



## STUDY OF PREVALENCE OF DEPRESSION , ANXIETY AND SOCIAL PHOBIA AMONG ADOLESCENT STUDENTS IN SELECTED SCHOOLS

**Dr Sowndarya T A** Assistant professor Srinivas Institute of medical Science and Research Centre

**Dr Radhe B K\*** Assistant professor Srinivas Institute of medical Science and Research Centre.  
\*Corresponding Author

**ABSTRACT** Psychological factors being an important change in this age group play a vital role in shaping the future adult and subsequently the rest of the life. It is also a vulnerable period for the occurrence of problematic behaviours like truancy from school, poor academic performance, initiation of substance use, depression, anxiety, anti-social behaviour like stealing, violent behaviour and other psychiatric disorders. Studies among 253 million adolescents out of a total population of 1.23 billion (20%) have revealed that the incidence of childhood psychiatric disorders can range up to 18 per 1000 in a year. School health centres are often helpful in identifying the mental health care needs of adolescents, partly because adolescents spend much of their time in school. Hence, the study was undertaken to survey the distribution and determinants of depression, anxiety and social phobia among adolescent students.

**METHODOLOGY** - A cross sectional study was done among adolescent students in Mangalore city, from July 2015 to June 2016. The study comprised of 1171 adolescent students. A pretested semi-structured questionnaire was used to collect data regarding socio demographic profile, depression, anxiety symptoms, social phobia and their determinants. Standardised questionnaires like BDI-2, HAM-A and SPIN were used for assessment

**RESULTS:** The prevalence of depression was found to be 52% (n= 613) according to BDI score. Mild mood disturbance was the commonest type (39%) followed by Moderate depression (26.7%). 52 students (4.4%) complained of Severe depression and 3 students (0.3%) had Extreme depression. The distribution of anxiety among study participants shows prevalence of 25%. The prevalence of social anxiety was seen among 36% (n=426).

**CONCLUSION:** Prevalence of depression, anxiety and social phobia is high among adolescent students. Hence, facilities for counselling and also regular monitoring for danger signs have to be in place in schools.

**KEYWORDS :** Prevalence ,depression , anxiety and social phobia

### INTRODUCTION

WHO identifies adolescence as the period in human growth and development from ages 10 to19. It represents one of the critical transitions in the life span. While adolescence is a time of tremendous growth and potential, it is also a time of considerable risk during which social contexts exert powerful influences. Complex transitions occur in this period which includes physical, social, cultural, educational and psychological changes. Psychological factors being an important change in this age group play a vital role in shaping the future adult and subsequently the rest of the life. It is also a vulnerable period for the occurrence of problematic behaviours like truancy from school, poor academic performance, initiation of substance use, depression, anxiety, anti-social behaviour like stealing, violent behaviour and other psychiatric disorders. Many adolescent mental disorders fall under the broad categories of mood disorders (e.g., depression) and anxiety disorders (including social anxiety disorder, obsessive-compulsive disorder (OCD)).<sup>1</sup>

In India, as per 2011 census, there are 253 million adolescents out of a total population of 1.23 billion (20%).<sup>2</sup> Studies among them have revealed that the incidence of childhood psychiatric disorders can range up to 18 per 1000 in a year.<sup>3</sup>

Anxiety is a neurotic disorder characterised by a state of apprehension or unease arising out of anticipation of danger. The various manifestations of anxiety are generalised anxiety disorder, social phobia, separation anxiety, panic disorder with/without agoraphobia and other specific phobias. Generalised anxiety disorder is characterised by uneasiness/restlessness to almost all events/situations, not just to a particular event/situation without any apparent reason. Whereas phobia is defined as an irrational fear of a specific object, situation or activity which often leads to persistent avoidance of the feared object, situation or activity. Social anxiety disorder (SAD) or social phobia is a common anxiety disorder characterized by intense fear of embarrassment, humiliation, and negative evaluation by others. There is marked distress and disturbance in routine daily functioning.<sup>4</sup>

School health centres are often helpful in identifying the mental health care needs of adolescents, partly because adolescents spend much of their time in school. The present study was undertaken to study the distribution and determinants of depression, anxiety and social phobia among adolescent students.

### OBJECTIVES

To study the prevalence of depression , anxiety and social phobia among adolescent students in selected schools

### METHODOLOGY

A cross sectional study was done among adolescent students in Mangalore city, from July 2015 to June 2016. The study comprised of 1171 adolescent students. A pretested semi-structured questionnaire was used to collect data regarding socio demographic profile, depression, anxiety symptoms, social phobia and their determinants. Standardised questionnaires like BDI-2, HAM-A and SPIN were used for assessment

The sample size was calculated using the formula  $n=4PQ/L^2$  where prevalence of psychiatric problems was considered to be 57.7% among adults according to study done by Nagendra et al. (2012).<sup>5</sup> The allowable error was taken to be 5%. After substituting all the values in the formula the final size obtained was 1171 adolescent students.

Multistage stage sampling was adopted to attain the required sample size. There were 110 unaided English medium high schools in Mangaluru city, which were divided into two zones such as North and South , each zone had 55 schools respectively. The calculated sample size 1171 was divided among two zones so 586 students from north zone and 585 students from south zone were enumerated for the study. Of the 55 schools in each zone,15 schools from north zone gave consent for the study and ten schools from south zone gave consent for the study. Out of the schools who gave consent for the study 4 schools from north zone were selected and 3 schools from south zone were selected using simple random sampling technique. Each school was enumerated till a sample of size 146(586/4 schools) was reached in the north zone and 195(585/3 schools) from the south zone respectively.

Permission was obtained from both the college ethical committee, from schools and also from study participants. One hour duration was given by the class teacher for each class. Students were approached. Allotted one hour was utilised for the brief introduction of the topic , brief explanation of the questionnaire and purpose of the study. Completion of these questionnaires takes about 15-20 minutes. The questions which are not perceived by the participants need not be answered.Students who have scored above the cut-off points in any of the above scales were thoroughly assessed and clinical diagnosis done by using International ICD-10 DCR. Prompt reference of the students diagnosed to be depressed and anxious was done to the teaching hospital.

The data was entered on to a computerised Excel (Microsoft Excel 2008) spread sheet. Findings were compiled, analysed and tabulated with tables and figures. Subsequently it was analysed using SPSS trial version 21.0

**RESULTS**

The study had equal male and female participants. There were 586 males and females and the ratio was 1:1. The participants were majority from urban area 1106 (94.4%). There were majority Hindus 862(73.6%), there were 286(24.4%) Muslims and 23(2.0%) Christians. The education status of parents showed majority fathers were graduate and above, 534(45.6%).among mothers majority were graduate and above 368(31.4%). These indicate parents who are literate tend to educate their children. Table 1: shows prevalence of psychosocial factors among the study participants.

**Table No 1: Distribution Of Study Participants Based On The Psychosocial Factors (n=1171)**

PARAMETER	EVIDENCE OF DISTRESS	FREQUENCY	PERCENTAGE
CONFLICTS IN THE FAMILY	PRESENT	138	11.8%
	ABSENT	1033	88.2%
SELF PERCEPTION OF FINANCIAL DIFFICULTY	PRESENT	241	20.6%
	ABSENT	930	79.4%
SELF PERCEPTION OF MENTAL STRESS	PRESENT	350	29.9%
	ABSENT	821	70.1%
LIVING IN HAPPY FAMILY	PRESENT	1126	96.2%
	ABSENT	45	3.8%
PARENTS ALCOHOL CONSUMPTION	PRESENT	120	10.2%
	ABSENT	1051	89.8%
HISTORY OF DEPRESSION IN PARENTS	PRESENT	105	9.0%
	ABSENT	1066	91.0%
LOSS OF PARENT/S	PRESENT	66	5.6%
	ABSENT	1105	94.4%
BULLIED IN SCHOOL	PRESENT	280	23.9%
	ABSENT	891	76.1%
HAVING FRIENDS	PRESENT	1135	96.9%
	ABSENT	36	3.1%

Among 1171 students, it was observed that 138 students (11.8%) had experienced conflicts in the family, and 241 students( 20.6%) faced financial difficulty, further 350 students (29.9%) mentioned mental stress due to their parents expectations, most of them i.e 96.2% said that they are living in a happy family, 10.2% of their parents consumed alcohol, also 9% of them gave history of depression in parents, also observed that 66 students had single parent, surprisingly 23.9% of students faced bullying in school by the peer group, another important finding was 36 students (3.1%) had no friends for sharing their feelings.

The prevalence of depression was found to be 52% (n= 613) according to BDI score. Table 2 shows severity of depression among the students (n= 613). among the 613 students who had depression Mild mood disturbance was the commonest type (39%) followed by Moderate depression (26.7%). 52 students (4.4%) complained of Severe depression and 3 students (0.3%) had Extreme depression.

**Table 2: Distribution Of Study Subjects Based On The Severity Of Depression (n=1171)**

SEVERITY OF DEPRESSION	BDI SCORES	FREQUENCY	PERCENTAGE
MILD MOOD DISTURBANCE	11-16	240	39.1%
BORDERLINE	17-20	154	25.1%
MODERATE	21-30	164	26.7%
SEVERE	31-40	52	8.4%
EXTREME	>41	3	0.48%
TOTAL		613	100%

The distribution of anxiety among study participants shows prevalence of 25% (n=289). Table 3 shows distribution of participants based on severity of Anxiety according to HAM-A scores.

**Table No 3: Distribution Of Study Subjects Based On The Severity Of Anxiety (n=289)**

SEVERITY OF ANXIETY	HAM-A SCORES	FREQUENCY	PERCENTAGE
MILD	<17	131	45.3%
MODERATE	18-24	71	24.5%
SEVERE	25-30	87	30.1%
TOTAL		289	100%

Of the 289 students who had Anxiety, Mild anxiety was the commonest type (45.3%) followed by Severe anxiety (30.1%). 71 students (24.5%) showed moderate anxiety.

The prevalence of social anxiety was seen among 36% (n= 426) table 4: shows distribution of participants with social phobia according to severity by SPIN score. According to social phobia inventory scale, mild phobia was the commonest (57.5%) followed by moderate phobia (27.6%). 56 students (13.1%) complained of severe phobia and 7 students (1.6%) had very severe phobia.

**Table 4: Distribution Of Study Subjects Based On The Severity Of Social Phobia (n=426)**

SEVERITY OF SOCIAL PHOBIA	SPIN SCORES	FREQUENCY	PERCENTAGE
MILD	21-30	245	57.5%
MODERATE	31-40	118	27.6%
SEVERE	41-50	56	13.1%
VERY SEVERE	>51	7	1.6%
TOTAL		426	100%

**DISCUSSION**

Depression is a worldwide public health problem, that impacts an individual ability to perform life activities. A recently published longitudinal prospective study found that early onset depression often persists, recurs and continues into adulthood and indicates that depression in youth may also predict more severe illness in adult life. Depression in young people often co-occurs with other mental disorders, most commonly anxiety behaviour, or social anxiety disorders. This makes screening for depression very vital among school going students of the adolescent age groups.<sup>5</sup>

In our study, among the 1171 students, the prevalence of depression was found to be 52.3%. This was comparable to observations made by Nagendra et al, where 57.7% of adolescent students were found to have depression.<sup>2</sup> However prevalence was higher than the range of prevalence stated by Robert's et al<sup>6</sup> (6% to 41%) in a meta-analysis of 52 studies done in 20 countries of the world. The disagreement may be attributed to the use of different tools for measurement of depression, different sample size, motivation of the student to respond, and the individual's lifestyle.

In our study we measured adolescent anxiety using HAM-A scale and the overall prevalence rate was found to be 24.7% i.e 289 students had anxiety which was lower compared to study conducted by Deb & Walsh on anxiety among high school students in Calcutta(2010)<sup>7</sup> where the prevalence was 18.9%.

Another study conducted by Bakhla et al<sup>1</sup> showed prevalence anxiety to be 11% which was again much lower compared to the findings of our study.

The most common type of SAD in our study was of mild (57.5%) followed by moderate (27.6%), severe grade phobia (13.1%) and very severe phobia(1.6%) according to social phobia inventory scale. Study conducted by Khyati Mehtalia(2004)<sup>8</sup> also states that mild SAD(32.3%) was the commonest but values were much low compared to our study findings.

**CONCLUSION**

Prevalence of depression, anxiety and social phobia is high among adolescent students. Hence, facilities for counselling and also regular monitoring for danger signs have to be in place in schools.

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