Original Research Article

A Cross Sectional Study On Perceived Stress Among The Professional Students Of A Campus In North Kerala

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Abstract

Background: Students studying in professional colleges experience more stress during their education period because of vast curriculum, frequent examinations, lack of sleep and extracurricular activities etc. If we do not identify early and give support, long term stress may create more serious psychological problems (anxiety, depression and suicidal tendencies etc.). So, this study was conducted to assess the levels of stress among the students. **Objectives:** To assess the level of perceived stress and some factors affecting it among students of a campus in Kannur, North Kerala. **Materials and Methods:** A cross sectional study was conducted at Anjarakandy Integrated Campus, Kannur which includes students of different courses (Medical, Dental and Pharmacy). A sample of 818 students was collected using purposive sampling method. After getting the informed consent, data was collected using Cohen's Perceived Stress Scale (14 items) by visiting classes. Descriptive statistics and associations were analysed. **Results:** Among 818 students, 40% were males and 60% were females. 52.2%, 28.4% and 19.4% were medical, dental and pharmacy students respectively. The mean stress score was 27.29±5.1. About 93% and 3% of the students were having moderate and high perceived stress respectively. There was no association between the stress and gender and courses they were studying. The common perceived reasons among students for stress was study overload and staying away from home. They felt that very good family support, extracurricular activities and timely counselling will help in reducing the stress. **Conclusion:** The proportion of students having moderate perceived stress was very high and it was not associated with gender and course they were studying. Giving adequate support like family support, lessons on time management and counselling along with increasing the extracurricular activities may play an important role in reducing the stress, otherwise these students with moderate stress may end up with high stress levels which may give rise to other psychological disturbances such as depression, anxiety and suicidal tendency.

Introduction:

Humans in present time are running against time to accomplish their life goals which is making them feel pressurised to fit into the ever challenging and changing world. Inability to cope with this pressure often leads to stress.[1] Stress is a dynamic process and is defined as "a particular relationship between the person and the environment that is appraised by the person astaxing or exceeding his or her resources and endangeringhis or her well-being".[2] Stress can manifest either as 'eustress' or as 'distress'. Eustress is positive form of stress which motivates an individual to continue working whereas distress is a negative form of stress or 'bad stress' wherein stress becomes too much to bear or able to cope

with.[3] If stress is longstanding, there is no longer any fun in the challenge and it impairs the person's wellbeing. [1,3]

Various studies show that students in professional colleges experience mild to moderate stress very often.[1,3–11] Professional college students experience various degrees of stress during their education because of vast curriculum, frequent examinations,high competitiveness, lack of time, lack of sleep, less extracurricular activities etc.Excessive stress results in an increased prevalence of non-communicable diseases such as hypertension and cardiovascular diseases and also increases the prevalence of psychological problems such as depression, anxiety, substance abuse, suicide ideation etc. Early identification of stress among the students and providing appropriate

support systems helps in combating stress and its problems.

So, with this background, we conducted this study with the objective to assess the level of perceived stress and few factors affecting it among students of a campus in Kannur, North Kerala.

Material and Methods:

It was a cross sectional study conducted at Anjarakandy Integrated Campus (AIC), Anjarakandy, Kannur.The students of AIC studying in different professional courses such as medical, dental and pharmacy and students who were willing to participate were included in the study. It was conducted over a period of two months (August 2016- September 2016).There were about 1100 students studying in these different professional courses at the campus, out of that 818 students participated in the study.Data collection tool consists of two parts – I. Basic details (age, sex, course, year of course, family income, residence and parent's occupation) II. Cohen's Perceived Stress Scale-14 (PSS-14) questionnaire was used to assess the stress.[12]

*PSS-14 Questionnaire and Scoring:*PSS-14 is the most widely usedpsychological tool for measuring the perception of stress which was having established validity and reliability.[12,13] It is a measure of the degree to which situations in one's life are perceived as stressful. The questions in the PSS deals about the feelings andthoughts of the students during the past month. The PSS-14 consists of 14 questions, in that seven were positive and seven were negative. The negative element intends to assess helplessness while positive element assess the self-efficacy of the individual to cope with the existing stressors. Each item was rated ona five-point Likert scale from 0='never' to 4='very often' and ranging from zero (0)=never, one(1)=almost never, two (2)=sometimes, three(3)=fairly often andfour(4)=very oftenon the basis of their occurrence duringone month prior to the survey. The PSS scores are obtained by reversing theresponses (e.g., 0 = 4, 1 = 3, 2 = 2, 3 = 1 and 4 = 0) to the seven positively stated items (items 4, 5, 6, 7, 9, 10, 13) and then summingacross all the items. The scores ranged from 0 to 56.[12]Scores were divided into 'low perceived stress' (0-18), 'moderate perceived stress' (19-36) and 'high perceived stress' (37-56).[14]

The study was conducted after taking ethical clearance from the Institutional Ethics Committee, Kannur Medical College.The data was collected by visiting each class rooms after the permission from respective colleges. After explaining the purpose of the study and written informed consent was taken from those who were willing to participate in the study. Data was collected by administering questionnaire to the students with the instructions to choose best answer how they felt over past

one month.Data were entered in Microsoft Excel and analyzed using EpiData Analysis. Descriptive statistics such as frequencies, proportions, mean and standard deviation were used. Chi-square used to check the association and p value <0.05 considered as statistically significant.

Results:

Socio-demographic Details:
A total of 818 students participated in the study and the mean age of the study population was 20.7±1.7 years. Among the participants 60% (491) were females and 40% (327) were male students. About 52.2% (427) students were medical students, 28.4% and 19.4% were dental and pharmacy students (Table 1).

Table 1: Distribution of study participants by gender and mean age in years.

Course	Male n (%)	Female n (%)	Total n (%)[#]	Mean Age (SD)[*] in years
Medical	171 (40.0)	256 (60.0)	427 (52.2)	19.9 (1.4)
Dental	97 (41.8)	135 (58.2)	232 (28.4)	21.4 (1.7)
Pharmacy	59 (37.1)	100 (62.9)	159 (19.4)	21.7 (1.1)
Total	327 (40.0)	491 (60.0)	818 (100)	20.7 (1.7)

[*]*SD- Standard deviation*
[#]*Column percentage.*

Perceived Stress and factors associated with it:
The overall mean score of the perceived stress score (PSS) among the students was 27.3 with a standard deviation (SD) of 5.1 (95% CI 26.9-27.6). The mean PSS was higher among pharmacy students (28.3) followed by dental and medical students (Table 2).

Table 2: Mean Perceived Stress Score (PSS) among the different course students.

Course	Mean PSS	Standard Deviation	95% CI
Medical	26.9	5.2	26.4-27.4
Dental	27.4	4.9	26.8-28.0
Pharmacy	28.3	5.0	27.5-29.1
Total	27.3	5.1	26.9-27.6

About 93% (759) of the students were having moderate stress, 4% and 3% were having mild stress and high stress respectively (Fig.1). High stress was more among females and pharmacy students whereas moderate stress was more

117
Perceived Stress Among The Professional Students. Thilak S A et.al.
Special Issue on Lifestyle Diseases   **www.commedjournal.in**

among the males and dental students and there was no statistical significance between the stress and gender and course in which they were studying (Table 3).

Table 3: Association between Perceived Stress, gender and course of study among the study population.

Factors	Low Stress n (%)	Moderate Stress n (%)	High Stress n (%)	Total	p value
Gender Male Female	12 (3.7) 21 (4.3)	308 (94.2) 451 (91.9)	07 (2.1) 19 (3.9)	327 491	0.343
Course Medical Dental Pharmacy	20 (4.7) 06 (2.6) 07 (4.4)	394 (92.3) 219 (94.4) 146 (91.8)	13 (3.0) 07 (3.0) 06 (3.8)	427 232 159	0.732
Total	33 (4.0)	759 (92.8)	26 (3.2)	818	

The common reason mentioned by the students for the stress was study overload (33.9%), followed by home sickness (22%), family issues (14.2%) and sleep deprivation (11.2%) [Fig.2].
Solutions felt by students for reducing the stress:
Around39.6% students felt that recreation will help to reduce the stress, 27.4%, 21.4% and 11.6% felt that family support, timely counselling and adequate sleep will help in combating stress respectively.

Discussion:

College students experience stress at various levels and this is slightly more among the professional college students. The mean perceived stress score in our study was 27.3 and was similar to studies done in India by Abhay MB et al and Shriram V et al.[7,10] But, it was lower compared to studies done outside India by Shah M et al (Pak), Waqas A et al (Pak), Civitci A (Turkey).[8,15,16] In our study, there was no association found between stress and gender of the students which was similar to Shriram V et al and Waqas A et al, but there was an association found between stress and gender in the study of Shah M et al.[8,10,15]

In our study, compared to medical and dental students, stress was more among the pharmacy students which was different compared to study done by Abhay MB et al which showed more stress among dental students, similar stress among medical students and lowest stress among pharmacy students. However, in our study, there was no association between courses students were studying which was different compared to study done by Waghachavare VB et al which showed students studying in medical and dental had more stress compared to engineering students.[3]

The common reasons for stress felt among the study particapants were study overload, away from home, lack

of sleep which was similar to other studies.[7,8,15]The solutions felt by students to combat stress were better family support, extracurricular activities and counselling similar to study done by Abhay MB et al and Satheesh BC et al.[1,7]

The limitations of the study were other socio-demographic factors such as type of residence, income, occupation of parents etc were not used for analysis because of more missing data for these variables. More proprtion of medical students were included in the study, the probability proportional size sampling would have been ideal sampling method to use. Also, engineering and nursing students were not included in the study because of examinations.

Conclusions and Recommendations:

The proportion of students having moderate perceived stress was very high and it was not associated with gender and course they were studying. The commonest reasons for stress were study overload and staying away from home. The main stress relieving factors mentioned were very good family support, extracurricular activities and timely counselling. Based on our study results, we recommend to conduct lessons on time management, to promote extracurricular activities, providing timely family support along with counselling to cope the stress. Otherwise students with moderate stress may end up with high stress levels which may give rise to other psychological disturbances such as depression, anxiety and suicidal tendency.

References:

1. Satheesh BC, Prithviraj R, Prakasam PS. A Study of Perceived Stress among Undergraduate Medical Students of a Private Medical College in Tamilnadu. Int J Sci Res. 2015;4(1):994–7.
2. Butler G. Definitions of stress. Occas Pap R Coll

118
Perceived Stress Among The Professional Students. Thilak S A et.al.
Special Issue on Lifestyle Diseases   www.commedjournal.in

Gen Pract [Internet]. 1993;(61):1–5. Available from:
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2560943/pdf/occpaper00115-0007.pdf

3. Waghachavare VB, Dhumale GB, Kadam YR, Gore AD. A study of stress among students of professional colleges from an urban area in India. Sultan Qaboos Univ Med J. 2013;13(3):422–9.

4. Solanky P, Desai B, Kavishwar A, Kantharia S. Study of psychological stress among undergraduate medical students of government medical college, Surat. Int J Med Sci Public Heal [Internet]. 2012;1(2):38–42. Available from: http://www.scopemed.org/?mno=22398

5. Chandan N, Sherkhane MS. Assessment of Stress and Burnout among Medical Graduates using PSS-14 and MBI-SS scales. Natl J Res Community Med. 2017;6(1):44–9.

6. Acharya S. Factors Affecting Stress Among Indian Dental Students. Int Perspect Dent Educ. 2003;67(10):1140–8.

7. Abhay MB, Kumar KM, Paul NC, Shashidhar HG. Differences In Perceived Stress and Its Correlates Among Students In Professional Courses . J Clin Diagnostic Res. 2011;5(6):1228–33.

8. Waqas A, Khan S, Sharif W, Khalid U, Ali A. Association of academic stress with sleeping difficulties in medical students of a Pakistani medical school: a cross sectional survey. PeerJ [Internet]. 2015;3:e840. Available from: http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=4369327&tool=pmcentrez&rendertype=abstract

9. Varghese RP, Norman SJT, Thavaraj SH. Perceived Stress and Self Efficacy among College Students : A Global Review. Int J Hum Resour Manag Res. 2015;5(3):15–24.

10. Veena S, Bhimani N, Aundhakar N, U Z, Kowale A. Study of perceived stress among I MBBS medical students. J Educ Technol Heal Sci. 2015;2(1):8–12.

11. Behere SP, Yadav R, Behere PB. A Comparative Study of Stress Among Students of Medicine , Engineering , and Nursing. Indian J Psychol Med. 2011;33(2):145–8.

12. Cohen S, Kamarack T, Mermelstein R. A Global Measure of Perceived Stress. J Health Soc Behav. 1983;24(December):385–96.

13. Andreou E, Alexopoulos EC, Lionis C, Varvogli L, Gnardellis C, Chrousos GP, et al. Perceived Stress Scale: Reliability and validity study in Greece. Int J Environ Res Public Health. 2011;8(8):3287–98.

14. State of New Hampshire Employee Assistance Program. Perceived Stress Scale Score Cut Off. State of New Hampshire Employee Assistance Program.

15. Mohsin Shah, Shahid Hasan Samina Malik CTS. Perceived Stress, Sources and Severity of Stress among medical undergraduates in a Pakistani Medical School. J Chem Inf Model. 2013;53(9):1689–99.

16. Civitci A. Perceived Stress and Life Satisfaction in College Students: Belonging and Extracurricular Participation as Moderators. Procedia -Social Behav Sci [Internet]. Elsevier B.V.; 2015;205(May):271–81. Available from: http://dx.doi.org/10.1016/j.sbspro.2015.09.077

119

Perceived Stress Among The Professional Students. Thilak S A et.al.
Special Issue on Lifestyle Diseases   **www.commedjournal.in**