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Research Article

Prevalence of stress among post graduate doctors at Mahadevappa Rampure medical college Kalaburagi, Karnataka

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ABSTRACT

Background: Stress, anxiety, worry, aggression have all increased significantly in recent years. A United nations report labeled stress as "The 20th Century Disease". World Health Organization called it a "Worldwide epidemic". Researchers have shown that post graduate doctors are under high levels of stress due to unique environment in which they work. This is of importance because it is known that the quality of care that the physicians give is directly related to their own health.
Methods: A cross sectional study was carried out among all the post graduates in Mahadevappa Rampure Medical College, Kalaburagi, for a period of 3 months (1st October to 31st December 2013). A self-administered questionnaire DASS-42 (Depression Anxiety Stress Scale) was used to assess the stress level among post graduates.
Results: Majority 61.94% of the study subjects belonged to 26-30 years of age groups and stress level is more common in the age group 20-25 i.e.39.34%. Majority 58.94% were males. 1st years post graduates experienced more stress 36.94% whereas 67.16% belonged to clinical side and more stress level was found in them. 65.03% stress level is found in unmarried postgraduates. Stress level was found to be more 35.90% among post graduates who were having 4-6 hours of sleep per day whereas 25.43% who worked for 6-10 hours per day.
Conclusions: The study concludes that majority of the post graduates suffering from stress due to various factors and it should not be ignored as it can cause many other health issues.

Keywords: Stress, Prevalence, Postgraduates

INTRODUCTION

Stress, anxiety, worry, aggression have all increased significantly in recent years. A United Nations Report labelled stress as "The 20th Century Disease". World Health Organization called it a "Worldwide epidemic".[1] Stress is a state of an individual that results from the interaction of the individual with the environment that is perceived as threatening to the well-being. It is an external constraint which directly upsets the individual both mentally and physically.[2] Work-related stress is the response people may have when presented with work demands and pressures that are not matched to their knowledge and abilities and which challenge their ability to cope. Stress occurs in a wide range of work circumstances but is often made worse when employees feel they have little support from supervisors and colleagues and where they have little control over work or how they can cope with its demands and pressures.[3]

The beginning of the Postgraduate Medical Training is a very stressful period. Young Doctors begin to confront with the difficulties and responsibility of the medical practice.[4]

The growing debate regarding long working hours of postgraduate trainees has been receiving considerable attention recently.[5] This greater workload contributes to increasing stress and decreases the overall performance and the quality of the life of the affected individuals.[6,7] Stress levels in healthcare professionals have been shown to be of high prevalence in many countries and the need to tackle this issue is due to many reasons like personal cost to the individuals and financial cost to organizations.[8] The last few decades are witnessing an era of increased specialization among doctors along with an increased demand for specialized medical care globally. The post graduate residents play a crucial role in the medical care delivery of the multispecialty hospitals attached to the teaching medical colleges. These residents are often invariably assigned duties exceeding 24 hours at a time. In the initial first year of residency, residents sometimes are on call for more than a week at a stretch and are under great stress due to sleep deprivation. Combined with other factors such as less stipend, abuses faced at the workplace often affects their mental health and also has a profound impact while dealing with patients.[9]

METHODS

A cross sectional study was carried out among all the post graduates in Mahadevappa Rampure Medical Kalaburagi. The duration of the study was 3 months (1st October to 31st December 2013). All the post graduates who were willing to participate were included in the study. Those who were not willing to participate were excluded from study. After taking their informed consent, out of 256 post graduates, 246 completed with questionnaire with a response rate of 96%. All these post graduates were interviewed using pretested questionnaire and a self-administered questionnaire DASS-42 (Depression Anxiety Stress Scale) was used to assess the stress level. Data was analysed using percentages, chi square tests.

RESULTS

Table 1: Distribution of study subjects according to their age.

Age group	Normal		Stress		Total	
	No	Percen-tage	No	Percen-tage	No	Percen-tage
20-25	37	60.66	24	39.34	61	24.63
26-30	103	67.76	49	32.24	152	61.94
31-35	7	100.00	0	0.00	7	2.99
>35	24	92.31	2	7.69	26	10.45
Total	171	69.51	75	30.49	246	100.00
chi-square = 12.5			p>0.05			

Table 1 shows that majority i.e. 152 (61.94%) of the study subjects belonged to 26-30 years of age groups and stress level is more common in the age group 20-25 accounting for 24 (39.34%) followed by 49 (32.24%) in 26-30 years of age and 2 (7.69%) in more than 35 years of age respectively and it's found statistically not significant.

Table 2 shows that out of 246 post graduate majority 145 (58.94%) were male and 101 (41.06%) were female. The table also revealed that stress is more 39 (38.61%) in females as compared to male 36 (24.83%) and found statistically highly significant.

Table 2: Distribution of study subjects according to their sex.

Sex	Normal		Stress		Total	
	No	Percen-tage	No	Percen-tage	No	Percen-tage
Male	109	75.17	36	24.83	145	58.94
Female	62	61.39	39	38.61	101	41.06
Total	171	69.51	75	30.49	246	100
chi-square = 16.9			p>0.001			

Table 3 shows majority that majority 111 (45.12%) were in 1st year followed by 84 (34.15%) were in 2nd years and 51 (20.73%) were in 3rd years respectively. Stress level is more 41 (36.94%) in 1st years as compared to 2nd year (21.43%) and 3rd year (31.37%) respectively and found statistically highly significant.

Table 3: Distribution of study subjects according to their years of residency.

Year of residency	Normal		Stress		Total	
	No	Percen-tage	No	Percen-tage	No	Percen-tage
1	70	63.06	41	36.94	111	45.12
2	66	78.57	18	21.43	84	34.15
3	35	68.63	16	31.37	51	20.73
Total	171	69.51	75	30.49	246	100
chi-square = 23.8			p>0.001			

Table 4: Distribution of study subjects according to their course.

Year of residency	Normal		Stress		Total	
	No	Percen-tage	No	Percen-tage	No	Percen-tage
Pre	18	75.00	6	25.00	24	9.9
Para	42	73.68	15	26.32	57	23.13
Clini-cal	110	66.67	55	33.33	165	67.16
Total	171	69.51	75	30.49	246	100.19
chi-square = 9.26			p>0.05			

Table 4 shows that majority 165 (67.16%) belonged to clinical followed by 57 (23.13%) belonged to para clinical and 24 (9.90%) belonged to preclinical

respectively. Stress levels were more 33.33% (55) in clinical side as compared to para (26.32%) & preclinical (25%).

Table 5 shows that out 246 post graduate 83 (33.58%) were married and remaining 163 (66.42%) were unmarried. Stress levels were more 26 (31.33%) in married as compared to unmarried 49 (30.06%).

Table 5: Distribution of study subjects according to their marital status.

Marri-age status	Normal		Stress		Total	
	No	Percen-tage	No	Percen-tage	No	Percen-tage
Married	57	68.67	26	31.33	83	33.58
Un-married	114	69.94	49	30.06	163	66.42
Total	171	69.51	75	30.49	246	100
chi-square = 2.34			p>0.05			

Table 6 shows that out of 83 married post graduates 51 (61.45%) were having one or more children, among them only 7 (13.73%) were stressed as compared to married post graduates without child 4 (12.50%).

Table 6: Distribution of study subjects having children.

Post-graduates having children	Normal		Stress		Total	
	No	Percen tage	No	Percen tage	No	Percen-tage
Yes	44	86.27	7	13.73	51	61.45
No	28	87.50	4	12.50	32	38.55
Total	72	86.75	11	13.25	83	100
chi-square = 0.026			p>0.05			

Table 7: Distribution of study subjects according to their sleeping hours.

Sleeping hours/ day	Normal		Stress		Total	
	No	Percen tage	No	Percen-tage	No	Percen-tage
4-6 hours/day	75	64.10	42	35.90	117	47.76
6-10 hours/day	95	73.64	34	26.36	129	52.24
Total	171	69.51	75	30.49	246	100
chi-square = 4.33			p>0.05			

Table 7 shows that out 246 post graduates 129 (52.24%) were having 6-10 hours of sleep per day while 117 (47.76%) were having 4-6 hours of sleep per day. Stress level is more 42 (35.90%) in post graduates who were sleeping 4-6 hours per day as compared to those post graduates who were having 6-10 hours of sleep per day and it's found statistically not significant.

Table 8 shows that out of 246 post graduates majority 173 (70.15%) worked for 6-10 hours per day followed by 55 (22.39%) 10-15 and 18 (7.46%) worked more than 15 hour per day. Stress levels were found to be more 44 (25.43%) in post graduates who worked for 6 to 10 hours per day as compared to others.

Table 8: Distribution of study subjects according to their working hours.

Working hours/ day	Normal		Stress		Total	
	No	Percen-tage	No	Percen-tage	No	Percen-tage
6 to 10 hours/day	129	74.57	44	25.43	173	70.15
10 to 15 hours/day	33	60.00	22	12.72	55	22.39
>15 hours/day	9	50.00	9	5.20	18	7.46
Total	171	69.51	75	43.35	246	100
chi-square = 4.33			p>0.05			

DISCUSSION

In our study out of 246 study subjects majority were in 26-30 age groups and more stress levels seen in 20-25 age group the reason may be the initial adjustment to the new environment ,work stress, new language/culture etc. Similar results were found in a study done by Saini NK et al[10] showed that out of 930 doctors majority were in 26-30 years of age constituting about 69% (642).While in an another study 74 (58.7%) were in 30-39 years of age.[11]

Our Study showed that females are more stressed as compared to males .It is found statistically significant. Similar finding were seen in a study done by Harajyoti Mazumdar et al showed that 60% of females were presented with stress related symptoms and remaining 40% were male.[12] In a study done by Anjali N et al [13] showed that 57.58 % (19) females having more stress level as compared to male 41.18 % (7).

In our study majority 36.94% (41) stress level found in 1st year post graduates as compared to others and it's statistically significant. Similar finding were seen in study done by Aarti G Sahasrabuddhe et al in tertiary care hospital in Mumbai showed 46.2% (43) stress levels found in 1st year of residency as compared to others.[14] Similar finding were also found in other study [10].A study done by Bansal RK et al showed that maximum stress feeling was reported by the 1st year residents (77.3%) followed by 52.1% among the 2nd year and 58.31% among the 3rd year students respectively.[9] Our study showed that stress level found 33.33% (55) in clinical post graduates as compared pre and para clinical post graduates. It's found statistically not significant. In an another study it was found that stress was present in 44.3% (82) clinical post graduates as compared to pre and para clinicals and it's was statistically significant.[14]

In our study 66.42% (163) were unmarried whereas 33.58% (83) were married. Stress was present more 106 (65.03%) in unmarried as compared to married 26 (31.33%) and found statistically not significant. Similar results were observed in a study done by B.A. Issa et al among resident doctors in a Nigerian University Teaching Hospital 100% stress present in unmarried doctors as compared to married 92.9%.[15] While in an another study stress level found more 45.5% (25) in married post graduates and found statistically not significant.[14]

In our study the postgraduate couple who were having one or more children were having more 13.73% stress as compared to the couple who don't have their children and it's found statistically non-significant. In a study done by Saini NK et al revealed that stress level is more 44.4% in residents doctors having one or more children as compared to those resident doctors who don't have their children 25.4% and it's found statistically highly significant.[10]

In our study Stress level is more 42 (35.90%) in post graduates who were sleeping 4-6 hours per day as compared to those post graduates who were having 6-10 hours of sleep per day and it's found statistically not significant. While in a study done by Aarti GS et al showed that 47.8% stress were present in among resident doctors who were sleeping for more than 6 hours per day as compared to resident doctors who were sleeping less than 6 hours per day 29.4% and it's found statistically highly significant.[14]

Our study showed that stress levels were found to be more 44 (25.43%) in post graduates who worked for 6 to 10 hours per day as compared to others and it's not statistically significant. Similar results were seen in a study done by Pashtoon MK et al showed as the duration of work increased stress level also increased.[16]

CONCLUSION

Stress is one of the major growing mental problems among highly educated health professional and it should not be ignored as it can cause many other health issues. Stress should be evaluated and its remedy must be done to get better future health consultants.

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