

Impact of Perceived Stress among Medical Postgraduate Students of SCB Medical College, Odisha, India and its Relation with Burn Out.

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Abstract: Introduction: Stress in medical education is common and process-oriented. It often exerts a negative effect on their academic performance, physical health, and psychological well being.

Aims: The purpose of this study was to examine the relation between stress and burnout among PGS of SCB Medical College. This study aims at identification of such susceptible students in the early stage i.e. first year of Post graduate medical education, and to provide them essential support in the form of an intervention program to lessen the negative consequences of stress.

Materials and Methods: A cross-sectional survey was carried out among the post graduate students of SCB Medical College, Cuttack, Odisha. Participants were instructed to fill out questionnaire asking about their Depression, anxiety, depersonalization, decrease in level of performance, stress. Results showed that female PGS have high stress as compared to male PGS. A 41-item questionnaire was designed to assess the sources of stress and their severity. Likert's 5-point scale was used to quantify the extent of severity on each item. Coping strategies adopted by students were assessed by using a 22-item stress inventory, and a questionnaire based on 19 institutional stress-reducing factors was used to identify its role.

Results: Stress had positive correlation with depression anxiety component of burnout. 68 PG students participated in the study. Among them 56 are male, 12 are female PGS. 16 are final yr. PGS, 25 are second yr. PGS, 27 are first yr. PGS. Median stress level based on 41 items was evaluated for each student. About 29% (40 students) had median stress level greater than 3. Female students were more stressed (17.19%) than male students (14.93%). The study revealed that students generally adopt active coping strategies rather than avoidant strategies like alcohol and drug abuse. The study indicated that emotional support system is a major stress-relieving factor for students.

Conclusion: Prevalence of perceived stress is high among medical students. It seems that academic-related problems are greater perceived stressors. Review of academics, exam schedules and patterns, better interaction with the faculty and proper guidance, intervention programs and counseling could certainly help a lot to reduce stress in medical students.

Keywords: Coping factors, institutional factors, perceived stress

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I. Introduction

The aim of medical education is to produce competent, physically and mentally strong health professionals, as they are going to be the pillars of future health care system. If they experience any obstacle at the beginning of their career, it may impede their overall professional development or even lead to change of profession. Stress is one of the most common and process-oriented obstacle in medical education. It often exerts a negative effect on the academic performance, physical health, and psychological well being of the students. [1] Many previous studies have shown fairly high level of depressive symptoms amongst medical students. [2],[3],[4] Researchers have also worked on various factors inducing anxiety about professional future amongst students and doctors. [5] It has been observed that academic, physical, and emotional factors are greater perceived causes of stress in these students. [6] Studies have reported that academic constraints and factors like age, gender, ethnicity, and marital status influence students' severity of stress and hence their academic performance. [7],[8],[9] Identifying such susceptible students in the early phase of medical education and providing them essential support

could be a useful intervention to lessen the negative consequences of stress in future. At SCB Medical college Cuttack, Odisha. 150 students from different states of India are admitted every year. More than 50% of the students are from Odisha. They have diverse cultural, socio-economic, and educational backgrounds and get exposed to a totally new learning environment with vast curriculum. This sudden change could be stress-inducing with varying degree of severity. Besides this, there could be other sources of stress that could hamper student's performance. Hence, information about the sources and the severity of stress is vital, as it could help in designing proper interventional strategies to enhance their learning abilities of students. In view of this, a study was undertaken with the objectives as below:

- Estimating the prevalence of perceived stress in Post graduate students.
- Identification of various stress-inducing factors in these students.
- Correlating stress inducing factors to gender, stay, mother tongue, previous educational place, and choice of admission.
- Identifying coping strategies of students that relieves stress.
- Identifying institutional factors that could help in relieving stress and
- Educating students about managing academic failures and about various coping strategies.

Stress is a common problem among post graduate medical students as they donot have any specific time limit for duty(Shete et al.,2015).Nearly 36% femalepost graduatemedical students and 24% male post graduate medical students have psychiatric morbidity(Aktekin et al,2001). Burnout among health professionals characterized by various degrees of emotional exhaustion,depersonalization &low sense of personal accomplishment(Rotenstein LS et al,2018).Reserchers found the burnout to be high as 45% in multicentric studies on medical students (Dyrbye et al., 2017).However limited data available for PG students.An insight into prevalence, nature & severity of burnout in these PGstudents will make us empathetic & primed towards early intervention if required for an improved future.

II. Aims and objectives

- To determine the pattern of perceived stress among postgraduate medical students (PGS).
- To assess the relation between perceived stress & burn out.

III. Materials and methods

Sociodemographic data was collected by semistructured proforma.Participants responded to Percieved stress scale andMaslach Burn out inventory and for each variable a score were given. Data is represented as mean \pm SD. The data was compared by chi-square test and compared standards t-test. Regression analysis was done to know the risk factors. A $P < 0.05$ was considered significant.

IV. Results

Results were obtained by analyzing data in SPSS(IBM) as follows-

- 68 PGstudents participatedin the study. Among them 56are male,12 arefemale PGS. 16are final yr. PGS ,25are second yr. PGS,27are first yr.PGS.
- Mean and standard deviation of age of the residents participating was 33.09 ± 3.34 with the range from 25 to 42 years.
- Females was found to have high PSS scores (Mean-23.00, SD-2.80) which were statistically significant when compared to their male counterpart.
- On MBI- DepressiveAnxiety score, 30.9% of residents had lowlevel burnout, 64.7% had moderate level burnout, and others (4.4%) had high burnout.
- On MBI- Depersonalization component, 1.5% of residents had mild level burnout, a significant portion 95.6% had moderate level burnout, and 2.9% had high level burnout.
- On Reduction of personal achievement component,50% had mild level burnout and 20.6% had moderate level burnout whereas 29.4% students had high level of reduction of personal achievement.
- Perceived stress had statistically significant positive correlation with depressive anxiety component of burnout.

Table 1-correlation analysis of perceived stress with various parameters

Parameters	Spearman's correlation coefficient(Rho value)	P value
MBI-depression anxiety syndrome	0.705	0.000(S)
MBI-depersonalisation	0.331	0.052(NS)
MBI-reduction in personal achievement	-0.080	0.454(NS)

Table 2 Association of variance of various psychological variables with sex

Parameters	Female Mean± SD	Male Mean± SD	t-test value	P value
Perceived stress	23.00± 2.80	19.59± 2.98	3.66	0.00(S)
MBI- Depressiveanxiety syndrome	22.83 ± 2.91	20.21± 4.66	1.53	0.08(NS)
MBI-Depersonalization	9.83 ± 0.93	7.96 ± 1.33	-0.30	0.69(NS)
MBI- Reduction of personalachievement	29.60 ± 9.64	32.21 ± 9.73	-0.66	0.52(NS)

V. Discussion & Conclusion

- Various studies on medical students from various medical colleges in India and other countries worldwide identified a high frequency of stress. The present study also showed a high-stress level in post graduate medical students.
- Dyrbye et al. 2006 found the burnout to be around 45% in their study. we found high level burnout was 4.4% on depressive-anxiety; 2.9% on depersonalization; and 29.4% on reduction of personal achievement.
- Results showed a strong positive correlation between perceived stress and burnout (Depression anxiety syndrome).
- It was observed that females had higher scores on perceived stress as compared to males.

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Conflict of interest- there is no conflict of interest.

Purpose of study-Academic.

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