A STUDY OF DIFFERENCES IN DEPRESSION ANXIETY STRESS IN STUDENTS IN INDIA

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ABSTRACT:

Depressive disorders often start at a young age. There is a need for early identification of depression, anxiety, and stress (DASS) and prevention. The present study was undertaken to find the magnitude of DASS among adolescents.Undetected and untreated mental disorders can impair a person's ability to perform at school or work place, cope with daily activities of life and can lead to severe psychiatric disorders and consequences later in their life.Adjustment to school life for the first time can be a stressful experience for most school students. Because of the challenges faced when adapting to these life changes, school students are at risk for developing mental health issues. The development of symptoms of depression and anxiety can further aggravate and leads to difficulty in adapting to the demands imposed upon by academic pressures of different course. Adolescent by itself is a period of adjusting to the changes in one's body and at emotional, cognitive and behavioral level. Mental health issues like depression and excessive anxiety can lead to difficulty in academics, relationships, and other important day to day life challenges.

Aims: To find the health status of school going adolescents in India. The objectives were (i) to study the prevalence of DASS among publicschool going adolescents and (ii) to study the correlates of DASS.

Settings and Design:A Cross-sectional survey of 14 years to 18 years students of four classes from 9th to 12th studying in public schoolsof Dwarka, New Delhi.

Subjects and Methods: Fourpublic schools were randomly selected through lottery method. In each public school, for each of the four classes, a section was randomly selected again by the lottery method. Forty students were selected from public school reaching sample size of 500.

Statistical Analysis Used: The data entry was done in MS Office Excel 2007. The analysis was done in the form of frequency tables, charts cross tables. For statistical significance, Chi-square test and correlation was found between various factors.

Results: The prevalence of DASS was 65.53%, 80.85%, and 47.02%, respectively. Overall, comorbidity between depression and anxiety was 57.65%. Extremely severe depression was very less (3%). The prevalence of DASS was higher in females. For depression and anxiety, the peak age was 18 years.

KEYWORDS: Psychological Stress, Depression, Anxiety, Mental Health, Students.

INTRODUCTION

Adolescence includes the age group between 10 to 19 years of age and it is a transitional phase from child to an adult. During this phase, lots of physical, psychological and behavioural changes take place which contribute to various mental health issues. Mental health problems like depression, anxiety and other conditions can lead to various behavioural issues at school or home, increases involvement in health risk behaviours like substance use and can lead to reduced academic performance in public schools. Worldwide around 10-20% of children and adolescents are estimated to be affected by mental health issues which accounts for about 15-30% of disability-adjusted life years lost in first thirty years of life. Many of these mental health issues that emerge during late childhood phase or early adolescent phase can continue to adulthood. Due to stigma, discrimination and inaccessibility and unavailability to mental health services, often these issues are undiagnosed and left untreated. These issues are not frequently addressed in families and in schools. Mental health is influenced by various factors like age, gender, and

physical illnesses, biological, psychological, family and social factors. Understanding the association between mental health and physical health is essential for prevention and effective treatment. Early identification and treatment can help these people to perform well academically, socially and vocationally.First effective step in addressing these mental health issues is identifying and creating an evidence base for number of people in need or number of people affected by these issues which can help in creating public awareness regarding these issues. Due to paucity of evidence or literature in the current geographic region, the current study has been conducted to determine the prevalence of depression, anxiety, stress and its correlates among urban school going adolescents of Dwarka, New Delhi in India.

DEPRESSION & ANXIETY AMONG COLLEGE STUDENTS

Adolescence is the period of transition. Depressive disorders often start at a young age; they reduce people's functioning and often are recurring. Globally, the reported prevalence rates of mental disorders among children and adolescent range from 1% to 51%. According to the WHO reports, community-based studies revealed an overall prevalence rate for mental disorders around 20% in several national and cultural contexts.[1] Major depression was the fourth most prevalent human disease in 1990 and is expected to rank second by the year 2020 in adolescent age group.[2] In developing countries, the prevalence of mental disorders among adolescents attending primary health-care facilities ranges between 12% and 29%.[3] Several studies indicate that the prevalence rates of the individual disorders: Depression, anxiety, and stress (DASS) are growing among adolescents (Institute for Health Metrics and Evaluation, 2013).[4] India contributes 21% of adolescent's population in the world. One out of six children affected with mental disorder. Early Indian community-based studies reported the prevalence rate of psychiatric disorders among children ranging from 2.6% to35.6%.[5] It has been noted that the majority of suicides in India are by those below the age of 30 years.[6] Depressive disorders often start at a young age; they reduce people's functioning and often are recurring.[7,8] Hence, there is need for early and effective identification of DASS that can prevent many psychiatric disorders at their nascent stage. With this thought in mind, the present study was undertaken to find the magnitude of DASS among adolescents and various factors associated with it. The aim

of this study was to find the status of the mental health of school going adolescents (13–18 years of age) in India.

METHODOLOGY

This was a public school based cross-sectional study.

Study design

The cross-sectional survey was conducted in public schools, for 4 months (January 1, 2014– April 30, 2014). The students (aged 14–18 years) of classes 9th, 10th, 11th, and 12th studying in public schoolsofDwarka, New Delhiwere included in the study.

Selection of participants

In total, there were 186 recognized schools, with 107 public schools and 79 public schoolsofDwarka, New Delhi. For the representation of true population of these public schools, fourpublic schools were randomly selected through lottery method. In each school out of four classes (9–12th), each section was randomly selected again by the lottery method. Further, ten students were selected from each section by systematic random sampling [Figure 1]. Sample size for the study was 470 students. Based on the varied prevalence of psychiatric morbidity from approximately 1–40%,[5,6] the maximum prevalence was taken to be 40% to calculate the sample size and relative error 5%. To check DASS, prepiloted questionnaire DASS scale (DASSS) 21 was used. The DASSS 21 is a 21 item self-report questionnaire designed to measure the severity of a range of symptoms common to both depressionand anxiety. In completing the DASSS, the individual is required to indicate the presence of a symptom over the previous week. Each item is scored from 0 to 3. Accordingly, the DASSS allows not only a way to measure the severity of a patient's symptoms but also a means by which a patient's response to treatment can also be measured. In addition, a self-structured questionnaire on socioeconomic status was also prepared. Before administering the questionnaire to the students, they were briefed about the study. They were assured about the privacy and confidentiality of their personal information and opinions. The questionnaire was pilot tested on the similar age group students of one school,

which was not the part of the study. This was done to validate the questionnaire. Principals, concerned teachers, and students were informed before the visit.
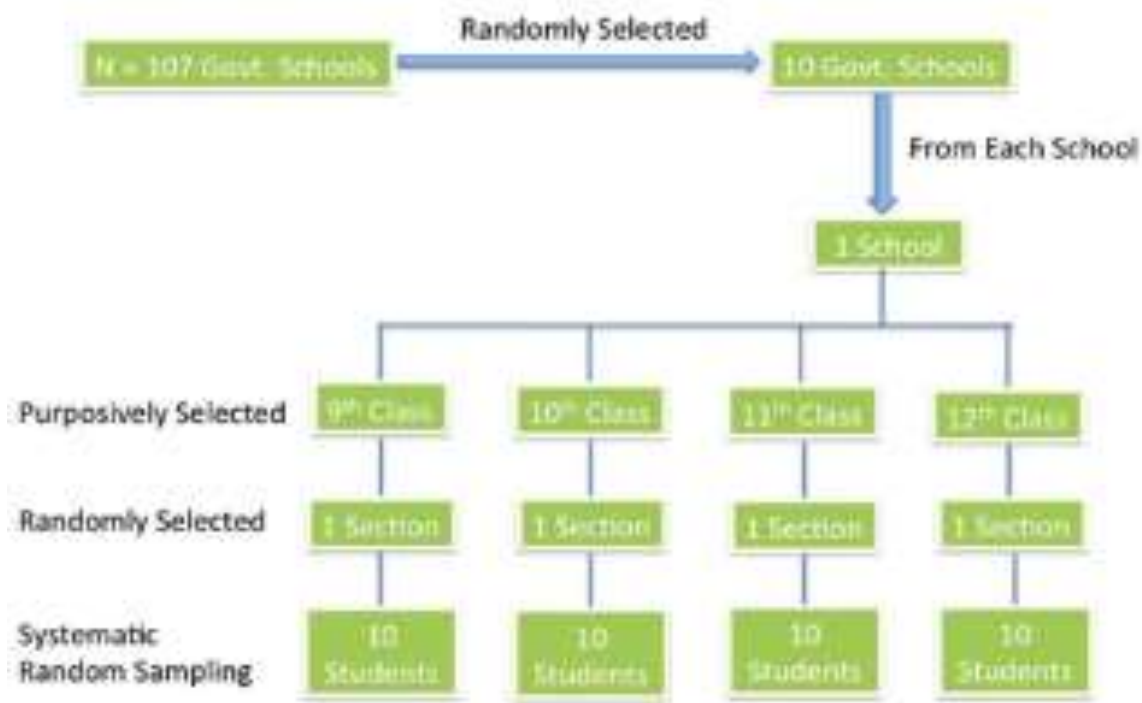

Figure 1: Sampling technique used to select study sample

Inclusion criteria

• All public schools present in India

• Students studying in classes 9th, 10th, 11th, and 12th of both the genders (males and females).

Exclusion criteria

• Those students who did not give consent or refuse to participate in the study.

Statistical analysis

The data entry was done in MS Office Excel 2007. The analysis was done in the form of frequency tables, charts cross tabs. For statistical significance, Chi-square test and correlation were found between various factors.

RESULTS

Out of 470 students, the maximum number of students participating in study was from 9th class (28.72%), and minimum number of students was from 12th class (22.76%). There were 257 male (54.68%) and 213 female (45.31%) participants in the study. The maximum number of students were from the age group of 16 years, i.e., 180 (38.29%) and minimum from the age group of 19 years, i.e., 3 (0.63%) students. Table 1 shows gender-wise distribution of participants having DASS. Table 2 shows that overall comorbidity between all three disorders, i.e., DASS was 36.1%. Distribution of participants of 9th, 10th, 11th and 12th class having the DASS is shown in Table 3. On comparison of DASS among participants of 9th, 10th, 11th, 12th classes, it can be seen that depression was higher in 12th class, anxiety was higher in 10th class, and stress was higher in 9th class. While comparing DASS among participant of non-board (9th + 11th) and board classes (10th + 12th), it was found that it was higher in board classes than in non-board classes. It was found that all types of depression (75.59%) and stress (53.52%) were higher in board classes than of non-board classes (57.2% and 41.63%, respectively).

Among students of classes 11th and 12th, according to their stream, it was found that depression and anxiety were maximum in medical students (78.57%), and stress was more in commerce students (48.89%). It was found that extremely severe depression was highest among medical students (03.57%); mild depression was also more in them (28.57%). Moderate depression was more in arts students (43.42%). Extremely severe (17.10%) and moderate anxiety (27.63%) were higher in arts students. Mild anxiety was higher in medical students (42.86%). Severe anxiety was higher in commerce students (16.67%). Extremely severe stress was present only in commerce students (01.11%); severe stress was higher in nonmedical students (60.71%). Mild stress was higher in arts students (35.53%).

Table 1: Gender-wise distribution of participants having depression, anxiety, and stress (n=500)

Gender	Number of students	Prevalence of DASS (%)

Males	257	85 (33.07)
Females	243	85 (39.9)

DASS: Depression, anxiety and stress

Table 2: Comorbidity between different disorders (n=500)

Comorbidity	*n*(%)
Overall	170 (36.17)
Depression and anxiety	271 (57.65)
Depression and stress	144 (40)
Stress and anxiety	200 (500

Table 3: Distribution of participants of 9th, 10th, 11th and 12th class having the depression, anxiety, and stress (n=500)

Students of class	DAS	Normal (%)	Mild (%)	Moderate (%)	Severe (%)	Extremely severe (%)
Class 9th (n=135)	Depression	55 (40.74)	21 (15.56)	40 (29.63)	14 (10.37)	5 (3.7)
	Anxiety	37 (27.41)	31 (22.96)	52 (38.52)	14 (10.37)	1 (0.74)
	Stress	32 (23.7)	37 (27.41)	51 (37.78)	9 (06.67)	6 (4.44)
Class 10th (n=106)	Depression	28 (26.42)	27 (25.47)	32 (30.19)	14 (13.21)	5 (4.72)
	Anxiety	18 (16.96)	21 (19.81)	39 (36.79)	15 (14.15)	13 (12.26)
	Stress	50 (47.17)	30 (28.30)	10 (09.43)	15 (14.15)	1 (0.94)
Class 11th (n=122)	Depression	55 (45.08)	20 (16.39)	34 (27.87)	12 (09.84)	1 (0.82)
	Anxiety	27 (22.13)	36 (29.51)	26 (21.31)	21 (17.21)	12 (09.84)
	Stress	72 (59.02)	29 (23.77)	11 (09.02)	9 (07.38)	1 (0.82)
Class 12th (n=107)	Depression	25 (23.30)	23 (21.36)	43 (40.78)	12 (11.65)	4 (02.91)
	Anxiety	21 (19.42)	29 (27.18)	25 (23.30)	12 (11.65)	20 (18.45)
	Stress	49 (45.63)	40 (37.86)	6 (05.83)	12 (10.68)	0

Distribution of participants having DASS according to the age showed that half of the student of 13 years of age felt stressed and three-fourth is depressed and anxious. In 14-year-old students 78% of students had anxiety. In 15-year-old students, nearly two-third had depression and more than three-fourth had anxiety. A similar situation was seen in 16-year-old students. In 17-year-old students, three-fourth had anxiety. In 18-year-old students, all students had anxiety, and 91%

were depressed. The overall trend shows that the level of stress increased with age. In case of depression and anxiety, the peak age was 18 years.

Self-satisfaction with academic performances in participants with DASS was 67.08%, 86.07%, and 40.5%, respectively whereas the parent's satisfaction with academic performances of their wards with DASS was 66.86%, 80.47%, and 43.19%, respectively. Poor socioeconomic conditions and father's occupation (nonworking) were directly related with higher level of DASS. With increase in the education level of parents, level of DASS in their children decreased. As the parents love decreased, level of depression and stress in the participants increased. DASS was found to be more among students whose mothers were not alive. The level of anxiety was found higher in the participants belonging to the joint families. Students staying away from home in hostels and paying guest accommodations had higher levels of depression and stress. It was found that the prevalence of depression and stress was more in students who were bullied by batch mates. It was also found that the prevalence of DASS was more in students who felt overburdened with test schedules. The level of stress was higher among the participants who were not self-satisfied with their academic performance and whose parents were not satisfied. Participants, who took alcohol and smoked, showed higher prevalence of DASS.

DISCUSSION

In our study, we found that the prevalence of DASS was more in students who feel overburdened with test schedules. The level of stress was higher among the participants who were not self-satisfied with their academic performance and whose parents not satisfied. Similar results have been reported by other studies, namely, Kaur and Sharma, Moreira and Furegato, Liuand Lu and Gray-Stanley et al. A study done by Deb et al. revealed that 63.5% of the higher secondary students in Dwarka, New Delhi experience academic stress, and the parental pressure for better academic performance was found to be mostly responsible for academic stress as reported by 66.0% of the students. It was found that the prevalence of DASS was higher in females than in males. The study conducted in Dwarka, New Delhi that girls had higher scores on beck depression inventory than boys.

Academic stress is a type of stress that arises due to academic factors such as heavy school schedule, unrealistic expectation and demands of parents and teachers, low academic performance, poor study habits, and not having enough time to deal with school's multiple priorities. Academic stress is recognized as a risk factor for depression and suicidal behavior. The experience of school-related stress such as poor academic performance, negative feedback from parents and teachers about school work; daily hassles in the school environment, stressful life events, and negative affect states during school work were all leads to increase in depression.[11,12] Poor academic grades generally predict high educational stress; the discrepancy between expected and actual grades may play a more important role in the development of psychological distress and other mental health problems.

In our study, DASS increases as the intake of alcohol increases. Higher DASS was found among those who drink alcohol and those who were occasional smokers. Severe depression and extremely severe stress were more in males as compared to females. A study done in Dwarka, New Delhi revealed that 23.25% had contemplated suicide earlier and that 91.9% of them were aged 30 years or less. A strong association of suicidal tendency with alcohol was reported in 10.42% of the sample. The suicide rate was more in males as compared to females. It might be due to the reason that males are not emotionally very strong as compared to females and shared less of their problems as compared to female. The prevalence of DASS increases as the parents love decreases, lack of parental affection takes toil on mental peace of children. In a review done by Zgambo, et al. in 2012, it was seen that children and adolescents who live without parents exhibit higher levels of depressive symptoms than those who live with parents around them. Depression is decreased by higher levels of parental care and lower levels of parental indifference. Greenberger et al. stipulate that strong positive family relationships lessen the symptoms of depression. Manyother factors, such as loss of loved ones, conflicts with parents, teachers, and peers, and significant physical diseases may have important effects on adolescent suicidality. In our study, as the level of parent's education increases, the level of prevalence DASS among adolescents decreases. There is a direct relation between the parents' mental health and their children's health. A cross-sectional study by Olfson et al. in 2003, on parental

depression and child mental health reported that children of parents with depression were approximately twice as likely as children of parents without depression to have a variety of mental health problem. The prevalence of depression and stress was more among the participants who were bullied by their batch mates or seniors. According to the study conducted by Khawaja et al. in 2015 showed that physical abuse (P = 0.05), verbal abuse (P = 0.003), injury (P = 0.02), and bullying (P < 0.001) were significantly associated with psychological stress.

As the age increases, the prevalence of DASS was also found to be increasing. The peak of the prevalence of depression was in the 18th year of age. Tepper et al. argue that depressive symptoms do not differ between boys and girls but intensify with age. This trend of increasing DASS may be due to different social and developmental challenges faced by teens. In our study, depression and stress were prevalent in participants who belong to poor families. Direct and indirect effects of relative poverty had bad effect on the development of emotional, behavior, and psychiatric problems. Poverty has multidimensional phenomenon, encompassing inability to satisfy basic needs, lack of control over resources, lack of education and poor health. Since DASS was very high, hence, provision should be made for a natural mentoring program for the children as well as adolescents. Psychological health should be the prime concern of school authorities, and it should be integrated with school health programs. Child-centered activities including individual mental health consultation and specific problem-focused interventions as well as more general classroom programs to improve coping skills, social support, and self-esteem. For relieving stress, yogic exercises, meditation, laughter therapy, and other recreational activities suitable for that group of students should be made part of school curriculum. Although school health program is running in various schools mental, psychological, and emotional dimensions are not given adequate attention, it is recommended that school health program should be strengthened by including above-mentioned aspects. Child psychologists should be recruited on permanent basis in public schools. There should be counseling sessions for students and their parents. Students must be made aware about ill effects of substance abuse through lectures so that do not indulge in such things. Since DASS level was found more among the girls

than the boys, the need of hour is that more attention should be paid to girl child under school health program.

CONCLUSION

According to study, the overall prevalence of DASS among school going adolescents in India was high. DASS in this population have been shown to be associated with increased risk of suicidal behavior, homicidal ideation, tobacco use, and other substance use. The burden of mental disorder is great as they are prevalent in all societies. They create a substantial burden for affected individuals and their families and produce significant economic and social hardships that affect society as a whole.If undetected and untreated this can affect their academic performance and can lead to psychological issues later in their life. So, sensitizing the parents through parent teachers meeting can create awareness among the parents regarding the importance of mental health of children. Teachers need to be trained for identifying and reporting these issues earlier to the parents. Health education sessions need to be organized regularly to the students regarding coping strategies and life skills to prevent themselves from these problems.

1. The current investigation revealed higher rate of depression and anxiety among female students.

2. It has been empirically found that professional students report higher level of depression and anxiety than nonprofessional students.

3. The current investigation also revealed relatively higher level of depressive and dysfunctional anxiety symptoms in school going students irrespective of gender.

4. There is a strong need to start professional counseling and psychotherapy for school students to cater their emotional needs and to help them cope with the academic and other pressures of day to day life.

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