



## Occupational Stress among Medical Professionals

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### Abstract

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#### Keywords:

Age, Medical professionals, Occupational stress, Sex.

This study is an attempt to find out the occupational stress among medical professionals. A total number of 600 medical professionals (doctors and nurses) were selected for the study, among them 300 were doctors and 300 were nurses from various hospitals in Bangalore City, India. Occupational stress index (OSI) and Socio Demographic Data Sheet were used for collecting the data. Results revealed that doctors and nurses did not differ significantly on occupational stress. The study also revealed that no main or interaction effect of professional group and sex on occupational stress. Similarly age and professional group has showed no significant main and interaction effect on occupational stress.

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The main purpose of the present study was to assess the occupational stress in a sample of medical professionals (doctors and nurses) from various hospitals and health centres in Bangalore city. Health professionals are highly skilful professionals and usually require broad knowledge. These health professionals consist of physicians, physician assistants, dentists, midwives, radiographers, physiotherapists, registered nurses, optometrists, operating department practitioners, pharmacists and others. Allied health professionals also referred to as 'health associate professionals' in the International Standard Classification of Occupations (ISCO), support carrying out of health care, treatment and referral plans usually established by medical, nursing, and other health professionals (WHO, 2010).

Medical professionals regularly work in hospitals, healthcare centers, and other service delivery points, but also in educational training, research, and administration. Some provide care and treatment services for patients in private homes. Many numbers of countries have a large number of community health workers who work outside, like formal healthcare institutions, managers of medical services, health information technicians and other assistive staff and support workers are also considered a vital part of health care teams (WHO, 2006).

Lazarus and Folkman (1984) defined "stress as the result of a particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being".

Stressor is an event, objects, experience or environmental factors that cause stress in people (Collins English Dictionary, 2012). Researchers have found that stressors can make individuals more or less prone to both physical and psychological problems including heart disease and anxiety (Pastorino, 2012). Stressors are more likely to affect an individual's health when they are chronic, highly disruptive or perceived as uncontrollable themselves (Pastorino, 2012).

Occupational stress is defined generally as stress related to one's job. Occupational stress has related to unexpected responsibilities and pressures relevant to job that do not align with a person's knowledge, skills or expectations, and inhibiting one's ability to cope with. According to Beehr and Newman (1978) occupational stress is a condition wherein job related factors interacts with the worker to change or disrupt his/her psychological conditions such that the person is forced to deviate them from their normal functioning.



Cox (1993) identified two prominent sources of stress arising from an individuals' role within an organization; role ambiguity and role conflict. Burke (1988) takes the view that research on role conflict and ambiguity is extremely homogenous and do not divide the two constructs in describing the variables which correlate with them. Role conflict and ambiguity are correlated positively with tension, fatigue, and absenteeism, leaving the job, psychological and physiological general strain. Role conflict and ambiguity are correlated positively with tension. Role conflict and ambiguity are correlated negatively with job satisfaction, performance, physical withdrawal, supervisory satisfaction, decision making, organizational commitment, job involvement, tolerance for conflict and group cohesion reported influence.

Srivastava and Singh (1981) identified twelve factors which cause occupational stress, such as: role overload, role ambiguity, role conflict, group pressure, low profitability, under participation, low status, intrinsic impoverishment, responsibility, strenuous working conditions, poor peer relations and powerlessness.

Occupational stress and burnout are highly prevalent among doctors and nurses. Some studies suggested that workplace stress is invasive in the health care centers because of inadequate staff, long working hours, exposure to infectious diseases and hazardous substances lead to illness or death and threat of malpractice litigation. Other stressors include the emotional labor of caring for ill people and high patient loads. The consequences of this stress can include abuse of drugs, suicide, major depressive disorder and anxiety, all of which occur at higher rates in health professionals than the general working population. High levels of stress are also linked to high rates of burnout, diagnostic error, absenteeism and reduced rates of patient satisfaction (Ruotsalainen, 2014).

Simpson and Grant (1991) examined the Sources and Magnitude of Job Stress among Physicians. Data were collected through Interview from 57 women, 147 men young physicians. Patient relationships scale, financial issues scale, time pressures scale and competence concerns scales were administrated. Findings showed that physicians' have more job related stress than many other types of works. Sources and intensity of job stressors do not vary significantly by gender. Medical practice problems are more stressful in non profit than for practices. Early career doctors appeared to experience only moderate levels of stress and stressors were not related to impaired mental health.

Rout (1999) conducted a study on Job stress among general practitioners and nurse at primary care in England. Data was collected from 205 general practitioners and 119 practice nurses. The result of the study shows that Male general practitioners had significantly higher scores on anxiety and depression than normative population. On the other hand Practice nurses reported lower scores on anxiety and depression.

Omar (2003) in their study entitled Sources of Work-Stress among Hospital-Staff at the Saudi. Sample rate consists of 414 Doctors, nurses, technicians, administrators and therapists. Result of the study shows that the level of work-stress among the hospital staff seems to be high. This was due to insufficient technical facilities, absence of appreciation, long working hours and short breaks. Other findings also shows the older the employee and the more experience he/she has the less work-stress is experienced.

### **Objectives**

1. To study the occupational stress among doctors and nurses.
2. To study the influence of gender and age on occupational stress.

### **Hypotheses**

1. Doctors and nurses differ significantly on occupational stress.
2. Sex and age will influence on occupational stress of medical professionals.

## Method

### Participants

Based on random sampling technique, the overall sample for this study covered 600 medical professionals working different hospitals of Bangalore city, India. Out of them, 300 doctors and 300 nurses were included in this study. Among the total doctor participants, 150 participants were male and 150 participants were female. Among nurses 150 participants were male and 150 participants were female. With regard to age, among doctors, 141 participant's age up to 30 and 159 participants' age above 30. Among nurses 200 participants were up to 30 age and 100 participants were above 30 age.

### Instruments

1. Occupational Stress Index (OSI): Occupational stress index by Srivastava and Singh (1981) was used to collect occupational stress of the participants. This index consist of 46 items. Out of 46 items, 28 items were 'true keyed' and rests 18 were 'false keyed'. True keyed items ranged from 1-5 point scale ranging on a continuum of strongly agree, agree, uncertain, disagree and strongly disagree. For false keyed items the scoring procedure will be reversed with a range from 5-1 score respectively. The reliability of the occupational stress index determined by the computation of alpha co-efficient that was 0.90. The internal consistency of the test was 0.93 determined by the odd even method. Index of homogeneity and internal validity of individual items was determined by computing point bursarial co-efficient of correlation. The value of co-efficient of co relation is ranged from 036 to 0.59.
2. Socio Demographic Data Sheet: This instrument was used to collect demographic characteristics of participants which includes sex and age.

### Procedure

The participants of the study were met at their respective work place and discussed the aim and objectives of the study. After getting their oral consent, the research instruments viz occupational stress along with socio demographic data sheet were distributed among them. After responding the instruments, the research instruments were collected back and scored according to the scoring key. Then the data were fed into a spreadsheet for further statistical analysis. Data were analyzed using descriptive statistics, independent t test and two way ANOVA.

### Results

To achieve the objectives and to verify the hypothesis formulated, the investigator has applied statistical techniques like 't' test, ANOVA. The first hypothesis was 'Doctors and nurses differ significantly on occupational stress'. Here the investigator has compared the mean scores of doctors and nurses on occupational were compared using 't' test and the results are presented in table 1.

Table1

*Mean, SD, and t value of occupational stress by group*

Variable	Group	N	Mean	SD	't' value
Occupational stress	Doctors	300	140.00	48.38	0.245
	Nurses	300	139.30	11.33	

Group and occupational stress: When doctors and nurses respondents were compared for mean scores on occupational stress, Independent samples t test revealed that doctors and nurses did not differ significantly on occupational stress.

To find out whether there exist main and interaction effect of group and sex on occupational of medical professional two-way ANOVA was calculated and the results are presented in table 2.

Table 2

Mean, Sd and F value of occupational stress by group and sex (2x2)

Group	Gender	N	Mean	SD
Doctors	Male	150	136.88	15.47
	Female	150	143.12	66.62
	Total	300	140.00	48.38
Nurses	Male	150	140.43	11.16
	Female	150	138.16	11.43
	Total	300	139.30	11.33
Total	Male	300	138.65	13.58
	Female	300	140.64	47.78
	Total	600	139.65	35.11
F ( Group) <sup>1,596</sup>			F=0.060; p=0.806	
F (gender) <sup>1,596</sup>			F=0.482; p=0.488	
F (interaction) <sup>1,596</sup>			F=2.204; p=0.138	

Group, sex and occupational stress: When male and female respondents were compared for mean scores on occupational stress, descriptive statistics revealed that Gender wise a non significant difference was observed between male and female respondents in their overall occupational stress (F=0.482; p=0.488). Interaction effect between group and gender also shown to be non significant on overall occupational stress (F=2.204; p= .138).

Table 3

Mean, Sd and F value of occupational stress by group and Age (2x2)

Group	Age (years)	N	Mean	SD
Doctors	Up to 30	141	136.758	14.357
	Above30	159	142.880	65.0373
	Total	300	140.003	48.384
Nurses	Up to 30	200	139.190	9.406
	Above30	100	139.520	14.500
	Total	300	139.300	11.336
Total	Up to 30	341	138.184	11.751
	Above30	259	141.583	51.708
	Total	600	139.651	35.111
F ( Group) <sup>1,596</sup>			F=0.025; p=0.875	
F (age) <sup>1,596</sup>			F=1.188; p=0.276	
F (interaction) <sup>1,596</sup>			F=0.958; p=0.328	

Group, age and occupational stress: When age group up to 30 years and above 30 years respondents were compared for mean scores on occupational stress, descriptive statistics revealed that age wise a non significant difference was observed between age group up to 30 years and above 30 years respondents in their overall occupational stress (F=1.188; p=0.276). Interaction effect on group and age also shown to be not differ significantly on overall occupational stress (F=0.958; p= .328).



## Discussion

The main objective of the current research is to study the occupational stress among doctors and nurses. The hypothesis states that: 'doctors and nurses differ significantly on occupational stress'. A statistical method of independent t test has been applied to test the hypothesis. Outcome of the study revealed that doctors and nurses did not differ significantly in their occupational stress score. Therefore hypothesis is not accepted. A study supported by Wang et al., (2011) reported that Occupational stress played an important role in job burnout and quality of life among female nurses and doctors

The second objective of the current research is to study the influence of gender and age on occupational stress. Hypothesis of the study states that: 'Gender and age will influence on occupational stress among doctors and nurses'. Statistical methods of two way ANOVA has been applied to test the hypothesis. The result of the study revealed that, when male and female respondents were compared for occupational stress, result revealed that gender wise a non significant difference was observed between male and female respondents in their overall occupational stress. Interaction effect on group and age not differ significantly on occupational stress. Gender wise Hypothesis is not accepted, as the result obtained by the present research showed that gender was not influenced on occupational stress (table 2). Study by Simpson and Grant (1991) reported that Sources and intensity of job stressors do not vary significantly by gender. Another study by Kirkcaldy & Martin (2000) reported that Gender differences on occupational stress or the health outcome variables were not observed in this study.

When comparing with age, result showed non-significant difference in their occupational stress score. Interaction effect on group and age also showed non-significant difference on self efficacy. Therefore the hypothesis is not accepted (table 3). Study by Gulavani and Mahadeo (2014) reported that there was no significant association found between occupational stress, job satisfaction and age, sex, professional education, year of experience.

## Conclusion

In the present study result revealed doctors and nurses did not differ significantly on occupational stress. Gender wise a non significant difference was observed in their occupational stress and interaction effect of group and gender shows non-significant difference among medical professionals. Age related result revealed non-significant difference among medical professionals on occupational stress. Interaction effect of group and age also showed to be non-significant among medical professionals. The Finding of the study may be utilized for setting of specific designed training programs for medical professionals, and also educational institutions should begin to develop programmes related stress management for doctors and nurses in earlier age.

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**Conflict of Interests**

The author declared no conflict of interests.