

Impact of Stress on Health Care Professionals, a study conducted in a tertiary care teaching hospital, Hyderabad.

Dr. B. Nikhila¹ Dr. M. Rajiv² Dr. K.V. Krishna Reddy³
Dr. R. Mahendra⁴ Dr. N. Satyanarayana⁵

1,2,4 –Junior residents, 3- Associate professor, 5- Professor & HOD Department of Hospital Administration, Nizam's Institute of Medical Sciences.

Abstract

Stress is any action that places special physical or psychological demands upon a person, anything that can unbalance his individual equilibrium. Work-related stress is a potential cause of concern in health care workers and is associated with decreased job satisfaction, days off work, anxiety, depression, sleeplessness, medical errors, and near misses. To compare stress levels in different groups of health care worker and identify causes of stress, we conducted a survey-based study at a super-specialty public sector hospital. The study was done using questionnaire-based tool which were given to 800 out of whom 438 responded. Respondents included doctors, engineers, health care administrators, students pursuing degrees in hospital administration, and other professionals. The questionnaire consists of indicators like behavioural indicators, sleep indicators, emotional indicators, physical indicators etc to measure the levels of stress. Each indicator consists of multiple questions which are rated from 5 to 1. The total score is used to grade stress levels as mild, moderate and severe.

Keywords: Stress, Medical practitioners, Stress management, Health status, Work stress.

Date of Submission: 01-03-2021

Date of Acceptance: 14-03-2021

I. Introduction

Stress results from a mismatch between the demands and pressure on the person, on the other hand, and their knowledge and abilities, on the other. It is the body's reaction to harmful situations- whether they are real or perceived. A chemical reaction occurs in the body that allows to act in a way to prevent injury. This reaction is known as "fight-or-flight", or the stress response. During stress response, heart rate increases, breathing quickens, muscles tighten, and blood pressure rises. Our bodies are designed to handle small doses of stress. But, we are not equipped to handle long term, chronic stress without ill consequences. It challenges their ability to cope with work. Most of work stress concerns the way work is designed and the way in which organizations are managed. Because these aspects of work have the potential for causing harm, they are called "stress related hazards". When affected by stress people may become increasingly distressed and irritable, have difficulty in making decisions, enjoy work less and feel less committed to it, have difficulty in sleeping, feel tired depressed and anxious. Emotional symptoms include becoming easily agitated, frustrated or feeling overwhelmed, like losing self-control and feeling bad about oneself which can lead to anxiety disorders, addictions, depression, eating disorders, and suicide. Physical symptoms include headache, insomnia, chest pain and stomach upset. Cognitive symptoms include constant worrying, racing thoughts, forgetfulness and disorganization. Behavioural symptoms include changes in appetite, increased use of alcohol, drugs or cigarettes. A healthy work environment is one in which there is not only an absence of harmful conditions but an abundance of health promoting ones.

II. Aims And Objectives

Aim

The aim of the study is to assess the stress levels among health care professionals and finding its correlation with work, health status, and allied factors.

Objectives

- To assess the stress level among various work groups of health care professionals
- To explore the relation between work stress and health
- To compare the stress levels among men and women
- To explore the relation between work stress and years of work experience
- To explore marital status influence on stress condition
- To identify the age groups which are most susceptible to work stress

III. Materials And Methods

Study Setting

We conducted an anonymous survey of doctors working in various departments and in hospital administration over 7 weeks using the validated questionnaire. The study was conducted on 800 participants who included health care professionals.

Study Design

The study was a questionnaire-based analytical study incorporating indicators like behavioural indicators, sleep indicators, emotional indicators, physical indicators etc to measure the levels of stress. Each indicator consists of multiple questions which are rated from 5 to 1. The total score is used to grade stress levels as mild, moderate and severe.

The responses were statistically analysed by Statistical Package for the Social Sciences which was used for data analysis. Descriptive statistical measures were used for quantitative variables.

Study Questionnaire

The study was done using questionnaire-based tool which were given to 800 participants. The questionnaire was obtained from stress management magazine prepared by THE COUNSELLING TEAM INTERNATIONAL; San Bernardino. The questionnaire shows how stress affects different parts of your life. Circle the responses which best indicates how often you experience each stress indicator during a typical week. When all questions were answered adding the points totals for each section. The questionnaire is prevalidated; hence no ethical approval is needed.

- 5- Almost always (on five days a week)
- 4-most of the time (on three days a week)
- 3-some of the time (on one and half days a week)
- 2-almost never (less than 2hours a week)
- 1-never

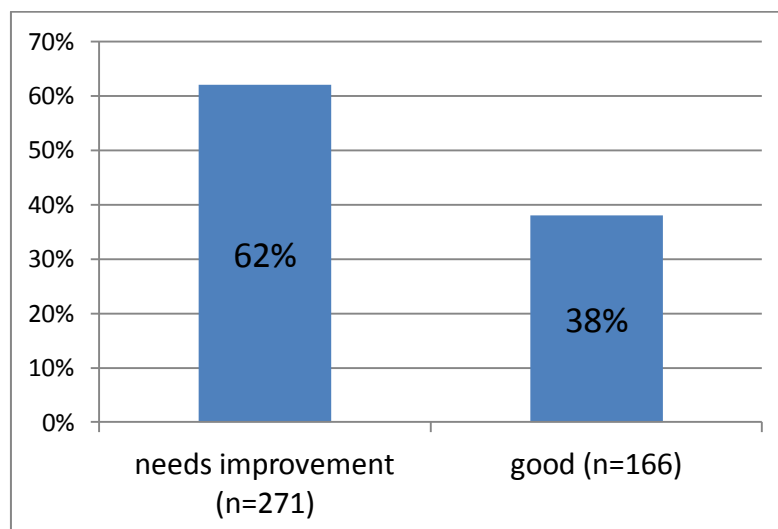
Response Rate

The questionnaire was distributed to 800 participants out of whom 438 responded. Respondents included doctors, engineers, health care administrators, students pursuing degrees in hospital administration, and other professionals. The satisfactory response rate probably reflects both the suitability of the study design and the health care professional's interest in the topic.

IV. Observation And Discussion

Work-related Stress

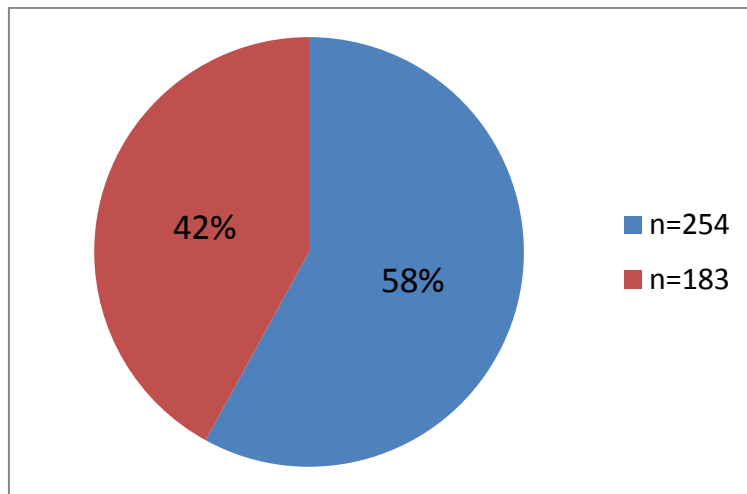
Of the study population, 62% (271) have moderate stress which needs better stress management; 38% of the study population (166) have safe levels of stress and they manage stress levels very well (Graph 1).



Graph 1: work stress

Health Status

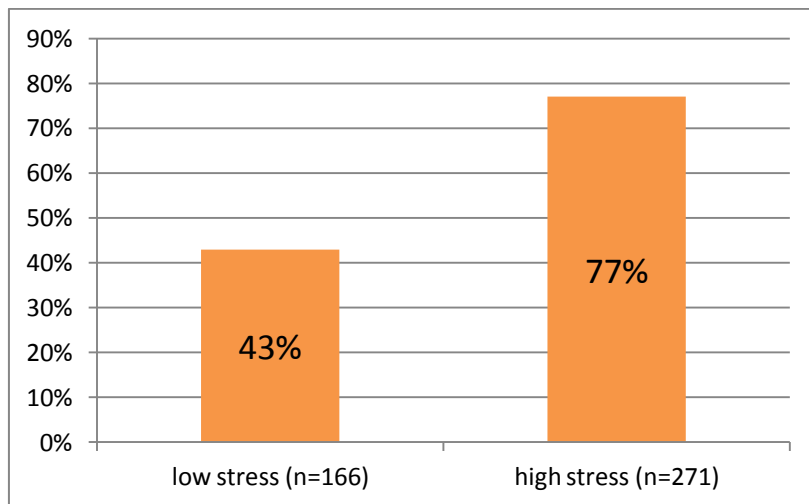
Of the study population, 58% (254) showed a stress associated symptom; 42% of the study population (183) showed good health status (Graph 2).



Graph 2: health status

Impact of Stress on Health

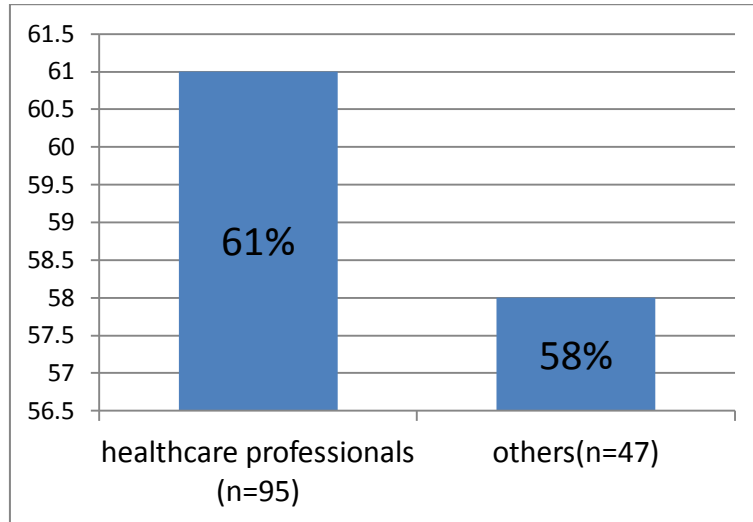
Out of the population that managed work stress well (166), only 43% showed symptoms, whereas out of the population that did not show good stress management (271), 77% showed symptoms. Thus, it proves that better stress management decreases the chance of having health symptoms related to stress. This result is statistically significant and the difference between two population is $77\% - 43\% = 34\%$ (Graph 3).



Graph 3: impact of stress on health

Job Profile and Stress

From the total population (n = 438), to find the correlation of stress in health care professionals vs. other professionals, student/nonworking category of sample size was excluded. The working professionals of all categories had a sample size of 142; 95 out of 142 were health care professionals and 61% of these health care professionals showed stress; 47 out of 142 were nonhealth care professionals and 58% of these nonhealthcare professionals showed stress. This shows that stress level in health care professionals was marginally higher (3%) than in nonhealthcare professionals. This result was statistically not significant (Graph 4).



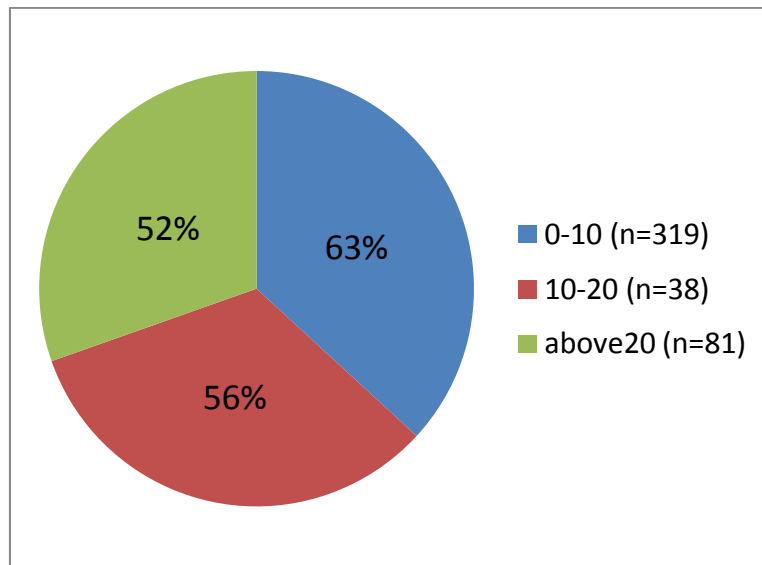
Graph 4: job profile and stress

Work Experience and Stress

The sample population was divided into three groups:

1. People having 0 to 10 years of work experience—stress in 63% of population.
2. People having 10 to 20 years of work experience—stress in 56% of population.
3. People having more than 20 years of work experience—stress in 52% of population

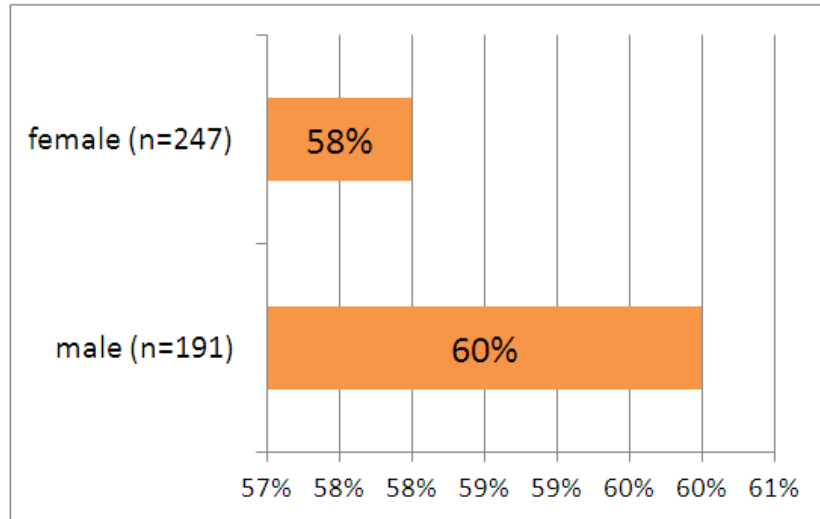
It is observed that as number of years of experience increase, stress management skills improve and the person copes with stress in a better way. This may not mean that stress reduces with the number of years of work, but only shows that a person handles stress in a more matured way (Graph 5).



Graph 5: work experience and stress

Gender and Stress Management

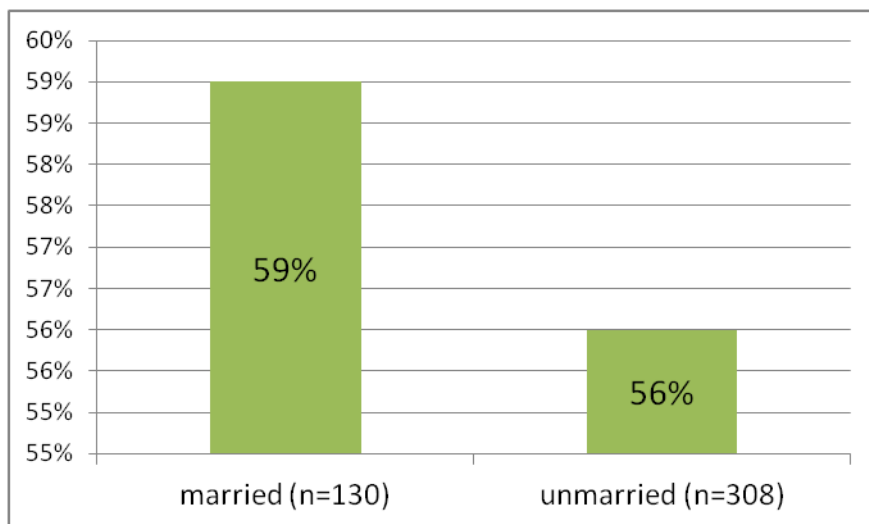
Males (n = 191), 60% of the population had stress. Females (n = 247), 58% of the population had stress (Graph 6). Gentlemen have marginally more stress (2%) than ladies!!!



Graph 6: gender and stress management

Marital Status and Stress

Married (n = 130), 59% of the population had stress. Unmarried (n = 308), 56% of the population had stress. Married people have marginally higher stress (3%) than unmarried people (Graph 7)

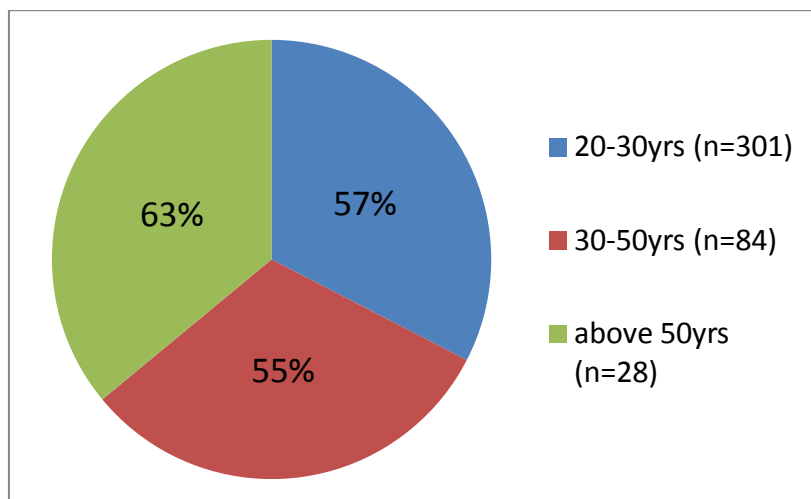


Graph 7: marital status and stress

Age and Stress

The population was classified into three groups:

1. People aged 20 to 30 years [n = 301]—57% of this population showed stress.
2. People aged 30 to 50 years (n = 84)—55% of this population showed stress.
3. People aged 50 years and above (n = 28)—63% of this population showed stress (Graph 8).



Graph 8: age and stress

V. Conclusion

From the study, it is apparent that correlation exists between work stress and poor health. The questionnaire consists of indicators like behavioural indicators, sleep indicators, emotional indicators, physical indicators etc to measure the levels of stress. Each indicator consists of multiple questions which are rated from 5 to 1. The total score is used to grade stress levels as mild, moderate and severe.

Poor health in turn, reduces human efficiency due to lack of alertness, focus, absenteeism, and other similar problems. There was no significant difference in stress levels between different grades of doctors and administrative staff. All workers in health care profession are equally stressed. Stress can be effectively managed by applying a risk management approach as is successfully done with other major health and safety problems.

Effective stress-free environment is possible in any organization when both employees and employers cooperate and develop mutual understanding for each other's needs. Thus, it is essential for each of them to do their bit, to promote a wholesome atmosphere of peace, joy, and good health.

Work stress questionnaire ID No.....

Personal information

1	Name(optional)			
2	Age			
3	Sex	Male	Female	
4	Marital status	Married	Single	
5	Education	Nongraduate	Postgraduate	
		Graduate	Higher Education	
6	Job profile	Student	Doctor	Entrepreneur
		Hospital administrator	Other Professionals	Hospital architect
7	Work experience	0-10 yrs.	10-20 yrs.	above 20 yrs.

The questionnaire shows how stress affects different parts of your life. When all questions were answered adding the points totals for each section.

- 5- Almost always (on five days a week)
- 4-most of the time (on three days a week)
- 3-some of the time (on one and half days a week)
- 2-almost never (less than 2hours a week)
- 1-never

PHYSICAL INDICATORS: how often would you say:

Indicators	Almost always	Most of the time	Some of the time	Almost never	never
I have severe lower back pain	5	4	3	2	1
I get severe or chronic headaches	5	4	3	2	1
My stomach quivers or feels upset	5	4	3	2	1
I get skin rashes or itching	5	4	3	2	1
My body feels tense all over	5	4	3	2	1
I don't really plan my meals for balanced nutrition	5	4	3	2	1
I lack physical energy	5	4	3	2	1
I smoke tobacco	5	4	3	2	1
I get sharp chest pain	5	4	3	2	1
I have problems with y bowels	5	4	3	2	1
I need to urinate more than most people	5	4	3	2	1
My ulcer bothers me	5	4	3	2	1
I feel short of breath after 4 flights of stairs	5	4	3	2	1
I have very small or large appetite	5	4	3	2	1
Because of my busy schedule is miss 2 meals during the week	5	4	3	2	1
I have a nervous sweat or sweaty palm	5	4	3	2	1

Physical indicators point total.....

SLEEP INDICATORS: how often would you say:

I take pills to get sleep	5	4	3	2	1
I have bad dreams	5	4	3	2	1
I wake up at least once in the middle of the night	5	4	3	2	1
I have trouble falling asleep	5	4	3	2	1
I awake feeling tired	5	4	3	2	1

Sleep indicators point total.....

BEHAVIORAL INDICATORS: How often would you say:

I drink alcohol or use drugs to relax	5	4	3	2	1
I have to work late	5	4	3	2	1
I go to work even when I feel sick	5	4	3	2	1
I try to work while am eating lunch	5	4	3	2	1
I have to bring work home	5	4	3	2	1
I shutter or get tongue tied when I talk to other people	5	4	3	2	1
When I drink I like to get really drunk	5	4	3	2	1
I arrive at work late	5	4	3	2	1
At least once a week I have shouting match with co-worker	5	4	3	2	1
I have problems with my sex life	5	4	3	2	1
I make bets for money	5	4	3	2	1
After dinner I spend more time alone	5	4	3	2	1
I take at least one prescription drug without recommendation	5	4	3	2	1
I tend to stumble when walking	5	4	3	2	1
when am feeling high on alcohol I will drive a motor vehicle	5	4	3	2	1

Behavioural indicators point total.....

PERSONAL HABITS: How often would you say:

I spend less than 3 hrs a week working on a hobby of mine	5	4	3	2	1
I lack time to read daily newspaper	5	4	3	2	1
When I feel stressed it is difficult for me to plan time and activities to constructively release my stress	5	4	3	2	1
I spend less than 30min a day working toward a life goal	5	4	3	2	1
I drive in a motor vehicle faster than the speed limit	5	4	3	2	1
I spend less than 1hr a eek writing personal letters	5	4	3	2	1
I watch TV for more than 1hr a day	5	4	3	2	1
My day-to-day living is not really affected by my religious beliefs or my philosophy of life	5	4	3	2	1

Personal habits point total.....

EMOTIONAL INDICATORS: how often would you say:

I found the best way to deal with hassles and problems to consciously avoid thinking or talking about them	5	4	3	2	1
I have trouble remembering things	5	4	3	2	1
I worry a lot	5	4	3	2	1
I feel anxious or frightened about problems I can't really describe	5	4	3	2	1
It is hard for me to relax at home	5	4	3	2	1
It is important for me not to show my emotions to my family	5	4	3	2	1
It's best if I don't tell my closest friend how I am really feeling	5	4	3	2	1
I feel very angry inside	5	4	3	2	1
I feel extremely sensitive and irritable	5	4	3	2	1
I have temper outbursts I can't control	5	4	3	2	1
I find it hard to talk when I get excited	5	4	3	2	1
I have felt so bad that I thought of hurting myself	5	4	3	2	1
Impulsive behaviour has caused me problems	5	4	3	2	1
I feel very tired and disinterested in life	5	4	3	2	1
Generally I'm not optimistic about my future	5	4	3	2	1
I feel like I can't trust anyone	5	4	3	2	1
I feel like other people don't understand me	5	4	3	2	1
I really don't feel good about myself	5	4	3	2	1
My emotions change unpredictably and without any apparent reason	5	4	3	2	1

Emotional indicator point total.....

This questionnaire helps to determine what areas of your life stress affects the most by adding the circled numbers in each section and ark the point total for each section on the appropriate dotted line below.

STRESS LEVELS

Points total	Very low	medium	high	very high	danger
Physical indicators	22.....	30.....	38.....	48.....	54+
Sleep indicators	5.....	8.....	10.....	12.....	14+
Behaviour indicators	18.....	27.....	36.....	45.....	50+
Personal habits	9.....	15.....	20.....	25.....	30+
Emotional indicators	21.....	29.....	37.....	46.....	55+

Note that the areas showing “very high” or danger levels of stress are problem areas one should focus on when you develop your personal stress management plan.

On the lines below, write the 3 signs which occur earliest and most regularly when you are under stress. These signs allow you to identify that causes you stress and to take action before serious problem result.

1. _____
2. _____
3. _____

Date questionnaire completed _____

References

- [1]. Fugel li P. The burned-out physician. Nord Med 1987;102(12):360-362.
- [2]. Wong JG. Doctors and stress. Med Bull 2008 Jun;13(6):4-7.
- [3]. Gabbard, G.; Menninger, R. The psychology of the physician. In: Gabbard G, Menninger R, editors. Medical marriage. Washington (DC): APA Press; 1988. pp. 11-22.

- [4]. Notman, M. Physician temperament, psychology, and stress. In: Goldman LS, Myers M, Dickstein L, editors. The handbook of physician health. Chicago (IL): AMA Press; 2000. pp. 39-51.
- [5]. Gautam, M. Depression and anxiety. In: Goldman LS, Myers M, Dickstein L, editors. The handbook of physician health. Chicago (IL): AMA Press; 2000. pp. 80-94.
- [6]. Maslach, C.; Leither, MP. The truth about burnout. San Francisco (CA): Jossey-Bass Publishers; 1997. pp. 13-15.
- [7]. Myers, M. Depression and anxiety. In: Goldman LS, Dickstein L, editors. The handbook of physician health. Chicago (IL): AMA Press; 2000. pp. 80-94.
- [8]. Cromie, WJ. Suicide high among female doctors. Cambridge (MA): The Harvard Gazette; 2005.
- [9]. Pearson, C. New study shows high rate of stress among doctors. Washington (DC): VOA News; 2009. [cited 2009 Sep 26]. Available from: <http://www.voanews.com/english/2009-09-26-voa3.cfm>.
- [10]. Dasgupta H, Kumar S. Role stress among doctors working in a government hospital in Shimla (India). Eur J Soc Sci 2009 Sep;9(3):356-370.
- [11]. Adshear G. Healing ourselves: ethical issues in the care of sick doctors. Adv Psychiatr Treat 2005 Sep;11(5):330-337.
- [12]. Chambers R, Belcher J. Self-reported health care over the past 10 years: a survey of general practitioners. Br J Gen Pract 1992 Apr;42(357):153-156.
- [13]. Forsythe M, Calnan M, Wall B. Doctors as patients: postal survey examining consultants and general practitioners adherence to guidelines. BMJ 1999 Sep;319(7210):605-608.
- [14]. Sehlen S, Vordermark D, Schäfer C, Herschbach P, Bayerl A, Pigorsch S, Rittweger J, Dormin C, Bölling T, Wypior HJ, et al. Job stress and job satisfaction of physicians, radiographers, nurses and physicists working in radiotherapy: a multicenter analysis by the DEGRO Quality of Life Work Group. Radiat Oncol 2009 Feb;4:6-14.

Dr. B. Nikhila¹, et. al. "Impact of Stress on Health Care Professionals, a study conducted in a tertiary care teaching hospital, Hyderabad." *IOSR Journal of Business and Management (IOSR-JBM)*, 23(03), 2021, pp. 16-24.