

The Impact of Demographic Features and Environmental Conditions on Rates of Nursing Burnout

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Abstract

Background: The burnout phenomenon is a complex and multidimensional reality and also a common metaphor for a state of extreme psychophysical exhaustion that is usually related to work.

Objectives: The goal of this study was to evaluate nursing burnout in 371 registered nurses at both governmental and private hospitals in Shiraz, Iran.

Patients and Methods: This was a cross-sectional study that evaluated nursing burnout using the Maslach Burnout Inventory. Independent sample T-test and one-way analysis of variance were performed to determine the association between demographic factors, the nurses' working environment, and nurse burnout.

Results: The results of this study showed that nurses in internal medicine wards, at staff positions, and on rotating shifts in governmental hospitals have a high rate of total burnout ($P < 0.05$). In contrast, nurses with less than five years of work experience have a high rate of reduced personal accomplishment ($P < 0.05$). Also, nurses with 6 - 15 years of work experience reported the highest incidence of emotional exhaustion ($P < 0.05$).

Conclusions: Burnout is associated with some specific demographic and environmental features. To reduce and prevent burnout, nursing leadership should focus on personal accomplishments in nurses with little work experience, especially for nurses in internal medicine wards, on rotating shifts, and on staff wards. In addition, policy makers at higher levels should also consider nursing burnout in governmental hospitals.

Keywords: Nursing Burnout, Staff, Internal Medicine Wards, Governmental Hospitals

1. Background

The burnout phenomenon is a complex and multidimensional reality (1) and a common metaphor for a state of extreme psychophysical exhaustion that is usually related to one's work (2). It is due to job stress and includes common reactions that lead to reduced motivation and effectiveness (3). Burnout also correlates with the organizational environment and fits into six work-related areas: workload, control, reward, community, fairness, and values (4). At the same time, the organizational environment also affects job burnout (5, 6).

The three main dimensions of burnout are exhaustion, cynicism, and inefficacy (6). Burnout is also characterized by emotional exhaustion, depersonalization, and reduced personal completion (6-8). On the other hand, one context contrary to burnout is that human beings believe that life is full of meaning; therefore, they need and look for meaningful action in their work (9). The three dimen-

sions of burnout (10) represent an interrelationship between emotional exhaustion, depersonalization, and diminished personal accomplishment (11). Emotional exhaustion has been underscored as the essential or central aspect of burnout, while feelings of diminished adequacy and work performance and a useless state of mind constitute depersonalization and were initially deciphered as outcomes of the burnout (12). This phenomenon is the result of many environmental factors, such as stress, social support, and cultural situations. Generally, emotional exhaustion is related to being overloaded at work and its associated outcomes. On this topic, job pressure is associated with anxiety and job dissatisfaction (13), finally leading to burnout; this type of pressure is considered to be a key component of the burnout experience (14). It has been demonstrated that emotional exhaustion is a good predictor of job performance (12); emotional exhaustion is also a potentially important construct in examining sales force

behavior and attitude relationships (15).

Depersonalization refers to losing contact with oneself, with a tendency to underestimate oneself or others. Accordingly, the individual neglects his or her own needs (16). Various psychological theories of depersonalization have been based upon partial facts, such as changes in the clarity and range of consciousness, self-observation, a lack of feelings or emotions, disturbances in memory, changes in the perception of space or time, and subjective experiences of bodily changes (17). Additionally, exhaustion is also positively related to depersonalization (18).

Diminished personal accomplishment is a self-perception that casts doubts on professionals' capacity to make a meaningful contribution through their work (19). It refers to a decline in the feeling of competence and successful achievement in an individual's work in relation to people (20), or a lack of self-efficacy in their work performance (21). Generally, diminished personal accomplishment leads to a reduction in their motivation to work or promote their skills and organizational behavior.

Nursing is associated with a high rate of burnout (22, 23) and involves practicing nurses (24) and nursing students alike (25), a condition related to the nature of the nursing profession. Some main features that threaten nurses' well-being include continuously working with ill people, specifically those with psychological problems, unexpected events that may occur during nursing care, difficulties in some types of nursing care, and rotating shifts, which affect life planning.

2. Objectives

The goal of the current study was to evaluate nursing burnout in the hospitals of Shiraz, the capital city of the Fars province in southern Iran. Accordingly, burnout was evaluated using the three dimensions of the Maslach Burnout Inventory. In addition, the association between demographic characteristics and environmental work in relation to nursing burnout demands an examination of the following hypotheses:

Hypothesis 1: There is an association between age and total burnout and its subscales.

Hypothesis 2: An association exists between work experience and total burnout and its subscales.

Hypothesis 3: There is an association between rotating shift work and total burnout and its subscales.

Hypothesis 4: An association exists between one's nursing position and total burnout and its subscales.

Hypothesis 5: There is an association between critical wards (emergency, critical care unit (CCU), and intensive care unit (ICU)) and total burnout and its subscales.

Hypothesis 6: An association exists between governmental hospitals regarding critical wards (emergency department, CCU, ICU) and total burnout and its subscales.

3. Patients and Methods

This cross-sectional study was conducted with 371 registered nurses who were employed at governmental and private hospitals in Shiraz, Iran. The sample size was determined according to Morgan and Krejcie's defined table (26). According to the table, 400 participants were selected for the study from 11,000 registered nurses. The questionnaires used for the collection of data included demographic and job characteristics and the Maslach Burnout Inventory. Despite some criticisms of the Maslach scale, it appeared to appropriately conceptualize at least two variables of work-related syndromes, including exhaustion and depersonalization/cynicism (27). This scale comprised total burnout and its subscales, such as emotional exhaustion, depersonalization, and reduced personal accomplishment. The scale's validity has already been evaluated in many studies; it was further calculated in this study and demonstrated a Chronbach's alpha of 0.855 for burnout.

All data analyses were conducted using the statistical package for the social sciences (SPSS Inc., Chicago, Illinois, USA), version 15, and considered the descriptive variables, such as the means and standard deviations. An independent sample T-test was used to compare sex, marital status, rotating shift work, and type of hospital with total burnout and the subgroups' scores. In addition, a one-way analysis of variance (ANOVA) was performed to compare age groups, education levels, work experience, and type of ward with the amount of total burnout and also the subgroups' scores. A two-tailed P value less than 0.05 was considered to be statistically significant. All research was carried out based on the ethical principles of the declaration of Helsinki and also the American sociology association.

4. Results

The results showed that 371 people participated in this study; 40 (18.9%) were male, and 331 (81.1%) were female. In terms of training, 24 (8.6%) had completed high school and worked as a nurse's aide, 337 (85.3%) had a bachelor's degree, and 16 (5.8%) held a master's degree. Regarding their marital status, 169 (61%) participants were married and 107 (36.6%) were single; only one person (0.4%) was divorced.

At the descriptive level, the results showed that the means and standard deviations (SDs) of emotional exhaustion, depersonalization, reduced personal accomplishment, and total burnout were 26.11 ± 13.04 , 7.09 ± 6.38 ,

18.75 ± 9.4, and 51.95 ± 20.98, respectively. As previously mentioned, the aim of this study was to evaluate the association between demographic and environmental work features with burnout in hospital nurses. According to the study's aims and in regard to the aforementioned hypotheses, the findings were as follows:

4.1. Hypothesis 1

As shown in (Table 1), there was a significant association between increasing age and reduced personal accomplishment ($P = 0.027$). In addition, age had no association with emotional exhaustion, depersonalization, and total burnout. Likewise, there was no relationship between sex, marital status, and education with total burnout and its subscales. Therefore, the first hypothesis was rejected.

4.2. Hypothesis 2

In this context, the results showed a significant relationship between both emotional exhaustion and reduced personal accomplishment with the nurses' amount of work experience ($P < 0.05$). Therefore, the first part of hypothesis 2 was rejected; in the second part, the two subscales were associated with work experience.

4.3. Hypothesis 3

The mean scores for reduced personal accomplishment and total burnout in nurses with rotational shifts were more than those of nurses with a fixed schedule ($P < 0.05$). Therefore, the first part of the hypothesis was accepted; in the second part (regarding the association between shift work and burnout subscales); only the sense of having a reduced personal accomplishment was accepted.

4.4. Hypothesis 4

The results showed that the mean scores of staff nurses for total burnout and depersonalization ($P < 0.05$) were higher than those of supervision nurses. Therefore, this hypothesis was rejected.

4.5. Hypothesis 5

All burnout scores (total scores and subgroup scores) were higher for the nurses who worked in internal wards compared with those from all other wards (Emergency, CCU and ICU, surgery, and others). Total burnout was found to be statistically significant ($P < 0.05$). Therefore, hypothesis 5 was rejected.

4.6. Hypothesis 6

All of the burnout scores (total scores and subgroup scores) were higher in governmental hospitals compared to private hospitals and were also all statistically significant except for depersonalization and reduced personal accomplishment ($P < 0.05$). Therefore, hypothesis 6 was accepted.

5. Discussion

The goal of this study was to evaluate the association between some main demographic features and job characteristics with burnout in 371 nurses employed at governmental and private hospitals. The results showed that increasing age and more work experience led to a reduced sense of personal accomplishment, although increasing age also represents increasing work experience (years). There was a close relationship between more work experience and social capital in nurses' work environment as well as between their age and work experience. Therefore, increasing age was associated with the hospital's social and bureaucratic capital. Older nurses are more experienced and generally have more accomplishments. Accordingly, they achieve most of their objectives but may also suffer from a higher level of burnout. This finding was confirmed by another study (28); it was also shown that young nurses need more opportunities for development (29).

Regarding work experiences, the middle-aged group that had 6 - 15 working years demonstrated significantly higher levels of emotional exhaustion. This type of exhaustion is a general reaction to stress and is perceived as a feeling of pressure and also a lack of emotional resources. According to its definition, emotional exhaustion represents an endless state of physical and emotional fatigue that results from intemperate occupation, unsatisfied individual needs, and/or relentless stress (30). It also depicts a tendency to be sincerely overextended and depleted by one's work, which is evidenced by both physical weakness and a feeling of mental exhaustion and inward depletion (31). Because emotional exhaustion is related to work pressures and especially one's history of work experience, middle-aged nurses with 6 - 15 years of work experience often face fatigue due to work pressure. Nurses with fewer than five years of work experience are more vigorous, but by the time they enter their sixth year, they are often confronting both physical and psychological problems associated with work pressure or overload, signaling the start of emotional exhaustion. Nurses from 22 - 27 years of age with five years of valued work experience and overload shifts possess high energy with little exhaustion. On the other hand, middle-aged nurses who have had to work for many years report

Table 1. Association Between Demographic Variables and Burnout^a

Value	Emotional Exhaustion	Depersonalization	Reduced Personal Accomplishment	Burnout
Age, y				
20 - 29	24.31 ± 13.00	7.26 ± 6.53	20.13 ± 10.40	51.74 ± 21.53
30- 39	27.86 ± 13.46	7.16 ± 6.30	18.06 ± 9.46	53.09 ± 21.16
More than 40	26.74 ± 12.11	6.02 ± 6.38	16.13 ± 8.55	48.89 ± 19.70
P value	0.056	0.495	0.027	0.502
Sex				
Male	28.20 ± 11.57	8.39 ± 6.51	17.46 ± 8.63	54.06 ± 18.30
Female	25.47 ± 13.19	6.76 ± 6.25	19.02 ± 10.04	51.26 ± 21.50
P value	0.150	0.076	0.280	0.362
Education				
Completed high school	27.03 ± 14.14	7.75 ± 7.59	18.19 ± 10.00	52.97 ± 21.36
Bachelor's degree	25.78 ± 12.93	7.00 ± 6.32	18.77 ± 9.85	51.56 ± 21.14
Master's degree	29.67 ± 13.59	6.86 ± 5.47	19.19 ± 9.99	55.71 ± 19.74
P value	0.382	0.795	0.925	0.651
Marital status				
Married	26.65 ± 12.43	7.06 ± 6.24	18.36 ± 9.56	52.07 ± 20.68
Single	25.31 ± 13.92	7.05 ± 6.50	19.88 ± 10.18	51.65 ± 21.68
P value	0.3338	0.988	0.383	0.853
Work experience, y				
≤ 5	24.13 ± 13.14	7.23 ± 6.84	20.64 ± 6.70	20.04 ± 21.09
6 - 15 (middle group)	28.16 ± 13.21	7.22 ± 6.15	17.59 ± 9.92	52.96 ± 21.77
> 15	25.51 ± 11.79	6.02 ± 5.05	17.53 ± 9.25	49.06 ± 19.39
P value	0.026	0.452	0.014	0.525

^aValues are expressed as mean ± SD.

diminished energy and suffer from emotional exhaustion due to their state of work overload.

Despite this connection, nurses with more than 15 years of work experience who work five or sometimes six morning shifts per week in “easy” wards, such as general surgery, did not exhibit significant exhaustion. In addition, other researchers have identified a significant relationship between all dimensions of burnout and work overload among nursing educators (32-34). Furthermore, the feeling of having work overload has been shown to be associated with psychiatric disorders (35). Finally, middle-aged nurses also suffer from a loss of energy and emotional exhaustion that could be the result of past work overload, which is contrary to the findings of Erickson and Grove, who showed younger nurses experienced more emotional stress than seasoned nurses (36).

Regarding work experience and a reduced sense of personal accomplishment, (Table 1) reveals that nurses with

less than five years of work experience and those who serve as staff nurses have low feelings of personal accomplishment. This is because they are unable to promote themselves by grasping opportunities due to an unfamiliarity with bureaucratic and workplace statuses, a finding confirmed by other studies (28).

The association between fixed and rotating shifts with job burnout showed that nurses on rotating shifts, especially those with less than 10 years of work experience, reported more overall burnout and also reduced feelings of personal accomplishment than those with regular shifts. The nurses on rotation have more shifts than nurses on regular duties. In addition, nurses who work a regular shift in this study were usually on the morning shift. This finding is in agreement with those of Jamal and Baba (37), Glazer (38), and Krausz and Koslowsky (39) and in contrast to the study of Sahraian et al. (40), who reported that nurses with regular schedules have more burnout than nurses on ro-

Table 2. The Association Between job Characteristics and Job Burnout^a

Value	Emotional Exhaustion	Depersonalization	Reduced Personal Accomplishment	Burnout
Rotating shift work				
Fixed	23.83 ± 12.25	5.93 ± 4.45	16.35 ± 9.53	46.11 ± 18.68
Rotating	26.50 ± 13.23	7.33 ± 6.48	19.23 ± 9.86	53.07 ± 21.31
P value	0.167	0.136	0.048	0.025
Status at work				
Staff	26.64 ± 13.21	7.35 ± 6.52	19.35 ± 9.83	53.36 ± 21.28
Supervisor	23.61 ± 11.47	5.41 ± 4.44	17.04 ± 9.51	46.05 ± 17.60
P value	0.109	0.033	0.104	0.016
Ward type				
Emergency	26.10 ± 13.22	7.12 ± 6.61	18.67 ± 9.71	51.90 ± 22.69
ICU or CCU	24.88 ± 13.33	6.79 ± 6.29	18.85 ± 9.98	50.53 ± 20.63
Internal medicine	31.90 ± 11.86	9.49 ± 7.08	22.33 ± 9.86	63.72 ± 20.33
Surgery	26.66 ± 12.06	6.69 ± 6.25	17.03 ± 9.32	50.38 ± 19.32
Other ward	26.20 ± 16.27	7.90 ± 6.35	19.00 ± 10.76	53.10 ± 27.70
P value	0.055	0.179	0.082	0.009
Hospital type				
Governmental hospital	27.06 ± 13.32	7.22 ± 6.30	19.27 ± 9.88	53.56 ± 21.56
Private hospital	23.21 ± 11.75	6.68 ± 6.66	17.14 ± 9.58	47.03 ± 19.76
P value	0.014	0.486	0.073	0.010

^aValues are expressed as mean ± SD.

tating shifts. The discrepancy between the results can be explained in terms of differences in workplaces. Our study was carried out in all wards of hospitals, whereas the other study was conducted only in ICU units. Nurses who work a regular shift in the ICU may suffer from high emotional burnout, but generally, however, those who work rotating shifts in other wards experience more exhaustion.

Regarding the status of work, the results showed that depersonalization and total burnout in staff nurses are more significant than in supervision nurses. This condition can be explained by two reasons: 1. Staff nurses carry the main responsibility and often work without any sense of personal accomplishment. 2. Some of them expect to operate in a supervisory capacity but instead serve as staff nurses due to a lack of meritocracy. On the other hand, as staff nurses also have more direct contact with patients than their supervisors and provide most of the nursing care, they exhibit increasing levels of total burnout. This outcome was confirmed by the findings of a study carried out by Leiter and Laschinger (41), who showed that staff nurses experienced more emotional exhaustion. It was also shown that burnout increases with age, and staff

members with little work experience in nursing display lower levels of burnout (42), which was consistent with our results.

As for the type of ward and its association with the total and subscales of burnout, the scores were higher for nurses on internal wards compared to other wards. Contrary to the belief that nurses in the emergency, CCU, or ICU departments demonstrate higher burnout, our findings showed that the level of burnout was higher among nurses in internal medicine departments who care for elderly patients with chronic illnesses, such as cerebrovascular accident, cancer, rheumatological disorders, and acquired immunodeficiency syndrome. Some of these patients are bedridden and need extensive nursing care. On the other hand, other patients are admitted for weeks or months, and their care may lead to emotional exhaustion. Some nurses in internal medicine departments have worked for 10 years or more and thus experience a higher amount of burnout. These conclusions are not in agreement with the findings of other studies (43, 44), which showed that nurses in psychiatric wards suffer more burnout than those in other types of hospital wards. The participants

in this study were mainly recruited from an internal medicine group except for four who came from psychiatric departments. As previously pointed out, nurses from internal medicine wards were more vulnerable to burnout, which was a different finding than the results of another study that indicated nurses that did not work in ICUs exhibited less burnout (39).

Finally, studies on the extent of burnout in nurses from both private and governmental hospitals showed that nurses who work in governmental hospitals experience more emotional exhaustion and total burnout compared to those employed at private hospitals, which was a clear indication of the higher work overload that is present in governmental hospitals. According to the health sector evolution plan (HSEP), which began in 2014, the amount of work overload was significant in governmental hospitals; it also leads to higher levels of emotional exhaustion and increasing rates of burnout, a reality associated with anxiety and job dissatisfaction (13) and therefore an area that deserves further investigation.

5.1. Conclusion

The results of this study showed that nurses in internal medicine wards, on rotating shifts, and at governmental hospitals had a high rate of total burnout. In contrast, nurses with fewer than five years of work experience reported high levels of reduced personal accomplishment; those with 6-15 years of working experience demonstrated a high amount of total emotional exhaustion. Therefore, it is suggested that the concerned authorities should develop appropriate plans to change nurses' work schedules, especially on internal medicine wards and for rotating shifts and staff nurses. In addition, there is also a need to promote the personal accomplishments of nurses with less than five years of work experience and to address emotional exhaustion in those with 6-15 years of nursing. Finally, at a higher level, healthcare policymakers should devote more attention to reducing nursing burnout in governmental hospitals.

Footnote

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