



An observational study to compare stress and burnout among anesthesia and surgical PG student or residents in a tertiary care teaching hospital in Kathihar, Bihar

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Abstract

Objective and Aim: *In today's world new doctors who are taken anesthesia as a speciality training is face challenges in terms of infrastructure and high workload in hospital with undefined working hours. This study was initiated among PG student or residents to compare the stress and burnout levels at a tertiary care academic center in Katihar, Bihar.*

Method: *After getting ethical committee approval, this comparative observational study was conducted among 100 residents (50 each from surgical branches and anesthesia) were surveyed for the observational trial conducted at a tertiary care academic center in Katihar, Bihar. Predesigned questionnaire was prepared to evaluate gender, age, marital status, year of studentship or residency, Burnout Clinical Subtype Questionnaire-12 and Perceived Stress Scale-10. Between residents of anesthesia and surgical specialties, burnout and perceived stress were compared.*

Results: *In perceived stress, namely 21 and 18, respectively, PG Students and residents of both surgical and anesthesia branches scored high. In surgical residents ($P = 0.03$), the score was significantly higher and increased progressively with the year of residency. Overloaded with work felt by the majority of residents (90% surgical, 80% anesthesia). lack of development of individual skills was considered for the overgrowing work load only by 20%–30% of respondents and less than 10% was reported giving up in view of difficulties.*

Conclusion: *High level of stress and overload dimension of burnout was observed among PG student or residents of both surgical and anesthesia branches and compare to anesthesia residents surgical residents score marginally higher.*

Keyword: *Psychological stress, PG student or residents, anesthesia and surgical.*

Introduction

Heavy workload, night shift, little vacation time, eating habit, inadequate time to sleep, long duty hours experience stress in day-to-day life by Postgraduate trainees and registrars working in a

tertiary care teaching hospital and this is compounded by the expectations of parents, teachers and patients which are higher in a tertiary care institute^[1]. Poor infrastructure, no defined limit of a number of working hours and poor

infrastructure further worsen the condition. To improve performance and training certain level of stress may be considered desirable but this young doctors are disposed to burnout syndrome which is detrimental for the greater patient population they treat and also for the residents themselves^[2,3]. As per literature, the mental fatigue of residents working in anesthesia and surgical branches effect to fatal complications in surgical patients and margin of error.

This study was initiated among PG student or residents to compare the stress and burnout levels at a tertiary care academic center in Katihar, Bihar.

Method

After getting ethical committee approval, this comparative observational study was conducted among 100 residents (50 each from surgical branches and anesthesia) were surveyed for the observational trial conducted at a tertiary care academic center in Katihar, Bihar. Predesigned questionnaire was prepared to evaluate gender, age, marital status, year of studentship or residency, Burnout Clinical Subtype Questionnaire-12 and Perceived Stress Scale-10. Between residents of anesthesia and surgical specialties, burnout and perceived stress were compared.

PSS-10 is 10 question series which allows investigator to assess perceived stress of an individual. All question are having option range from 0 (never) to 4 (very often)^[6]. BCQS-12 is 12 question series which allows investigator to experiences which occur at work. It has three dimensions –“neglect” dimension is made up of items 3, 6, 9, and 12, he “lack of development” dimension is made up of items 2, 5, 8, and 11 and the “overload” dimension is made up of items 1, 4, 7, and 10^[7].

SPSS Inc Statistical Package was used for statistical analysis. All statistical tests were performed at a significance level of p<0.05 and were two-sided.

Result

Questionnaire are filled anonymously by 50 participants each from the field of various surgical branches and anesthesia. The demographic details are filled in Table 1.

Table 1: Demographic parameters

Parameters	Surgical Residents (N=50)	Anesthesia residents (N=50)	P value
Age (Years)	26.2 ± 2.2	26.5 ± 2.1	0.821
Gender (Male/Female)	38/12	36/14	0.512
Year of Residency (1/2/3)	13/18/19	11/20/19	0.681
Married (No.)	8	12	0.729

In perceived stress, namely 21 and 18, respectively, PG Students and residents of both surgical and anesthesia branches scored high. In surgical residents (P = 0.03), the score was significantly higher and increased progressively with the year of residency. Overloaded with work felt by the majority of residents (90% surgical, 80% anesthesia). lack of development of individual skills was considered for the overgrowing work load only by 20%–30% of respondents and less than 10% was reported giving up in view of difficulties.

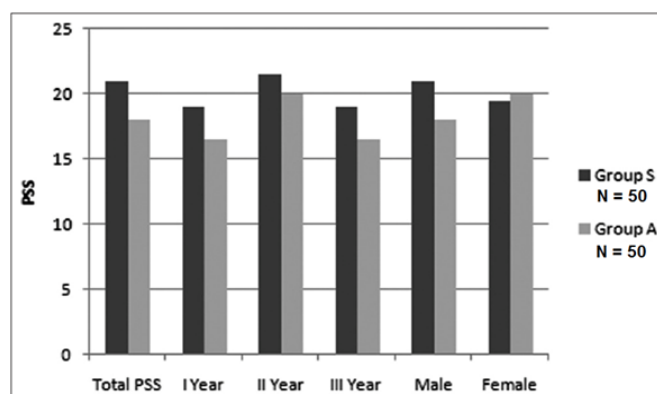


Figure 1: Perceived Stress Scale-10 score: Total, according to year of residency and gender, Group S: Surgical residents, Group A: Anesthesia residents

Discussion

The stress is increasing day by day among the PG students and residents not only I our hospital but

across India. There were several reason for which this became a chronic issue which is in increasing mode. In our study, high level of stress and overload dimension of burnout was observed among PG student or residents of both surgical and anesthesia branches and compare to anesthesia residents surgical residents score marginally higher. High blood pressure, large waist to hip ratio, suppressed immune function, higher body mass index, higher cortisol levels, increased alcohol consumption, decreased sleep and suppressed immune function were few associated disease which develop in due course of time by this individuals due to this work stress^[8].

As a result of ineffective coping strategies adopted by people to protect themselves from the work-related stress, Burnout is become a progressively developing syndrome^[9]. While trying to achieve good results in his/her profession, the overload dimension refers to neglecting one's own life and risking one's health^[10]. As per the result of our study, compared to anesthesia residents the surgical residents score higher in this dimension of burnout though the difference is marginal.

However, in a randomized controlled trial by Saadat et al, highlighted the importance of counseling during the stressful period of residency and the importance of offering support to residents in the form of such programs^[11]. Even few data published earlier also confirmed in existence of high stress and the major factors for stress in junior residents^[12,13].

The main reason to conduct this study is to highlight this chronic over increasing pandemic situation, so the the concern authority can take the necessary step to prevent this mental stress through various counselling and taking necessary steps.

Conclusion

High level of stress and overload dimension of burnout was observed among PG student or residents of both surgical and anesthesia branches and compare to anesthesia residents surgical residents score marginally higher.

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