid adolescent age group, derived its findings as per the Bisht Battery Scale based questionnaire and related categorization. The observance of mild, moderate and severe academic anxiety in majority of students shows high pressures for academic performance and therefore related anxiety levels. Thus, the study concludes that the provision of counselling facilities for students and parents shall go a long way in not only relieving the students from the undesirable levels of academic anxieties, but will also help them to cope up with the academic challenges thereby avoiding possibilities of taking extreme steps like suicides.

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1.Introduction:

The term adolescence is derived from the Latin word 'Adolescere' meaning to grow to mature. Adolescence has been defined by World Health Organization as "Critical period of transition to adulthood and progression from appearance of secondary sexual characters to sexual and reproductive maturity and development of adult mental process".¹

Adolescence is one of the most dynamic stages of human development. It is characterized by an exceptionally rapid rate of growth and is often variable in individual due to its dependence on genetic, hormonal and nutritional factor. Adolescence is accompanied by dramatic physical, cognitive, social and emotional changes that present both opportunities and challenges for adolescents, families, health professionals, educators and communities. Although early life experiences form the foundation for personality development, experiences during the adolescent years contribute significantly to the unique characteristics and maturation of the young adult.²

WHO defines adolescence both in terms of age (spanning the ages between 10 and 19 years) and in terms of a phase of life marked by special attributes. These attributes include

Rapid physical growth and development

Physical, social and psychological maturity, but not all at the same time

Sexual maturity and the onset of sexual activity

Experimentation

Development of adult mental processes and adult identity.

Transition from total socio-economic dependence to relative independence.³

In India, adolescents (10-19 years) constitute 21.4% of the population, comprising one fifth of the total population. Mid adolescence (13-15 years) is a stage distinguished by the development of a separate identity from parents and new relationships with peer groups and opposite sex & of experimentation.

* Corresponding Author : Dr. Raghvendra Gumashta,
Department of Community Medicine,
NKP Salve Institute of Medical Sciences & Research Centre,
Nagpur, India 440019
E.mail: rgumashta@yahoo.com

According to National Family Health Survey -II, India, 1998-99 mid adolescent boys constitute about 5.2% of total population and mid adolescent girls constitute 5.1% of total population⁴.

Adolescent is characterized by strong tendency to experiment with risk behaviour. The desire for novelty and courage for experiment are much greater in adolescent than later life. Most commonly reported behaviour in this age group of population include activities such as television viewing, playing video-games, hitting others, lack of sleep and throwing things².

Anxiety is arguably an emotion that predates the evolution of man. Its ubiquity in human and its presence in a range of anxiety disorders make an important clinical focus. The word anxiety is derived from latin 'anxietas' (to choke, throttle, trouble, upset) and encompasses behavioural, affective and cognitive response to perception of danger. Anxiety is normal human emotion. In moderation, anxiety stimulates an anticipatory and adaptive response to challenging or stressful event. In excess, anxiety destabilizes and dysfunctional state results. Anxiety is considered excessive or pathological when it arises in absence of challenge or stress, when it is out of proportion to challenge or stress in duration or severity, when it results in significant distress & when it results in psychological, social, occupational, biological and other impairment⁵⁻⁶.

Anxiety is one of the most common psychological disorders in school aged children and adolescents worldwide (Costello, Mustillo, Erkanli, Keeler & Angold, 2003). The prevalence rate of anxiety ranges from 4%-25% with average of 8%⁷. These emotional problems are often neglected as they are not easy to be detected by the parents or by teachers. These figures could be underestimation since anxiety among a large number of children and adolescent goes undiagnosed owing to the internalized nature of its symptoms (Tomb & Hunter, 2004). Anxiety is associated with substantial negative effect on children's social, emotional and academic success. Its specific effect includes poor social and coping skills often leading to avoidance of social interaction, loneliness, low self esteem, perception of social rejection, difficulty in forming friendship and lower academic achievement (Hudson & Rapee, 2006). In India main documented cause of anxiety among school children and adolescents is parent's high educational expectation and pressure for academic achievement (Deb, 2001). It is relevant to mention here that in one year alone, 2520 children, or more than six children per day, committed suicide because of failure in examination (National Crime Records Survey-GOI-2000). This shocking figure underlines the seriousness of this problem & its resounding social costs to communities.¹⁵ Since a very limited number of studies have addressed anxiety among school-aged children & adolescents in India, because of the seriousness of its adverse consequences, it was considered important to explore this issue further. Hence, the need for this study.

2. Material & Methods

A cross sectional study was carried out in an urban school randomly selected by lottery method. A study population of 410 mid adolescent school children in age group of 12-15 years were studied during study period of July 2010 to March 2011. After explaining the objectives of study and the method of data collection to concerned school authorities, written permission was sought. All the students who were enrolled were given brief orientation about the purpose of the study, its objectives & its methodology in the class rooms in the presence of their respective class teachers. A semi structured questionnaire was custom-made for gathering information about the demographic & socio-economic background of the adolescents and the profile of their parents. A separate proforma related to parental age, education, income & occupation was made to be filled by their parents at their homes. The face validity & socio-cultural admissibility of this semi structured questionnaire was also ascertained. The pre-designed semi structured questionnaire based on Bisht Battery Stress Scale was used as study tool consisting of 15 questions. The students were explained that they should read every question and mark their answer as 0 to 4 depending upon their qualitative and quantitative assessment. So each student had to mark their response as 0-4 twice for every question. The students total score was calculated and level of academic anxiety was assessed quantitatively as normal (0-15), mild (15-30), moderate (31-69) & severe (>70) 17. Data was entered in Microsoft excel sheet and analysed using statistical software SPSS version 16 software (SPSS Inc. Chicago, Illinois, USA). Both the descriptive and inferential data analyses were applied using the appropriate statistical test of significance (Chi-square, t-test). The confidence interval of 95% and significant difference of <0.05 is taken as valid for test of significance.

3. Results

Among 410 study subjects, 237 (57.8%) were males (Table 1) & 173 (42.2%) were females. The mean age of study subjects was 13±0.71 years. Among study population, 235 subjects were from upper middle (57.3%) & 131 from upper (31.9%) socio-economic class, while only 44 (10.8%) were from lower socio economic class. Among the study subjects 46.1% had professional father. 14.9% had professional mother. The majority of them had either nuclear families (83.4%) or joint families (10.98%). Majority of students had tuition (93.6%) and majority (75.4%) were spending less than one hour on sport activities. Television viewing was universal (96.1%), but majority among them (75.6%) were spending less than one hour daily for this recreational activity. Video game playing was not to their taste and majority (95.85%) were not using these games for their recreation. Maximum among study subject (94.7%) were also not using computer daily due to their pre-occupation with studies & tuition. The prevalence of overweight & obesity was 20.5% and 48% of female study subjects had higher waist hip ration (>0.85).

Among the study subject 25.5% had morbidities, particularly of non-infectious type, highest being severe academic anxiety (20.2%) & overweight/obesity (20.5%). The pre hypertension was seen in 15.9% of study subjects while 11.5% were having stage I hypertension.

Table No. 1 shows distribution of study subjects according to academic anxiety as assessed by Bisht Battery Anxiety Scale. Out of total 410 students only 62(15.1%) were normal, which is without any academic anxiety while majority 348 (84.9%) were facing some or the other form of academic anxiety. Among them, maximum that is 249(60.8%) were having moderate anxiety while 83(20.2%) students were suffering from severe level of academic anxiety. This high percentage of severe level of academic anxiety is known to affect their academic achievement and also their self confidence. These figures could represent just a tip of an iceberg, as anxiety among large number of children and adolescent is known to go undiagnosed owing to the internalized nature of its symptoms. The main documented cause of anxiety among school adolescents is parent's high educational expectation and pressure for academic achievement.

Table no 2 shows distribution of severe academic anxiety in relation to various variables. When severe academic anxiety analyzed in relation to working status of mother, prevalence of severe academic anxiety is more in student who has mother as housewife(22.8%) than with those whose mother is working women(16.2%), however this difference is found to be statistically insignificant(p= 0.1553, NS). With respect to mother's employment status, many researchers had suggested that maternal employment by itself is unlikely to impede a child's social & emotional development (Gottfried & Gottfried, 2006). In fact, for children of working mother tend to be more independent, to enjoy higher self-esteem, and to hold higher educational & occupational aspirations than those whose mothers are housewives (Richards & Duckett, 1994). It is also consistently established that children of employed mother were as confident in social setting as children whose mother remained at home & were somewhat more sociable with peers. The Moore & Hofferth (1979) also found that working women spent half as much time caring for their children as did housewives, but their children still developed normal attachments to them. But Kerryann Walsh from Queensland University of Technology reported about more anxiety among adolescents whose mothers were working women (26.2%) as compared to 23.4% in non working housewife mothers (p<0.01).

When severe academic anxiety analyzed in relation to type of family, it was noticed that academic anxiety was more in nuclear family(20.5%) as compared to joint and three generation family(19.1%) however this difference is found to be statistically not significant(p= 0.8002,NS)

When severe academic anxiety was analyzed in relation to socio economic status, it was observed that severe academic anxiety was higher in upper socio economic status(20.5%) as compared to lower socio economic status(13.3%), however this

difference is found to be statistically not significant (p= 0.500,NS) . In studies of adults, socio economic status has been found to impact both directly on rates of mental illness & indirectly via the influence of poverty & financial hardship on low & middle income groups (Hudson et al, 2009). The least anxiety as seen in high socio economic adolescent is attributed to their secured future in terms of material & financial aspect (Kaplan & Sadock, 2000). Deb Sibnath et al (2010) in their study in adolescent of Kolkata(India) also reported about higher prevalence of anxiety in middle socioeconomic class in relation to higher or lower socioeconomic classes(p<0.01)¹⁵

When severe academic anxiety was analyzed in relation to father's occupation, it was noticed that severe academic anxiety was more in study subjects whose father's occupation was semiskilled, unskilled, unemployed (26.4%) as compared to those parents who were professional & skilled (18.6%), however this difference is found to be statistically not significant(p=0.105,NS).

The higher prevalence of severe academic anxiety among semiskilled, unskilled or unemployed father could be attributed basically to their socioeconomic condition rather than any other reason. The peer pressure from their friends belonging to upper or upper middle socioeconomic class or from friends whose fathers are professional or skilled workers could be underlying reason to push this group of students for having severe academic anxiety.

Table 1. Distribution of Study Subjects according to academic anxiety (n=410)

Bisht battery score	Level of academic anxiety	Number	Percentage
>70	Severe anxiety	83	20.2
31-69	Moderate anxiety	249	60.8
30-15	Mild anxiety	16	3.9
<15	Normal (No anxiety)	62	15.1
	Total	410	100

Table No. 2 Distribution of severe academic anxiety in relation to occupation of mother, type of family, SES and father's occupation (n=410)

	Total	With severe academic anxiety	Without severe academic anxiety	Chi-square value
Housewife	279	62(22.8%)	217(77.2%)	X ² = 2.02, p= 0.1553, NS
Working mother	130	21(16.2%)	109(83.8%)	
Nuclear family	342	70(20.5%)	272(79.5%)	X ² =0.06, p= 0.8002,NS
Joint & 3 Generation Family	68	13(19.1%)	55(80.9%)	
Upper SES	396	81(20.5%)	315(79.5%)	X ² =0.4548, p=0.5004,NS
Lower SES	15	02(13.3%)	13(86.7%)	
Professional & skilled	323	60(18.6%)	263(81.4%)	X ² =2.62, p=0.105,NS
Semi- skilled, unskilled & unemployed	87	23(26.4%)	64(73.6%)	

Table 3: Gender wise distribution of moderate and severe anxiety. (n=410)

Type of Anxiety	Male No. (%)	Female No. (%)	Total	Chi Square	p value	Odds Ratio
Normal	55 (91.67)	5 (8.33)	60	12.20	0.00048	1
Mild	13 (81.25)	3 (18.75)	16			0.39
Moderate	141 (55.73)	112 (44.27)	253			0.11
Sever	57 (70.37)	24 (29.63)	81			0.22
Total	266	144	410			

Table 4: Distribution of anxiety in relation to tuition. (n= 410)

Type of Anxiety	Attending Tuition No. (%)	Not attending tuition No. (%)	Total	Chi Square	p value	Odds Ratio
Normal	50 (84.75)	9 (15.25)	59	8.808	0.003	1
Mild	14 (87.5)	2 (12.5)	16			1.26
Moderate	242 (96.03)	10 (3.97)	252			4.36
Sever	79 (95.18)	4 (4.82)	83			3.55
Total	385	25	410			

4. Discussion:

The academic anxiety was assessed by Bisht Battery anxiety scale. Out of total 410 study subjects, maximum adolescent had moderate anxiety i.e. 249 (60.8%) followed by severe anxiety in 83 (20.2%), while 62 (15.1%) study subjects had no anxiety.

Reddy AVR. (1989)⁸: studied different problems of concern for school going adolescent and reported academic anxiety as most common problem to be followed by anxiety regarding their future.

Pramod S. (1996)⁹: reported about boys manifesting more futuristic orientation than girls and hence having more academic anxiety than girls. In this present study the prevalence of academic anxiety was also higher (87.5% among mild, 96.03% among moderate and 95.18% among severe anxiety students) in boys as compared to girls (12.5% among mild, 3.97% among moderate and 4.82% among severe anxiety students).

Boyd Candice P et al (2000)⁷: Studied the prevalence of anxiety and depression in Australian adolescent and their comparison with worldwide data. The data from two Australian studies were combined so that the prevalence of anxiety & depression in a large, normative sample of Australian adolescents could be investigated. The results of these analyses were then compared with previously reported prevalence rates from studies worldwide. This comparing revealed striking differences in the prevalence of anxiety and depression across different countries and cultures.

Ojha V (2005)¹⁰: also reported about higher academic anxiety in boys as compared to girls.

Madhu Jain et al (2007)¹¹: studied academic anxiety among adolescents and its role of coaching & parental encouragement. The coaching attending boys experienced high level of academic anxiety than self-studying boys. Contrary to it, coaching attending girls tends to have less anxiety than self studying girls. Similarly, coaching attending boys exhibit more academic anxiety than coaching attending girls and self studying boys show less anxiety than self studying girls. The prevalence of moderate academic anxiety (44.27%) and severe academic anxiety (29.63%) in present study (Table 3) also were significantly higher in tuition going students when compared with students opting for self study pattern (Table 4), $X^2 = 8.808$, p value = 0.003, OR 4.36 for moderate anxiety and OR 3.55 for severe anxiety.

Milgram Norman et al(1999)¹²: studied the relation of academic of anxiety with type of academic activities and procrastination in children and parent's direct involvement in their children school work . The author found that students were less anxious about homework than the other academic assignments and there was inverse relationship of anxiety and procrastination with regard to homework.

Carter R (2000)¹³: found that 25 to 40% of individuals suffer from test anxiety with more female than males being affected. Academic anxiety is not only test anxiety but also anxiety about certain educational subjects in general.

Bhansali Reena, Kunjan Trivedi (2008)¹⁴: made a comparative study between boys and girls of 16-18 years to know about gender differences in incidence and intensity of academic anxiety among 240 adolescents from different high schools of Jodhpur city & reported higher level anxiety (66.1%) in girls as compared to boys (33.9%) which was statistically significant ($P < 0.01$).

Deb Sibnath et al (2010)¹⁵: has studied a 460 adolescents aged 13 to 17 years through State Trait Anxiety Inventory. The result showed that anxiety was prevalent in the sample with 20.1% of boys and 17.9% of girls found to the suffering from high anxiety. More boys were anxious than girls (45.1%). ($p < 0.01$). The results also showed that adolescents belonging to the middle class suffered more anxiety than those from both high & low socioeconomic groups ($P < 0.01$) with adolescents of working mothers were found to be having more anxiety ($P < 0.01$)

Singh Y. G (2010)¹⁶: Studied the level of academic anxiety in Akola city of Vidharbha region and found that the level of academic anxiety was high (71.25%) in most of the students. It was also found that as the level of academic anxiety increases academic achievement decreases and vice versa.

In a nutshell, results of this study of 410 adolescents in Nagpur, (city located in centre of India) shows that severe anxiety was prevalent in one fifth of the sample which calls for anxiety prevention efforts for adolescents and mental health promotion efforts aimed as adolescent's parents. It includes general & specific anxiety prevention education, self help strategies & building of psychological support network & services. For this purpose, school offers an ideal setting for universal prevention activities with potential to reach large numbers of children & adolescents. Additionally, the school environment is likely to facilitate the acquisition of competencies in Indian children as it is viewed as a place of learning (Rambaldo et al, 2001). At school adolescents can be taught how to manage stress & anxiety and can practice cognitive-behavioural skills. It also requires a multidisciplinary programme directed towards improving parent's knowledge of and attitudes towards the common issues of adolescents. The parent education is specifically required in the Indian context to deal with the phenomenon of educational pressure and the comparison of the performance of one's own child with the best ranked students.

5. Conclusion

While considering the high prevalence of severe academic anxiety among study population, schools should start counselling centre for children and for parents as well, to be served by expert counsellor or by expert child psychologist, if required. Such centres

would go a long way for encouraging healthy lifestyle practices among study subjects, particularly focused on adolescents in upper and upper middle socioeconomic status. The high prevalence of academic anxiety in coaching attending adolescents in relation to self studying students is also a cause of concern. It is high time that both the school and parents take realistic view of their wards' capabilities and set reasonable standards for their achievements. The parents, in particular, and schools, in general need to encourage adolescents to freely express themselves, impose lesser restriction on them and appreciate their achievements.

This issue is of particularly importance for a simple reason that, if left untreated, adolescent anxiety can persist into adulthood. And, secondly, anxiety (and depression) in adolescence have been linked with poor psycho-social outcomes and in some cases, suicide. Hence, accurate identification of adolescent at risk and its proper management at primary level is vital in many aspects.

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