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Gender Disparities in Workplace Stress Levels Among Physicians and Nurses

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Abstract

Work stress is increasingly recognized as a critical health concern that negatively impacts employee satisfaction and productivity, leading to elevated absenteeism and turnover rates. Studies suggest that women may face higher levels of work-related stress than men, although some research has not identified significant differences. The experiences of stress in the workplace differ between doctors and nurses, given the higher levels of interpersonal interaction in these roles. This cross-sectional observational study involved 200 doctors and 200 nurses, ensuring balanced gender representation. Demographic information was collected through a semi-structured proforma, and workplace stress was assessed using the Workplace Stress Scale. The results indicated that 66.2% of participants viewed their work environment as stressful, with a mean score of 19.01 on the Workplace Stress Scale. A notably higher proportion of females (72.5%) reported experiencing stress at work compared to males (60.5%, $p<0.05$). Among the nursing staff, female nurses reported the highest stress levels (76%, mean score of 21.3), followed by female doctors (69%, mean score of 19.4), while male nurses (61%, mean score of 18.1) and male doctors (60%, mean score of 17.2) reported lower levels. These findings suggest that women perceive their work environments as significantly more stressful than their male counterparts. It is crucial to focus on enhancing working conditions for doctors and nurses, especially for female employees, as this can lead to improved outcomes for patients and the wider community.

Keywords: Doctors, Gender Disparities, Nursing Staff, Work Stress.

Introduction

The concept of 'stress' was introduced by Hans Selye in 1936. Workplace stress refers to the detrimental physical and emotional reactions that arise when there is a mismatch between job demands and the worker's abilities, resources, or needs. This type of stress is linked to various biological responses that can ultimately jeopardize health, leading to conditions such as cardiovascular disease and psychosomatic disorders. Job stress emerges from the interplay between the employee and their work environment. Individual differences, including personality traits, gender, socioeconomic status, social background, and coping mechanisms, play a crucial role in determining whether specific job conditions will induce stress. Increasingly, work-related stress is acknowledged as one of the most significant occupational health risks, negatively impacting employee satisfaction and productivity while contributing to higher rates of absenteeism and turnover. Workplace stress is a pressing issue, and it has been proposed that gender may be a significant demographic factor influencing stress experiences. While some studies suggest no differences in workplace stress levels between men and women, others indicate variations in both the sources of stress and its intensity across genders. Women experience higher levels of workplace stress compared to men due to specific stressors such as discrimination, stereotyping, the intersection of marriage and work, and social factors. Research indicates that male doctors report greater stress than their female counterparts, particularly concerning inter-role distance and feelings of role inadequacy. Additionally, a study involving 50 emergency doctors across two hospitals in northern Davangere found a correlation between role ambiguity, role conflict, and

work-related stress. For physicians, significant challenges in the workplace include inadequate working conditions, insufficient facilities, staffing shortages, and lack of resources and equipment. Nurses, on the other hand, face a broader range of stressors stemming from the physical, psychological, and social dimensions of their work environment. Elevated stress levels can lead to staff burnout and turnover, ultimately compromising the quality of patient care.

Materials and Methods

This study is a cross-sectional observational research conducted at a medical college associated with a general hospital, with approval obtained from the hospital's Superintendent. A total of 400 participants were surveyed, comprising 100 female and 100 male doctors (M.D. or M.S.) as well as 100 female and 100 male nursing staff, all selected randomly after obtaining informed consent. Participants were interviewed in groups and asked to complete self-rated questionnaires during these sessions. Data collection spanned four months, followed by one month dedicated to data entry and analysis. Demographic information was gathered using a specifically designed semi-structured proforma, while the level of workplace stress was evaluated using the workplace stress scale. The hospitals covered at northern area of Davangere was ESI Hospital and SS High-tech Hospital.

Results and Discussion

Table 1 illustrates that the distribution of age and years of experience is quite comparable across both genders and job categories. In summary, 42% of individuals have less than 10 years of work experience, 41% possess between 10 and 25 years, while only 16% have more than 25 years of experience.

Table 1: Demographic Variables of the Respondents

Demographic Variable	**Number of Sub-variables**	**Nursing staffs**		**Doctors**		**Total**
		Male	**Female**	**Male**	**Female**	
		100	**100**	**100**	**100**	**400**
Age	<35 Yrs	43	40	43	39	165
	35-50	44	40	41	44	169
	>50	13	20	16	17	66
Marital Status	Married	89	80	86	85	340
	Single	11	20	14	15	60
Years of experience	<10	40	40	44	46	170
	10-25	45	39	40	39	163
	>25	15	21	16	15	67
Family	Nuclear	42	37	37	56	172
	Joint	58	63	63	44	228

Source: Researcher's Compilation

Table 2 indicates that the mean score for the workplace stress scale is significantly higher in females (20.3) than in males (17.7; $P<0.001$). When examining job categories, nursing staff exhibit a statistically significant higher mean score on the workplace stress scale (19.71) compared to doctors (18.3; $P<0.05$). A total of 72.5% of females reported low to profound levels of stress on the workplace stress scale, whereas only 60.5% of males fell into the same category ($P<0.05$). Items B, C, D, E, G, and H on the workplace stress scale received significantly higher scores from females compared to males ($P<0.05$). Additionally, within job categories, nursing staff scored higher on items B, C, D, and G of the workplace stress scale than doctors ($P<0.05$).

Table 2: The comparative results of workplace assessments for nurses versus doctors and for males versus females

Scale items	Score	Nursing (N-200)	Doctors (N-200)	Comparison Results	Male (N-200)	Female (N-200)	Comparison Results
A. Conditions at work are unpleasant or sometimes even unsafe	1	7	8	χ^2=3.004 df=4 P=0.5572	8	7	χ^2=6.936 df=4 P=0.1393
	2	14	17		19	12	
	3	41	48		50	39	
	4	74	78		77	75	
	5	64	49		46	67	
B. I feel that my job is negatively affecting my physical/ emotional well being.	1	68	92	χ^2=12.54 df=4 P=0.01376*	96	64	χ^2=24.34 df=4 P=0.000068*
	2	70	68		70	68	
	3	31	25		25	31	
	4	19	13		7	25	
	5	12	2		2	12	
C. I have too much work to do and/or too many unreasonable deadlines	1	31	37	χ^2=15.23 df=4 P=0.004245*	36	32	χ^2=27.81 df=4 P=0.00001361*
	2	76	96		100	72	
	3	52	51		52	51	
	4	23	12		11	24	
	5	18	4		1	21	
D. I find it difficult to express my opinions or feelings about my job conditions to my superiors.	1	57	61	χ^2=9.915 df=4 P=0.04188*	60	58	χ^2=19.76 df=4 P=0.0005576*
	2	67	69		75	61	
	3	35	48		49	34	
	4	20	15		10	25	
	5	21	7		6	22	
E. I feel that job pressures interfere with my family or personal life	1	82	94	χ^2=6.099 df=4 P=0.191895	105	71	χ^2=12.78 df=4 P=0.01240*
	2	50	54		46	58	
	3	50	31		32	49	
	4	15	19		14	20	
	5	3	2		3	2	
F. I have adequate control or input over my work duties.	1	95	86	χ^2=3.013 df=4 P=0.5556	92	89	χ^2=4.505 df=4 P=0.3420
	2	40	48		46	42	
	3	23	29		30	22	
	4	23	24		20	27	
	5	19	13		12	20	
G. I receive appropriate recognition or rewards for good performance.	1	65	62	χ^2=13.89 df=4 P=0.007652*	66	61	χ^2=15.62 df=4 P=0.003569*
	2	45	70		71	44	
	3	49	49		44	54	
	4	27	14		13	28	
	5	14	5		6	13	
H. I am able to utilize my skills and talents to the fullest extent at work.	1	80	69	χ^2=1.873 df=4 P=0.7592	83	66	χ^2=14.09 df=4 P=0.007022*
	2	56	65		68	53	
	3	43	46		37	52	
	4	12	13		6	19	
	5	9	7		6	10	
Stress level	1. No stress (</=15)		63	71	χ^2=9.364 df=4 P=0.05261	79	55	χ^2=21.44 df=4 P=0.0002589*
	2. Low (16-20)		50	67		66	51	
	3.Moderate (21-25)		47	41		39	49	
	4. Severe (26-30)		27	15		12	30	
	5.Profound (30-40)		13	6		4	15	

Mean Score/SD		19.71 /6.31	18.30 /5.47	P=0.0174*, T=2.3878 Df=398, SED=0.590	17.66 /5.34	20.35 /6.21	P<0.0001*, T=4.6449 Df=398, SED=0.579

Source: Researcher's Compilation

Table 3 indicates that female nurses exhibit a significantly higher mean score on the workplace stress scale (21.3) compared to their male counterparts (18.1; P<0.05). Similarly, among doctors, female physicians scored higher (19.4) than male physicians (17.2; P<0.05). Specifically, items B, C, and D of the workplace stress scale received significantly higher scores from female nursing staff in comparison to male nursing staff (P<0.05). In the case of doctors, female doctors scored higher on items B, C, E, G, and F of the workplace stress scale than male doctors (P<0.05). Notably, 76% of female nursing staff reported low to profound stress on the workplace stress scale, whereas only 61% of male nursing staff reported similar levels (P<0.05). Among doctors, 69% of female doctors experienced low to profound stress, which is significantly higher than the 60% of male doctors (P<0.05). Overall, 66.2% of participants scored low to profound stress on the workplace stress scale, with an overall mean score of 19.01.

Table 3: Outcome of the workplace stress assessment regarding gender disparities among medical doctors and nursing personnel

Scale items	Score	Nursing		Comparison Results	Doctors		Comparison Results
		Male (N-100)	Female (N-100)		Male (N-100)	Female (N-100)	
A. Conditions at work are unpleasant or sometimes even unsafe	1	5	2	χ^2=12.05 df=4 P=0.01699	3	5	χ^2=1.614 df=4 P=0.8063
	2	11	3		8	9	
	3	25	16		25	23	
	4	35	39		42	36	
	5	24	40		22	27	
B. I feel that my job is negatively affecting my physical/ emotional well being.	1	40	28	χ^2=12.26 df=4 P=0.01551*	56	36	χ^2=13.81 df=4 P=0.007913*
	2	38	32		32	36	
	3	15	16		10	15	
	4	5	14		2	11	
	5	2	10		nil	2	
C. I have too much work to do and/or too many unreasonable deadlines	1	19	12	χ^2=19.47 df=4 P=0.000635*	17	20	χ^2=11.64 df=4 P=0.02026*
	2	45	31		55	41	
	3	26	26		26	25	
	4	9	14		2	10	
	5	1	17		nil	4	
D. I find it difficult to express my opinions or feelings about my job conditions to my superiors.	1	32	25	χ^2=17.55 df=4 P=0.001508*	28	33	χ^2=6.834 df=4 P=0.1449
	2	40	27		35	34	
	3	19	16		30	18	
	4	6	14		4	11	
	5	3	18		3	4	
E. I feel that job pressures	1	45	37	χ^2=4.14	60	34	χ^2=14.21

interfere with my family or personal life	2	26	24	df=4 P=0.3873	20	34	df=4 P=0.006664*
	3	19	31		13	18	
	4	8	7		6	13	
	5	2	1		1	1	
F. I have adequate control or input over my work duties.	1	48	47	χ^2=7.535 df=4 P=0.1102	44	42	χ^2=1.549 df=4 P=0.8179
	2	24	16		22	26	
	3	14	9		16	13	
	4	7	16		13	11	
	5	7	12		5	8	
G. I receive appropriate recognition or rewards for good performance.	1	33	32	χ^2=7.729 df=4 P=0.1020	33	29	χ^2=14.81 df=4 P=0.005105*
	2	26	19		45	25	
	3	28	21		16	33	
	4	8	19		5	9	
	5	5	9		1	4	
H. I am able to utilize my skills and talents to the fullest extent at work	1	39	41	χ^2=3.25 df=4 P=0.516839	44	25	χ^2=22.16 df=4 P=0.000186*
	2	30	26		38	27	
	3	24	19		13	33	
	4	4	8		2	11	
	5	3	6		3	4	
Stress level	1. No stress (</=15)	39	24	χ^2=12.3 df=4 P=0.01526*	40	31	χ^2=11.36 df=4 P=0.02282*
	2. Low (16-20)	29	21		37	30	
	3.Moderate (21-25)	20	27		19	22	
	4. Severe (26-30)	8	19		4	11	
	5.Profound (30-40)	4	9		nil	6	
Mean Score/SD		18.12/ 6.9	21.31 /6.1	P=0.0007*, T=3.4637 Df=198, SED=0.921	17.21 /4.44	19.40 /6.17	P=0.0044*, T=2.8810 Df=198, SED=0.760

Source: Researcher's Compilation

Conclusion and Limitations of the study

The sample size of the study is sufficient and aligns well with similar research in this field. A total of 66.2% of participants reported experiencing workplace stress, which is consistent with findings from other studies. In our research, the overall mean score on The Workplace Stress Scale is 19.0, which is in close proximity to the reported mean score of 18.4 from a study conducted by the Northern Hospitals in Davangere. Notably, the mean score for the workplace stress scale is significantly higher in females (20.3) compared to males (17.7; P<0.001). This result contrasts with the previously mentioned study, which reported mean scores of 18.6 for males and 18.1 for females, showing no significant gender differences. This discrepancy may be attributed to varying gender roles in Eastern and Western cultures, where, in the East, working women often continue to fulfill primary homemaking responsibilities.

In comparison to males (60.5%), a higher percentage of females reported experiencing more stress in the workplace (72.5%, P<0.05). This aligns with the findings which indicated that 65% of males and 72% of females

among doctors in a teaching institution reported similar levels of stress. Various studies on workplace stress have consistently shown that women tend to experience greater stress than men. This may be attributed to the dual roles that women often juggle, coupled with a heightened subjective perception of stressors. However, this observation contrasts with the results of The Bristol Stress and Health at Work Study conducted in the UK, which found no significant differences in overall work stress between genders. Such discrepancies may arise from variations in cultural and social contexts, occupational groups, and specific workplace environments. Additionally, the differences in gender roles are diminishing in Western culture.

This study represents the initial comparison of workplace stress levels between doctors and nursing staff. Our findings indicate that 70% of nursing staff reported higher stress levels (mean score of 19.7) compared to 64.5% of doctors (mean score of 18.3). This difference is statistically significant ($P<0.05$). The elevated stress levels among nursing staff may be attributed to factors such as increased workloads, limited authority due to their lower rank compared to doctors, irregular working hours, shift responsibilities, and conflicts with colleagues, supervisors, and medical personnel. Additionally, workplace stress is notably higher among female nursing staff (76%, mean score of 21.3) and female doctors (69%, mean score of 19.4) when compared to their male counterparts, with male nursing staff reporting 61% (mean score of 18.1) and male doctors at 60% (mean score of 17.2), all statistically significant ($P<0.05$).

Workplace stress is evidently a concern among nursing staff and physicians. Female employees report significantly higher levels of stress compared to their male counterparts. The influence of Indian cultural norms continues to affect the work environment, highlighting the necessity to focus on enhancing conditions for female workers more than for males. Strategies such as improving working conditions, providing adequate resources, clarifying job roles, fostering constructive conflict resolution, and offering stress management training could effectively alleviate workplace stress. It would be prudent for the government to leverage this potential and enhance facilities at tertiary care centers. One limitation of this study is its cross-sectional design, which prevents establishing any causal links between psychosocial job factors and self-reported experiences of depression, anxiety, and stress. Additionally, the reliance on self-reported data may introduce bias. Nonetheless, self-reporting is often the most practical method for collecting information about workers' conditions. The study was conducted at a single center, and we were unable to include a representative sample from various working groups due to logistical challenges and funding constraints.

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