



STRESS IN FIRST YEAR MEDICAL POST GRADUATE STUDENTS IN CENTRAL INDIA: A CROSS SECTIONAL STUDY.

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ABSTRACT

Introduction-Medical residency is time of great stress & struggle for residents. It is primarily due to highly demanding working conditions, limited time available for leisure activities & rest. The residents need to develop new skills that require lot of concentration & sometimes produce anxiety amongst them. **Aim**-The study is done to assess level of stress amongst first year residents. **Methods**-Following ethical clearance the study from Institutional ethics committee (IEC) of Gandhi Medical College Bhopal the study was conducted amongst first year residents in various departments of institute. A pre designed -pretested questionnaire was used for data collection. The stress was assessed using Hospital Anxiety & Depression score (HADS.) The subjects were chosen using non-random, opportunity sampling. The relevant tests of significance was used to co-relate various factors causing stress. **Results**-The study included 95 residents of which 89.74% students had mean age of 27 + 3.1 years of age. Of all participants 19.99 % residents had normal stress levels, almost 23.11% had borderline scores & 56.9% had abnormal stress scores. There is no statistically significant association between age & gender with levels of stress. There was significant stress amongst residents with less than 6 hours of sleep per day (p<0.01). There was significant stress amongst residents in clinical departments compared to non-clinical post graduate students (p<0.009). **Conclusion**-It is concluded that the first year residents are under tremendous stress. The main stressors are long working hours, less time available for sleep & type of residency.

KEYWORDS : non random, opportunity sampling, Hospital Anxiety & Depression score (HADS.)

INTRODUCTION

Stress can be generally defined as undue, inappropriate or exaggerated response to a situation. It produces adverse psychological and physiological changes leading to decreased productivity, disease and sometimes death^(1,2) Stress in medical practice has always been a topical issue⁽³⁾. It is expected that the medical doctor himself must be in a perfect state of mind devoid of morbid worries and anxieties. They are also prone to stress because of the peculiarities of their work situation and the expectation of the society⁽¹⁾. Also the period of residency is specially very stressful as it involves learning new cognitive & psychomotor skills. During this time there are long hours of continuous work with altered circadian rhythms to meet the demands of workplace. It involves taking care of patients, along with stress of academic performance & to deal with various issues at personal life front. A medical resident doctor is in a very vulnerable position as he is expected to deliver as per standards set by personnel in workplace since Day 1. He is expected to be physically, mentally & psychologically in perfect state to cope with modus operandi of work place. He is expected to learn the necessary skills and learn the protocols in the workplace in shortest possible span. The work load for residents is immense due to great patient influx & skewed doctor : patient ratio. Sometimes a resident is caught in unfavourable situation where s/he has to work in medical branch which was opted due to factors other than personal choice. It causes lot of conflict & needs immense self-motivation to continue pursuing the course. Apart from medical training there are other stressors like paucity of sleep, long hours of work causing disturbance in physiological function, lack of proper nutrition, adjustment to new workplace ex. issues with understanding local language. Residents are at increased risk of acquiring infections while working in wards. They also suffer from lowered immunity status due to poor dietary intake.

Also the completion of thesis & other academic activities add to further stress. There is also stress of paying back education

loans/debts. A young resident also receives lot of stress from family members for getting settled as per norms of society. They think that now the period of competitive study is almost over & now its appropriate time to get settled in life. All these factors add to stress in life of a resident which have short & long term implications on his/her well being. Sometimes "burnt out phenomenon develops i.e. a terminology made popular by Felton⁽⁴⁾ consisting of a triad of emotional exhaustion, depersonalization (treating patients and other people as if they were objects) and low productivity/achievements. It is viewed as a result of prolonged stress or frustration, leading to lowered production, and increases in absenteeism, health care costs, and personnel turnover. It produces both physical and behavioural changes, in some instances leading to chemical abuse. It is a health care professional's occupational disease which must be recognized early and treated.⁽⁴⁾ Hence this study was conducted to identify level of stress & stressors amongst first year residents.

METHODOLOGY

The study was started only after clearance from institutional ethics committee (IEC). A cross-sectional study was conducted amongst first year residents posted in various departments at Gandhi Medical college Bhopal. The study was conducted for total duration of 3 months i.e. September to November 2019. The data was collected using pre designed pilot tested questionnaire. Informed consent was taken from subjects & were assured that data will be kept confidential. The respondents were provided with questionnaire & were requested to fill it whenever they have free time.

A non-random opportunity sampling was used for selecting respondents. The data was compiled in MS excel 2010 & analysed using Epi info 7.1. The data was interpreted in terms of percentages & proportions. The stress was assessed using Hospital Anxiety & Depression score (HADS.) It is a self-assessment questionnaire that has been found to be a reliable

instrument for detecting states of anxiety and depression in the setting of hospital outpatient clinic. It has seven items each for depression and anxiety subscales. ⁽⁶⁾The scoring criteria adopted was 0-7 as normal 8-10 as borderline case & 11-21 as abnormal cases.

RESULTS

In total 95 first year residents participated in study. In total 89.74%(85/95) students belonged to mean age 27 ± 3.1years of age. There were 60% male students. In total 16.48% participants were married of which 4.48% had ≥1 children. Out of 95 participants 56 % students had lost atleast 5% bodyweight in past 3 months i.e. total since onset of residency.

Almost 42.64% worked for 11-18 hours/day & 7.35% subjects worked for more than 18 hours/day. Of of all participants 76.81% subjects slept only for 4-6 hours/ day & 7.21% subjects slept only for ≤4 hours/day. Of all participants 19.99 % (19/95) residents had normal stress levels, almost 23.11%(22/95) had borderline scores & 56.9%(54/95) had abnormal stress scores. Almost 28.4% subjects working for more than 8 hours were stressed.

DISCUSSION

There is no statistically significant association between age & gender with levels of stress.(Table-1).There was significant stress amongst residents with less than 6 hours of sleep per day (Table-1). There was significant stress amongst residents in clinical departments compared to non-clinical post graduate students (Table-1).This finding is similar to as observed by NK Saini et al in their study on residents in Delhi they found that the prevalence of stress was found to be statistically significant (P=0.045) & residents of clinical subjects were stressed more as compared to non-clinical residents.(6)

Table-1-Distribution of subjects on the basis of level of stress amongst them						
	Normal		Borderline		Abnormal	
	N	%	N	%	N	%
Distribution of subjects on the basis of Gender						
Male	10	10.52	17	17.9	30	31.6
Female	9	9.47	5	5.21	24	25.3
Chi sq-3.61 df-2 p-0.165						
Distribution of subjects on the basis of age						
24-30years	13	13.68	16	16.84	34	35.78
30-40years	6	6.31	6	6.31	20	21.05
Chi sq-0.71 df-2 p-0.70						
Distribution of subjects on the basis of hours available for sleeping each day						
Less than 4 hours	8	8.42	3	3.15	22	23.15
4-6 hours	7	7.36	17	17.89	30	31.57
More than 6 hours	4	4.21	2	2.10	2	2.10
Chi Sq-11.68 df-4p-0.01						
Distribution of subjects on the basis of department of residency						
Clinical	12	12.63	20	21.05	49	51.57
Non clinical	7	7.36	2	2.10	5	5.26
Chi Sq-9.24 df-2 p-0.009						
Distribution of subjects on the basis of daily working hours						
Less than 8 hours/day	11	11.57	17	17.89	32	33.68
8-16 hours	3	3.15	03	3.15	20	21.05
> 16 hours/day	5	5.26	02	2.10	02	2.10
Chi sq-12.79 df-4 p-0.0123						

Overall 80.01% residents were stressed, this findings are similar to study done in Goa by Pinto et al (7).The major cause of stress amongst residents was less sleeping hours available during duty. This finding was similar to the study Laxmi Tellur & et al. They found that 24.1% residents had high stress & 64.2% residents had moderate stress when they slept for less than 6 hours/day.(8)

Also there is a statistically significant association of stress & number of working hours per day. The finding is similar to the study Laxmi Tellur & et al but the current study has less stressed individuals compared to study above mentioned study.(8)

CONCLUSION

There is significant stress amongst first year residents. The level of stress is found to be more in subjects with long working hours with very less time available for sleep per day. It is observed that clinical subject residents were under greater stress than non clinical ones. The stress management should be the part of curriculum that will be beneficial to residents in their years of practice.

Limitations

All residents could not be motivated to participate in study. Despite being diagnosed under considerable stress substantial intervention could not be done as the residency has tight working, teaching & learning schedules which leave very little scope for de stress activities.

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