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## **A survey for estimation of stress at work place among doctors affecting day to day life**

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**Abstract**---Introduction: Stress is defined as physical and psychological state that occurs when the individual is unable to cope with demands and pressure of situation. In the present Covid-19 era when doctors are overloaded, the stress to balance between his family and work life has increased. The modern medical workplace is a complex environment and doctors take it either exciting or depressing. The stress due to working conditions lead to many symptoms like depression, anxiety, anger, headache, insomnia. Aim of the study was to estimate the level of stress among doctors, to identify the risk factors and relieving factors for the stress and to assess the consequences of stress. Material & Methods: It is an Observational Cross Sectional Study. After obtaining permission from Institutional Ethical Committee the study was conducted on 400 doctors pursuing post graduation after MBBS and post graduate doctors. Doctors in the study work in different departments of private and government hospitals as well as private practitioners. They were included in the study only after obtaining an informed consent. All the doctors fitting

into the inclusion criteria were taken into the study. Google form questionnaire consisting of 30 pre selected questions regarding stress due to working conditions was shared in various WhatsApp groups and personal numbers. It was complete voluntary for the participants to participate through Google form questionnaire. All the questions were provided multiple choice options. Doctors had to select suitable options for them. Data was collected and analyzed. Observations & Results: Majority of the doctors participated were from clinical branch (77.4 %), between the age of 23-35 years (62.3%) and married (76.7 %). Most of the doctors scaled their stress in moderate category (44.5 %). Common symptoms were irritability, anger, headache, easy fatigability etc. Main stress factors were less resources (equipments, drugs, etc) (41.1 %), man power (39.7%), poor work atmosphere (39%), excessive administrative work (31.5 %). Listening to music was most common relieving factor (61 %). 67.8% participants felt that they are not giving enough time to their family members. Conclusion: Majority of doctors had moderate level of stress in our study. They felt dull, tired and irritable after coming from work. I strongly recommend proper psychological counselling and involvement of stress relieving activities like yoga and meditation at work place to help the doctors be happy and stress free.

**Keywords**--Work Stress, doctors, Questionnaire.

## **Introduction**

Stress is defined as physical and psychological state that occurs when the individual is unable to cope with demands and pressure of situation<sup>1</sup>. Level of stress and job satisfaction among doctors can affect the quality of health care<sup>1</sup>. Doctors are heavily loaded leading to burnout in today's Covid 19 era. Burnout is considered as a distinct state of psychological stress generated by the individual's occupation and/or workplace and is identified as such in the World Health Organization's International Classification of Diseases<sup>2</sup>.

The stress due to working conditions lead to many symptoms like headache, depression, anxiety, anger, insomnia. The stress among doctors are due to various conditions like patients load (marked increased/ decreased), long working hours, less compensation, poor work atmosphere, personal safety, family issues or health issues<sup>3,4</sup>. These make the doctors upset, irritable, tired and nervous after their working hours. All these factors affect doctors' personal and family life.

The level of stress among doctors is different at various job profiles like resident doctor, consultant or private practitioner<sup>5</sup>. Work related stress is also different between clinical and non clinical doctors.

Stressful working conditions may lead the doctors to develop habits to relieve the stress. Excessive stress may seriously and negatively affect a person's health, the working capacity and efficiency of the health-care providers, resulting in a change in the individual's psychological and/or physiological state. Some doctors may

need help of psychiatrist and psychological drugs to relieve this stress. This survey was done to assess the level of stress among doctors of all job profiles. By this survey we can know the different risk factors, symptoms and effect on day to day life due to stress among doctors.

### **Material and Method**

This is a cross sectional observational study. After obtaining permission from Institutional Ethical Committee the study was conducted on working doctors between 23 to 70 years of age. Post graduate doctors and doctors pursuing postgraduation after MBBS were included in this study where as retired doctors and undergraduate doctors were excluded. We studied on doctors working in different departments from private and government hospitals as well as private practitioners through Google form questionnaire. All the doctors participating in the study were explained clearly about the purpose and nature of the study in the language that they can understand. They were included in the study only after obtaining an informed consent. Google form consists of 30 questions regarding stress due to working conditions at their work place. There were 7 questions regarding general information, 8 questions regarding information related to stress, 6 questions regarding risk factors and relieving factors of stress and 9 questions regarding consequences regarding stress. All the questions were multiple choices. Doctors selected suitable options for them. Data was collected and analyzed. The content validity was sort after the expert opinion of 05 experts. The content validity ratio is 0.91 as two experts suggested modification in the data collection tool which was incorporated in the questionnaire. Collected data was compiled in Microsoft office excel 2010 format. Data was processed using EPI info statistical software version 7.2. Frequency, Proportions were obtained from the collected data. Descriptive and analytical statistical methods are used for the preparation of results. Data is presented in tabulated as well as graphical format.

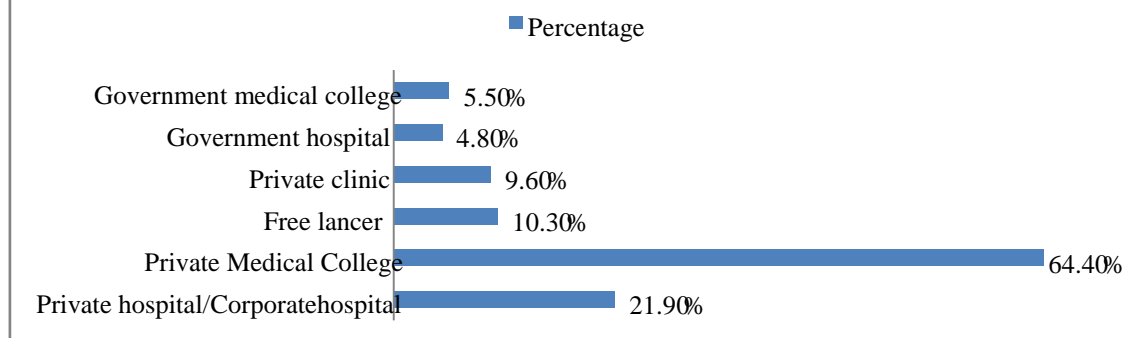
### **Observations and Results**

In our study, 400 doctor participants [Male (55.5%) & Female (44.5%)] were evaluated. Majority of the doctors participated were from clinical branch (77.4 %), between the age of 23-35 years(62.3%) and married (76.7 %).(Table- 1)

Table 1: Demographic distribution of participants

Variable	Subgroup	Frequency	Percentage
Age (in years)	23-35	249	62.3 %
	35-50	118	29.5 %
	50-70	33	8.2 %
Department	Preclinical	25	6.2 %
	Para clinical	66	16.4 %
	Clinical	309	77.4 %
Marital Status	Married	307	76.7 %
	Unmarried	82	20.5 %
	Divorced	03	0.7 %
	Separated	03	0.7 %

## Distribution of work place of participants



	Widow/ Widower	05	1.4 %
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In this study, most of the doctors (96.6%) were full time working while only 3.4% doctors were part time working. Designation and work place distribution is as follows: (Table 2, Figure 1)

Table 2: Designation of doctors

Variable	Subgroup	Frequency	Percentage
Designation	Professor and Head	32	8.2 %
	Professor	22	5.5 %
	Associate professor	88	21.9 %
	Assistant professor	66	16.4 %
	Senior resident	25	6.2 %
	Tutor/demonstrator	03	0.7 %
	Consultant doctor	33	8.2 %
	Private practitioner	60	15.1 %
	Resident doctor	71	17.8 %

Figure 1: Bar diagram showing distribution of work place of participants.  
(Multiple responses were selected)

According to subjective feeling of stress, most of the doctors scaled their stress in moderate category (44.5 %). (Table 3)

Table 3: Level of stress

Variable	Subgroup	Frequency	Percentage
Level of stress	No stress (Scale 0)	08	2.1 %
	Mild (Scale 1-3)	159	39.7 %
	Moderate (Scale 4-6)	178	44.5 %
	Severe (Scale 7-9)	49	12.3 %
	Extreme (Scale 10)	06	1.4 %

Figure 2 showing symptoms experienced by participants during stress. Common symptoms in descending order were irritability, anger, headache, easy fatigability, anxiety, loss of appetite, Depression, Insomnia and others (chest pain, palpitation, leg cramps, hyperacidity, drained out, loss of interest) . Multiple responses were selected.

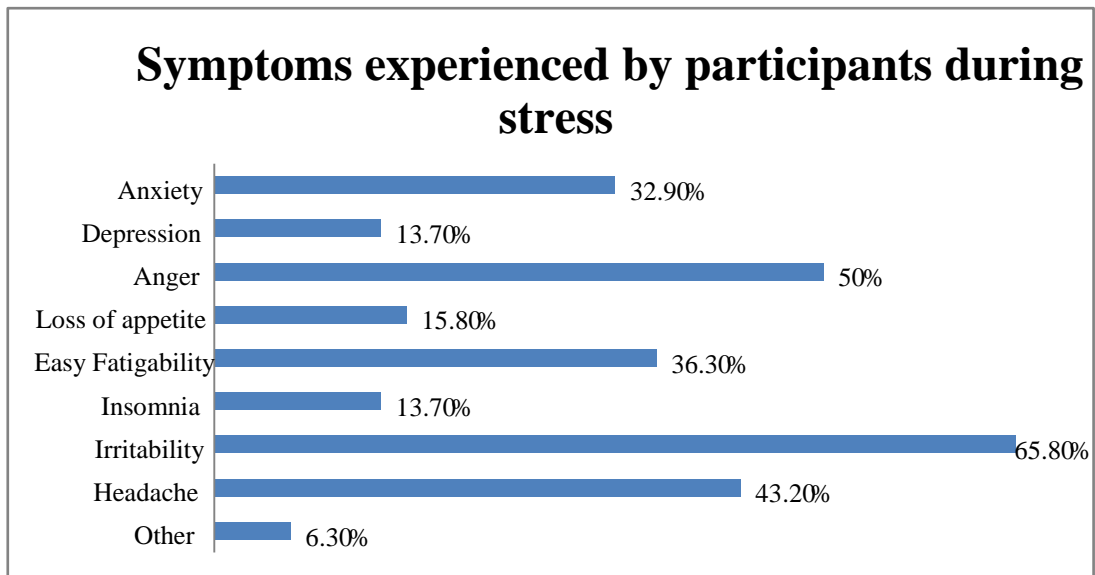


Figure 2: Bar diagram showing Symptoms experienced by participants during stress

In our study 52.7% participants experienced stress for less than 1 hour and 39% had stress for 1-5 hours in a day. Most of them (54.1%) experienced stress during working hours, While 30.1% participants had stress after working hours.



Figure 3: Duration of stress among participants.  
Table 4: Different variables in relation to stress

Variable	Rarely	Sometimes	Often	Very often	Never
Enjoyment of work	2.7% (11)	9.6% (39)	45.2% (180)	42.5% (170)	0.0 % (0)
Dull, tired, irritability after coming from work	21.1% (85)	43.2% (172)	19.2 % (77)	11% (44)	5.5% (22)
Need for more professional & skill development	12.3% (50)	41.8% (167)	23.3% (93)	19.9% (79)	2.7 % (11)
More hunger for junk food /sweets during stress	17.8 % (71)	26.7 % (107)	21.2 % (85)	15.8 % (63)	18.5 % (74)
Feeling of stress at work	11.5% (47)	55.5% (221)	15.8% (63)	15.1% (60)	2.1 % (9)
Feeling of stress with rapid change in work place/condition	20.5 % (82)	40.5% (161)	19.9% (79)	6.8 % (28)	12.3 % (50)
Need to consult a doctor/psychiatrist to relieve stress	14.4 % (58)	11.6 % (47)	3.4 % (14)	2.1% (8)	68.5% (273)

Majority of participants felt sometimes dull, tired, irritable after coming from work. Most of the participants 68.5% felt no need to consult a psychiatrist or doctor to relieve stress. In our study, main stress factors were less resources (Equipments, drugs, etc) (41.1 %), less man power (39.7%), poor work atmosphere (39%), excessive administrative work (31.5 %), less work compensation (24.7%), heavy

traffic (24.7%), less work satisfaction (23.3%) etc. Other stress factors like excessive patient load, conflict with colleague, long working hours, personal health issues, family issues were also selected by few participants.

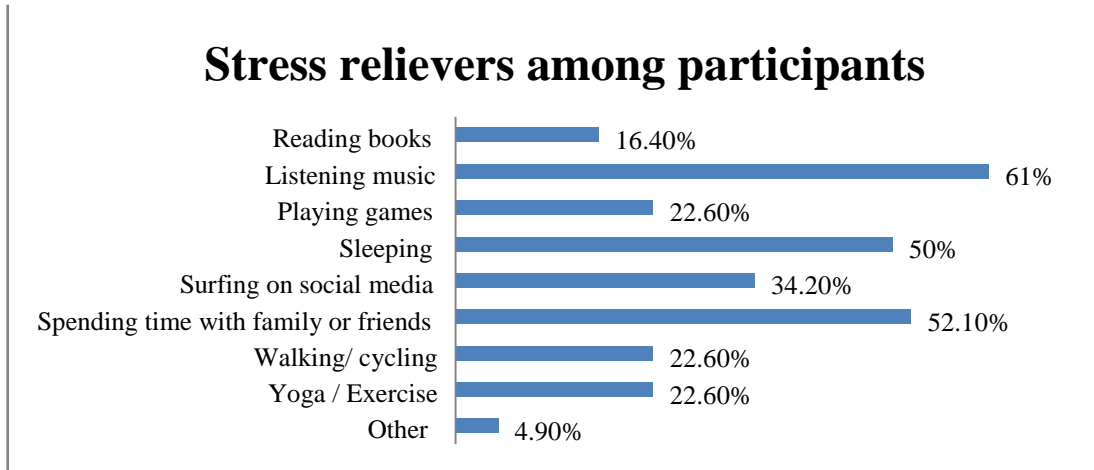


Figure 4: Stress relievers among participants

Majority of participants (61%) enjoyed music to relieve their stress, while others slept, spent time with family and friends, surfed on social media, read books, play games, yoga, exercise, walking etc. In our study, 29.5% participants exercise for 1-2 days in a week, while 24% participants exercise for 3-4 days in a week. Families of 51.4% participants felt that the participating doctors were suffering from stress while majority of participants 67.8% felt that they were not giving enough time to their family members.

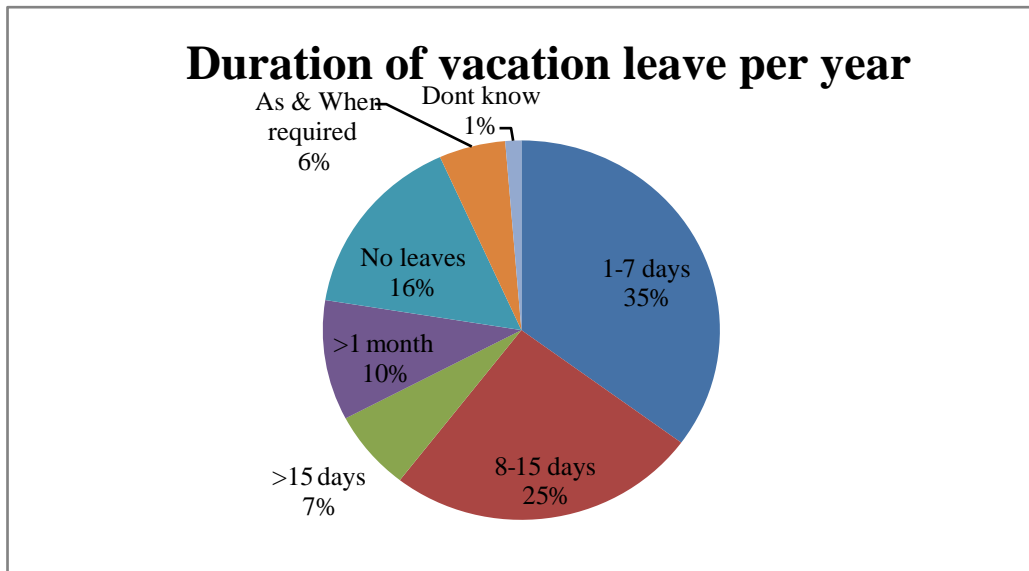


Figure: 5 Duration of vacation leaves per year

In our study, 21.9% participants had very good sleep, while 60.3% had fairly good sleep. Also most of the patients (89%) had not taken any prescribed or over the counter medicines to help them sleep. In this study, 7.5% participants consumed alcohol, 3.4% consumed tobacco/ gutaka and 2.7% participants smoked bidi/ cigarette. In last one year, 7.5% participants were diagnosed with hypertension.

## Discussion

Doctors are a key group for a well-functioning health care system and stress among doctors negatively affect quality of patient care and healthcare organisations<sup>5</sup>. Regular evaluation of work-related stress, followed by analyses and appropriate actions, is therefore important to reduce and prevent this stress.

In our study, 400 doctor participants were evaluated from different clinical and non clinical departments. Male doctors were more (55.5%) than female doctors (44.5%). Majority of the doctors participated were from clinical branch (77.4 %), between the age of 23-35 years (62.3%) and are married (76.7 %). Sidhu et al. conducted similar study on doctors in tertiary care hospital in north India, having more female participants between the age group 20-30 years, married and from clinical branch<sup>2</sup>. Although, some studies reported that older doctors, single and female doctors have higher levels of stress<sup>6,7</sup>.

Among all participants, majority (55.5 %) of doctors felt stress at work sometimes, while 15.8 % doctors often and 15.1 % doctors very often felt stress at work. We found prevalence of stress was 30.9% in our study. In a similar study conducted by Sathiya et al., among doctors in a tertiary care teaching hospital in Tamil Nadu, they found overall prevalence of stress was 39.5%<sup>8</sup>. Another study conducted by Sahasrabuddhe AG et al., stress among resident doctors of tertiary care hospital of Mumbai reported 37.3%<sup>9</sup>. Similarly, Saini NK et al. found overall prevalence rate of stress among resident doctors was 32.8% in a tertiary care institute in Delhi<sup>10</sup>.

In our study, main stress factors were less resources (equipments, drugs, etc) (41.1 %), less man power (39.7%), poor work atmosphere (39%), excessive administrative work (31.5 %), less work compensation (24.7%), heavy traffic (24.7%), less work satisfaction (23.3%) etc. Other stress factors like excessive patient load, conflict with colleague, long working hours, personal health issues, family issues were also selected by participants. A study conducted by Menon A et al. in Zambia, Africa found that the workload, the low level of reward and the long working hours were most frequently identified causes of stressors among doctors<sup>11</sup>.

Majority of participants (61%) listen to music to relieve their stress, similar result was also found in study conducted by Sindhu et al<sup>2</sup>. While other stress relieving factors in our study were sleeping, spending time with family and friends, surfing on social media, books, games, yoga, exercise, walking etc. In a study conducted by Prasad et al. Stress evaluation before and after 6 weeks of yoga and meditation program were done, it showed improvement in the inner content, happiness, confidence levels, patience and reduced fatigue in the participants<sup>12</sup>.

Families of 51.4% participants also felt that the participating doctors were suffering from stress while majority of participants 67.8% felt that they were not giving enough time to their family members. Majority of doctors felt that stress affects their family life also and spending more time with family is recommended. In our study most of the participants had good sleep and they didn't have to take any medications to help their sleep. Among participants 7.5% participants consumed alcohol, 3.4% consumed tobacco/ gutaka and 2.7% participants smoked bidi/ cigarette. Similar results were found in the study conducted by Sathiya et al<sup>8</sup>. In last one year, 7.5% participants were diagnosed with hypertension.

### **Conclusion**

Majority of doctors had moderate level of stress in our study. They felt dull, tired and irritable after coming from work. Proper psychological counselling and involvement of stress relieving activities like yoga and meditation will help the doctors to relieve their stress is highly recommended.

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