Prevalence of burnout syndrome and its related risk factors among physicians working in primary health care centers of the Ministry of Health, Al Ahsa region, Saudi Arabia, 2018–2019

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ABSTRACT

Burnout syndrome (BS) is a relatively common occupational problem. It is a psychological and behavioral syndrome described by three dimensions: emotional exhaustion (EE); depersonalization (DP); and low personal accomplishment (PA). Objectives: This study aims to calculate the prevalence of BS and its related risk factors among physicians of primary health care centers (PHCCs) of the Ministry of Health (MOH, Al Ahsa, Saudi Arabia. Materials and Method: A cross-sectional study was conducted in which 280 physicians working in PHCCs were selected as a comprehensive sample, the response rate was 80.7%. We excluded the trainee of residency programs, interns, and hospital physicians providing partial service in PHCCs. The data was collected using two-part self-administered questionnaire including sociodemographic data, working conditions, and Maslach Burnout Inventory™-Human Services Survey for Medical Personnel—MBI-HSS (MP). This data was analyzed using Statistical Package for Social Sciences (SPSS) program. Results: The mean score for EE was 24.99 ± 11.54 SD. The mean score for DP was 9.19 ± 6.13 SD. For PA, it was 29.41 ± 9.9 SD. The percentage of participants who scored high in EE was 47.3%. About one-half of the participants scored high DP and 59.7% had diminished PA. About one-quarter of the participants (24.3%) scored high burnout in all three dimensions. High EE was present in ages from 35 to 45 years, Saudi participants, rotating or covering physicians, and participants who were satisfied with their job. High DP was seen in Saudi physicians, family physicians, rotating or covering physicians, those who were not satisfied with their job, and physicians who work in rural areas. Low PA was seen in physicians who were not satisfied with their job, rotating or covering physicians, participants who do not have tasks other than clinical work, and physicians who work in Omran sector. Conclusion: There is a significant level of burnout among physicians working in PHCCs in Al Ahsa. High burnout was associated with some risk factors. Further research is needed to study this problem in depth.

Keywords: Burnout, physicians, primary health care

Introduction

Burnout syndrome (BS) is a relatively common occupational problem. It has a wide range of symptoms including exhaustion, frustration, anger, and negative attitudes toward work and patients. It is a psychological and behavioral syndrome described by three dimensions: emotional exhaustion (EE); depersonalization (DP); and low personal accomplishment (PA). EE appears when a professional feels drained, emptied, or consumed. DP surfaces when an employee loses the feeling of his/her own identity in relation to others in his/her work, while PA appears as a lack of efficacy.

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Generally, BS results from prolonged exposure to chronic stressors in the workplace,[3] but there are many organizational factors that contribute to burnout including excessive workload, inadequate rewards, and poor interpersonal relationships. Health care professionals such as physicians and nurses are more prone to develop BS because they deal with emotionally demanding situations and are exposed to clients’ psychosocial problems.[4]

BS has been shown to have adverse outcomes on occupational indicators such as job performance, job satisfaction, frequent absence, and staff turnover.[8] Moreover, BS symptoms have been linked to different types of mental and physical problems such as depression, insomnia, and gastrointestinal problems.[8]

The satisfaction of physicians in an organization will help with the retention of staff, saving the huge cost of staff and physician turnover.[7] Attention to physician’s well-being encourages patient safety and decreases the probability of errors.[8]

Primary health care centers (PHCCs) are an essential part of the health care system. They provide comprehensive services including disease prevention, management, treatment, and rehabilitation. Health care providers should be competent, effective, and motivated to provide high-quality care.[9]

Employees who work in a stressful environment are more prone to burnout. Physicians and other health care providers work in a stressful environment because they have to take care of their patients, and they have to react physically and emotionally to patients’ problems.[11]

It is found that burnout negatively affects the care provided to the patients by reducing empathy and other communication skills such as positive attitude and listening skills which are important parts of patient care for all physicians, especially primary care physicians.[10] Also, burnout negatively affects patient safety and it can be associated with more medical errors.[10,11] For these reasons, it is important to pay attention and study burnout and its risk factors among primary care physicians.

**Literature Review**

Physician burnout is considered to be an epidemic and it has negative effects on medical care and patient safety. It has been estimated that one in every three physicians will have burnout at any given time.[12] Throughout the previous decade, many studies have been conducted on the prevalence and risk factors of burnout among medical staff.[13-35] The extent of burnout may vary depending on the practice setting, specialty, and work environment. Some research was conducted in hospital settings,[13-15,31] while others were done in PHCCs. Burnout affects all medical staff including physicians,[16-34] nurses,[15] pharmacists,[13,34] and lab technicians.[15,35] Most of the studies used Maslach Burnout Inventory (MBI) as a research tool,[13-15,17-28] and some studies used other tools such as single-item scale for burnout[16] and Astudillo and Mendinueta questionnaire.[29]

Worldwide prevalence of burnout among PHC physicians varies from one country to another; ranging from 3.7% to 54.1%.9,16-24,36 Throughout our literature review, we found that most of the studies in the Middle East and Arab countries were done among physicians working in hospitals and[13-15,31,32] only a few studies were done in PHCCs. The prevalence of overall burnout among PHC physicians in Arab countries was ranging from 12.6% to 41.94%. High EE burnout ranges from 23.2% to 69.5%. High DP burnout ranges from 13.8% to 38.9%. Low PA burnout ranges from 18.7% to 28.5%.[23-30]

The studies done worldwide showed that BS was higher among men with DP and women with EE,[17] those with more than 5 years of working experience,[18] younger age physicians, those who have excessive hours of work, and those with job dissatisfaction.[20]

The studies done in Arab countries showed that BS was higher among female physicians,[25,26,29] younger age physicians,[25,26,29] those who worked more than 5 years,[29] unsatisfied physicians,[26] those who have fewer years of experience,[29] married, not exercising, and nonsmokers.[28]

In Saudi Arabia, a few studies were done on BS among PHC physicians.[25-27] A study was conducted in 16 PHCCs of Riyadh Military Hospital, in which 144 physicians were included. They used two questionnaires as research tools: the first questionnaire included questions regarding demographic data (age, gender, marital status, years since qualification as a doctor, years in current workplace, earning, working conditions “working hours per week, patients seen per week, night shifts, weekends worked,” intention of changing the job, sick leave utilization, sleep patterns, and smoking) as well as MBI-Human Services Survey (HSS). The results showed that 53.5% of respondents scored high for EE burnout, 38.9% for DP, and 28.5% for PA, with 2.78% scoring high burnout in all the three dimensions. They found significant associations between EE high burnout and job satisfaction (higher in unsatisfied doctors, 88.5%), intention to change job (higher in those considering changing their jobs, 80%), and age (higher in ages below 34, 65%). High DP in burnout was associated with physicians taking psychotropic drugs (80%).[26]

Another study was conducted in PHCCs in Asir province, in which 370 physicians were included. They used a self-administered questionnaire which included the MBI as well as data on the demographic and professional characteristics (i.e. age, sex, nationality, salary, qualification, specialty, years of experience after qualification, duration of work at the health facility, and the number of working days per week). Out of 370 physicians, 29.5% reported high EE, 15.7% high DP and, 19.7% low PA, with 6.3% scoring high in all the three dimensions. High EE score was associated with younger age, Saudi nationality, and salary of 15,000–20,000 SAR. Physicians who had more working days and those who had longer duration of annual vacation were less likely to report EE. High DP score was associated with Saudi nationality, working for 5–15 years, and salary >20,000 SAR. Low
PA score was associated with younger age, non-Saudi nationality, working for ≥5 years, and more annual vacation.\textsuperscript{[23]}

There was a study done in Jeddah to measure burnout of physicians working in PHCCs under the Ministry of Health (MOH). They had enrolled 246 physicians in their study. The majority of those physicians were general practitioners and family physicians (66.7% and 21.1%, respectively). Dentists and other specialties were only 12.2%. The results showed that the prevalence of burnout among the physicians working in PHCCs was 25.2%. Out of 246 physicians, 69.5% reported high EE, 26% high DP, and 12.2% for low PA.\textsuperscript{[27]}

### Objectives

**Primary (general) objectives**

To calculate the prevalence of BS and its related risk factors among physicians of PHCCs of MOH, Al Ahsa, Saudi Arabia.

**Secondary (specific) objectives**

1. To calculate the prevalence of BS among physicians of PHCCs of MOH, Al Ahsa, Saudi Arabia.
2. To study the risk factors of BS among physicians of PHCCs of MOH, Al Ahsa, Saudi Arabia.

### Materials and Methodology

**Study sitting and time**

PHCCs of MOH, Al Ahsa, Saudi Arabia

From March 2018 to August 2019.

**Study design**

Prospective analytical cross-sectional study during the specified period.

**Study population**

Physicians of PHCCs of MOH, Al Ahsa, Saudi Arabia during the specified period.

**Inclusion criteria**

All physicians of MOH PHCCs, Al Ahsa, Saudi Arabia during the specified period.

**Exclusion criteria**

Trainee of residency programs, interns, hospital physicians providing partial service in PHCCs.

**Study variables**

**Dependent variables**

Prevalence of BS.

**Independent variables**

Sociodemographic data, working conditions, MBI-HSS (MP).

### Sampling

**Sample size**

The sample size is 280 physicians.

**Sampling technique**

Comprehensive sample.

**Data collection tool and technique**

A two-part questionnaire including sociodemographic data, working conditions, and MBI-HSS (MP).

**MBI-HSS (MP):** The MBI-HSS (MP) is derived from the Human Services Survey specifically for medical personnel which is validated by the extensive research that has been conducted in more than 35 years since its initial publication.\textsuperscript{[27]}

The MBI-HSS (MP) of 22 statements of job-related feelings describing the frequency as: never; a few times a year or less; once a month or less; a few times a month; once a week; a few times a week; or every day addresses three scales as follows:

- **EE** measures feelings of being emotionally overextended and exhausted by one's work.
- **DP** measures an unfeeling and impersonal response toward patients.
- **PA** measures feelings of competence and successful achievement in one's work.\textsuperscript{[27]}

### Data management

Collecting the data from participants, coding, sorting, and storing.

**Plan for data analysis**

We used SPSS software for data entry, data analysis, and inference.

A confidence interval of 95% was chosen and the level of significance was set at <0.05 throughout the study.

The appropriate test for the appropriate variables was conducted.

The mean and standard deviation for continuous variables and frequencies (percentages) for categorical and qualitative variables were calculated.

Chi-square test: for assessment of association between categorical variables.

Univariate regression analysis was used with BS as the dependent variable and the associated risk factors as independent variables.

Student t-test for comparison between two different means used.

### Study strength

According to our literature review, it is one of the few studies done in Saudi Arabia and no similar study has been done in Al Ahsa region or eastern province.
It includes all physicians of PHCCs, MOH, and Al Ahsa.

**Results**

**Section 1: Demographic variables**

226 participants were enrolled in this study, half of them were of ages between 25 and 35 years. The subjects comprised participants with varied backgrounds. The sociodemographic variables of the study sample are shown in Table 1. The majority (88.1%) were married. Men outnumbered the women (68% vs. 32%) as shown in Figure 1. The subjects were mostly general practitioners (56.2%), followed by dentists (20.8%). The rest were from other specialties like family medicine, obstetrics and gynecology, and others [Figure 2].

Table 1 shows that about three-quarters of the participants (74.3%) were Saudis; the majority of the participants (85.8%) were residents.

In addition, one-quarter of the participants (24.8%) were working for more than 10 years in PHCCs, and 80.5% of the participants never smoked.

About two-thirds of the participants (61.1%) were earning between 10,000 and 20,000 SAR per month, and the area of working for 90.3% was urban. Two-thirds of the participants (68.6%) stated that they were fixed in one PHC, 78.4% of the participants stated that the average number of patients seen per day was less than 60 patients. One-third (33.1%) of the participants were satisfied with their job, 41.6% of the participants stated that they had tasks other than clinical work.

**Section 2: Questionnaire results**

**First: Overall score results**

Table 2 shows that the mean score for the EE part of the questionnaire was 24.99 ± 11.54 SD, for DP part it was 9.19 ± 6.13 SD, and the mean score for PA part was 29.41 ± 9.9 SD.

Table 3 shows the frequencies and percentages for the levels of each part of study questionnaire. The percentage of participants who scored high in the EE part was 47.3%, in addition, about half of the participants scored high in DP part, and 59.7% had diminished PA. About one-quarter of the participants (24.3%) scored high level of burnout in all three dimensions (high EE, high DP, and low PA).

Table 4 shows the relationship between each part of the questionnaire and demographic variables. For the EE part, a high score was seen in ages from 35 to 45 years (P = 0.023), Saudi participants got higher scores than non-Saudi participants (P = 0.004).

In addition, rotating or covering physicians got higher scores than those who were fixed in one PHC (P = 0.016), participants who got high scores were more satisfied than other participants (P = 0.0001).

For the DP part, Saudi participants got higher scores than non-Saudi participants (P = 0.018), family medicine doctors got higher scores than other specialties (P = 0.048).

In addition, rotating or covering physicians got higher scores than those who were fixed in one PHC (P = 0.0001), the participants who got high scores were not satisfied with their job (P = 0.0001), and participants who worked in rural area got higher scores than the participants who worked in urban area (P = 0.010).

### Table 1: Sociodemographic variables frequencies and percentages (n=226)

| Variables                      | Categories          | n   | Percentage |
|-------------------------------|---------------------|-----|------------|
| Age in Years                  | 25 to less than 35  | 128 | 56.6       |
|                               | 35 to less than 45  | 59  | 26.1       |
|                               | 45 to less than 50  | 26  | 11.5       |
|                               | 50 and above        | 13  | 5.8        |
| Gender                        | Male                | 154 | 68.1       |
|                               | Female              | 72  | 31.9       |
| Nationality                   | Saudi               | 168 | 74.3       |
|                               | Non-Saudi           | 58  | 25.7       |
| Marital status                | Single              | 24  | 10.6       |
|                               | Married             | 199 | 88.1       |
|                               | Widowed             | 1   | 0.4        |
|                               | Divorced            | 2   | 0.9        |
| Job title                     | Resident            | 194 | 85.8       |
|                               | Specialist          | 31  | 13.7       |
|                               | Consultant          | 1   | 0.4        |
| Specialty                     | General practice    | 127 | 56.2       |
|                               | Family medicine     | 41  | 18.1       |
|                               | Ob/Gyn              | 5   | 2.2        |
|                               | Dental              | 47  | 20.8       |
|                               | Others              | 6   | 2.7        |
| Years working in primary health care centers (PHCCs) | 5 years or less | 94  | 41.6       |
|                               | 6-10 years          | 76  | 33.6       |
|                               | greater than 10 years | 56  | 24.8       |
| Smoking status                | Nonsmoker           | 182 | 80.5       |
|                               | Ex-smoker           | 17  | 7.5        |
|                               | Current smoker      | 27  | 11.9       |
| Earning (per month)           | Less than 10,000 SAR| 27  | 11.9       |
|                               | 10,000 to 20,000 SAR| 138 | 61.1       |
|                               | More than 20,000 SAR| 61  | 27.0       |
| Sector                        | Omran               | 80  | 35.4       |
|                               | Mubaraz             | 88  | 38.9       |
|                               | Hofuf               | 58  | 25.7       |
| Area of working               | Urban               | 204 | 90.3       |
|                               | Rural (Hijrah)      | 22  | 9.7        |
| Duty Status                   | Fixing in one PHC   | 155 | 68.6       |
|                               | Rotating or covering | 71  | 31.4       |
| Average number of patients seen per day | Less than 40 patients | 93  | 41.2       |
|                               | 40 to 59 patients   | 84  | 37.2       |
|                               | 60 to 79 patients   | 38  | 16.8       |
|                               | 80 and above patients | 11  | 4.9        |
| Job satisfaction              | Not satisfied       | 25  | 11.1       |
|                               | Neutral             | 126 | 55.8       |
|                               | Satisfied           | 75  | 33.2       |
| Tasks other than clinical work | Yes                 | 94  | 41.6       |
|                               | No                  | 132 | 58.4       |

For the DP part, Saudi participants got higher scores than non-Saudi participants (P = 0.018), family medicine doctors got higher scores than other specialties (P = 0.048).

In addition, rotating or covering physicians got higher scores than those who were fixed in one PHC (P = 0.0001), the participants who got high scores were not satisfied with their job (P = 0.0001), and participants who worked in rural area got higher scores than the participants who worked in urban area (P = 0.010).
In addition, there was a significant difference in the mean score for job satisfaction in favor of not satisfied ($P = 0.003$).

Table 6 shows that there was no significant difference in the mean score between those who have other tasks and who don’t have other tasks.

2- DP part

Table 7 shows that there was no significant difference in the mean score between job titles.
Table 6: Independent-samples t-test results

|                          | n  | Mean | Std. deviation | Std. error Mean | T   | P    |
|--------------------------|----|------|----------------|-----------------|-----|------|
| Tasks other than clinical work (e.g., administrative work) | Yes | 46   | 35.50          | 7.483           | 1.103 | 0.84 | 0.39 |
|                          | No  | 61   | 34.38          | 6.205           | 0.795 |      |      |

Table 7: One-Way ANOVA test results for the mean score between job titles

| Job title | n  | Mean | Std. deviation | Std. error | F  | Sig. |
|-----------|----|------|----------------|------------|----|------|
| Resident  | 100| 14.13| 4.177          | 0.418      | 0.77 | 0.46 |
| Specialist| 15 | 14.40| 4.356          | 1.125      |      |      |
| Consultant| 1  | 9.00 |                |            |      |      |
| Total     | 116| 14.12| 4.191          | 0.389      |      |      |

Table 8 shows that there was no significant difference in the mean score for all demographic variables.

3- Diminished PA part

Table 9 shows that there was a significant difference in the mean score for age groups in favor of those who have 45–50 years ($P = 0.03$).

In addition, there was a significant difference in the mean score for job satisfaction in favor of satisfied with their job ($P = 0.009$). Other demographic variables show no significant difference in the mean score.

Table 10 shows that there was a significant difference in the mean score between males and females in favor of males ($P = 0.009$). Other variables show no significant difference in the mean score.

Discussion

Physician burnout is prevalent worldwide and it negatively affects physicians, patients, and the health care system, and it costs governments substantial cost. To our knowledge and search, this is the first study to determine the prevalence and risk factors of BS among primary health care physicians in Al Ahsa, Saudi Arabia. By using MBI-HSS (MP), we found that 24.3% of participants scored high level of BS in all the three dimensions while it was ranging from 3.7% to 54.1% worldwide.

The prevalence of overall burnout among PHC physicians in Arab countries was ranging from 12.6% to 41.94%. In a Saudi study conducted in Jeddah, the prevalence of burnout was 25.2%. In another Saudi study conducted in Riyadh, 63% of the participants scored a high level of burnout in all three dimensions.

In our study, 47.4% had a high level of EE, while it was also high in 23.2% to 69.5% in other studies done in Arab countries.

In other Saudi studies, the percentage of physicians who scored high EE was ranging from 29.5% to 69.5%. Our study showed a result within this range.

We found that 51.3% of the participants in our study had a high level of DP which is higher than that found in the studies done in Arab countries; (13.8% to 38.9%). Our study showed higher level of DP than other studies done in Saudi Arabia; (15.7% to 38.9%).

About 60% of the participants in our study scored a low level of PA which is higher than that in the studies done in Arab countries; (18.7–28.5%). Our study showed higher level of PA than other studies done in Saudi Arabia (12.2% to 28.5%).

In our study, high EE was seen more in physicians whose ages ranged from 35 to 45 years, Saudi participants, and rotating or covering physicians. Unexpectedly, the participants who got high scores were more satisfied with their jobs than other participants.

Worldwide, high EE was seen more among women, those with more than 5 years working experience, younger age physicians, those who have more excessive hours of work, and those with job dissatisfaction.

In studies done in Saudi Arabia, unlike our study, high EE was seen in younger age; in less than 34 years and in those who are unsatisfied with their job. Like our study, high EE was observed in Saudi participants. It was also higher in those receiving a salary of 15,000–20,000 SAR.

For DP, we found that it was higher in Saudi participants, family physicians, rotating or covering physicians, physicians who were not satisfied with their job, and participants who worked in rural areas.

In other studies done in Saudi Arabia, like our study, high DP was observed in Saudi physicians. It was also higher in those receiving salary more than 20,000 SAR, physicians who have 5–15 years working experience, and those who were taking psychotropic drugs.

Low PA was seen in physicians who were not satisfied with their job, in rotating or covering physicians, participants who did not have tasks other than clinical work, and physicians who work in the Omran sector.

In a study conducted in Asir province in Saudi Arabia, low PA was noticed in younger physicians, non-Saudi physicians, those with more than 5 years of work experience, and those with more annual vacation.

There are some limitations to our study. The most important limitation is the use of a cross-sectional method which does not
### Table 8: Independent-samples t-test results

|                          | n  | Mean | Std. deviation | Std. error Mean | T   | P     |
|--------------------------|----|------|----------------|-----------------|-----|-------|
| Gender                   |    |      |                |                 |     |       |
| Male                     | 84 | 14.20| 4.404          | 0.480           | 0.33| 0.73  |
| Female                   | 32 | 13.91| 3.631          | 0.642           |     |       |
| Nationality              |    |      |                |                 |     |       |
| Saudi                    | 94 | 14.20| 4.307          | 0.444           | 0.43| 0.66  |
| Non-Saudi                | 22 | 13.77| 3.728          | 0.795           |     |       |
| Area of working          |    |      |                |                 |     |       |
| Urban                    | 99 | 14.19| 4.254          | 0.482           | 0.44| 0.66  |
| Rural (Hijrah)           | 17 | 13.71| 3.901          | 0.946           |     |       |
| Duty Status              |    |      |                |                 |     |       |
| Fixed in one PHC         | 67 | 13.57| 3.795          | 0.646           | -1.67| 0.09  |
| Rotating or covering     | 49 | 14.88| 4.613          | 0.659           |     |       |
| Tasks other than clinical work (e.g. Administrative work) | | | | | |
| Yes                      | 55 | 14.20| 4.382          | 0.591           | 0.19| 0.84  |
| No                       | 61 | 14.05| 4.047          | 0.518           |     |       |

### Table 9: One-way analysis of variance results

|                          | n  | Mean | Std. Deviation | Std. Error | F    | Sig.  |
|--------------------------|----|------|----------------|------------|------|-------|
| Age in years             |    |      |                |            |      |       |
| 25 to less than 35       | 68 | 24.90| 6.025          | 0.731      | 3.06 | 0.03  |
| 35 to less than 45       | 43 | 22.44| 7.468          | 1.139      |      |       |
| 45 to less than 50       | 17 | 19.53| 10.724         | 2.601      |      |       |
| 50 and above             | 7  | 20.57| 9.034          | 3.415      |      |       |
| Total                    | 135| 23.21| 7.532          | 0.648      |      |       |
| Job title                |    |      |                |            |      |       |
| Resident                 | 114| 23.04| 7.221          | 0.676      | 0.21 | 0.8   |
| Specialist               | 20 | 24.25| 9.419          | 2.106      |      |       |
| Consultant               | 7  | 23.00|               |            |      |       |
| Total                    | 135| 23.21| 7.532          | 0.648      |      |       |
| Specialty                |    |      |                |            |      |       |
| general practice         | 73 | 23.82| 6.592          | 0.772      | 1.57 | 0.18  |
| family medicine          | 25 | 24.16| 7.122          | 1.424      |      |       |
| Ob/Gyn                   | 3  | 28.33| 3.786          | 2.186      |      |       |
| Dental                   | 31 | 21.00| 9.194          | 1.651      |      |       |
| Others                   | 3  | 18.33| 13.051         | 7.535      |      |       |
| Total                    | 135| 23.21| 7.532          | 0.648      |      |       |
| Years working in PHCCs   |    |      |                |            |      |       |
| 5 years or less          | 53 | 24.62| 6.074          | 0.834      | 2.17 | 0.11  |
| 6 to 10 years            | 48 | 23.08| 7.729          | 1.116      |      |       |
| greater than 10 years    | 34 | 21.21| 8.933          | 1.532      |      |       |
| Total                    | 135| 23.21| 7.532          | 0.648      |      |       |
| Smoking status           |    |      |                |            |      |       |
| Nonsmoker                | 109| 23.50| 7.599          | 0.728      | 1.04 | 0.35  |
| Ex-smoker                | 10 | 19.90| 6.919          | 2.188      |      |       |
| Current smoker           | 16 | 23.38| 7.375          | 1.844      |      |       |
| Total                    | 135| 23.21| 7.532          | 0.648      |      |       |
| Earning per month        |    |      |                |            |      |       |
| less than 10,000 SAR     | 20 | 21.90| 7.093          | 1.586      | 0.36 | 0.69  |
| 10 to 20 SAR             | 74 | 23.38| 7.357          | 0.855      |      |       |
| more than 20,000 SAR     | 41 | 23.56| 8.146          | 1.272      |      |       |
| Total                    | 135| 23.21| 7.532          | 0.648      |      |       |
| Sector                   |    |      |                |            |      |       |
| Omran                    | 57 | 22.28| 7.549          | 1.000      | 0.91 | 0.4   |
| Mubaraz                  | 53 | 24.23| 7.597          | 1.044      |      |       |
| Hofuf                    | 25 | 23.20| 7.377          | 1.475      |      |       |
| Total                    | 135| 23.21| 7.532          | 0.648      |      |       |
| Average number of patients per day | | | | | |
| less than 40 patients    | 53 | 22.40| 8.328          | 1.144      | 0.69 | 0.55  |
| 40-59 patients           | 50 | 24.38| 6.020          | 0.851      |      |       |
| 60-79 patients           | 26 | 23.00| 8.676          | 1.702      |      |       |
| 80 and above patients    | 6  | 21.67| 6.623          | 2.704      |      |       |
| Total                    | 135| 23.21| 7.532          | 0.648      |      |       |
| Job satisfaction         |    |      |                |            |      |       |
| not satisfied            | 21 | 26.67| 4.902          | 1.070      | 14.2 | 0.0001|
| Neutral                  | 78 | 24.64| 6.073          | 0.688      |      |       |
| Satisfied                | 36 | 18.11| 9.158          | 1.526      |      |       |
| Total                    | 135| 23.21| 7.532          | 0.648      |      |       |
give us a causal relationship. Another limitation is not adding
some variables that were seen to be associated with high level
of burnout such as duration of annual vacation\textsuperscript{[29]} and the use
of psychoactive medication in the last year.\textsuperscript{[20]}

**Conclusion**

Based on the results of this study, there is a significant level
of burnout among physicians working in PHCCs in Al Ahsa,
Saudi Arabia. In some dimensions, BS was higher than other
studies done worldwide and in Saudi Arabia. High burnout was
associated with some variables such as job satisfaction, physician
nationality, being rotating or covering physician, and age of
physician. Further research is needed to study this problem
in-depth, to identify the causes, and to establish a strategy to
prevent, early detect, and treat burnout among physicians working
in PHCCs.

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There are no conflicts of interest.

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**Table 10: Independent-samples t-test results**

|                      | n  | Mean | Std. deviation | Std. error Mean | T      | P    |
|----------------------|----|------|----------------|-----------------|--------|------|
| Gender               |    |      |                |                 |        |      |
| Male                 | 92 | 22.08| 7.810          | 0.814           | -2.62  | 0.009|
| Female               | 43 | 25.65| 6.320          | 0.964           |        |      |
| Nationality          |    |      |                |                 |        |      |
| Saudi                | 96 | 23.80| 7.177          | 0.732           | 1.42   | 0.15 |
| non-Saudi            | 39 | 21.77| 8.264          | 1.323           |        |      |
| Duty status          |    |      |                |                 |        |      |
| fixing in one PHC    | 85 | 22.89| 8.025          | 0.870           | -0.64  | 0.52 |
| rotating or covering | 50 | 23.76| 6.653          | 0.941           |        |      |
| Tasks other than clinical work (e.g., administrative work) | | | | | | |
| Yes                  | 49 | 23.92| 6.736          | 0.962           | 0.81   | 0.41 |
| No                   | 86 | 22.81| 7.961          | 0.858           |        |      |
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