

## ORIGINAL ARTICLE

## OCCUPATIONAL FACTORS ASSOCIATED WITH DEPRESSION IN NURSES WORKING IN A FEDERAL GOVERNMENT TERTIARY CARE HOSPITAL IN ISLAMABAD

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**Background:** Depression is more prevalent in women than in men. Among women's population sub-groups, there is paucity of research regarding occupational factors associated with depression in Pakistani nurses. **Methods:** This cross-sectional study was conducted on 250 female nurses working in a Federal Government tertiary care hospital in Islamabad. Pretested modified form of Agha Khan University Anxiety and Depression Scale was used to collect primary data. The questionnaires collected data on depressive symptoms, work experience, working hours, working environment, harassment by patients or attendants, job satisfaction and job stress. SPSS version 20 was used for data analysis. Chi-square test was used to see the association between different variables and depression. **Results:** This study indicated high level of depression in nurses who were having work experience of 5–7 years ( $p=0.000$ ), who were working on rotating shifts ( $p=0.012$ ), whose work hours were not flexible ( $p=0.032$ ), who had experienced verbal abuse or harassment by patient or attendant ( $p=0.001$ ), who thought that they had more responsibilities and less authorities at work ( $p=0.018$ ), who suffered from injury at work ( $p=0.010$ ), who thought that they had to work fast at job ( $p=0.004$ ), who thought that they had to do extra physical work at job ( $p=0.003$ ), who believed that they had insufficient time for patient care ( $p=0.006$ ), who were not allowed to take decisions according to patient's requirements ( $p=0.005$ ), who were neither appreciated nor received any feedback from their seniors ( $p=0.002$ ), who did not enjoy their work ( $p=0.001$ ), who did not enjoy relations with their colleagues ( $p=0.001$ ), who were harassed by their administration ( $p=0.000$ ), who were not satisfied from their job ( $p=0.012$ ) and who believed that their job is stressful ( $p=0.000$ ). **Conclusion:** This study concluded that occupational factors play a very important role in determining depression in Pakistani nurses.

**Keywords:** Depression; Working Environment; Job Satisfaction; Job Stress

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### INTRODUCTION

Nurses play a pivotal role as the backbone of the health care system, providing continuous and round the clock services.<sup>1</sup> As such, nursing is a very demanding profession, posing challenges for the practitioner both psychologically as well as physically.<sup>2</sup> The gender predisposition coupled with job stress place nurses at an increase risk of depression.<sup>3</sup> The job stress has been known to increase the risk of depression and anxiety to almost two folds.<sup>4</sup> The main causes of stress in nursing profession have been identified as rotating work shifts, excessive workload, unfriendly management, lack of respect and executive support, incompetency, lack of control over work, poor relations with co-workers, facing patient death and lack of reward.<sup>5</sup> The prolonged stress is an important cause of depression.<sup>5</sup> The Nursing Times 2014 reported job related stress in more than 60% of the Nurses.<sup>6</sup> Weak sense of coherence at the workplace and lack of team

spirit has also been shown to be a powerful predictor of depression in nurses.<sup>7</sup> Depression level is higher in nurses who work in shifts.<sup>5</sup> In addition to these, purely environmental factors like the changing health care environment and rapid economic growth are associated with higher level of job stress in Chinese nurses.<sup>8</sup> Dying or death is also a workplace stressor for nurses.<sup>9</sup> High labour intensity of the nursing profession followed by low rewards also affect mental health of nurse practitioners.<sup>10</sup> The prevalence of job stress in nurses working in Iran is 75.6%,<sup>11</sup> while in Dammam, Saudi Arabia, it is 45.5% with a prevalence of 43% in nurses working in Primary level care and 46.2% in those working in a Secondary level care.<sup>12</sup> In 2010, a study conducted in Delhi (two tertiary care hospitals) reported that about 87.4% of nurses are suffering from job stress.<sup>13</sup> In 2010, a study conducted on nurses who were working in Abbasi Shaheed Hospital, Karachi revealed that the level of job stress in nurses is 75.6%.<sup>14</sup> In 2014, a study conducted on nurses working in hospitals of

Southern China, revealed that the symptoms of depression were associated with frequent night shifts, long and continuous working hours and frequent workplace violence.<sup>15</sup> About 64.22% of them reported experiencing workplace violence occasionally while 10% of nurses had experienced it frequently.<sup>15</sup> Other occupational stressors for nurses in this study were poor work environment, irregular work schedule, heavy workload, insufficient time for patient care and dealing with difficult patients.<sup>15</sup> In 2014, a study conducted on nurses in India revealed that 48% of the nurses experienced stress due to difficult patients, 59% experienced stress due to workload, 49% experienced stress due to issues with senior doctors, 52% experienced stress due to their supervisors and 53% experienced stress due to poor relations with their colleagues.<sup>16</sup> In 2015, a study on Canadian nurses concluded that depression is associated with job stress (OR=2.2).<sup>17</sup> In 2015, Qian *et al* concluded that nurses working under abusive administration were more likely to experience depression.<sup>18</sup> In 2016, a study conducted on nurses in Iran concluded that occupational stress among nurses causes job dissatisfaction and is an important cause of depression in nurses.<sup>19</sup> According to this study, 68% of nurses were suffering from stress, 35.6% of nurses were not satisfied from their job and 18.8% of nurses were suffering from depression.<sup>19</sup> Higher levels of work stress leads to lower level of job satisfaction.<sup>20</sup> Occupational Stressors like lack of resources, high workloads, staff issues, overtime, conflict with patients and poor supervision result in poor job satisfaction level.<sup>20</sup> In 2017, a study conducted on nurses working in Gaza-Palestine revealed that lack of equipment's and drugs, unpredictable schedules and shortage of nurses were severe occupational stressors for nurses which were causing depressive symptoms in 59.7% of nurses.<sup>21</sup> A study on Norwegian nurses concluded that symptoms of depression were decreased in nurses who were shifted from night work to day work.<sup>22</sup> Depression in the workplace causes maladjustment, decrease in productivity and absenteeism.<sup>23</sup>

The review of literature for this study indicated that the job stressors experienced by nurses were associated with an increase prevalence of depression. However, not many studies have been conducted in Pakistani context. This study aimed to find out the factors that were associated with depression in Pakistani nurses working in a Federal Government Tertiary Care Hospital in Islamabad.

## MATERIAL AND METHODS

This cross sectional study was conducted on female nurses working in a federal government tertiary care hospital in Islamabad. Data were collected from

nurses who were working on rotating shifts (morning, evening, night), who had been working for more than two years in the hospital and who used to work at least twenty hours per week in various wards. Data were taken only from those nurses who were interacting with patients, i.e., they were not in administration, on reception or on teaching side. Female nurses who were pregnant and who were suffering from chronic diseases e.g. asthma, hypertension, diabetes mellitus etc were not included in the study. The sample was selected through random sampling (drawing lots). The sample size was 250 and the response rate was 93.2%. Pretested modified form of Agha Khan University Anxiety and Depression Scale was used to collect data. Nurses were contacted in person by the Principal Investigator, the title and the objectives of the research were explained to each participant and the signatures were obtained on the informed consent form. The structured questionnaires were handed over to each participant and the same were collected on the next day. Data were collected on depressive symptoms, work experience, working hours, working environment, harassment by patients or attendants, job satisfaction and job stress. The filled forms were secured by the principal investigator and the participants were thanked for their participation. SPSS version 20 was used for data analysis. In Descriptive Analysis, frequencies and percentages were computed and in Inferential Analysis, Chi-square was used to see the association between different variables and depression. The *p*-value of less than 0.05 was considered statistically significant.

## RESULTS

Nurses who had a work experience of 8–10 years were 38.6% while 37.7% of nurses had a work experience of 5–7 years. Three fourth of the nurses were working on rotating shifts and about more than four fifth of the nurses could not have flexible hours at work. Majority of the nurses (79.4%) complained that they were not allowed to take decisions according to patient's requirement. About 72% of the nurses reported lack of appreciation and feedback on their work by their seniors. About two-thirds of the nurses reported being harassed by the administration. A vast majority of nurses (94.4%) believed that they had more responsibilities and less authority at work. All the nurses believed that they had to work fast at job and they had to do extra physical effort at job. About four fifth of the nurses reported getting injury on job. About 68% of the nurses had experienced verbal abuse by patient or attendant. One fourth of the nurses had experienced harassment by patients or attendants. More than half of the nurses (58.8%) were

not satisfied with their jobs and a vast majority (89%) found their job stressful.

Chi-square test was performed to determine the association of depression with different occupational factors. Statistically significant association was found between depression and the nurses who had a work experience of 5–7 years ( $p=0.000$ ). The prevalence of depression in nurses working on rotating shifts was significantly higher ( $p=0.012$ ) as was the case with those having inflexible working hours ( $p=0.032$ ). A statistically significant association was found between depression and nurses who thought that they had more responsibilities and less authorities at work ( $p=0.018$ ), who believed that they had to work fast at job ( $p=0.004$ ), who thought that they had to do extra physical work at job ( $p=0.003$ ) and who had suffered

from injury during job ( $p=0.010$ ). A statistically significant higher proportion of nurses who had experienced verbal abuse by patient or attendant were suffering from depression ( $p=0.001$ ) as well as those who had experienced harassment by patient or attendant ( $p=0.001$ ). A statistically significant association was found between depression and nurses who were not satisfied from their job ( $p=0.012$ ) and who believed that their job is stressful ( $p=0.000$ ). Figure-1 illustrates the higher prevalence of depression in nurses who were not satisfied from their job (55.6%) compared to those who were satisfied (36%).

Figure-2 illustrates higher prevalence of depression in nurses who believed that their job was stressful (82.4%), in comparison to those did not find their job stressful (8.9%).

**Association between depression and working environment**

Variables		Classification of Depression				p-value
		Normal (1–13)	Mild Depression (14–26)	Moderate Depression (27–39)	Severe Depression (40–52)	
Job Description is Clear	Yes (79.4%)	12 (5.1%)	74 (31.7%)	73 (31%)	26 (11%)	0.067
	No (20.6%)	7 (3%)	13 (5.5%)	22 (9.4%)	6 (2.6%)	
Decisions According to Patient Requirement	Yes (20.6%)	4 (1.7%)	18 (7.7%)	20 (8.5%)	6 (2.6%)	0.005
	No (79.4%)	15 (6.4%)	69 (29.6%)	75 (32%)	26 (11%)	
Appreciation by Seniors	Yes (27.5%)	6 (2.6%)	29 (12.4%)	25 (10.7%)	4 (1.7%)	0.002
	No (72.5%)	13 (5.5%)	58 (24.8%)	70 (30%)	28 (12%)	
Feed Back by Seniors	Yes (27.9%)	6 (2.6%)	29 (12.4%)	26 (11%)	4 (1.7%)	0.002
	No (72.1%)	13 (5.5%)	58 (24.8%)	69 (29.6%)	28 (12%)	
Colleagues Work Together	Yes (54.1%)	14 (6%)	57 (24.4%)	41 (17.5%)	14 (6%)	0.071
	No (45.9%)	5 (2.1%)	30 (12.8%)	54 (23%)	18 (7.7%)	
Enjoy Working	Yes (46.4%)	13 (5.5%)	51 (21.8%)	34 (14.5%)	10 (4.3%)	0.001
	No (53.6%)	6 (2.6%)	36 (15.4%)	61 (26%)	22 (9.4%)	
Enjoy Relations with Colleagues	Yes (48.1%)	13 (5.5%)	53 (22.7%)	35 (15%)	11 (4.7%)	0.001
	No (51.9%)	6 (2.6%)	34 (14.5%)	60 (25.7%)	21 (9%)	
Job Security Available	Yes (100%)	19 (8.1%)	87 (37.3%)	95 (40.7%)	32 (13.7%)	0.073
	No (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	
Harassment by Administration	Yes (70%)	12 (5.1%)	62 (26.6%)	67 (28.7%)	22 (9.4%)	0.000
	No (30%)	7 (3%)	25 (10.7%)	28 (12%)	10 (4.3%)	

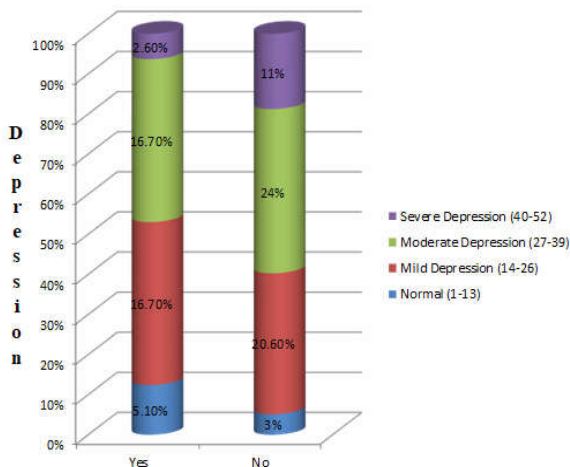


Figure-1: Depression and Job Satisfaction

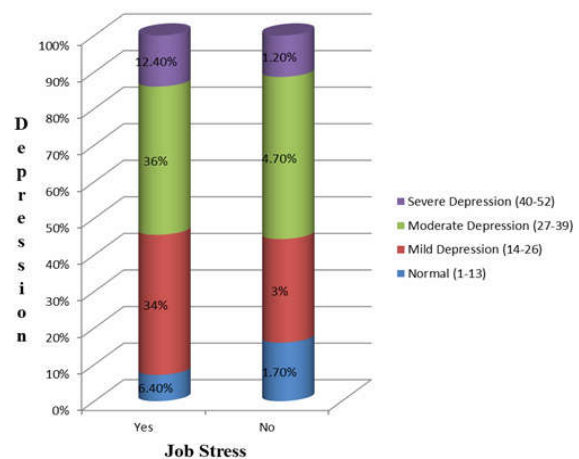


Figure-2: Depression and Job Stress

## DISCUSSION

This study was conducted to determine the occupational factors related to depression in a sample of nurses working at a federal government tertiary care hospital in Islamabad and a number of occupational factors were indicated to be related to depression in this study. The highest rate of depression was found in nurses who were working for 5–7 years in this profession (0.000) and who suffered from injury during work ( $p=0.010$ ). These finding may be explained by their inexperience and lack of emotional stability due to low level of coping skills which causes stress in nurses and prolonged stress is an important cause of depression.<sup>5</sup> We found high level of depression in nurses who were not allowed to take decisions according to patients' requirements ( $p=0.005$ ). Depression was more common in nurses who were not appreciated by their seniors ( $p=0.002$ ) and who did not receive any feedback from their seniors ( $p=0.002$ ).

This result is in line with the study conducted in Croatia which concluded that high efforts followed by low rewards in nursing profession affects the mental health of nurses.<sup>10</sup> Greater level of depression was found in nurses who did not enjoy their work ( $p=0.001$ ) and who were not enjoying relations with their colleagues ( $p=0.001$ ). This result is in line with the study conducted in 2014 in India, according to which more than half of the nurses experienced stress due to poor relations with their colleagues<sup>16</sup> and similar results were also found in a study conducted in China in 2015.<sup>5</sup> It means nurses were depressed because they were not satisfied with their working environment. The prevalence of depression was high in nurses who were working on rotating shifts ( $p=0.012$ ). This result coincides with the result of study conducted in China in 2015.<sup>5</sup> The depression level was high in nurses who perceived that they had more responsibilities and less authority at work ( $p=0.018$ ).

This result coincides with previous research in the field which found similar factors associated with depression.<sup>9</sup> Depression was more in nurses who believed that they had to work fast at job ( $p=0.004$ ) and who believed that they had to do extra physical work at job ( $p=0.003$ ), which is probably due to shortage of nurses,<sup>21</sup> which is making their job hectic and stressful. Depression level was high in nurses whose working hours were not flexible ( $p=0.032$ ), who had experienced verbal abuse or harassment by patient or attendant ( $p=0.001$ ) and who believed that they had insufficient time for patient care ( $p=0.006$ ). All these factors had been identified as an important

occupational stressors in nurses,<sup>15</sup> and prolonged stress leads to depression.<sup>5</sup> The high level of depression was found in nurses who were harassed by their administration ( $p=0.000$ ), this is congruent with the findings of the study by Qian *et al* who concluded that nurses working under abusive administration were more likely to experience depression.<sup>18</sup>

Depression was more common in nurses who were not satisfied from their job ( $p=0.012$ ), this is because higher levels of work stressors leads to lower level of job satisfaction,<sup>20</sup> and occupational stressors causes job dissatisfaction and depression.<sup>19</sup> High levels of depression were found in nurses who found their job stressful ( $p=0.000$ ). This result coincides with a number of studies in various parts of the world that have found higher rates of job stress in nurses.<sup>6,11–14</sup> In 2015, a study conducted on Canadian nurses concluded that depression is associated with job stress.<sup>17</sup> Another study conducted in 2014 concluded that job stress increases the risk of depression to two folds.<sup>4</sup> This indicates that nurses are suffering from high level of job stress globally which increases the likelihood of depression in this population.

There is paucity of research on the occupational factors associated with depression in Pakistani nurses. This study has endeavored to fill the gap in research and provide knowledge in the set field.

## LIMITATIONS

This was a cross-sectional study and cannot establish causality link between occupational risk factors and depression. Longitudinal studies should be conducted to confirm the present findings. Furthermore, the study was conducted on a sample of nurses working in a federal government tertiary care hospital in Islamabad and as such may not be generalizable to those working in provincial government or private sector hospital settings.

## CONCLUSION

This study concludes that the nurses are exposed to various stressors at workplace. All these stressors increase the likelihood of developing depressive disorders.

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## AUTHORS' CONTRIBUTION

GMJB: Literature search, conceptualization of study design, data collection. SH: Supervise the study. MMJA: Data analysis. JSM: Help in paper writing.

REFERENCES

1. Kane PP. Stress causing Psychosomatic illness among Nurses. *Indian J Occup Environ Med* 2009;13(1):28–32.
2. Zaghoul AA. Developing and Validating a tool to assess Nurse Stress. *J Egypt Public Health Assoc* 2008;83(3-4):223–37.
3. Letvak S, Ruhm CJ, McCoy T. Depression in Hospital employed Nurses. *Clin Nurse Spec* 2012;26(3):177–82.
4. Happell B, Gaskin CJ, Searl KR, Dwyer T. Physical and Psychosocial wellbeing of Nurses in a Regional Queensland Hospital. *Collegian* 2014;21(1):71–8.
5. Wang SM, Lai CY, Chang YY, Huang CY, Zauszniewski JA, Yu CY. The relationship among Work Stress, Resourcefulness and Depression level in Psychiatric Nurses. *Arch Psychiatr Nurs* 2015;29(1):64–70.
6. Restilia R. Systematic Review: Occupational Stress and related factors among Hospital Nurses. *Kes Mas J Fak Kesehatan Masy Univ Ahmad Daulan* 2015;9(2):85–94.
7. Kikuchi Y, Nakaya M, Ikeda M, Okuzumi S, Takeda M, Nishi M. Relationship between Depressive state, Job stress, and sense of Coherence among female nurses. *Indian J Occup Environ Med* 2014;18(1):32–5.
8. Yau SY, Xiao XY, Lee LYK, Tsang AYK, Wong SL, Wong KF. Job Stress among Nurses in China. *App Nurs Res* 2012;25(1):60–4.
9. Fathi A, Nasae T, Thiangchanya P. Workplace Stressors and Coping Strategies among Public Hospital Nurses in Medan, Indonesia. *J Nurs* 2012;2(1):315–24.
10. Golubic R, Milosevic M, Knezevic B, Mustajbegovic J. Work related Stress, education and work ability among Hospital Nurses. *J Adv Nurs* 2009;65(10):2056–66.
11. Kavari SH. A study of Depression prevalence in Nurses and it's effect in Shiraz Namazi Hospital. *Middle East J Fam Med* 2006;4(3):17–21.
12. Al-Makhaita HM, Sabra AA, Hafez AS. Predictors of work related stress among Nurses working in Primary and Secondary health care levels in Dammam, Eastern Saudi Arabia. *J Fam Community Med* 2014;21(2):79–84.
13. Bhatia N, Kishore J, Anand T, Jiloha RC. Occupational stress among nurses from two tertiary care hospitals in Delhi. *Aust Med J* 2010;3(11):731–8.
14. Khalid S, Irfan U, Sheikh S, Faisal M. Frequency of Stress and Depression in Female Nurses working in a Teaching Hospital. *KUST Med J* 2010;2:10–4.
15. Gong Y, Han T, Yin X, Yang G, Zhuang R, Chen Y, *et al.* Prevalence of Depressive symptoms and work related risk factors among nurses in public hospitals in Southern China: A cross-sectional study. *Sci Rep* 2014;4:7109.
16. Mohite N, Shinde M, Gulavani A. Occupational stress among nurses working at Selected Tertiary Care Hospitals. *Int J Sci Res* 2014;3(6):999–1005.
17. Enns V, Currie S, Wang JL. Professional autonomy and work settings as contributing factors to depression and absenteeism in Canadian Nurses. *Nurs Outlook* 2015;63(3):269–77.
18. Qian J, Wang H, Han ZR, Wang J, Wang H. Mental health risks among nurses under abusive supervision: the moderating roles of job role ambiguity and patients' lack of reciprocity. *Int J Mental Health Sys* 2015;9:22.
19. Poursadeghiyan M, Abbasi M, Mehri A, Hami M, Raei M, Ebrahimi MH. Relationship between Job Stress and Anxiety, Depression and Job Satisfaction in Nurses in Iran. *Soc Sci* 2016;11(9):2349–55.
20. Khamisa N, Oldenburg B, Peltzer K, Ilic D. Work related Stress, Burnout, Job Satisfaction and General Health of Nurses. *Int J Environ Res Public Health* 2015;12(1):652–66.
21. Aqel NA, Thabet AM. Work and Family Stressors, Depression and Anxiety among working women in Gaza Strip. *Glob J Intellect Dev Disabil* 2017;3(3):555615.
22. Thun E, Bjorvatn B, Torsheim T, Moen BE, Mageray N, Pallesen S. Night work and symptoms of Anxiety and Depression among nurses: A longitudinal study. *Int J Work Health Organ* 2014;28(4):376–86.
23. Lee KJ, Kim JI. Relating factors for Depression in Korean working women: Secondary analysis of the fifth Korean National Health and Nutrition Examination Survey (KNHANES V). *Asian Nurs Res* 2015;9(3):265–70.

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