Original Research Paper Physiology

Prevalence of Stress and Anxiety Among Nursing Students and its Association With BMI

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ABSTRACT

Stress and anxiety in college students is caused by strenuous academic programs, which may have physical and psychological effects on the well-being of students (1). 64% of graduates suffer from stress and anxiety disorders (2). Objective: The objective of our study was to assess the prevalence of stress and anxiety disorder among nursing students and to relate stress and anxiety with BMI. Methodology: Questionnaire based cross sectional study was conducted among 47 students pursuing first year nursing course in Dr. MGR educational research institute and university. Data to assess stress was obtained using Cohens stress scale and Anxiety using GAD -7 questionnaire (3). Results: Mean age of students' was18.5 years. 40% students between 17-18 years showed mild stress and 4% showed severe stress, whereas only 4% students between 19-20 years showed any form of stress. Nearly 80% students showed high anxiety levels. BMI had no significance between stress and anxiety ($P < 0.05$). Conclusion: Detecting anxiety and stress-related symptoms in the college population is a critical preventive strategy, which can help in preventing disruption to the learning process (4)

KEYWORDS : stress, anxiety, obesity, BMI

INTRODUCTION:

Stress is defined as body's non specific response to demands placed on it in due to disturbing events in the environment. For an adolescent college student physical appearance like skin color, appearance and physical traits can also be a contributing factor for stress. One third of students either resort to binge eating or unhealthy weight loss programs to maintain a body image. These stressful conditions leads to a vicious cycle with irregularity in diet, lack of exercise and addiction, each being considered independent factors leading to obesity. This condition has become a focus of concern nationally and globally. To evaluate the role of stress and anxiety in nursing students and to evaluate the association of BMI and stress Cohens stress scale and GAD 7 was used. Among medical students different scales have been used to assess anxiety and stress. In this study Cohens stress scale which used 10 point scale and GAD-7 which has seven questions was used as it was found to be more reliable and evaluated widely (5).

Review of literature:

Undergraduate medical students are more prone to depression due to stress and anxiety than any other graduate student. The condition is often undiagnosed and untreated (3). Stress is often (6) reported in students studying for examinations. Paramedical students are expected to learn and master a huge amount of knowledge and skills. Tight class schedules and repeated examinations make the students have a irregular diet pattern. This can cause students either to lose weight or gain weight due to intake of food at irregular timing. 41.9% students are reported to have prevalence of stress and showed suicidal tendency (4). Kouvenoen et al (7) have reported that there was no significant association between work stress and BMI unless stress leads to unhealthy eating habits (8). Students diagnosed with stress do not opt for any medical support either due to lack of time, or lack of confidentiality or due to stigma of mental health care (6).

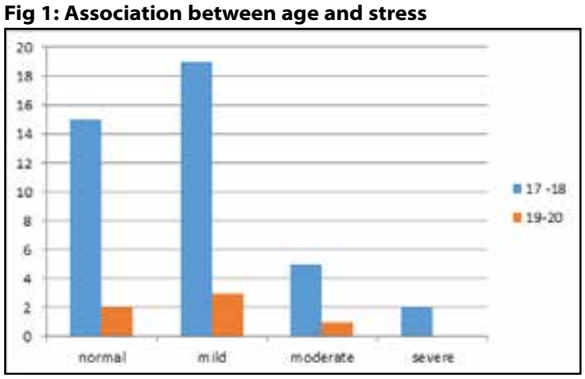
MATERIALS AND METHODS

Forty seven nursing students of Dr MGR educational and research institute participated in the study. Questionnaires to assess Stress (Cohen stress scale) and anxiety (Generalised Anxiety disorder scale -7) was distributed to the students. Study was undertaken after two months of beginning of course. Students who are already taking medication for stress and anxiety were not included in the study. Informed consent was obtained from all participants. Students with non communicable diseases were excluded from the study. Anthropometric details including age, height, weight and blood pressure was recorded. BMI was calculated from height and weight (kg/m^2) (9) Study was undertaken after obtaining ethical approval from Ethical committee of ACS Medical College.

Results

The data was entered and analysed by using SPSS software. Chi square test was used to compare proportions for the groups. When stress as a factor was considered 40% of students of age group 17 -18 years were having mild stress and 4% showed signs of severe stress. In students of age group 19 -20 only 4% showed severe stress (Figure 1). When GAD 7 questionnaire for anxiety was analysed, results show that prevalence of anxiety was more in students of age group 17-18 years (80%). Only 13% of students in the age group 19- 20 years showed increased anxiety levels. On comparison of BMI with stress (Figure 2), only 2% of obese showed signs of severe stress and 12% of obese did not show any anxiety. In students with BMI less than 18.5, 15% showed signs of mild stress. When anxiety levels were analysed 36% of normal BMI and 29% of obese students showed signs of anxiety.

Fig 1: Association between age and stress



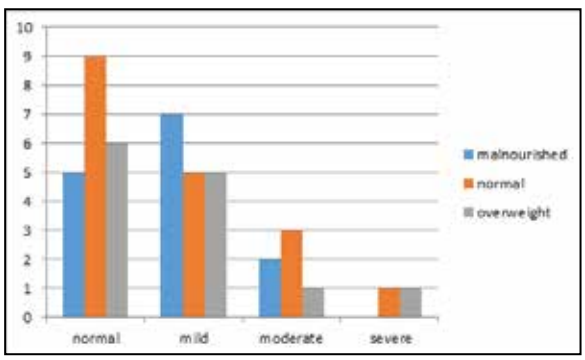


Fig 2: Association between BMI and stress

Discussion:

All students experience some form of stress which varied from mild to moderate and severe. On comparison, 17-18 year old students showed more stress levels than older students, which can be

attributed to them being away from home, acceptance levels among friends and faculty and academic challenge. Increased anxiety levels among this age group reflects that they are still in the process of accepting the new environment. 20 year old students showed decreased levels of stress and anxiety. Various stressors affecting the students can be load of academics along with financial stress in families which can also be a stress attributing factor. High psychological stress is associated with high blood pressure, larger waist to hip ratio and suppressed immune function and are risk factors for cardiovascular disease (11). BMI levels had no association between stress and anxiety. All students experienced mild stress levels and increased anxiety irrespective of BMI. Sudden change in routine causes a change in BMI which also plays a role in increasing stress and anxiety.

Conclusion:

Stress is the body's reaction to a challenge and right amount of stress will help sharpen reflexes. But the academic and social stressors faced by teenagers produces a physiological reaction which can be dangerous. Our study indicates younger students experiencing more stress and anxiety levels were increased among all. Moral and pschycological counseling will be given to students experiencing stress. Though our studies have shown no relation between BMI and stress, students will be motivated to have a healthy lifestyle.

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