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Stress Among Professional Colleges Student at Kanpur City

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***Abstract*: This paper presents a study on stress among professional colleges student at Kanpur city.**

***Keywords*: stress, professional colleges**

1. Introduction

Stress can be defined as any challenge to homoeostasis', or to the body's internal sense of balance [1]. It can manifest itself either as eustress or as distress. Eustress, literally translated as 'good stress', is a positive form of stress that motivates an individual to continue working. It is when this stress is no longer tolerable and/or manageable that distress manifests. Distress, or 'bad stress', is the point at which the good stress becomes too much to bear or cope with. Some signals that this change has occurred are when tension begins to build, and there is no longer any fun in the challenge or there seems to be no relief or end in sight. This kind of stress is well-known, and may lead to poor decision-making. The general characteristics of a person in distress are: being over-aroused; tense or unable to relax; touchy, easily upset or irritable; easily startled or fidgety, and demonstrating intolerance of any interruption or delay. Excessive stress results in an increased prevalence of psychological problems like depression, anxiety, substance abuse and suicide ideation.

Various studies around the globe have emphasized that students studying in medical and dental courses experience higher stress. However, there are few studies on this topic in India, especially on populations in smaller cities. Engineering students take half-yearly examinations, as compared to the annual examinations taken by medical and dental students. Theoretically, the higher frequency of examinations should lead to a higher prevalence of stress among engineering students. However, there are very few studies on the prevalence of stress among engineering students, especially in India. The present study was undertaken in order to assess the prevalence of stress among students of medical, dental and engineering colleges, and the association of stress with various academic, social and health-related factors, in an urban area from the Kanpur district of Uttarpradesh, India.

2. Methods

A cross-sectional study was conducted in an urban area of the Kanpur district of Uttarpradesh, India. The institutional ethical committee approved the study. The estimated sample size was 1,600, and the sampling technique used was convenience sampling. After obtaining ethical clearance, permission to conduct the study was sought from all medical, dental and engineering colleges within the study area. To ensure anonymity, no questions about the names of students or institutions were included in the questionnaire. Overall, two dental colleges, two engineering colleges and one medical college participated in the study. As engineering students outnumbered the medical profession students, to ensure comparability the mechanical division from the engineering college was randomly selected and included in the study. Students from all classes (grades) of each field were involved in the study. The study was conducted between September 2010 and February 2012.

A pre-tested, self-administered questionnaire was used as the study instrument. It was developed with the help of published literature and finalised after a pilot study. The questionnaire was divided into three sections. The first section covered sociodemographic factors such as age, gender, educational details, area of upbringing, parents' education and parents' occupation.

The second section comprised the short form of the Depression, Anxiety and Stress Scale (DASS-21), which has been validated as a screening tool by many researchers in a variety of sociodemographic conditions. The scale of stress calculated by the DASS-21 corresponds closely to the Diagnostic and Statistical Manual of Mental Disorders fourth edition (DSM-IV) symptom criteria for generalised anxiety disorder (GAD), and measures nervous tension, difficulty relaxing and irritability. Based on the score obtained from the DASS-21 guidelines, stress was classified as either absent (normal), mild, moderate or severe. The third section consisted of questions designed to identify potential stressors. Possible stressors were divided into three groups, namely academic factors (8 questions), health and lifestyle factors (14 questions), and environmental and social factors (10 questions). Based on the participant's answers, each factor was awarded a maximum of 10, 14 and 10 points, respectively. After a consultation with experts in the field, the cut-off point for each stress factor was decided at 50% or higher. For example, if a respondent scored 5 or more points for academic factors, then academic problems were considered as contributing to the development of stress for

this respondent. The academic factors section included information such as whether the student was taking a course by choice; if She/he had failed in any subject.

self-satisfaction with study efforts; the quality of the educational process at the college; the presence of study-related problems; an overloaded syllabus; satisfaction with the methods of teaching, and whether the participants felt stressed concerning their studies. The section concerning health and lifestyle factors was designed to measure the participant's perceived present health status, and if there had been any changes. Depression, calculated using the DASS-21, was included as a factor. Other psychological problems were also included such as mood breakdown, examination phobia, frustration and self-care. Health factors that were also assessed were exercise, diet, changes in sleep pattern and substance abuse.

The environmental and social factors section comprised questions on the participant's family, economic, social and emotional problems. It also included questions regarding their college and residential environment; relationship with other students; recreational activities, and their own as well as others' expectations regarding academic achievement. Questions regarding whether the students felt a need for stress management education to be included in the curriculum were additionally included in the questionnaire. Following ethical approval of the study, students were contacted after their lectures. Students from all classes were involved in the study, and care was taken to ensure that no participant was due to take any examinations in the month following the study.

The nature and purpose of the study was explained in detail, and willing students over 18 years old were provided with questionnaires and consent forms. The principal investigator was present while the students completed the questionnaire but the teachers of each institution were requested to wait outside. Absolute privacy and a mental comfort zone were maintained for each individual student while answering the questionnaire. Upon completion of the questionnaire, each participant was requested to drop their questionnaire and consent form in separate drop-boxes. A total of three visits (at least one week apart) was made to each institution to ensure the inclusion of all possible participants. Analysis of the data was done using percentages, chi-square tests, binary logistic regression and multinomial regression. Data from the pilot study were not included in the final analysis.

3. Result

Out of the 1,600 distributed and collected questionnaires, 1,244 were complete and hence used in the final analysis. Overall, there were 411 dental students, 417 engineering students and 406 medical students (studying for a Bachelor of Medicine or a Bachelor of Surgery [MBBS] degree). Out of all the students in the study, 676 (55.23%) were female and 548 (44.77%) were male. Respondents were 18–25 years old (mean ± standard deviation [SD] = 19.87 years ± 1.62 years). A total of 396 (32.3%) of the respondents were from rural areas, while 828 (67.7%) were from the urban area.

A total of 939 students (76.7%) were currently residing in hostels while 285 (23.3%) were residing in other places, or instance with parents, relatives or in rented apartments. Out of the total respondents, stress was present in 299 (24.42%); of these, mild stress was present in 123 respondents (10%), while 93 (7.6%) had moderate stress and 83 (6.8%) had severe stress. Considering the results according to the participant's field of education, 115 (28.7%) dental students, 82 (19.7%) engineering students and 102 (25.1%) medical students had stress; the association was statistically significant. Concerning gender, stress was present in 187 female respondents (27.7%) as compared to 112 male respondents (20.4%). Association of stress with gender was statistically significant. Although stress was associated with age, a distinctive trend was not observed. In terms of the participant's residence, 80 students from rural areas (20.2%) had stress as compared to 219 from the urban area (26.4%), and this association of stress with permanent residence was statistically significant.

On the other hand, stress was present in 243 students living in hostels (25.9%), while among the students living elsewhere, 56 (19.6%) had stress; an association which was also statistically significant. No significant associations were observed between stress and other sociodemographic factors, such as class or parents' education. The need to include stress management education in the curriculum was expressed by 248 (59.5%) of the engineering students, 198 (49.4%) dental and 220 (54.2%) medical students; this came to a total of 666 students (54.4%). Potential stressors faced by students were divided into three groups: academic factors, health and lifestyle factors, and environmental and social factors. A total of 188 (46.9%) dental, 164 (39.3%) engineering students and 184 (45.3%) medical students scored above 50% for academic factors; this signifies that 536 respondents (43.8%) had reported scores over the cut-off point

Stress was present in 299 respondents; out of these, 233 (77.9%) had a score above the 50% cut-off mark for academic factors, which was a statistically significant association. While considering the distribution according to the three fields of education, scores of above 50% for academic factors coexisted with stress in 94 (81.7%) dental, 62 (75.6%) engineering and 77 (75.5%) medical students, which are statistically significant associations for each of the three fields. The coexistence of scores. Stress was present in 299 respondents; out of these, 233 (77.9%) had a score above the 50% cut-off mark for academic factors, which was a statistically significant association. While considering the distribution according to the three fields of education, scores of above 50% for academic factors coexisted with stress in 94 (81.7%) dental, 62 (75.6%) engineering and 77 (75.5%) medical students, which are statistically significant associations for each of the three fields. The coexistence of scores.

Upon further analysis using binary logistic regression,

gender, academic factors, and environmental and social factors were observed to be the most important predictors for the development of stress Furthermore, by applying multinomial logistic regression, it was observed that the development of severe stress was chiefly dependent on academic factors.

4. Conclusion

Students from all three fields of education are exposed to stress; however, it seems that engineering students are less prone to the development of stress compared to medical and dental students. Further research needs to be done to study the differences in the academic environments of these fields, the role of a half-yearly examination pattern and the impact of these factors on the development of stress. Academic, environmental, social and health problems all play an important role in the development of stress. Academic factors are the most important stressors; hence the need for specific and targeted measures to decrease substantially the burden of stress on the students. Teaching techniques and college environments should be adapted to the needs of the students. The productive utilization of existing student welfare systems, development of more 'student-friendly' environments and regular periodic extracurricular activities with universal participation can prove to be useful stress-busters. Similarly, students living in hostels were observed to be prone to develop stress; thus, a periodic review of hostels, with feedback from the students, should be conducted and the complaints of students should be promptly addressed.

The majority of students were in favour of stress management education being included in the curriculum, and hence steps should be taken for its incorporation. Health is a major concern of students, and therefore the promotion of healthy dietary and lifestyle habits should be encouraged. Additionally, teachers, parents and even students themselves should be aware that undue expectations about academic achievement can lead to stress. Finally, regular study habits and adequate preparation can help students to avoid stress.

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