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Depression, Anxiety and Stress: A comparative study in Arts, Commerce & Science Junior College students in Rural Area of India

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ABSTRACT

Introduction: Increasing stress on school children has become a matter of national concern in India. The success of currently applied remedial policies is doubtful. A change in methods of imparting education is strongly felt.

Aims: The study aimed to find the extent and causes of depression, anxiety and stress in junior college students in Loni, a rural area in state of Maharashtra, India. The study also compared levels of depression, anxiety and stress in arts, commerce and science students.

Methods: This cross-sectional study was carried out in 360 students of P.V.P Arts, Science and Commerce Junior College in Loni. Stratified Random Sampling was used for selection of 120 students (equal number of girls and boys) each from arts, science and commerce streams. The questionnaire consisted of general information and Depression Anxiety Stress Scale-42 (DASS). Statistical analysis was done to calculate percentage, mean, standard deviation and Z values of DASS scores.

Results: Results showed that students of rural area are vulnerable to depression, anxiety and stress. Arts students had a higher level of depression as compared to their peers from science and commerce faculties. Stress was higher in 12th class students who faced board exams.

Conclusions: Depression, anxiety and stress in junior college students is not merely related to academic performance but to various internal and external factors. A mere change in examination scheme will not resolve this issue. The interventions aimed at reducing stress in students need to take these factors into account while formulating national policies.

KEYWORDS : Depression, Anxiety, Stress, DASS-42, junior college

INTRODUCTION:

Over the past few years the burden of work and expectations on the students has increased significantly. The ill effects of this have begun to show in the form of increased depression, stress, anxiety and suicides among school children. The stress on school children has become a matter of national concern and a need to change the methods of imparting education is being strongly felt. There have been reports of several suicides by school children allegedly due to increasing stress of school work. College students are a group particularly prone to stress due to the transitional nature of college life. (Towbes LC, 1996)[1]. The pressure to earn good marks (grades) is very high.(Hirsch JK et al.,1996)[2]

According to the World Health Organization Global Burden of Disease study ranked depression as the fourth leading cause of all disease, accounting for 4.1% of total burden (Murray C, et al.1996)[3]. By 2020 it will rise from the fourth to the second leading cause of DALYs. It will then be second only to ischemic heart disease for DALYS among both sexes. Depression is a mood disorder characterized by feeling of hopelessness, unhappiness, loss of motivation & suicidal tendencies. Anxiety is a subjective state of internal discomfort. It is a normal emotion with adaptive value and symptoms include worrying, impaired attention, poor concentration, and memory problems.

Students in rural areas of India are trapped between two worlds, the breakneck competition of the outside world and local traditions. Researchers have noted the particular vulnerabilities of rural youth, who tended to be more isolated & have fewer educational, recreational and other public health resources. Relative to urban community rural settings may be characterized by greater isolation, fewer educational and public health resources and higher levels of poverty.

The measures taken to address this issue are largely concentrated on altering exam patterns and changing methods of evaluation. With this background in mind the research intends to explore the extent of depression, stress, anxiety and there causes among the arts, commerce and science students in a rural area

OBJECTIVES:

- To study the extent of depression, anxiety and stress among junior college students in the rural area of Loni.
- To compare levels of depression, anxiety and stress in arts, commerce and science students and comment about the differences if any.

MATERIAL AND METHODS:

This cross-sectional study was carried out in 360 students of Padmashri Vittalrao Vikhe Patil Arts, Science & Commerce Junior College from village Loni a rural area of Maharashtra over a period of two months. Stratified random sampling was used for selection of 120 students each from arts, commerce & science streams and simple random sampling for selection of students from each faculty. The sample consisted of equal number of girls and boys.

Procedure prior to administering the questionnaire, ethical conditions for participating in the study was verbally explained to the respondents. These included privacy, voluntary participation, anonymity, confidentiality, and protection from both psychological and physical harm. Students participated in the study on the basis of this verbal informed consent. Written consent was taken from the Principal of college. In addition, the study met the ethical requirements of the Institutional Ethical Committee.

Data was collected on structured proforma from each study subject. The questionnaire was in both English & Marathi language.

Depression, Anxiety and Stress Scale (DASS) (Lovibond & Lovibond, 1995)

It is a 42-item self report measure used to assess depression, anxiety and stress. Items on DASS are rated on 4-point Likert type ranging from 0 (did not apply to me) to 3 (applied to me most of the time). Separate scores for depression, anxiety and stress were obtained by this scale. Internal consistency has been demonstrated in clinical samples(r=0.71). (Lovibond, P.F., &, Lovibond, S.H.,1995)[4]. Construct validity demonstrated with significant correlations between Anxiety Scale & Beck Anxiety Inventory (r=0.81)[5]; Depression scale & Beck Depression

Inventory (r=0.74)[5]. The DASS has been found reliable & valid method for assessing client changes in depressive mood and anxiety. (Simons et al., 2002)[6]

Data Analysis Items in the DASS subscales were scored according to instructions in the technical manual. Higher the score on each subscale more distressed the individual. The comparison was made using Mean, Standard Deviation and Z values of DASS scores.

RESULTS:

Table 1) Extent of depression among students:

dass score	Number of Students (%)
PROFOUND (>28)	6(1.7)
SEVERE (>21)	36(10)
MODERATE (14-20)	150(41.7)
MILD (10-13)	81(22.5)
NORMAL (0-9)	87(24.1)

The table 1 shows the extent of depression among students. Of the 360 students 6(1.7%) have profound depression, 36(10%) have severe depression, 150(41.7%) have moderate depression while 81(22.5%) suffer from mild depression.

Figure 1) Relation of Stream to mean DASS score:

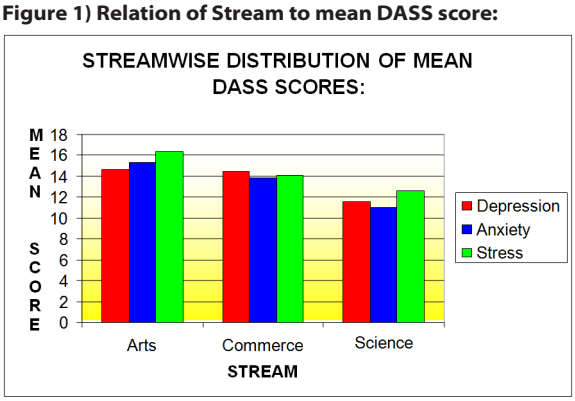


Table 2) DASS scores according to stream and class:

	Depression		Anxiety		Stress		p value*
	Mean	S.D	Mean	S.D	Mean	S.D	
Stream							
• Arts	14.65	6.9	15.25	9.6	16.35	9.5	p<0.001
• Commerce	14.5	4.4	13.8	7.25	14.05	8.2	
• Science	11.6	7.26	11.05	8.96	12.58	8.29	
Class							
• 11th	13.6	6.4	12.53	9.2	12.72	9.06	p<0.001
• 12th	13.56	6.48	14.2	8.14	15.9	8.2	

P values calculated on basis of Z test

Arts students had highest levels of depression, anxiety and stress. The Z values revealed a highly significant association ($p < 0.001$) between mean Depression Anxiety and Stress (DAS) scores of arts and commerce students as compared to science. Stress scores of 12th standard students are significantly higher than 11th standard students.

Ninety four percent (94.2%) students said that they had chosen the subjects on their own while 5.8% had not taken subjects of their choice. Those who had not chosen subjects on their own showed a significantly higher level of anxiety. Ninety Six percent (96.7%) students claimed to like the subjects while 3.3% did not like their subjects and had significantly higher levels of anxiety.

About forty eight percent students felt the burden of parent's expectations and showed significantly higher levels of DASS scores as compared to 51.7% who did not feel burdened by parent's expectations.

DISCUSSION:

As seen in Table 1, At least 76.9% of students have some degree of depression. These values are significantly higher than those in studies conducted in Saudi Arabia (38.2%) (Khalid et al.2007)[7], Sri Lanka (36%) (Rodrigo C et al 2010)[8], Chandigarh (45.8%) (Arun P, Chavan BS, 2009)[9] and Brunei (36%) (L Mundia, 2010).[10] This may indicate that students in rural area who do not have access to same educational, recreational and public health resources as that in the urban areas have higher levels of depression, anxiety and stress.

From Table 2 it is clear that depression, anxiety & stress are all significantly higher in students of arts and commerce faculties as compared to that of science students. This may be related to the uncertainty regarding future work situation for arts. Unfortunately art is still considered secondary to science which provides better employment opportunities. Often students who are unable to get science resort to taking arts against their will. This certainly affects their mind frame. Arts and commerce students in rural area have a comparatively poor past academic record. Science is still the preferred stream by many rural students with commerce and arts being a secondary choice. A study comparing DASS levels in arts, science and commerce students could not be found hence further studies with larger sample size have to be carried out to confirm these results.

Stress is significantly higher in 12th standard students as compared to 11th standard students (Table 2). This shows that levels of stress are higher in students in classes facing board examinations at the end of the year. These board exams are perceived to be the make or break of a student's career. Hence, a lot of importance and prestige is associated with these exams. Students are under tremendous peer pressure and burden of expectations to perform well in these exams. Also their routine is much more taxing with additional coaching and entrance exam training. Similar results being shown by other studies. (Bhasin SK et al 2010)[11], (Rodrigo C et al 2010)[8]

CONCLUSION:

In conclusion we can say depression, anxiety and stress among junior college students in the rural area is matter of great national concern and needs to be dealt with policies that are based on detailed analysis of problems and address the issue of children's mental health. The levels of depression, anxiety and stress were significantly higher than those seen in other studies. This shows that levels of depression are more in rural students.

Contrary to popular belief arts and commerce students are equally and in some cases more vulnerable to depression anxiety and stress. Further studies are needed to identify factors contributing to this observation. The writers suggest that uncertainty regarding future, past academic performance, low self esteem may all be contributing to higher levels of depression, anxiety and stress. Studying subjects which are not of students own choice, appearing for board exams, students previous grades, burden of parents expectations all lead to higher levels of depression, anxiety and stress in students.

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