

Job Related Burnout among Emergency Physicians and Nurses in Dammam City, Saudi Arabia

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Abstract

Background: Burnout has been related with physical assault especially among health care experts and unit staff who are more in danger of encountering distressing occasions.

Objectives: To assess prevalence of burnout among Emergency Department (ED) staff in Dammam City, Saudi Arabia, and to assess the potential associated factors.

Methods: A cross-sectional study was conducted in EDs in 3 public hospitals in Dammam during the period from April to July 2019.

Results: Most participants suffered from high level burnout for depersonalization and low personal achievement. Burnout was found among 76% of them. Male gender, being married or divorced, poor relationships with colleagues, suffering from psychiatric disorders and having less rest days were significantly associated with higher levels of burnout among the study subjects.

Conclusions: Most physicians and nurses working at emergency hospitals in Dammam City, Saudi Arabia, had burnout disorder, especially high compassion fatigue and low personal achievement.

Key words: Burnout, Emergency rooms, Physicians, Nurses, work execution, conflict

Background

Burnout is “a disorder of compassion weariness, depersonalization, and decreased individual achievement that can happen among people who work among groups and help others” and it alludes to a contrary outcome of chronic and incessant work pressure (1). Burnout has been related with physical ambushing especially among health care experts and unit staff who are more in danger of encountering distressing occasions (2). Patient’s pain and passing, uncooperative conduct of the patient, irrational requests, problematic patients, trouble with organization and absence of passionate help from colleagues and other staff members were viewed as potential stressors (3, 4).

For example, in Dammam, there are around a million people and contrasted with the quantity of emergency rooms for only three hospitals i.e., King Fahad University Hospital; Maternity and Children Hospital; and Dammam Center Hospital (5). The congestion of ED has different impacts as putting the patient in danger and poor outcomes, diminished doctor’s profitability, expanded dissatisfaction among medicinal staff, and causing burnout (6).

A cross-sectional study n was held in the emergency medical hospital of University of Tanta, Egypt in 2015, and shows that age, recurrence of presentation to brutality and cruelty at work, long experience, work load, supervision and work exercises were huge indicators of burnout disorder 66% (7). In different cross-sectional studies dependent on a survey directed in a college in Niš in 2016, focusing on ED doctors and medical caretakers, argues that the personal factors in adapting to work pressure altogether diminish the burnout disorder (8). The presentation of savagery in the workplace is related with burnout in ED staff 64% (9). Diminished requests and increment of labourers’ autonomy over their activities lessens the burnout disorder (10). Burnout disorder influences the execution of work adversely (11).

Also, a cross-sectional review study demonstrated that feeble logic because of business related pressure can influence the presentation of burnout adversely (12). Multilevel relapse examination study showed that the atmosphere and lack of cooperation among collaborators are considered hazard factors of burnout disorder (13).

This study aimed at assessing of the prevalence of burnout among ED staff in Dammam and assessing the potential associated factors.

Methods

Study design and sample:

A cross-sectional study was conducted in Emergency Departments in governmental hospitals in Saudi Arabia including Qatif central hospital in Dammam, and Dammam central hospital and Maternity and children in Dammam from April to July 2019. These hospitals are the main providers of emergency and trauma service in Dammam, Saudi Arabia (KSA).

Study population and sample size:

The targeted population included all ED physicians and nursing staff in Dammam City, Saudi Arabia. The inclusion criteria were all doctors and nurses of ED staff in the governmental hospitals who have been working for more than one year. Those who had experience of less than one year in the ED, trainees, physicians and nurses who are working in administration or those who work in ED in private hospitals were excluded.

Sampling:

All Doctors and nurses working in the ED in the targeted hospitals were approached with a questionnaire sheet to cover the calculated required minimum sample size which is 104. The total number of ED physicians and nurses in the targeted hospitals is 150. The sample size was calculated by the Epi-Info Software, based on 95% level of significance, assuming that the prevalence of stress and burnout among ED physicians and nurses is 64.1% with accepted margin error 5%.

Study tools and data collection:

The questionnaire was developed after reviewing relevant literature by searching several medical databases, e.g., Science Direct, Scopus, PubMed. The questionnaire was reviewed and validated by three experts then the data were collected. Data were collected by visiting the hospitals 5 days per week until all staff were covered, by using a self-administered questionnaire after obtaining the acceptance from the administration to distribute the questionnaire to all ED doctors and nurses. The questionnaires were completed and returned to data collectors in the same session. This questionnaire covered the sociodemographic characteristics (age (in years), gender (male and female), marital state (married, single, divorced, widowed), occupation (nurse, doctors), and job details (workload per shift [how many patients seen by each doctor/nurse], number of shifts per month, number of off-days between shifts (1, 2 or 3), years of experience, professional responsibilities (residents, specialist or consultant for physicians) and (head nurse or nurse for nurses), previous exposure to workplace violence (physical or verbal) and job satisfaction (relation with colleagues [excellent, very good, good, or poor], relation with supervisor (excellent, very good, good, or poor) and bullying from colleagues or supervisors (yes, no).

Burnout was measured through the Maslach Burnout Inventory (MBI). The MBI measures burnout using 22 items grouped in three scales: emotional exhaustion (9 items), depersonalization (5 items) and reduced personal accomplishment (8 items). Emotional exhaustion measures feelings of being emotionally exhausted; depersonalization measures the development of negative attitudes toward the recipients; and personal accomplishment measures feelings of successful achievement. Participants were asked to answer the MBI items based on how often they experience these feelings on a 7-point Likert scale ranging from 0 (never) to daily (6) with possible sum scores of burnout, ranging from 0 to 132.

Ethical approval:

The ethical committee of faculty of medicine and the 3 included hospitals approved the study and the questionnaire sheet. A written informed consent was provided from the participants included in the study.

Statistical analysis:

The data processing was done using the Statistical Package for Social Sciences (SPSS, version 22).

Results

Demographics of the studied subjects:

Table (1) shows distribution of the studied group regarding basic characteristics. Dc hospital was 55 (52.9%) and Dm hospital was 49 (47.1%). Males were 58 (55.8%) and females were 46 (44.2%). Regarding nationality, Saudi was higher with 76 (73.1%) and non-Saudi was 28 (26.9%). Married cases were higher with 76 (73.1%) followed by single cases with 22 (21.2%). Regarding professional levels, resident (physician) was higher with 50 (48.1%) followed by diploma and specialist (nurse) with the same ratio 19 (18.3%). According to occupation, physician was higher with 67 (64.4%) followed by nurse with 34 (32.7%) and head nurse with 3 (2.9%). Number of off days between shifts was 1 in 51 (49%) cases while it was 2 and above in 53 (51%) cases. Regarding exposure to work related violence, verbal was higher with 70 (67.3%). Cases have been subjected to bullying, harassment in the last 12 months while the same number of cases have not with 52 (50%). Relations with supervisor were good in 38 (36.5%) cases, very good in 33 (31.7%) cases, excellent in 25 (24%) cases and poor in 8 (7.7%) cases. Relations with colleagues was excellent in 51 (49%) cases, very good in 35 (33.7%) cases, good in 16 (15.4%) and poor in 2 (1.9%) cases. Regarding income per month, from 10000 SR and 20000 SR was in 61 (58.7%) cases, up to 10000 SR was in 19 (18.3%) cases, from 20000 SR and 30000 SR was in 10 (9.6%) cases, from 30000 SR and 40000 SR and above 40000 SR was 7 (6.7%). Cases diagnosed with any psychiatric disorder were 15 (14.4%) and cases who were not diagnosed were 89 (85.6%).

Disorders among participants:

Table (2) shows the distribution of participants regarding their psychiatric disorders. Regarding emotional exhaustion, low level of burnout was found among 45 (43.3%) cases, followed by high level of burnout with 33 (31.7%) and moderate burnout were 26 cases (25%). Depersonalization was high in 55 (52.9%) cases, moderate in 31 (29.8%) cases and low in 18 cases (17.3%). Personal achievement was high in 54 (51.9%), low in 29 (27.9%) and moderate in 21 cases (20.2%). Burnout cases were higher (79, 76%), while non-burnout cases were 25 (24%).

Distribution of the studied group regarding burnout is shown in Figure 1.

Table (3) shows relation between incidence of burnout and different studied variables. A total of 42 participants in Dammam Central Hospital had burnout (53.2%), compared with 37 participants in Dammam Maternity and Children's Hospital (46.8%). Age of healthcare workers (HCW) without burnout ranged from 25-54 with mean value 31.84-6.216 and age with burnout ranged from 24-50 with mean value 32.78-5.952. Family size of HCW without burnout ranged from 0-8 with mean value 4.08-1.869 and family size with burnout ranged from 0-12 with mean value 3.50-2.069. Years of work experience without burnout ranged from 1-25 with mean value 6.48-5.009 and with burnout ranged from 1-22 with mean value 7.06-5.429. There was no statistically significant difference between incidence of burnout and demographic data ($P > 0.05$). Numbers of shifts per month in the last 6 months without burnout ranged from 17-26 with mean value 20.24-2.728 and family size with burnout ranged from 2-28 with mean value 18.67-4.760. Numbers of patients seen per shift by HCW without burnout ranged from 5-210 with mean value 57.36-62.909 and family size with burnout ranged from 1-300 with mean value 57.29-54.930. There was a statistically significant difference regarding numbers of patients seen per shift in relation to burnout ($P < 0.05$). There was a statistically significant difference regarding diagnosed with any psychiatric disorder in relation to burnout ($P < 0.05$).

Logistic regression analysis:

Entering type of job, sex, marital status, relation with colleagues and days of rest between shifts as potential associated risk factors for burnout among HCW, the only statistically significant independent factors were, being married in reference to single Odds ratio (OR), 95% CI: 5.58 [1.5, 20.7] and 1 day rest in reference to 2 or more OR, 95% CI=4.16 [1.14, 15.1].

Table 1: Demographics' and work characteristics of included subjects

| | No. | % |
|---|-----|------|
| Hospital | | |
| • Dammam central hospital | 55 | 52.9 |
| • Dammam Maternity and Children hospital | 49 | 47.1 |
| Sex | | |
| • Male | 58 | 55.8 |
| • Female | 46 | 44.2 |
| Nationality | | |
| • Saudi | 76 | 73.1 |
| • Non-Saudi | 28 | 26.9 |
| Marital status | | |
| • Married | 76 | 73.1 |
| • Single | 22 | 21.2 |
| • Divorced | 6 | 5.8 |
| Professional level | | |
| • Diploma (nurse) | 19 | 18.3 |
| • Specialist (nurse) | 19 | 18.3 |
| • Resident (physician) | 50 | 48.1 |
| • Specialist (physician) | 11 | 10.6 |
| • Consultant (physician) | 5 | 4.8 |
| Occupation | | |
| • Physician | 67 | 64.4 |
| • Head nurse | 3 | 2.9 |
| • Nurse | 34 | 32.7 |
| Numbers of off days between shifts | | |
| • 1 | 51 | 49.0 |
| • ≥ 2 | 53 | 51.0 |
| Exposure to work related violence | | |
| • Verbal | 70 | 67.3 |
| • Verbal and physical | 15 | 14.4 |
| • Nil | 19 | 18.3 |
| You have been subjected to bullying, harassment in the last year | | |
| • Yes | 52 | 50.0 |
| • No | 52 | 50.0 |
| Relations with supervisor | | |
| • Excellent | 25 | 24.0 |
| • Very good | 33 | 31.7 |
| • Good | 38 | 36.5 |
| • Poor | 8 | 7.7 |
| Relations with colleagues | | |
| • Excellent | 51 | 49.0 |
| • Very good | 35 | 33.7 |
| • Good | 16 | 15.4 |
| • Poor | 2 | 1.9 |
| Income per month | | |
| • Up to 10000 SR | 19 | 18.3 |
| • >10000 – 20000 SR | 61 | 58.7 |
| • >20000-30000 SR | 10 | 9.6 |
| • >30000-40000 | 7 | 6.7 |
| • >40000 SR | 7 | 6.7 |
| Diagnosed with any psychiatric disorder | | |
| • Yes | 15 | 14.4 |
| • No | 89 | 85.6 |

Table 2: Distribution of the participants according to their burnout

| | No. | % |
|-----------------------------|-----|------|
| Emotional exhaustion | | |
| • Low level burnout | 45 | 43.3 |
| • Moderate burnout | 26 | 25.0 |
| • High level burnout | 33 | 31.7 |
| Depersonalization | | |
| • Low level burnout | 18 | 17.3 |
| • Moderate burnout | 31 | 29.8 |
| • High level burnout | 55 | 52.9 |
| Personal achievement | | |
| • Low level burnout | 29 | 27.9 |
| • Moderate burnout | 21 | 20.2 |
| • High level burnout | 54 | 51.9 |
| Burnout | | |
| • Absent | 25 | 24.0 |
| • Present | 79 | 76.0 |

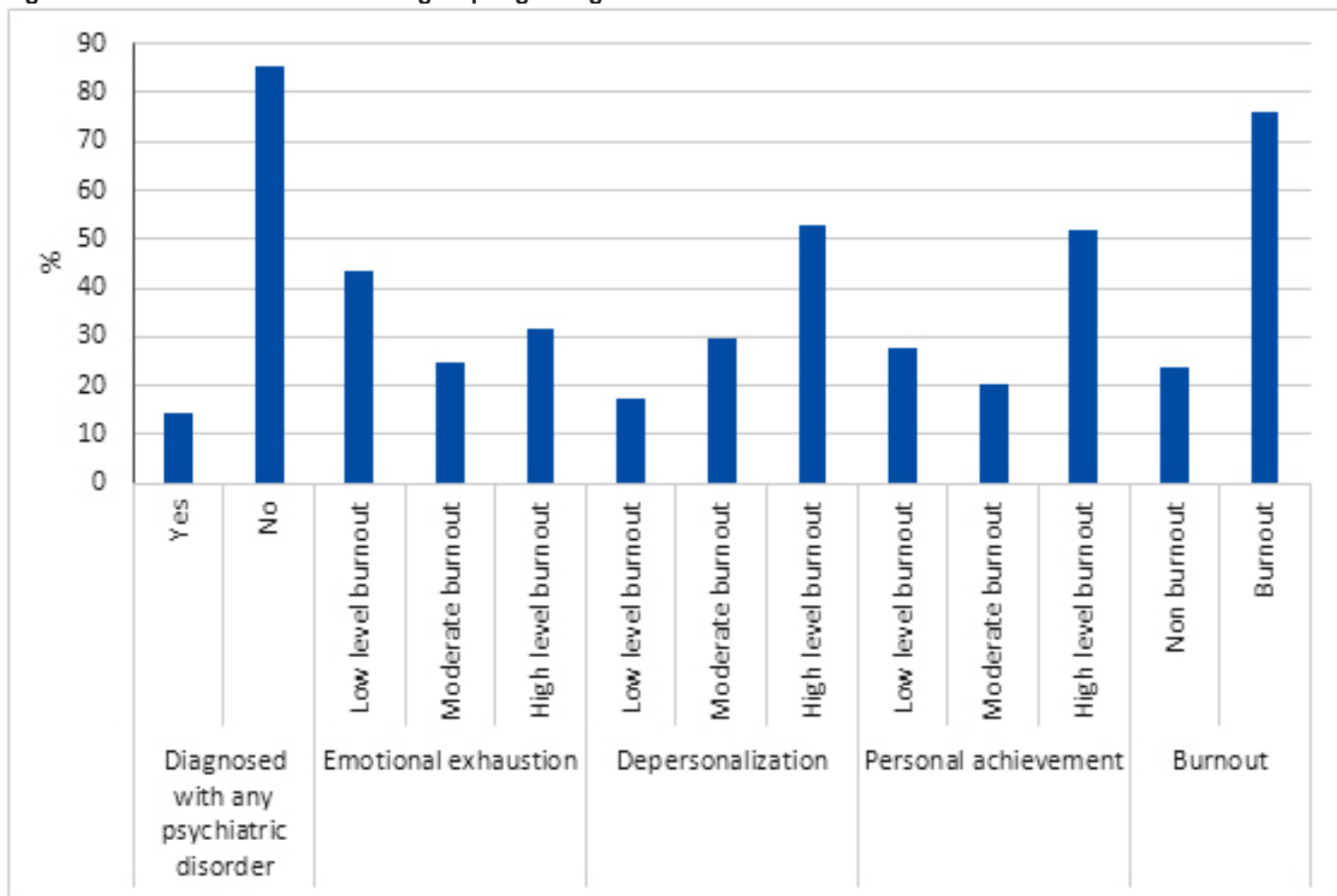
Figure 1: Distribution of the studied group regarding burnout

Table 3: Relation between incidence of burnout and potential associated factors

| | Burnout | | | | Test statistic P-value |
|---|---------|------|---------|-------|---------------------------|
| | Absent | | Present | | |
| | No. | % | No. | % | |
| Hospital | | | | | 0.010 |
| • Dammam central hospital | 13 | 23.6 | 42 | 76.4 | 0.550 |
| • Dammam Maternity & Children hospital | 12 | 24.5 | 37 | 75.5 | |
| Sex | | | | | 3.318 |
| • Male | 10 | 17.2 | 48 | 82.8 | 0.049* |
| • Female | 15 | 32.6 | 31 | 67.4 | |
| Nationality | | | | | 0.431 |
| • Saudi | 17 | 22.4 | 59 | 77.6 | 0.339 |
| • Non-Saudi | 8 | 28.6 | 20 | 71.4 | |
| Marital status | | | | | 8.541 |
| • Married | 13 | 17.1 | 63 | 82.9 | 0.036* |
| • Single | 10 | 45.5 | 12 | 54.5 | |
| • Divorced | 2 | 33.3 | 4 | 67.7 | |
| Professional level | | | | | 0.867 |
| • Diploma (nurse) | 4 | 21.1 | 15 | 78.9 | 0.929 |
| • Specialist (nurse) | 4 | 21.1 | 15 | 78.9 | |
| • Resident (physician) | 14 | 28.0 | 36 | 72.0 | |
| • Specialist (physician) | 2 | 18.2 | 9 | 81.8 | |
| • Consultant (physician) | 1 | 20.0 | 4 | 80.0 | |
| Occupation | | | | | 4.111 |
| • Physician | 16 | 23.9 | 51 | 76.1 | 0.250 |
| • Head nurse | 0 | 0.0 | 3 | 100.0 | |
| • Nurse | 9 | 26.5 | 25 | 73.5 | |
| Numbers of off days between shifts | | | | | 1.076 |
| • 1 | 10 | 19.6 | 41 | 80.4 | 0.210 |
| • ≥2 | 15 | 28.3 | 38 | 71.7 | |
| Exposure to work related violence | | | | | 4.549 |
| • Verbal | 21 | 30.0 | 49 | 70.0 | 0.103 |
| • Verbal and physical | 1 | 6.7 | 14 | 93.3 | |
| • Nil | 3 | 15.8 | 16 | 84.2 | |
| Subjected to bullying, harassment in the last year | | | | | 2.580 |
| • Yes | 9 | 17.3 | 43 | 82.7 | 0.084 |
| • No | 16 | 30.8 | 36 | 69.2 | |
| Relations with supervisor | | | | | 4.550 |
| • Excellent | 7 | 28.0 | 18 | 72.0 | 0.208 |
| • Very good | 6 | 18.2 | 27 | 81.8 | |
| • Good | 12 | 31.6 | 26 | 68.4 | |
| • Poor | 0 | 0.0 | 8 | 100.0 | |

Table 3: Relation between incidence of burnout and potential associated factors (contiued)

| | | | | | |
|--|----|------|----|-------|-----------------|
| Relations with colleagues | | | | | |
| • Excellent | 18 | 35.3 | 33 | 64.7 | 7.855 0.049* |
| • Very good | 6 | 17.1 | 29 | 82.9 | |
| • Good | 1 | 6.3 | 15 | 93.8 | |
| • Poor | 0 | 0.0 | 2 | 100.0 | |
| Income per month | | | | | |
| • Up to 10000 SR | 4 | 21.1 | 15 | 78.9 | 4.710 0.318 |
| • >10000 – 20000 SR | 13 | 21.3 | 48 | 78.7 | |
| • >20000-30000 SR | 2 | 20.0 | 8 | 80.0 | |
| • >30000-40000 | 4 | 57.1 | 3 | 42.9 | |
| • >40000 SR | 2 | 28.6 | 5 | 71.4 | |
| Diagnosed with any psychiatric disorder | | | | | |
| • Yes | 0 | 0.0 | 15 | 100.0 | 5.547 0.011* |
| • No | 25 | 28.1 | 64 | 71.9 | |

Figure 2: Distribution of participants regarding their burnout level and their relations with colleagues

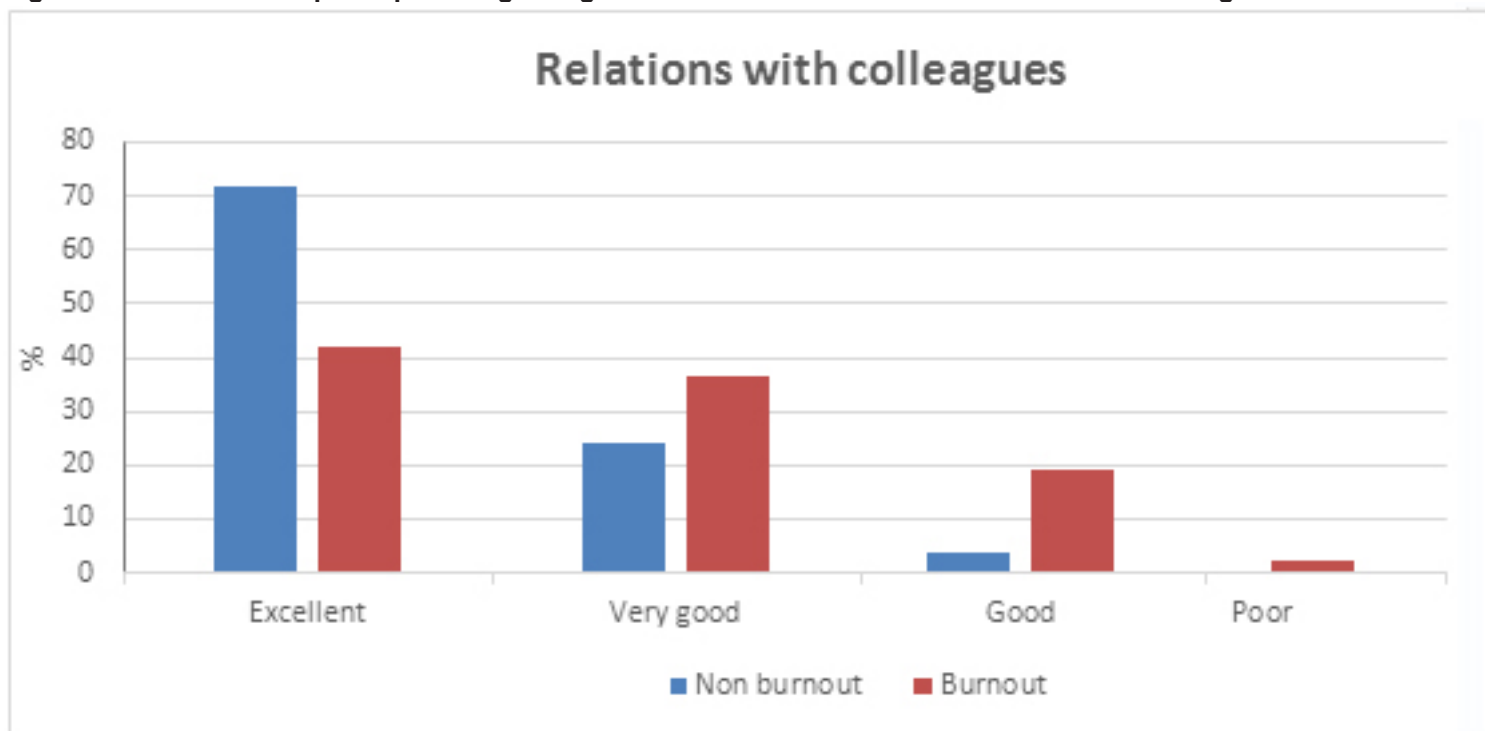


Table 4: Multiple logistic regression analysis of different independent risk factors associated with burnout

| | B | S.E. | Wald | df | Sig. | OR | 95% CI for OR | |
|--------------------------------------|-------|-------|-------|----|------|--------|---------------|--------|
| | | | | | | | Lower | Upper |
| Single | | | 7.148 | 2 | .028 | | | |
| Married | 1.720 | .669 | 6.615 | 1 | .010 | 5.583 | 1.506 | 20.704 |
| Divorced | -.407 | 1.129 | .130 | 1 | .718 | .665 | .073 | 6.082 |
| 1 day rest in reference to 2 or more | 1.426 | .657 | 4.708 | 1 | .030 | 4.163 | 1.148 | 15.101 |
| Female gender | -.815 | .687 | 1.406 | 1 | .236 | .443 | .115 | 1.702 |
| Shifts/month | -.132 | .073 | 3.231 | 1 | .072 | .877 | .759 | 1.012 |
| Doctors in reference to nurses | -.733 | .692 | 1.121 | 1 | .290 | .481 | .124 | 1.865 |
| Poor relations with colleagues | 1.878 | 1.111 | 2.855 | 1 | .091 | 6.540 | .741 | 57.748 |
| Constant | 3.899 | 1.791 | 4.736 | 1 | .030 | 49.339 | | |

Discussion

Occupation-related burnout is acknowledged as a difficult issue influencing a few groups of individuals related with the medical services industry where they experience the negative effects, diminishing their activity, and quality of life (14). Remembering this, it is imperative to unmistakably distinguish hierarchical stressors that are identified with employment burnout so as to support and encourage methodologies coordinated as a counteractive action and prevention (15).

Most of our participants suffered from low level burnout for emotional exhaustion, high level burnout for depersonalization and low personal achievement, thus the overall burnout between the study members was found among 76% of them. Higher results were found in a recent study concluding the contrasting burnout among various experts working under ED and showed a general frightening figure of 75.6% high compassion depletion, 84.4% high depersonalization, and 56.8% respondents had low personal achievement (16). Another study showed that Doctors expressed higher compassion and subjective burdens when contrasted with medical nurses. The two groups had high tangible requests and duties at work, regardless of the low level of their self-rule. The importance of work, duty to the work environment, and instability at work were high for the two groups thus increasing the burnout level (8).

In disagreement with our study, a study in India showed that enthusiasm depletion and burnout level were typically low; the respondents scored a general moderate degree of depersonalization and moderate to low personal achievement. The sceptical and lack of concern disposition might be reflected by the steady interaction with a high volume of patients just as managing hazardous conditions more often than not. ED likewise experience the negative effects of extensive carelessness from the emergency clinic executives as for framework and workplace arrangement. With expanding consciousness of people in general and their developing requests for crisis social insurance, the staff in ED constantly move toward becoming demotivated towards work, prompting a feeling of diminished individual achievement (14).

The male gender, being married or divorced, poor relationships with colleagues, suffering from psychiatric disorders and having less rest days were significantly associated with higher levels of burnout among the study subjects. In the same respect, a study showed that male sex, having history of smoking and admission of medications for rest issue, were altogether connected with higher danger of burnout among emergency staff (17). However, different investigations revealed that females were at higher danger of burnout contrasted with males in ER divisions (18, 19).

Other studies announced in their survey that both work related issues and non-business related components such as age, sex, and lifestyle are related with burnout (20).

Howlett and others inferred that task-situated adapting was related to diminished danger of burnout, while feeling focused adapting was related to expanded risk and negative effects of burnout (21). Also, other factors related with burnout among female emergency crisis nursing staff were absence of learning and aspiration for expert advancement (22). Another study found that more youthful (≤ 25 years), female, non-Saudi, low experienced, working more hours, and accessible if the need arises crisis doctors working at Makkah, Riyadh, and Jeddah Saudi urban communities were bound to express high compassion weariness contrasted with others (23). In Turkey (2016), age, sexual orientation, and monetary prosperity were all noteworthy indicators for burnout among emergency crisis staff (16).

Conclusions

An large number of doctors and medical nurses working at crisis branches of emergency hospitals in Dammam had burnout disorder, especially high compassion fatigue and low personal achievement.

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