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An observational assessment of the mental health status among students residing in women hostel in a district of Western India

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Abstract

Aim: Assessment of mental health status and associated factors among students residing in women hostel.

Method: A survey that was descriptive and cross-sectional was conducted over the course of one year among students who were living in hostels for female students. From a list that was submitted by the girl's hostel organization, three hostels were selected using a random selection procedure known as the lottery. One hundred students participated in the research project.

Results: The average age of respondents was 21.27 ± 3.47 years, practically all were Hindu (91%), and most were pursuing bachelor's degrees, with 14% preparing for their studies. 70% of respondents had a monthly family income of over Rs 30,000 and 70% were from nuclear families and 30% from joint families. The mean depression DASS score was 10.40 ± 7.73 , with 47% falling within normal range. The mean anxiety score was 13.57 ± 8.42 , with just 24% falling within the normal range. Similarly, the mean stress score was 13.77 ± 8.52 , with 44% falling under the normal severity scale categorization of DASS.

Conclusion: Our findings revealed an alarming level of depression, anxiety, and stress among female dormitory students.

Keywords: Anxiety, depression, girls, hostels, stress, students

Introduction

The World Health Organization (WHO) defines mental health as “a state of well-being in which the individual recognizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and can contribute to his or her community”^[1]. Many people equate health with being physically healthy and free of disease, and as a result, they have disregarded the value of mental health. As a result, mental health is a crucial component of total health^[2]. Therefore, it is very necessary to focus on mental health in every phase of life. Students are a special type of people who are transitioning out of the most difficult era of their lives. 3 Students who are preparing to start or are currently enrolled in undergraduate programs are among the most susceptible categories of students in terms of DAS.

Depression, anxiety, and stress levels in the community are recognized as key indices of mental health. Failure to detect and address these emotional disorders will sadly result in rising psychological morbidity, with detrimental effects throughout their professions and lifetimes^[4]. Stress among medical students has become a subject of concern around the globe^[5, 6]. Besides day-to-day stress, medical students have to undergo stress associated to medical school^[7]. Stress is the body's response to demands, difficulties, or upsetting environmental situations^[8].

Stress can be seen as either negative anguish or good eustress. When demands are more than a person's capacity to handle, distress results^[9]. Severe mental stress begins to impact a person's mood, behavior, eating, and sleeping patterns, which impacts not only their physical health but also their mental capacity^[10, 11]. Many researchers around the world have documented a large number of medical students suffering from conditions like anxiety, depression, and emotional disorders^[12], and these conditions have been linked to the use of addictive drugs^[13].

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The current study is set out to determine the mental health status among students residing in women hostel

Materials and Methods

Study type: Descriptive and cross-sectional study

Study duration: One year

Study area: St. John College of Engineering and Management, Palghar, Maharashtra.

Study participants: Female students who were living in hostels. From a list that was submitted by the girl's hostel organization, three hostels were selected using a random selection procedure known as the lottery. One hundred students participated in this research project.

Inclusion criteria: Girls over the age of 18 sleeping in private hostels were included in the study. **Exclusion criteria:** Girls with impairments, living in college or school hostels, and under the age of 18 were omitted.

Study tool: A pre-designed and semi-structured questionnaire was prepared, which consisted of three sections: demographic, psychosocial characteristics related to mental health state, and the DASS21, shortened form of DASS scale 13.

Data were obtained on these three factors. Written consent was taken prior to the survey and face to face questionnaire interview was conducted in order to examine the elements relevant to mental health, binomial category of questions (yes/no) was designed after significant literature study and prior studies additionally, to measure depression, anxiety, and stress, standard questionnaire (DASS) was done and the score was recorded. Frequency was measured as did not apply to me at all, applied to me to some degree, apply to me to large degree, apply to me very much with an assigned value of 0, 1, 2 and 3 correspondingly. The score was totaled and then multiplied by 2 for final score as DAS21 was utilized. Sum score was interpreted based on the classification of the severity table. The pretesting of the questionnaire was omitted due to its standardization; however, to mitigate information bias, respondents were briefed on the research topic and its content.

Statistical analysis: Data was collected and then analyzed in SPSS 25. It was double-checked and verified. Categorical data was summarized as proportion/percentage and numerical data was summarized as mean and standard deviation. $p < 0.05$ was considered statistically significant.

Results

Table 1: Demographic characteristics of the respondents

Characteristics	N (%) Mean± SD
Age (years)	21.27±3.47
Religion	
Hindu	91 (91)
Buddhist	5 (5)
Others	4 (4)
Education level	
Intermediate	4 (4)
Bachelor preparation	14 (14)
Bachelor	76 (76)
Masters	6 (6)
Family type	
Nuclear	70 (70)
Joint	30 (30)
Family income (per month in Rupees)	
30,000 and less	30 (30)
More than 30,000	70 (70)
DASS (depression)	
Normal	47 (47)
Depression	53 (53)
DASS (anxiety)	
Normal	24 (24)
Anxiety	76 (76)
DASS (stress)	
Normal	44 (44)
Stress	56 (56)

The mean age of respondents was 21.27±3.47 years, almost all of them were Hindu (91%), the majority of the respondents were studying for bachelor's and about 14% of them were preparing for their bachelor studies. 70% of the respondents had a monthly family income of more than Rs 30,000 and about 70% of respondents belonged to the nuclear family and 30% of them belonged to the joint

family. The mean DASS score for depression was 10.40±7.73. 47 (47%) fall into normal range. Similarly, the mean score for anxiety was 13.57±8.42 and only 24 (24%) were under the normal range. likewise, the mean score for stress was 13.77±8.52, 44 (44%) fall under the normal range according to the severity scale classification of DASS.

Table 2: Psychosocial variables related with mental health

Characteristics	N (%)
Frequent disturbance of roommate	
Yes	45 (45)
No	55 (55)
Death of a family member (in 2 years)	
Yes	24 (24)
No	76 (76)
Experience of abuse	
Yes	38 (38)
No	62 (62)
Homesickness	
Yes	80 (80)
No	20 (20)
Support from others	
Yes	80 (80)
No	20 (20)
Smoking	
Yes	10 (10)
No	90 (90)
Alcohol consumption	
Yes	25 (25)
No	75 (75)
Meal satisfaction	
Yes	40 (40)
No	60 (60)
Safe and supportive environment	
Yes	65 (65)
No	35 (35)

The study found that more than half of the respondents were not disturbed by their roommate. More than three-fourths of the participants reported that no one in their family had died in the past two years. More than three-fifth of respondents

did not face any sort of abuse in their life. More than three fourth felt homesick while living away from home. The majority of respondents were supported by others in their time of need.

Table 3: Association of socio-demographic and psychosocial variables with depression

Characteristics	Depression		P value	AOR	95% CI
	Yes (N0)	No (N)			
Religion					
Hindu	46	45	0.48		
Buddhist	4	1			
Others	3	1			
Education level					
Intermediate	1	3	0.17		
Bachelor preparation	8	6			
Bachelor	40	36			
Masters	4	2			
Family type					
Nuclear	40	35	0.72		
Joint	13	12			
Family income (per month in Rupees)					
30,000 and less	17	13	0.80		
More than 30,000	36	34			
Frequent disturbance of roommate					
Yes	27	17	0.002*	2.525	1.414-4.511
No	26	30			
Death of a family member (in 2 years)					
Yes	15	9	0.879	0.949	0.485-1.857
No	38	38			
Experience of abuse					
Yes	22	16	0.594	1.184	0.636-2.207
No	31	31			
Homesickness					
Yes	44	36	0.119	1.696	0.872-

No	9	11			3.296
Lack of other's support					
Yes	38	42	0.658	1.194	0.650-2.193
No	15	5			
Smoking					
Yes	3	7	0.133	0.479	0.183-1.250
No	50	40			
Alcohol consumption					
Yes	17	8	0.003*	2.698	1.401-5.197
No	36	39			
Meal satisfaction					
Yes	19	21	0.625	1.161	0.638-2.112
No	34	27			
Safe and supportive environment					
Yes	30	35	0.081	0.580	0.315-1.068
No	22	13			

Table 4: Association of socio-demographic and psychosocial variables with anxiety

Characteristics	Anxiety		P value	AOR	95% CI
	Yes N	No (N)			
Religion					
Hindu	68	22	0.468		
Buddhist	4	1			
Others	3	1			
Education level					
Intermediate	3	1	0.879		
Bachelor preparation	12	2			
Bachelor	58	18			
Masters	3	3			
Family type					
Nuclear	56	14	0.373		
Joint	20	10			
Family income (per month in Rupees)					
30,000 and less	24	6	0.740		
More than 30,000	52	18			
Frequent disturbance of roommate					
Yes	40	5	0.244	1.547	0.743-3.221
No	36	19			
Death of a family member (in 2 years)					
Yes	17	7	0.290	0.647	0.289-1.450
No	59	17			
Experience of abuse					
Yes	33	5	0.002*	4.580	1.776-11.814
No	43	19			
Homesickness					
Yes	65	15	0.119	1.804	0.859-3.786
No	11	9			
Lack of other's support					
Yes	65	15	0.040*	2.164	1.036-4.521
No	11	9			
Smoking					
Yes	9	1	0.733	0.804	0.229-2.817
No	67	23			
Alcohol consumption					
Yes	22	3	0.018*	2.895	1.201-6.980
No	54	21			
Meal satisfaction					
Yes	30	10	0.125	1.737	0.858-3.518
No	46	14			
Safe and supportive environment					
Yes	50	15	0.266	0.647	0.300-1.394
No	26	9			

Table 5: Association of socio-demographic and psychosocial variables with stress

Characteristics	Stress		P value	AOR	95% CI
	Yes (N)	No (N)			
Religion					
Hindu	52	39	0.170		
Buddhist	2	3			
Others	2	2			
Education level					
Intermediate	3	1	0.317		
Bachelor preparation	8	6			
Bachelor	44	32			
Masters	1	5			
Family type					
Nuclear	40	30	0.347		
Joint	16	14			
Family income (per month in Rupees)					
30,000 and less	20	10	0.677		
More than 30,000	36	34			
Frequent disturbance of roommate					
Yes	30	15	0.404	1.288	0.711-2.330
No	26	29			
Death of a family member (in 2 years)					
Yes	12	12	0.128	0.585	0.294-1.167
No	44	32			
Experience of abuse					
Yes	23	15	0.131	1.648	0.861-3.153
No	33	29			
Homesickness					
Yes	48	32	0.005*	2.577	1.328-4.999
No	8	12			
Lack of other's support					
Yes	48	32	0.965	1.014	0.539-1.908
No	8	12			
Smoking					
Yes	6	4	0.415	0.668	0.253-1.763
No	50	40			
Alcohol consumption					
Yes	17	8	0.206	1.525	0.793-2.934
No	39	36			
Meal satisfaction					
Yes	22	18	0.662	0.875	0.482-1.590
No	34	26			
Safe and supportive environment					
Yes	25	40	0.000*	0.267	0.137-0.520
No	31	4			

Respondents who blamed themselves for any adverse occurrences in their lives were linked to depression, anxiety, and stress (DAS). They were three times more likely to be depressed, twice as likely to be anxious and three times more likely to be stressed. Furthermore, having depression was more than twice as likely among those who consumed alcohol, and having anxiety was 2.895 times as likely among those who consumed alcohol. Respondents who were upset by their roommate were more than twice as likely to be depressed. Those who had experienced abuse were twice as likely to have anxiety and those who had received no assistance from others were twice as likely to have anxiety. Those who were homesick were more than twice as likely to have stressful emotional states, whereas being in a safe and supportive setting in hostels was a

significantly protective factor against stress. The other variables such as death of a family member within the last two years, smoking, and satisfaction with the food served by the hostel were not significantly associated with DAS.

Discussion

Adolescence (ages 10 to 19) is a pivotal stage in human development, during which adolescents face pressures to grow physically, emotionally, socially, and academically [14]. Mental health issues may profoundly affect students' academic achievement, employment prospects, overall health, and future if not promptly identified and addressed [15-17].

The average age of respondents was 21.27±3.47 years, with nearly all identifying as Hindu (91%). The majority were

pursuing bachelor's degrees, while around 14% were preparing for their undergraduate education. Seventy percent of respondents reported a monthly family income over Rs 30,000, with around 70% belonging to nuclear families and 30% to joint families. The mean DASS score for depression was 10.40 ± 7.73 . 47 (47%) fell into normal range. Similarly, the mean score for anxiety was 13.57 ± 8.42 and only 24 (24%) were beneath the normal range. Similarly, the average stress score was 13.77 ± 8.52 , with 44 individuals (44%) categorized within the normal range according to the DASS severity scale categorization. The necessity for students to reside in dormitories away from home while managing the significant demands of academic and personal life without support may correlate with an increased incidence of melancholy, anxiety, and stress. Furthermore, social stresses such as roommate disruption, abuse, poor self-esteem, blaming oneself, a lack of support, and drinking can all have a substantial psychological influence on students. We identified no connections between student household monthly income and depression, anxiety, or stress in our study. However, this conclusion is not compatible with previous research that indicate lower socioeconomic status is considerably connected with serious depressive illness and depressed symptomatology [18]. In terms of other demographic characteristics, we found no statistically significant associations with any of the variables (religion, education, family type, and monthly household income) except for ethnicity, which was found to be statistically significant with depression at $p=0.01$ but not with anxiety or stress. A study of Bangladeshi medical students found no significant correlation between socio-demographic characteristics and depression or anxiety.¹⁹ The research indicated that over fifty percent of the participants were untroubled by their roommate. Over seventy-five percent of the participants indicated that no family member had deceased in the preceding two years. Over sixty percent of respondents reported never experiencing any form of abuse in their lives. More than three fourth felt homesick while living away from home. The majority of respondents received help from others during their time of need. Individuals who attributed unpleasant events in their life to personal fault were associated with depression, anxiety, and stress (DAS). They were thrice as susceptible to depression, twice as prone to anxiety, and threefold more likely to experience stress. Moreover, individuals who consumed alcohol were more than twice as likely to experience depression, and their likelihood of experiencing anxiety was 2.895 times greater. Individuals who had dissatisfaction with their roommate were over twice as likely to exhibit symptoms of depression. Individuals who experienced abuse were twice as likely to suffer from anxiety, and those who received no support from others were also twice as likely to experience anxiety. Individuals experiencing homesickness were over twice as likely to encounter stressful emotional states, whereas being in a secure and supportive hostel environment served as a substantial protective factor against stress. The other variables such as death of a family member within the last two years, smoking, and satisfaction with the food served by the hostel were not significantly associated with DAS. A study at Nepal Medical College revealed that the prevalence of depression, anxiety, and stress among first-year medical students was 44%, 59.3%, and 45.1%, respectively, corroborating our findings that DAS is more prevalent

among adult students. A study in Germany similarly revealed that the prevalence of depression, anxiety, and stress was significantly greater in individuals aged 18-30 years compared to those aged 30-59 years [20, 21]. We hypothesize that this may be attributed to various challenges beyond academic pressure and social factors that individuals encounter during this specific stage of life. Our study identified correlations between various psycho-social factors (roommate disturbances, abuse, lack of support, self-blame, alcohol consumption, homesickness, and a secure and supportive living environment) and depression, anxiety, and stress; conversely, smoking and the death of a family member exhibited no association with DAS.

Conclusion

Depression, anxiety, and stress are detrimental to both individuals and society. Suicidal ideation, alterations in personality, difficulties in relationships and marriage, withdrawal from college, and other adverse consequences are among the repercussions. Our research indicated a concerning prevalence of depression, anxiety, and stress among female dormitory residents. Neglecting to address the issue may lead to dire consequences and a prolonged existence of hardship and dissatisfaction, indicating that appropriate measures and interventions must be enacted promptly by the relevant authorities to alleviate the challenges.

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