Prevalence of Stress and its Determinants among Interns in Medical Colleges of Delhi, India

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ABSTRACT

Background: Doctors, especially the interns, are prone to stress and anxiety because of the nature of their work that demands excessive working hours, thereby leading to sleep deprivation. They are also exposed to emotionally challenging situations that adds up to their stress. The mental health of doctors is not only of concern to them, but also is of concern to the greater society served by them. The current study was done to document the burden of stress among medical interns, to identify the factors associated with their stress and the coping strategies adopted. **Methods:** A cross-sectional study was conducted among medical interns in the five government medical colleges and associated hospitals of Delhi, India. A pre-tested semi-structured questionnaire was used to collect data on socio-demographic details, work related details and details relating to personal life/relationships. Besides this, Zung's self rating scale for depression, Way of coping assessment scale and Multidimensional Scale of Perceived Social Support were also used. A total of five focus group discussions (FGDs) were also conducted with the intent to understand the nature of stress and the coping strategies. Logistic regression analysis was performed to document the determinants of stress. **Results:** A total of 387 interns were interviewed. The mean age of the study participants was 23.6 ± 4.2 years. Nearly similar proportion of males (53.0%) and females (47.0%) were included in the study. A total of 254 interns (66%; 254/387) were found to be suffering from stress. The important reasons for stress were reported to be academics (38.6%) and emotional maladjustment (36.3%). Interns who were aged 23-26 years (OR 1.28; 95% CI: 1.01 – 2.04) and 27-29 years (OR 1.42; 95% CI: 1.14 – 2.39), female interns (OR 1.12; 95% CI: 1.02 – 1.46), those who were not married (OR 2.03; 95% CI: 1.52 – 2.37), those that hailed from a nuclear family (OR 1.33; 95% CI: 1.05 – 1.95), those that resided at home (OR 1.87; 95% CI: 1.01 – 2.76), those that had their schooling from a metropolitan (OR 2.13; 95% CI: 1.23 – 2.69) or a city (OR 2.82; 95% CI: 1.34 – 3.76) and those with their schooling in English (OR 2.39; 95% CI: 1.43 – 4.54) had higher odds of experiencing stress. Out of 254 stressed out students, 45(17.7%) used drugs other than those required for medical reasons and 27 had abused prescription drugs (10.7%). Majority of students (34.4%) approached family for support in stressful times, followed by 31% who approached friends. The most common coping strategy adopted was "planful problem solving" (84.8%) and "accepting responsibility" (79%). **Conclusion:** The study showed a high prevalence of stress in medical interns. Mechanisms to detect anxiety/stress at an early stage along with efforts to prevent the same are required.

Keywords: Stress, Interns.

INTRODUCTION

Stress is considered a normal human response to an internal or external pressure. It becomes an issue of concern when one feels deluged by the challenges it presents. Long periods of stress might have detrimental effects such as depression, cardiovascular diseases, cancer, ulcers, back pain, headaches, raised blood pressure, and a plethora of other problems.[1-3] Stress/burnout can present as fatigue, exhaustion, inability to concentrate, depression, anxiety, insomnia, irritability, and sometimes increased substance abuse. Psychiatric morbidities are often considered to be proxy indicators of the rising stress level.

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Mental and behavioral disorders account for 14% of the global burden of disease.[4] According to World Health Organization estimates, neuropsychiatric disorders account for 1·2 million deaths every year and 1·4% of all years-of-life lost.[5] Globally, every year, about eight lakh people commit suicide, 86% of whom are in low-income and middle-income countries, and more than half of whom are aged between 15 and 44 years.4 Further, mental disorder is independently associated with a substantial excess in all-cause mortality risk.[6-8] In India, there is a lack of sizeable literature on the burden of mental health disorders. A recent epidemiological survey in India concluded that the prevalence of mental and behavioural disorders to be very high.[9] Patel V et al in their study found that about 3% of death in individuals aged 15 years or older in India were due to suicide, corresponding to about 187,000 suicide deaths in India in 2010 at these ages.[10] For suicide-related deaths at ages 15 years or older,

40% of suicide deaths in men and 56% of suicide deaths in women occurred at ages 15-29 years.[10]

Out of many groups who are affected by such emotional states and disorders, doctors especially the interns comprise an important group because of the unique environment in which they work. Factors like excessive working hours, sleep deprivation, and repeated exposure to emotionally charged situations play an important role in causing stress in this highly vulnerable group.[11] In addition, lack of job security, family and personal problems further aggravate the stress. Due to the nature of their profession, the mental health of doctors is not only of concern to them, but also is of concern to the greater society served by them.

Physician dissatisfaction has been linked with inappropriate prescribing patterns.[12,13] Some studies suggest that burned out physicians have more trouble relating to patients, and the quality of the care they provide may suffer.[14,15]

Previous studies have documented job dissatisfaction, less time for family and friends, long working hours, academic pressure, and physically demanding work schedules to be the key determinants of stress in medical interns.[11,16-19] Interns are fresh pass outs and have to deal with multiple pressures like the pressure of clearing post graduate entrance, coping with learning clinical skills and high patient load. Mostly interns are in the age group of 22-24 years and stay away from their families. This puts additional pressure on them as at this age they are not psychologically very mature and unable to address problems efficiently. Studies have shown medical school training to be a source of significant stress.[20] The expectations and responsibilities increase during internship and a freshly passed candidate is not accustomed to these pressing job responsibilities. Consequently, they feel lost and stressed out.

The interns in the colleges of Delhi comprise a varied and heterogeneous mixture of students from remote villages to the most renowned schools of the country and come from different caste, religion and income groups. With this background, the current study was undertaken to document the burden of stress and its determinants amongst interns working in medical colleges of Delhi, India. We also undertook a qualitative methodology to understand the nature of stress and coping strategies among these interns.

MATERIALS AND METHODS

Study setting and participants

A cross-sectional study was conducted in all the five government medical colleges and associated hospitals of Delhi, India. These medical colleges serve as tertiary care centers and have huge influx of patients from all parts of the country. All the medical students who were carrying out their internship training in the five medical colleges of Delhi were eligible for the study. Interns who could not be contacted even after three attempts, those who were on leave for ≥2 days in 7 days preceding the date of interview, and those who had filled a similar questionnaire in past 8 weeks, were excluded from the study. Also, those with any chronic medical illnesses or disabilities, or major stresses in 6 months prior to research were also excluded from the study.

Sample size and sampling framework

Sample size was calculated considering the prevalence of stress to be 32%, absolute precision of 5%, alpha error of 5% and a non-response rate of 10%.[21] The formula used was 4pq/d2 where p= prior documented prevalence of stress; q=complement of p ; d=absolute precision. The final sample size came out to be 382. Since all five medical colleges were Government institutions and located in the same city and nature of work was almost similar, so we assumed that there was no design effect.

A list containing the names of all the interns and the departments where they were working was obtained separately from each of the five medical colleges included in the study. The final list included 450 interns. Using the population proportionate sampling technique, the individual college's study population was calculated from total study sample size. The study participants from each medical college were selected using random sampling.

Data collection tool(s)

A pre-tested semi-structured questionnaire was used to collect data. The questionnaire largely had questions pertaining to the socio-demographic details, work related details and details relating to personal life/relationships. Pre –testing of questionnaire was done in all five medical colleges (ten interns in each medical college) using convenient sampling. Three scales were also used namely Zung's self rating scale for depression, Way of coping assessment scale and Multidimensional Scale of Perceived Social Support.[22-24]

Zung's self rating scale for depression was used to evaluate depression in normal non-psychotic individual and has been time tested.[22] This scale assesses the perceived feelings of the students regarding their emotional status and consists of 20 items with scale ranging from 1 to 4. The total score was summation of all scores. The value ranges from 20 to 80. Stress was considered as a continuous variable ranging from low to moderate to high degree of experienced feeling. A high degree of stress was reflected in high scores on the Zung's scale and a low degree was reflected in low

scores on this scale. Score more than or equal to 40 was considered as stress.[22]

Way-of-coping was assessed by using the scale developed by Folkman and Lazarus.[23] The scale consists of 50 items. The coping scale has eight sub scales which were as follows: Confrontive coping: describes aggressive efforts to alter the situation. It also suggests a degree of hostility and risk taking; Distancing: describes efforts to detach oneself. It also concerns creating a positive outlook; Self-Control: describes efforts to regulate one's own feelings and actions. Seeking social support: describes efforts to seek informational and emotional support. Accepting responsibility: acknowledges one's own role in the problem with concomitant theme of trying to put things right. Escape-avoidance: describes wishful thinking and behavioral efforts to escape or avoid. These are different from distancing as these items suggest escape and avoidance, in contrast with the items on the distancing scale, which suggest detachment. Planful Problem solving: describes deliberate problem-focused efforts to alter the situation coupled with an analytic approach to solving the problem. Positive reappraisal: describes efforts to create positive meaning by focusing on personal growth.

Scores (1 to 4) were calculated by summing up the ratings for each sub scale. The scores were calculated for each way of coping and average score for each coping strategy was calculated. Average scores for every strategy were compared and dominant strategy of every individual was determined for further analysis.[23]

Multidimensional Scale of Perceived Social Support was used in the present study.[24] It assessed perceptions from three specific sources: family, friends and significant other(s). The inventory consists of 12 items divided into three groups of 4 items each.[24] Each item is rated on a five point scale ranging from 1 (strongly disagree) to 5 (strongly agree). The value for total scale ranges from 12 to 60. The value for each group (4 items each) will range from 4 to 20.

We also conducted 5 focus group discussions (FGDs); each FGD comprising of 6-9 medical interns. A total of 40 medical interns were involved in this qualitative process. The intent of these FGDs was to understand the nature of stress and the coping strategies. We aimed to select participants that could provide the most informative data while providing different perspectives on the topic, based on age, gender, marital status, predominantly spoken language etc.

Data collection

The study participants were contacted by the investigator personally and a written consent was taken. The questionnaire was administered by the trained data collector while the scales were self-administered. Ethical clearance was obtained from institutional ethics review committee of National Institute of Health and Family Welfare, New Delhi. Dean and principals of medical colleges and associated hospitals of all five medical colleges of Delhi were contacted and written permission was taken through proper channel.

Statistical analysis

Data were entered in Microsoft excel and subsequently transferred to SPSS version 17 for statistical analysis (Chicago, IL, USA). Wherever applicable, proportion and mean (SD) were calculated. Chi-square test was used to compare proportions. For statistical significance, p value of <0.05 was considered. Logistic regression analysis was carried out to find the determinants of stress among the study participants.

For the qualitative data, triangulation was applied to base coding and analytical decisions on convergent validation, by discussing coding, clustering, and analyzing among the researchers. All interviews were transcribed verbatim. Transcripts were read multiple times in order to get a feeling for the depth of the data and to collect and discuss ideas that came up while reading the data. We used an interpretative approach by analyzing thematically to identify patterns and categories in the data. Data analysis was as inductive and emergent themes rather than theoretical concepts, lead the analytical process.

RESULTS

A total of 387 interns were interviewed out of the list of 450. The response rate came out to be 86%.

Socio-demographic profile

The age group of respondents varied from 19 to 29 years.. The mean age of the study participants was 23.6 ± 4.2 years. Nearly similar proportion of males (53.0%) and females (47.0%) were included in the study [Table 1]. More than four-fifth (88.1%) of the interns were single and around two-third (67.4%) of them were from places outside Delhi [Table 1].

Prevalence of stress in study participants

According to the Zung scale, a total of 254 interns (66%; 254/387) were found to be suffering from stress. The important reasons for stress were reported to be academics (38.6%) and emotional maladjustment (36.3%) [Figure 1]. Disrupted social life due to work burden and financial crisis were reported by 12.9% and 5.5% of the interns respectively. Around 7% of the study participants reported increased physical work had led to stress in them.

Determinants of stress in the study population

[Table 2] shows the results of bivariate analysis between the key socio-demographic variables and stress among the study participants. The presence of stress was more in interns aged 27-29 years (77%), those who were not married (68.6%), those who had a nuclear family (69.6%) and in those who stayed at home (82.8%). Further, those who had their schooling in a metropolitan (78.5%) or a city (90.9%) and had their language of schooling/education as English (77.1%) had reported more stress.

[Table 3] presents determinants of stress, obtained through logistic regression analysis. Compared to interns of age 19-22 years, those who were aged 23-26 years (OR 1.28; 95% CI: 1.01 – 2.04) and 27-29 years (OR 1.42; 95% CI: 1.14 – 2.39) had higher odds of having stress and this was statistically significant. Though not statistically significant on bivariate analysis, in logistic regression model, female medical interns had higher odds of stress (OR 1.12; 95% CI: 1.02 – 1.46) compared to their male counterparts. Similarly, those who were not married had 2 times higher odds of experiencing stress compared to married interns (OR 2.03; 95% CI: 1.52 – 2.37). Study participants who hailed from a nuclear family (OR 1.33; 95% CI: 1.05 – 1.95), resided at home (OR 1.87; 95% CI: 1.01 – 2.76), had their schooling from a metropolitan (OR 2.13; 95% CI: 1.23 – 2.69) or a city (OR 2.82; 95% CI: 1.34 – 3.76) and those with their schooling in English (OR 2.39; 95% CI: 1.43 – 4.54) had higher odds of experiencing stress.

Consequences of stress as reported by the study participants

Out of 254 stressed out students, 45(17.7%) used drugs other than those required for medical reasons and 27 had abused prescription drugs (10.7%). Around 43% felt that they neglected their family because of their stress and another 45% felt emotional numbness while dealing with critically ill patients. One-third (32.6%) study participants had frequent internal conflicts with hospital staff/peers/seniors/parents/ family. Out of the total participants who had reported suffering from stress, 99 (39%) felt the need to visit a psychiatrist or a counselor to seek help and 4 (1.6%) had attempted suicide. More than half (57%) felt that they had been in trouble at work because of stress and 158 (62.2%) felt that working alone at night and poor support from seniors was a major cause of frustration which led to stress. Thirty nine (15.3%) felt that monetary compensation was not commensurate with job demand and was another major reason of stress.

Perceived Social Support and coping strategy

Majority of students (34.4%) approached family for support in stressful times, followed by 31% who approached friends. Another 28.7% discussed their problems with their fellow colleagues. Stress coping strategy was reportedly adopted by all those interns who experienced stress. A combination of strategies was practiced. The strategy that was most adopted by the interns was "planful problem solving" (84.8%) and "accepting responsibility" (79%), followed by "self control" (76.7%), "positive reappraisal" (73.2%), "distancing" (70.9%) and "confrontive coping" (72.1%). The least adopted coping strategy was escape-avoidance (41.8%).

Findings of the qualitative analysis

The majority of study subjects opined that they had to continuously work hard in order to prove to their seniors that they are worthy

"We always have to make a lot of effort every time again to show our motivation and to show that we have knowledge. It's quite stressful to always show that and it can be quite exhausting."(Male; aged 25 years)

It merged that female interns have to prove themselves that they are good as their male counterparts. This adds enormous amount of stress to the female interns

We are always taunted by our seniors that male interns are better in organizing things, time management, and handling critical situations. No matter how much we put our hard work, the seniors always have something to complain while this is not the case with male interns."(Female ; 24 years)

Those students who were from outside Delhi and residing in hostel were missing their families, which was posing a problem for them in settling down and focussing on their work.

"Being away from my family and getting very less leaves to go visit them is a big stress. The amount of work is also enormous and I get little time to talk to them over phone. Parents are always complaining about me neglecting them. They do not understand how I cope with study and work pressures. All this leads to a lot of emotional stress" (Female, aged 23 years; resident of Uttar Pradesh)

Financial difficulties were also common among study participants.

"My parents have taken a loan for my studies. I am always worried whether I will be able to excel in my work, acquire higher education and repay the loan" (Male; 28 years)

Some interns were very stressed by the ill behaviour of their senior doctors

"Some senior doctors insult interns who are unable to execute their duties. They scold in front of the patients. This is not only embarrassing but also lowers the morale".

Reported coping strategies

Self-directed learning beneficial to motivation and patient welfare

Quite a few of the interns reported that when they encounter a stressful situation, they try to remain calm and focus on the bigger picture. They admitted that taking care of critically ill patients is stressful; but they channelize their stress into positivity through problem-based coping strategy, such as self-directed learning.

"When taking care of a patient, I am under some stress regarding my ability to help them. But at the same time, I want to transform my textbook knowledge into treatment for the patient." (Female; 23 years)

"I'm the one dealing with the patient, so I have to identify the problems and solve them. I need to read more textbooks to improve myself so that I can handle clinical problems." (Male 26 years)

Disengagement
When stressed out, the participants mostly tried to detach themselves from people and work related activities. Most of them recounted not communicating with anyone as modes of catharsis.

"There is no need to work so much as we are not getting the desired respect and value. I am constantly surrounded by tensions which are too much to handle. I am here to become doctor not a patient, but with so much stress, I feel I would become ill sooner or later".
Other reported modes of coping with stress

Some of the participants coped with their work stress by spending time and outings with family and friends, shopping, listening to music and watching movies and television. Binge eating during stress was acknowledged by few of the participants, while some admitted to stop eating completely. Workout was mentioned by very few males as a mode of stress reliever. Some students relaxed themselves through religious activities. One of the participants explained:
"When I am down, I like to say prayers. This relaxes me and gives me strength to bear pressures" (Female ; 28 years)

Table 1: Distribution of socio-demographic characteristics among the study participants (N=387)

Variable (s)		Number(n)	Percentage (%)
Age (in completed years)	19-22	167	43.2
	23-26	120	31.0
	27-29	100	25.8
Sex	Male	205	53.0
	Female	182	47.0
Religion	Hindu	302	78.1
	Sikh	42	10.8
	Christian	24	6.2
	Muslim	19	4.9
Marital status	Single	341	88.1
	Married	46	11.9
Type of family	Nuclear	299	77.2
	Joint	88	22.8
Caste	General	171	44.2
	Other backward class (OBC)	136	35.1
	Scheduled caste(SC) and tribe (ST)	80	20.7
Original place of residence	Outside Delhi	247	67.4
	Delhi	140	32.6
Place of stay in Delhi	In hostel/rented apartment	300	77.5
	At home	87	22.5
Mother tongue	Hindi	304	78.5
	Non-Hindi	83	21.5
Place of schooling	Metropolitan	200	51.7
	City	77	19.9
	Small town/rural	110	28.4
Language of schooling/education	English	310	80.0
	Non-English	77	20.0
Mode of travel to workplace	On foot	190	49.1
	Public conveyance	97	25.1
	Private/self-owned vehicle	100	25.8
Time involved in travelling to workplace (in hours)	<1	290	75.0
	1-2	80	20.7
	>2	17	4.3

Table 2: Association between socio-demographic characteristics and stress among interns in medical colleges of Delhi, India

Variable	Stress		p-value
	Present; n (%)	Absent; n (%)	
Age (in completed years)			

19-22 23-26 27-29	92 (55.1) 85 (70.8) 77 (77)	75 (44.9) 35 (29.2) 23 (23)	0.04
Sex Male Female	133 (64.8) 121 (66.5)	72 (35.2) 61 (33.5)	0.71
Religion Hindu Sikh Christian Muslim	185 (61.3) 35 (83.3) 19 (79.2) 15 (79.0)	117 (38.7) 7 (16.7) 5 (20.8) 4 (21.0)	0.56
Marital status Single Married	234 (68.6) 20 (43.5)	107 (31.4) 26 (56.5)	0.03
Type of family Nuclear Joint	208 (69.6) 46 (52.3)	91 (30.4) 42 (47.7)	0.04
Caste General Other backward class (OBC) Scheduled caste(SC) and tribe (ST)	113 (66.1) 88 (64.7) 53 (66.3)	58 (33.9) 48 (35.3) 27 (33.7)	0.39
Original place of residence Outside Delhi Delhi	159 (64.3) 95 (67.8)	88 (35.7) 45 (32.2)	0.80
Place of stay in Delhi In hostel/rented apartment At home	189 (63) 72 (82.8)	111 (37) 15 (17.2)	0.04
Mother tongue Hindi Non-Hindi	200 (65.8) 54 (65.1)	104 (34.2) 29 (34.9)	0.44
Place of schooling Metropolitan City Small town/rural	157 (78.5) 70 (90.9) 27 (24.5)	43 (21.5) 7 (9.1) 83 (75.5)	0.002
Language of schooling/education English Non-English	239 (77.1) 15 (19.5)	71 (22.9) 62 (80.5)	0.0001
Mode of travel to workplace On foot Public conveyance Private/self-owned vehicle	125 (65.8) 58 (59.8) 71 (71)	65 (34.2) 39 (40.2) 29 (29)	0.09
Time involved in travelling to workplace (in hours) <1 1-2 >2	183 (63.1) 56 (70) 15 (88.2)	107 (36.9) 24 (30) 2 (11.8)	0.64

Table 3: Determinants of stress among interns in five government medical colleges of Delhi, India

Variable(s)	Adjusted odds ratio	95%CI
Age (in completed years) 27 - 29 23 – 26 19 – 22	 1.42 1.28 1	 1.14 – 2.39 1.01 – 2.04
Sex Female Male	 1.12 1	 1.02 – 1.46
Religion Hindu Sikh Christian Muslim	 0.82 1.17 1.01 1	 0.67 – 1.29 0.98 – 2.12 0.76 – 1.32
Marital status Single Married	 2.03 1	 1.52 – 2.37
Type of family Nuclear Joint	 1.33 1	 1.05 – 1.95
Caste General Other Backward Class	 0.98 0.92	 0.81 – 1.19 0.85 – 1.28

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Scheduled Caste/Tribe	1	
Original place of residence		
Outside Delhi	0.89	0.56 – 1.85
Delhi	1	
Place of stay in Delhi		
At home	1.87	1.01 – 2.76
In hostel/rented apartment	1	
Mother tongue		
Hindi	1.01	0.62 – 1.17
Non-Hindi	1	
Place of schooling		
Metropolitan	2.13	1.23 – 2.69
City	2.82	1.34 – 3.76
Small town/rural	1	
Language of schooling/education		
English	2.39	1.43 – 4.54
Non-English	1	
Mode of travel to workplace		
On foot	0.95	0.82 – 1.56
Public conveyance	0.87	0.76 – 1.74
Private/self-owned vehicle	1	
Time involved in travelling to workplace (in hours)		
>2	2.33	0.90 – 3.33
1-2	1.71	0.79 – 2.84
<1	1	
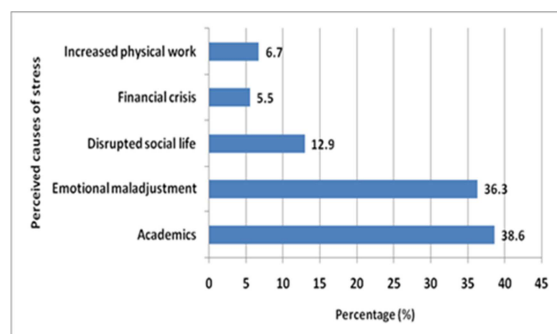
Figure 1: Perceived causes of stress as reported by the medical interns in five Government medical colleges of Delhi, India

DISCUSSION

The study showed a high prevalence (66%) of stress among medical interns. In the present study, with more than two-third of the interns under stress, the working condition in medical colleges of Delhi seems deplorable and requires immediate attention. The findings of the current study corroborate well with other studies.[25,26] Sidik S.M et. al. in their study among Malaysian medical students reported similar findings where the prevalence of emotional disorders was seen to be high (41.9%).[25] Another study by Lynda E. et al found that affective disorders (both depression and anxiety syndromes) were three to four times more common among Ontario family practice residents.[26] Shaikh B.T. et. al., in their study in Pakistani medical school found that majority (>90%) felt that they have been stressed at one time or another.[27] On the other hand, the findings did not match up with studies done in India.[17,21] Saini NK et al in their study documented the prevalence

of stress in resident doctors of Delhi to be 32.8% which is much less than our study.[17] This difference could be due to the difference in scales used. Saini NK et al used DASS (Depression Anxiety Stress Scale) while we used Zung's self rating scale.[17] Deshpande JD et al in their study in a tertiary care teaching hospital in rural Maharashtra found the prevalence of stress to be 32% in medical interns. The observed lower prevalence, compared to our study, could be due to the study area being rural whereas in our study it was an urban metropolitan.[21]

Interns who were staying at home during their internship had higher odds of stress compared to those staying at hostel/rented apartment. The reason for this could be that interns residing in hostels or rented apartments usually have to deal with day to day responsibilities on their own unlike those living at their homes where the responsibilities shift on their parents. Thus, they are more accustomed to stressful conditions compared to interns residing at their homes. Also, interns who were unmarried had higher odds of stress compared to married ones. This points to the possibility that spousal support, be it either emotional and/or financial could be a pacifying factor for stress.

Majority of the interns were stressed up due to academics and emotional maladjustment. Academics has been recognized as the most dominant stressor by many other studies.28-30 Deshpande JD et al in their study in a tertiary care teaching hospital in rural Maharashtra found that academic cause was a greater cause of stress and depression among interns. Pressure in performing in post graduate entrance exams were a major stressor.[21] According to the study carried out in Tamil Nadu it is observed that, students who had

better previous academic records were more under stress due to high parental, peer and self-expectations.[31]

In the current study, stress coping strategy was adopted by all those interns who experienced stress. Majority approached family and friends for support in stressful times, similar to the findings reported by Lynda E. et al.[26] The strategy that was most adopted by the interns was planful problem solving and accepting responsibility. Although in the present study majority of the interns were practicing appropriate stress coping strategy, the findings nevertheless underscore the importance of introducing techniques of stress management to the interns by trained professionals. Regular training sessions for the same could be conducted.

It should be considered that since stress is a multifaceted phenomenon, no simple solution is available. Furthermore, differences in the particular circumstances of each individual make it impossible to provide a unique solution for the management of stress. Therefore, interventions should be targeted at eliminating as many underlying causes as possible, so that the action taken reduces stress and prevents future stress. The interventions could include: stress recognition, stress assessment, anti-stress intervention followed by monitoring and evaluation. Measures like defining clearly the job responsibilities, reducing hours of internship, arrangement of shift schedules according to psycho-physiological and social criteria, promoting engagement in extra-curricular activities and hobbies, essential attendance at mental health counseling and support from peers within the medical profession could provide significant help to interns.

Limitations

The results could not be generalized as stress levels might change as per individual basis. Moreover, the assessment of stress was based on self-report and the source of stress was subjective and different for each individual. Since the sample included both, the interns who had just joined their internship program and those who were completing their internship, they might not have similar mental state, and that could have influenced the findings of the study. Further, the work related stress levels might get exaggerated if there are conflicts at home and the home environment is not cordial. Information on home related environment was not captured which is one of the limitations of the current study.

CONCLUSION

The current study showed a high prevalence of stress in medical interns. Considering that this could affect their performance and in turn

adversely affect the quality of treatment provided, necessary steps need to be taken to address this issue. Mechanisms to detect anxiety/stress at an early stage along with efforts to prevent the same would be beneficial in the long run. Familial and social support acts as a buffer against stress so it should be enhanced.

Medical colleges should promote time management strategies. Programs aimed at personal and professional development for interns to reduce maladaptive responses to the stresses of medical training can be developed. The goals of the program should be to provide a supportive atmosphere, build trust, and promote deeper self-understanding and sensitivity. As academic affairs are major stressor for medical students so more leisure time activities, better interaction with the faculty and proper guidance, advisory services and peer counseling at the campus during exam schedules could do a lot to reduce the stress. Overall, there should be a supportive system for students/interns in their respective colleges or hospitals that are specifically tailored to their needs.

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