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Research Article

Workplace Stress among Doctors of a Medical College in South India

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ABSTRACT

Background and Objectives: Mental stress is a major health problem among medical professionals. Healthcare workers suffer from work related or occupational stress often resulting from high expectations coupled with insufficient time, skills and/or social support at work. There is a high incidence of decreased quality of work and life among the medical professionals due to the various stressors in their professional life. Here we have conducted a study among the doctors of Mount Zion Medical College with the following objectives. The objectives of the study were to assess the stress level among various work groups of doctors, explore the relation between work stress and health and compare the stress levels based on age, gender, and designation. **Methods:** The study was a cross sectional study done in Mount Zion Medical College, Adoor, among the doctors from 1/11/2021 to 15/11/2021. All study participants available in the study area satisfying inclusion criteria were taken for the study, which was a sample size of 100, was selected conveniently. A pretested close ended questionnaire was used. Data was entered and coded in Microsoft Excel and analyzed. **Results:** The association of age with the level of stress and stress related symptoms was found to be significant. The association of sex with level of stress and stress related symptoms was found to be insignificant. The association of profession with level of stress was found to be significant while that with stress related symptoms were insignificant. The association of education with level of stress was found to be significant while that with stress related symptoms was insignificant. The association of work experience with level of stress was found to be significant while that with stress related symptoms was insignificant. The association of marital status with the level of stress and stress related symptoms was found to be insignificant. **Conclusion:** Among the study participants who were found to have a significant level of mental stress, it was noted that there was a significant association between age, profession, education, and work experience. Among the study participants who were found to have stress-related health symptoms it was noted that there was a significant association with age only and not with any other factor.

INTRODUCTION

Stress is a feeling of tension or pressure that people experience when demands placed on them exceed the resources they must meet these demands [1]. There is a considerable debate among stress researchers about how to adequately define stress. According to Selye, Any external event or internal drive which threatens to upset the organism's equilibrium is stress [1]. He has defined stress as the non-specific response of the body to any demand made upon it. Lazarus sees Stress as a result of a transaction between person and environment [3]. Zimbardo defined stress as the pattern of specific and non-specific responses an organism makes to stimulus events that disturbs its equilibrium and exceeds its ability to cope [4]. From the foregoing definitions it may be pointed out that the researchers explained the notion of stress from various perspectives:

I) As an external force which is perceived as threatening;
ii) As response to a situation demanding an individual to adapt to change, physically or psychologically;
iii) As an interactional outcome of the external demand and internal resources;
iv) As personal response to certain variations in the environment;
v) A more comprehensive combination of all.

Occupational stress is related to the workplace. This situation is faced by an employee when there is a total discrepancy between workplace requirements and the person's competency to carry out those requirements in an efficient way. Many organizational factors such as work overload, being underpaid, and an unfriendly working environment can be some of the causes of occupational stress. It is a very complex construct to define. It is related to every person in a different way.

There are many sources of stress as some may be intrinsic related to

profession while some are related to the role of employer and his/her attitude towards the employees of the organization, some to the employees' relationships with each other, some are related to culture and climate of the concerned organization. Some sources of occupational stress are those which come from outside the working environment, worker's personal life etc **(Figure 1).**

Pestonjee has identified 3 important sectors of life in which stress originates: (i) Organizational & Profession sector (ii) Social sector and (iii) Intrapsychic sector [5]. Organizational/ Profession stress has been defined in terms of a misfit between person's skills & abilities and the demands of his/her profession. The concept of Organizational/profession stress falls under the umbrella of a broader concept i.e. Role Stress. Therefore, it becomes imperative to understand the concept of Organizational role, to understand the concept of stress in Organizational & profession sector of life. The focus of the present study is to understand stress in organizational/ profession sector of life.

Every day, physicians encounter stressors that are a fundamental part of medical practice [6]. However, in the past few decades, compared with other professional groups physician's wellness has diminished in every aspect of professional life [7]. Chronic stress may affect the relationship of physicians with their patients and can lead to negative clinical consequences, such as compassion fatigue, unprofessionalism, and clinical errors. Chronic stress can also affect a physician's personal life and result in negative outcomes, such as chronic fatigue, substance abuse, psychiatric morbidity, and suicidal ideation [8].

Doctors provide a vital workforce in health department in India. They have extended working hours and are untiringly providing their services to humanity. Doctors are providing unique services that are not consistent with other social workers. Doctors have long working hours and in addition to providing medical care to patients, they must fight back with ethical dilemmas as well as unjustified demands of management or relatives of patients [9]. Due to all these circumstances, there is increased profession dissatisfaction, high absenteeism, turnover intentions of doctors in hospitals. As far as their personal life and social adjustment is concerned, these aspects of their life are also affected in a negative way due to occupational stress. They may fall an easy prey to addiction, use of alcohol or smoking to relieve stress. Nowadays it is becoming imperative to identify the major causes of occupational stress among doctors and their effects and relationships [10].

In this investigation, we undertook a study involving the physicians at Mount Zion Medical College, aiming to achieve the following objectives: The study sought to evaluate the stress levels within different work groups of doctors, investigate the correlation between work-related stress and health, and compare stress levels across different categories such as age, gender, and professional designation.

MATERIALS AND METHODS

This was a cross sectional study.

Sample Size: 100

Study Setting: The study was conducted by an anonymous survey of doctors working in various departments of our hospital over a period of 2 weeks using the validated questionnaire developed by the Indian Council of Medical Research (ICMR).

Study Duration: This study was conducted over a period of 2 weeks from 1/11/2021 to 15/11/2021.

Study Design: The study is a questionnaire-based analytical study incorporating two questionnaire-based tools. The first questionnaire is used to assess work stress and the second for general health status evaluation. The responses will be analyzed by the Statistical Package for the Social Sciences which will be used for both data analysis and tabular presentation.

Study Questionnaire: The study is to be done using two questionnaire- based tools which will be given to 100 participants. The first questionnaire, the work stress questionnaire, has been developed by ICMR, having 32 questions to be scored on 1/2/3/4 criteria, Never 1, Sometimes 2, Frequently 3, and Always 4.

The scores are interpreted as:

- **Scores 32 to 64:** You manage your stress levels very well.
- **Scores 65 to 95:** You have a reasonably safe level of stress
- **Scores 96 to 128:** Your level of stress is too high.

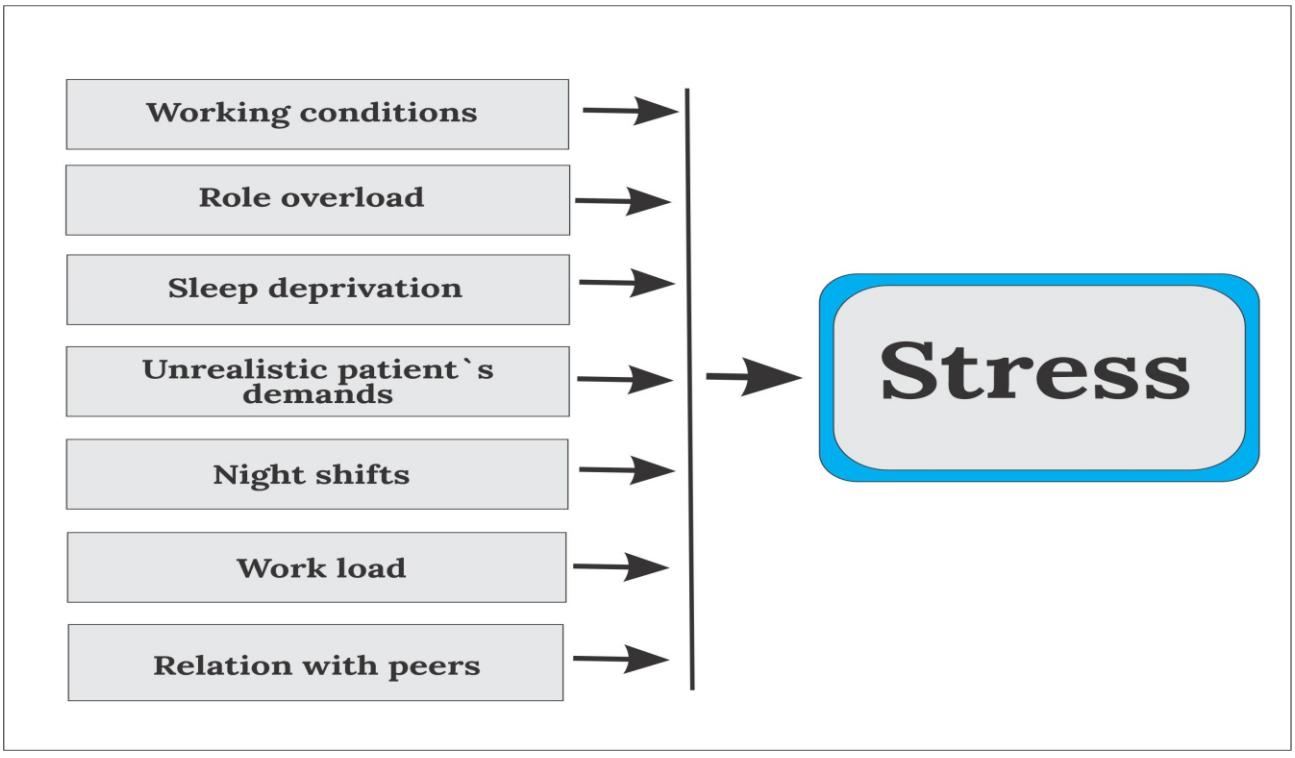

Figure 1: factors responsible for stress in doctors

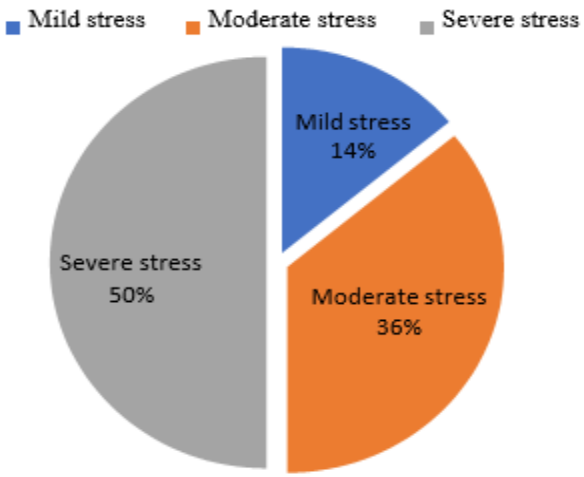

Figure 2: Distribution of stress levels among study population

Table 1: Association between age and level of stress

Age	Level of stress				
	Mild stress	Moderate stress	Severe stress	Total	
20-35	2	15	37	54	
36-50	1	8	8	17	
>50	11	13	5	29	P=0.000
Total	14	36	50	100	

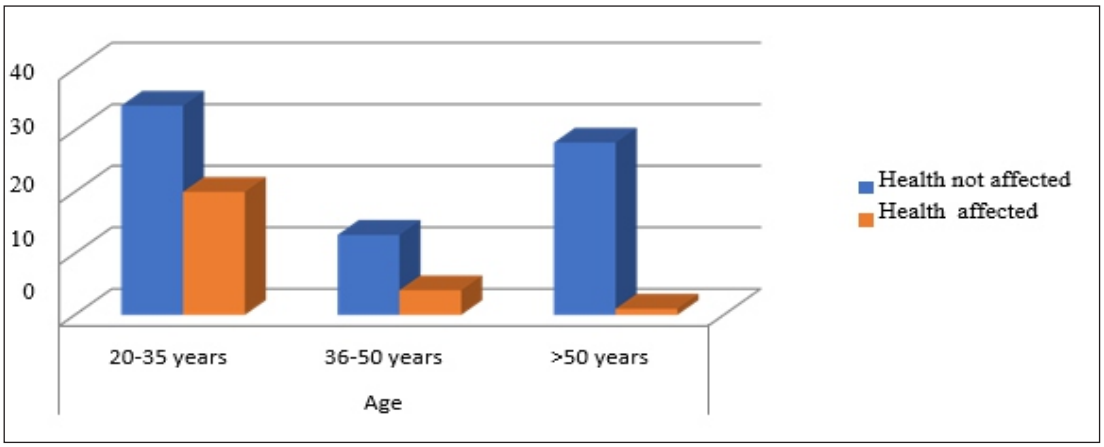

Figure 3: Distribution of health related symptoms on the basis of age

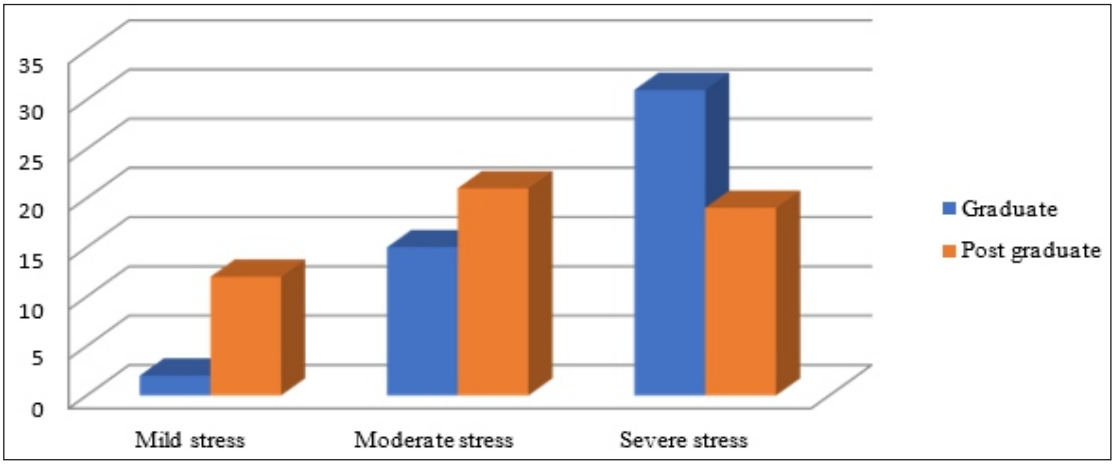

Figure 3: Association between educations and level of stress

The second questionnaire which assesses commonly experienced stress symptoms is also developed by ICMR. The questionnaire has 30 questions which are specific to general health. Each question had symptoms needed to be scored 0/1/2 on the criteria Never—0, Sometimes—1, and Always—2.
The scores were interpreted as,

- **Score less than 30** meaning health is not affected,
- **Score more than 30** meaning commonly experienced stress symptoms have effect on individuals' health.

Inclusion Criteria:

a) Doctors working in clinical departments.
b) Minimum 3 months of working experience in the institution

Exclusion Criteria:

a) Doctors in non-clinical departments
b) Less than 3 months of working experience in the institution

RESULTS

The study population had 54 male participants and 46 female participants, with 54% of subjects belonging to age group between 20 and 35; 17 were belonging to age group between 36 and 50 and 29 were above age 50. There were 48 graduates and 52 post-graduate doctors. Of the study population 47 are unmarried, 49 are married and 4 are either divorced or widowed. The study population had 50 participants who had more than 1 year of work experience and 50 participants who had less than 1 year of work experience. The study population had 50 participants suffering from severe stress and 36 participants had moderate stress while 14 of the participants only had mild stress **(Figure 2).**

Among the study population, 25 participants had their health affected due to the stress while 75 participants showed only a few stress related symptoms. On analysing the association between age and the level of stress faced in their professional spheres, we could find that in the age group 20-35 years, 2 were having only mild stress, 15 were having moderate stress and 37 were having severe stress, in the age group 36-50 years, only 1 had mild stress, 8 of them had moderate stress and 8 had severe stress and in the age group > 50 years, 14 were having only mild stress, 36 had moderate stress and 50 had severe stress. There is a significant association between age and level of stress .ie, as age advances the level of stress increases. It may be because of the increasing workload with age **(Table 1).**We also could find significant association between age and stress related health problems which means as age advances symptoms of stress also increase proportionally. In the study population belonging to 20-35 years, 34 didn't have much of stress related symptoms while 20 had their health affected, while in the participants belonging to 36-50 years, 13 didn't have much of stress related symptoms while 4 had their health affected, and among the study population >50 years, 28 didn't have much of stress related symptoms while only 1 had their health affected **(Figure 3).**We could not find any significant association between gender and level of stress. Even though many studies have shown positive co-relation between gender and level of stress, the result of this study is not so. Also, we could not find any significant association between gender and stress related health problems. Other studies have shown females are more symptomatic than males. The disparity among the results may be due to the gender distribution changes between the study population and the district.

Out of the 25 participants whose health were affected because of stress, 3 had respiratory symptoms like breathlessness, 3 had CVS symptoms like palpitation, 7 suffered from GIT symptoms like indigestion, 8 had anxiety problems and 4 showed signs of depression like sleeplessness. The depressive symptoms were more among female subjects than males.

There was a significant association between educational qualification and level of stress. Among the 48 graduates in the study population, only 2 had mild stress while 15 had moderate stress and 31 had severe stress, and among the 52 postgraduates in the study population, 12 had mild stress only, 21 had moderate stress and 19 had severe stress **(Figure 3).**

In our study we found that there is no significant association between marital status and level of stress and stress related health problems. But when one investigates the stress and the duration of work experience, we can see that there is a significant association between them. This shows that as work experience increases, the level of stress decreases proportionally as the person understands how to deal with stress through experience.

There was no significant association between work experience and stress related health problems. Various studies have shown that experience increases the level of stress and the stress symptoms reduce significantly. But here significance is not observed since more were new to the profession. While examining the stress symptoms perceived by the subjects, it was found that anxiety and depressive symptoms are more common than symptoms related to other systems.

DISCUSSION

Many studies have suggested that stress among physicians, nurses and other health care professionals was high in comparison to other types of work, for example, Graham and Rees conducted a comparative study between different occupational groups [9,10]. The most important part of the study is that the health care professionals, compared with non-health care employees have gotten significantly higher levels of pressure within their workplace. Age is a factor that determines stress. Our study had majority of the study subjects between the age group of 20 to 35. Studies done by Hirak Das Gupta *et al*., have shown that majority of their study subjects fell in the age group between 45 and 60 [11]. When one looks into the gender aspect of the study population studies conducted by R Burbeck *et al.,* Chambers and Howie et *al.,* it showed majority of their work force had more males than females. Our study also had more of males, i.e 54% and 46% females [12-14].

Studies conducted by Ronald and Lepnurm and Levey showed in their study that there were more post graduates or doctors with a Masters degree and in our study it was also the same. It can be noted that those physicians, were given important responsibilities compared to the junior staff [15,16]. In the professional aspect, Muthukrishnan analyzed interview data from 103 male and female hospital employees belonging to various categories such as doctors and nurses to find that the level of occupational stress was high. Our study was conducted only among doctors of a private medical college [17].

When studying regarding marital status of the study population, Ramirez *et al.,* and Lee *et al.,* conducted studies in 1996 and 2008 and in their studies the marital status was 38% and 41 % respectively [18,19]. In our study it was found that 49% were married and the remaining was not. Anxiety symptoms are usually more with single subjects due to lack of a partner to share their worries and woes.

When studying about the work experience, Baba investigated the causes of role stress among male and female doctors working in government hospitals [20]. Findings of the study revealed that both male and female doctors experienced organizational role stress. The level of stress experienced by doctors with 11-20 years of experience was the highest, followed by the doctors having experience of 3-10 years which suggested that senior doctors had to shoulder the administrative responsibilities as well, as they grow in their role. In our study we could also find similar findings.

When studying the level of stress and symptoms, the studies conducted by Gold KJ and Shah MA *et al.,* has shown that level of stress as well as stress related health problems are more in health work professionals compared with general population. In our study it was found that 50% suffered from severe stress and 36% from moderate stress [21,22]. Most of the studies had similar findings when comparing stress and stress related health effects.

CONCLUSION

Within the group of participants experiencing noteworthy mental stress, a notable correlation was observed concerning age, profession, education, and work experience. However, for those participants

exhibiting health symptoms related to stress, a significant association was identified solely with age, with no observable connection to other factors.

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