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Examining the Impact of Job Motivation on Aggression, Burnout, and Stress Among Nurses in North Khorasan Teaching Hospitals (2023 - 2024)

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Abstract

Background: Nurses are the backbone of the health care system and require adequate motivation to provide high-quality care. Reduced motivation can increase stress, burnout, and workplace aggression.

Objectives: This study aimed to investigate the relationships between job motivation and aggression, burnout, and job stress among nurses working in teaching hospitals in North Khorasan Province.

Methods: This descriptive cross-sectional correlational study was conducted among 155 nurses working in teaching hospitals in North Khorasan Province in 2023 - 2024. Data were collected using a demographic characteristics form and Ludahl and Kitchener's Job Motivation Questionnaire, Goldard's Burnout Questionnaire, the Buss and Perry Aggression Questionnaire, the Health and Safety Executive Occupational Stress Questionnaire, and the Holmes and Rahe Social Readjustment Rating Scale. Data were analyzed using SPSS version 19.

Results: The mean age of the participants was 31.14 ± 7.11 years, and 12.9% were male. Most participants held a bachelor's degree in nursing, were married, and lived in Bojnurd. The mean job motivation score was 53.13 ± 7.45, the mean aggression score was 70.45 ± 21.28, the mean job stress score was 108.85 ± 12.81, and the mean burnout score was 152.31 ± 20.54 Data analysis showed that motivation was significantly associated with aggression, aggression was significantly associated with burnout and job stress, and job stress was significantly associated with burnout ($P < 0.05$). Education, marital status, work experience, and type of employment were also associated with stressful events experienced during the previous six months.

Conclusions: Increasing support and rewards from authorities and improving the nurse-to-patient ratio may enhance nurses' motivation, reduce job stress, burnout, and aggression, and improve the quality of nursing services.

Keywords: Aggression, Burnout, Work Motivation, Work Stress, Nurses

1. Background

Nurses are among the most important members of the health care system and are responsible for providing direct patient care (1). Because nurses are in continuous contact with human lives and face substantial occupational challenges, job motivation is essential for providing high-quality care. Motivation is a process that encourages individuals to strive continuously to achieve organizational goals; neglecting motivation can reduce productivity and waste human resources (2).

In nursing, decision-making in risky and unpredictable situations and caring for critically ill patients require adequate motivation; otherwise,

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increased errors, reduced quality of care, and burnout may occur. Burnout comprises physical, emotional, and attitudinal dimensions and occurs when an individual's resources are depleted over a prolonged period of exposure to difficult emotional conditions (3). This condition reduces nurses' interest in and engagement with their work and may be caused by work pressure, salaries inconsistent with the work performed, and inadequate stress management.

Job stress is a physical and emotional response to a mismatch between job demands and an individual's resources and abilities (4). In nursing, job stress can cause illness and reduce the quality of care. Job stress is also a factor affecting workplace aggression (1). Aggression includes any action that causes physical or psychological harm to others; psychological aggression is the most common type and may develop into physical violence (5). Nurses are at high risk of aggression because of their direct contact with patients and patients' companions. The consequences of aggression include reduced job satisfaction, reduced quality of patient care, and increased absenteeism among nurses (6).

The nursing work environment, including workload, conflicts with colleagues, professional responsibilities, and exposure to aggression from patients or physicians, is a major contributor to burnout. Burnout has numerous physical, psychological, and social consequences, including fatigue, sleep problems, digestive problems, and decreased social activity. At the organizational level, it reduces the quality of care and increases anxiety and errors. Burnout can be considered an occupational disease that should be prevented.

2. Objectives

Given the direct relationship between nurses' physical and mental health and the quality of their performance, it is important to understand job motivation and the factors that reduce it. In addition, because few comprehensive studies have simultaneously examined the relationships among job motivation, job stress, burnout, and aggression, this study aimed to determine the relationships between job motivation and aggression, burnout, and job stress among nurses working in teaching hospitals in North Khorasan Province.

3. Methods

3.1. Study Design and Participants

This descriptive cross-sectional correlational study was conducted among nurses working in six teaching hospitals in North Khorasan Province in 2023 - 2024. The inclusion criteria were completion of an informed consent form, employment in teaching hospitals in the province, a score of less than 150 on the Holmes and Rahe Life Change Scale, and at least one year of work experience. The exclusion criteria were failure to answer more than 11% of the questions, a change in the place of employment, withdrawal from the study, or resignation.

Of 455 nurses, 155 eligible nurses were selected by stratified random sampling, including 25 from Imam Khomeini Hospital, 45 from Hashemi Hospital, 15 from Bint Al-Huda Hospital, 20 from Imam Reza Hospital, 25 from Imam Hassan Hospital, and 20 from Imam Ali Hospital.

3.2. Instruments

The questionnaires assessed demographic characteristics, job motivation using Ludahl and Kitchener's questionnaire, burnout using Goldard's questionnaire, aggression using the Buss and Perry questionnaire, occupational stress using the UK Health and Safety Executive questionnaire, and stressful life events using the Holmes and Rahe scale.

The demographic questionnaire included age, gender, work experience, place of residence, education, workplace section, type of employment, marital status, experience of stressful events, history of tobacco use, and history of psychiatric medication use.

Ludahl and Kitchener's Job Motivation Questionnaire consists of 20 items scored on a 4-point Likert scale from 1 to 4 and assesses interest in work, job importance, job satisfaction, responsibility, self-confidence, and self-control. Scores range from 20 to 80. Scores of 20 - 40 indicate low job motivation, 40 - 50 indicate moderate job motivation, and scores above 50 indicate high job motivation. Reliability was assessed using Cronbach's alpha of 0.92.

Goldard's Burnout Questionnaire consists of 40 items scored on a 7-point Likert scale, with a total score range of 40 - 280. Burnout levels are interpreted from very low to very high: 40 - 80 indicates very low burnout, 81 - 120 indicates low burnout, 121 - 200 indicates high burnout, and 200 - 280 indicates very high burnout. Reliability was assessed using Cronbach's alpha of 0.86 (7).

The Buss and Perry Aggression Questionnaire consists of 29 items and four subscales: verbal aggression, physical aggression, anger, and hostility. It uses a 5-point Likert scale from 1 (does not describe me

at all) to 5 (describes me completely), and scores range from 29 to 145. Reliability was assessed using Cronbach's alpha of 0.78.

The Health and Safety Executive Occupational Stress Questionnaire consists of 35 items in seven domains. Response options range from never to always or from strongly disagree to strongly agree, with higher scores indicating greater stress. Its reliability was reported as 0.65.

The Holmes and Rahe Stressful Events Scale consists of 41 items that assign a numerical score to each situation. Total scores of 150 - 200, 200 - 300, and above 300 indicate 37%, 50%, and 80% probabilities of harm, respectively. Its reliability was reported using Cronbach's alpha of 0.79 (8).

3.3. Bias

A potential source of bias was response bias, which may have arisen from the use of self-administered questionnaires to assess key variables such as job motivation, aggression, burnout, and stress. Self-report measures may not accurately capture the true levels of these variables because participants may provide socially desirable responses, particularly for sensitive areas such as aggression or burnout. Nurses may underreport stress or aggression to conform to perceived professional norms, particularly in health care settings in which emotional control is valued. This may introduce social desirability bias, potentially skewing the results and underestimating the true prevalence of these issues among participants.

In addition, reliance on participants' recall of stressful life events and work-related experiences during the preceding six months may have introduced recall bias. Nurses may not accurately remember the frequency or intensity of these events, which could lead to underreporting or overreporting of stressful experiences. This could distort findings on the relationship between job motivation and outcomes such as stress and burnout because inaccurate recall may affect assessment of the temporal link between these factors. Reducing response and recall biases would require incorporating objective data sources or conducting more frequent assessments over shorter periods to enhance accuracy and reliability.

3.4. Statistical Analysis

Data were analyzed using SPSS version 19. Independent t tests, analysis of variance, Pearson correlation, and equivalent nonparametric tests, including the Kruskal-Wallis test, were used. The significance level was set at 0.05.

4. Results

4.1. Participant Characteristics

The participants had a mean age of 31.14 ± 7.11 years, and 12.9% were male. Regarding education, 94.8% had a bachelor's degree in nursing, and 63.2% were married. Most participants lived in Bojnurd (54.8%), had less than five years of work experience (54.8%), worked in special departments (25.2%), and were permanently employed (53.3%). In addition, 98.7% of participants reported no history of tobacco or drug use and no history of psychiatric medication use (Table 1).

Table 1. Demographic Characteristics of Study Participants (N = 155) [a]

Variables	Values
Age, Mean ± SD	31.14 ± 7.11
Gender	
Male	20 (12.9)
Female	135 (87.1)
Educational level	
Bachelor's degree	147 (94.8)
Master's degree	8 (5.2)
Marital status	
Single	57 (36.8)
Married	98 (63.2)
Residence	
Shirvan	70 (45.2)
Bojnurd	85 (54.8)
Work experience (y)	
First 5	85 (54.8)
Second 5	41 (26.5)
Third 5	4 (2.6)
More than 15	25 (16.1)
Workplace section	
Emergency	30 (19.4)
Intensive care	39 (25.2)
Internal medicine	31 (20.0)
Surgery	33 (21.3)
Neonatology and pediatrics	7 (4.5)
Obstetrics and gynecology	15 (9.7)
Employment type	
Project	63 (40.6)
Commitment	2 (1.3)
Contractual	7 (4.5)
Permanent	83 (53.5)
History of tobacco or drug use	
Yes	2 (1.3)
No	153 (98.7)
History of psychiatric medication use	
Yes	2 (1.3)
No	153 (98.7)

[a] Values are expressed as No. (%) unless otherwise indicated.

Table 2. Mean Scores of Motivation, Aggression, Job Stress, Burnout, and Stressful Life Events in the Past 6 Months and Their Correlations (N = 155) [a]

Variables	Mean ± SD	Motivation	Aggression	Job Stress	Burnout	Stressful Life Events
Motivation	53.13 ± 7.45	-	-	-	-	-
Aggression	70.45 ± 21.28	-0.249 (-0.39 to -0.09); 0.002	-	-	-	-
Job stress	108.85 ± 12.81	0.172 (0.02 to 0.31); 0.32	-0.189 (-0.34 to -0.03); 0.018	-	-	-
Burnout	152.31 ± 20.54	-0.033 (-0.19 to 0.13); 0.682	0.167 (0.01 to 0.31); 0.037	0.281 (0.13 to 0.42); 0.000	-	-
Stressful life events in 6 months	312.34 ± 17.76	0.058 (-0.09 to 0.20); 0.473	-0.007 (-0.16 to 0.15); 0.929	0.006 (-0.15 to 0.16); 0.942	-0.103 (-0.25 to 0.05); 0.2	-

[a] Values are expressed as mean (95% CI); P-value, unless otherwise indicated.

Table 3. Analysis of the Multiple Linear Regression Model Between Motivation, Aggression, Job Stress, Burnout, Stressful Life Events in the Past 6 Months, and Demographic Variables (N = 155)

Variables	Motivation (Sig)	Burnout (Sig)	Aggression (Sig)	Job Stress (Sig)	Stressful Life Events (Sig)
Age	0.009 (0.916)	0.014 (0.682)	0.034 (0.671)	-0.148 (0.065)	0.396 (0.000)
Gender	0.514	0.179	0.438	0.577	0.031
Marital status	0.225	0.069	0.254	0.035	0
Educational level	0.607	0.005	0.344	0.379	0.005
Residence	0.259	0.238	0.844	0.630	0.998
Work experience	0.227	0.469	0.896	0.409	0
Workplace section	0.469	0.654	0.481	0.894	0.785
Employment type	0.096	0.270	0.364	0.105	0
History of tobacco or drug use	0.649	0.769	0.788	0.367	0.499
History of psychiatric medication use	0.64	0.769	0.788	0.367	0.499

4.2. Motivation, Aggression, Job Stress, Burnout, and Stressful Life Events

The mean job motivation score was 53.13 ± 7.45, the mean aggression score was 70.45 ± 21.28, the mean job stress score was 108.85 ± 12.81, the mean job burnout score was 152.31 ± 20. 54, and the mean score for stressful events experienced during the past six months was 312.34 ± 17.76.

Data analysis showed a significant negative association between the mean job motivation score and aggression (P = 0.002, r = -0.249). Aggression was significantly associated with burnout (P = 0.037, r = 0.167) and job stress (P = 0.018, r = -0.189), and job stress was significantly associated with burnout (P < 0.001, r = 0.281) (Table 2).

4.3. Associations With Demographic Variables

Analysis of the associations between the mean scores for motivation, aggression, job stress, burnout, and stressful events and demographic variables showed that education level was significantly associated with burnout, marital status was significantly associated with job stress, and education level, work experience, and type of employment were significantly associated with stressful events during the past six months (P < 0.05) (Table 3).

5. Discussion

This study aimed to investigate the relationship between job motivation and aggression, burnout, and job stress among nurses working in teaching hospitals in North Khorasan Province.

The results showed that nurses' job motivation was high, similar to findings reported in a systematic review and meta-analysis of nurses' job motivation in Iranian hospitals (8). The level of aggression among nurses was moderate, which is consistent with previous findings. Job burnout was high, consistent with the findings of Mohammadpour et al. (9). Job stress was also high and consistent with the findings of Ghanei Gheshlagh et al. (10). This study showed no significant relationship

between age and job stress, in line with the results of Lambert and Paoline (11).

Education level was related to job burnout. Nurses with lower education had lower job expectations and experienced less burnout. A significant relationship was also found between age and the experience of life stress. Increased job motivation was associated with decreased aggression, consistent with the findings of Mohseni et al. (12). Aggression was also associated with burnout; increased aggression was associated with increased burnout, consistent with Molero Jurado et al. (13), who also reported a direct and significant relationship between burnout and aggression. Aggression was also associated with job stress; increased aggression was associated with decreased stress, whereas Saberi and Soheili (1) reported the opposite finding. Burnout and job stress were also positively associated, similar to previous findings.

Higher education was associated with reduced experience of stress during the previous six months, similar to findings reported by Woo et al. (14). Marital status was also associated with job stress and stress experience; single individuals had higher stress levels, which is consistent with W et al. (14) and inconsistent with Kouchek et al. (15). Work experience was inversely associated with stressful events during the previous six months, consistent with Lee et al. (16) and inconsistent with Jafari et al. (17). Employment type was also associated with stressful experiences.

These findings indicate the importance of managing job motivation and reducing aggression and job stress, as these factors can affect nurses' mental and physical health and improve the quality of patient care. Job motivation can be enhanced through diverse educational and recreational classes, financial and nonfinancial incentives, and organizational support. These measures may also reduce burnout and aggression and increase nurses' motivation and job satisfaction.

5.1. Conclusions

The results of this study indicate that fostering job motivation among nurses can play an important role in improving their performance. Providing incentive points from authorities and increasing the nursing workforce may increase motivation and job satisfaction. Increasing job motivation can directly reduce job stress, burnout, and aggression. Reducing these negative factors not only maintains nurses' mental and physical health but also improves their ability to provide high-quality patient care. These findings indicate that organizational support policies and human resource management can substantially improve nurses' work environments. Therefore, promoting job motivation and reducing occupational pressures are key strategies for improving the quality of nursing services.

5.2. Research Limitations

The limitations of this study included nurses' limited time in different departments and the fact that the research was conducted only in North Khorasan Province. Future studies should be conducted with larger samples in different cities and hospital departments to increase the generalizability of the results. Future studies can also examine the roles of other environmental and organizational factors, such as managerial support, organizational culture, and welfare facilities, in relation to motivation, aggression, burnout, and job stress.

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Footnotes

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References

1. Saberi H, Soheili A. >[Prediction of level of aggression and interpersonal problems in ED nurses based on their occupational stress]. *Nursing and Midwifery Journal*. 2017;**15**(6):478-87. FA.
2. Marzieh Hassanian Z, Heydari A, Sadeghi A, Moghimbeighi A. The relationship between knowledge management and job motivation of nurses in educational treatment centers of Hamadan University of Medical Sciences, 2015. *Sci J Hamedan Nurs Midwifery Fac*. 2017;**25**(1):35-43. https://doi.org/10.21859/nmj-25015.
3. Dall'Ora C, Ball J, Reinius M, Griffiths P. Burnout in nursing: a theoretical review. *Human Resources for Health*. 2020;**18**(1). 41. [PubMed ID: 32503559]. [PubMed Central ID: PMC7273381]. https://doi.org/10.1186/s12960-020-00469-9.
4. Hajlo N, Sobhi Gharamalki N, Imami F. Examining the relationship between organizational creativity, job stress and job motivation, progress with nurses' organizational commitment. *Psychological Studies, Faculty of Educational Sciences and Psychology, Al-Zahra University*. 2012;**8**(3):89-106. https://doi.org/10.22038/psj.2015.5250.
5. Malik OF, Schat ACH, Shahzad A, Raziq MM, Faiz R. Workplace psychological aggression, job stress, and vigor: a test of longitudinal effects. *Journal of Interpersonal Violence*. 2021;**36**(5 - 6):NP3222-NP40. [PubMed ID: 29683077]. https://doi.org/10.1177/0886260518770650.
6. Kanchika M, Iwasaki S, Konish A, Deguchi Y, Kobayashi Y, Nakada A, et al. Aggression in teachers is related to role conflict and role ambiguity as occupational stress. *Osaka City Med J*. 2015;**61**(2):93-104. [PubMed ID: 26995853].
7. Rezai H, Darkeh M, Nouripour Liauli R. The relationship between burnout and general health of employees in central prison. *Journal of Military Psychology*. 2014;**5**(18):59-66. https://doi.org/10.1037/a0036710.
8. Esfahani P, Afshin M. [Examining nurses' job motivation in Iranian hospitals: a systematic review and meta-analysis]. *Health Research Quarterly*. 2018;**4**(1):30-37. FA. https://doi.org/10.29252/hrjbaq.4.1.30.
9. Mohammadpour E, Ebrahimi Belil F, Asghari S, Jabbari M. Investigating the aggression and its related factors in Ardabil School of Nursing and Midwifery students in January 2019. *Journal of Health and Care*. 2021;**22**(4):318-326. https://doi.org/10.52547/jhc.22.4.318.
10. Ghanei Gheshlagh R, Hosseini MA, Sayehmiri K. Job stress among Iranian nurses: a systematic review and meta-analysis. *Scientific Journal of Nursing, Midwifery and Paramedical Faculty*. 2017;**2**(4):68-75. https://doi.org/10.29252/sjnmp.2.4.68.
11. Lambert EG, Paoline EA. The influence of individual, job, and organizational characteristics on correctional staff job stress, job satisfaction, and organizational commitment. *Criminal Justice Review*. 2008;**33**(4):541-64. https://doi.org/10.1177/0734016808320694.
12. Mohseni S, Mirgol A, Miri A. >[Investigating the relationship between motivational strategies with addictive talent and male students' aggression]. *Nursing Development in Health*. 2019;**9**(2):45-54. FA.
13. Molero Jurado MDM, Gázquez Linares JJ, Pérez-Fuentes MDC, Martos Martínez Á. Aggression and burnout in nurses during COVID-19: a cross-sectional study. *Nursing & Health Sciences*. 2023;**25**(1):130-40. [PubMed ID: 36495247]. [PubMed Central ID: PMC9877851]. https://doi.org/10.1111/nhs.13001.
14. Woo YW, Kim KH, Kim KS. Death anxiety and terminal care stress among nurses and the relationship to terminal care performance. *Journal of Hospice and Palliative Care*. 2013;**16**(1):33-41. https://doi.org/10.14475/kjhpc.2013.16.1.033.
15. Kouchek M, Mohammadi R, Miri M. Relationship between occupational stress and quality of life in intensive care unit nurses in selected naval hospitals. *Journal of Marine Medicine*. 2023;**4**(4):223-30. https://doi.org/10.30491/4.4.223.
16. Lee W, Tsai S, Tsai C, Lee C. A study on work stress, stress coping strategies and health-promoting lifestyle among district hospital nurses in Taiwan. *J Occup Health*. 2011;**53**(5):377-83. [PubMed ID: 21778658]. https://doi.org/10.1539/joh.11-0054-FS.
17. Jafari H, Rahimi MK, Loeloe MS, Jalaei Z. Investigating the relationship between stress management and the quality of working life of nurses in teaching hospitals in Yazd in 2023. *Journal of Health Research in Community*. 2024;**9**(4):37-46. https://doi.org/10.18502/mshsj.v8i4.15167.