

Comprehensive assessment of demographic and occupational factors influencing burnout amongst community pharmacists in Jordan

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Abstract

Job burnout is a major issue that influences employees' performance, job satisfaction and their overall well-being. There is limited evidence that points towards poor profession status and general dissatisfaction amongst community pharmacists. This study aimed to investigate burnout and associated factors amongst community pharmacists in Jordan. The study was conducted via an online questionnaire composed of three main domains: demographics, occupational factors and Copenhagen burnout inventory (CBI) and a total of 400 community pharmacists participated. Total burnout scores amongst the participants were elevated (49.72 ± 16.65), with 43% exhibiting a high total burnout level. Burnout scores negatively correlated with age, exercise level, perceived sleep quality and financial status, while positively correlated with body mass index. Living alone status had elevated odds for high burnout compared to living with family or roommate(s). Regarding occupational factors, burnout level negatively correlated with the number of pharmacies the participants have worked in, working hours per day, how sufficient they perceive their salary to be and how much they enjoy working in a community pharmacy setting. On the other hand, a positive correlation was observed for the number of work days per week, requirement to work on national holidays and perceived workload. Moreover, working on night shifts and working alone both had higher odds for exhibiting high burnout levels. In conclusion, the results call for employers and policy-makers to take into consideration factors influencing burnout amongst community pharmacists for the development and implementation of interventional strategies to mitigate burnout and enhance the well-being of community pharmacists.

Keywords

community pharmacy, job satisfaction, mental health, pharmacy practice

Introduction

Occupational burnout is a multi-dimensional construct, characterised by exhaustion, cynicism and inefficacy that develops in response to chronic emotional and interpersonal job stressors (Maslach et al. 2001). There is cumulative evidence linking burnout to reduced productivity,

higher job dissatisfaction and increased turnover intention (Nayeri et al. 2009; Yoon and Kim 2010; Alzailai et al. 2021). Factors influencing burnout prevalence can differ, based on the occupation itself and its duties, as well as other demographic, socioeconomic and cultural factors (Soares et al. 2007; Chou et al. 2014; Lucchetti et al. 2018). Nevertheless, there is a general consensus that calls for the

development and implementation of strategies to mitigate burnout in workplaces.

Healthcare workers, including pharmacists, are not immune to burnout. In fact, the physical and mental well-being, psychological distress and burnout have always been a concern amongst healthcare providers (Chemali et al. 2018), that were also aggravated in recent years during the COVID-19 pandemic (Leo et al. 2021; Menon et al. 2022). Literature identified multiple modifiable risk factors to be considered by policy-makers and administrators in order to reduce job burnout amongst healthcare workers; for instance, reducing workload and job-stressors, creating a healthy job environment and paying more attention to the mental well-being of their staff (Sharifi et al. 2021). However, the systematic work of Sharifi et al. (2021) highlighted the discrepancies in burnout assessment, heterogeneity of the assessed populations and the multiplicity of suggestions without any further intervention or follow-up, which, all in all, calls for further large-scale interventional studies in order to propose more solutions and examine their effectiveness in this regard.

Pharmacists are considered the most accessible primary healthcare providers who play an integral role in medication stewardship and patient education (Bazzari and Bazzari 2023). Reports by the International Pharmaceutical Federation (FIP) highlight that up to 75% of pharmacists globally work in a community pharmacy setting (FIP 2017). In Jordan, recent available statistics by the Jordanian Pharmaceutical Association (JPA) report a total of 32,446 registered pharmacists and 4,693 community pharmacies in the Kingdom (JPA 2023). A very limited number of studies have examined burnout and job-related stress amongst pharmacists in Jordan (Al Khalidi and Wazaify 2013; Algunmeeyn et al. 2020) and none of which has solely focused on community pharmacists or detailed any associated occupational factors influencing their burnout level. Moreover, there is anecdotal evidence that points towards pharmacists' general dissatisfaction with the current status of the profession, in addition to multiple media releases regarding the low pay and increase in unemployment rates amongst pharmacists in Jordan (Petra 2015; Almamlaka 2022). Accordingly, this could possibly predict an elevation in burnout level amongst Jordanian pharmacists.

This study aims to assess the level of burnout and identify its association with a number of demographic and occupational factors amongst community pharmacists residing in Jordan in order to provide guidance for policy-makers and legislators towards improving the work environment, pharmacy practice and the quality of provided services.

Methods

Sampling and ethical considerations

This cross-sectional study was conducted via an online questionnaire, prepared using Google Forms®. The ques-

tionnaire was written in English, as the official teaching language for pharmacy programmes in Jordan. The form link was shared by the researchers amongst multiple Jordanian pharmacists-designated groups on Facebook® and WhatsApp®. The questionnaire was open for responses from 15 until 30 November 2023.

The cover section of the questionnaire included the study title; researchers contact details; study approval; eligibility criteria (i.e. adult age, an undergraduate bachelor degree in pharmacy and active working status in a community pharmacy in Jordan); an explanation of the study aim and significance; confidentiality and data protection statement (i.e. that no personal identifying information will be asked and the collected data will solely be used for scientific research purposes); voluntary participation and the right to withdraw statement (the participants were not paid or compensated); and lastly, an informed consent note, which had to be submitted prior to participation.

The calculated representative sample size was 380 (population size = 32,446 (JPA 2023), 95% confidence interval and 5% margin of error), which was determined using the following equation (SurveyMonkey 2023):

$$\text{Sample Size} = \frac{z^2 \times p(1-p)}{1 + \left(\frac{z^2 \times p(1-p)}{e^2 \times N} \right)}$$

A total of 400 complete responses were received and included in the study.

The study was approved by the Deanship of Scientific Research and Graduate Studies at Jerash University (approval number: 1543/6/2/9/٢٠٢٣ ع, Date: 13.11.2023) and was conducted with strict adherence to the guidelines of the Declaration of Helsinki regarding anonymity, voluntary participation and data protection (WMA 1964). The Copenhagen Burnout Inventory (CBI) (Kristensen et al. 2005) is in the public domain (no permission is required), as highlighted in a previous correspondence with Prof. Dr. Tage Kristensen.

Research instrument

Demographics

The first section of the questionnaire aimed to collect the participant demographic factors that may potentially impact their level of burnout. These include age; gender; self-reported body weight and height; marital status; smoking status; parenthood status; exercise level; perceived sleep quality; household living arrangement; and financial status. Body weight and height were used to calculate the body mass index (BMI). The exercise, sleep and financial status questions were assessed using a 5-point Likert scale.

Occupational factors

The next section in the questionnaire focused on the occupational factors that may influence the community pharmacist in terms of burnout. These included the experience, determined by the years of community pharmacy

practice; the number of community pharmacies each participant has worked in so far; how many hours they work every day; how many days they work per week; the work status, whether they are employees or owners; whether they are in a management position; if the participant has worked in pharmacy sectors other than community pharmacy and which they preferred, between community pharmacy and other sectors; whether they have health insurance and social security from their current job; if they are required to work on national holidays and if they are paid extra for working overtime or on national holidays; how far is their home from their work and how easy it is to travel between home and work; how sufficient is their salary, based on their work and how they would describe their workload level; how much they enjoy working in community pharmacy; how healthy is their relationship with their employer or other employees; if they have a fixed number of allowed vacation days per year; if they usually work alone or with others; how good would they describe themselves as community pharmacists; and when is their work shift, in the early morning, around mid-day or late at night. A 5-point Likert scale was used for the questions assessing the distance and ease of travel between home and work, the participants' description of their salary and workload, their level of enjoyment of community pharmacy, their relationship with the employer/other employees and their self-assessment as community pharmacists.

Copenhagen burnout inventory

The third section aimed to assess burnout level amongst the participants using the Copenhagen Burnout Inventory (Kristensen et al. 2005). The CBI included a total of 19 questions that evaluate total burnout and its three main domains: personal burnout (6 questions), work-related burnout (7 questions) and client (patient or customer)-related burnout (6 questions). Each question was based on a 5-point Likert scale of frequency or agreement with "Always" or "To a very high degree" scoring 100%, "Often" or "To a high degree" scoring 75%, "Sometimes" or "Somewhat" scoring 50%, "Seldom" or "To a low degree" scoring 25% and "Never/Almost never" or "To a very low degree" scoring 0%. However, one of the work-related questions was phrased in a positive manner and, thus, required inverse scoring with "Always" being scored as 0% and "Never/Almost never" scored as 100%. The score for each participant was calculated as the mean of response scores across all or selected questions to obtain total and domain scores, respectively. Accordingly, the total burnout score has a range of 0 to 100 with higher scores indicating higher burnout levels. A score above a cut-off value of 50 was considered a high burnout level, while a score of 50 or less was considered a low burnout level.

Statistical analysis

Data analysis was conducted using JASP software (Version 0.16.2, www.jasp-stats.org). All results are presented

as mean \pm standard deviation (SD) or as counts (n) and percentages (%). The dependence between participant demographic and occupational factors with gender was assessed using Chi-square (χ^2) test, except for continuous variables. The normality of distribution for continuous variables was assessed using the Shapiro–Wilk (SW) test with a significant result for age, weight, height, BMI, years of practice, number of pharmacies, work hours per day and work days per week ($P < 0.01$) indicating deviation from normality. Accordingly, their ranks were used for comparison across genders using the Mann-Whitney (MW) U test. The effect size for comparisons of means and ranks (ranks across dichotomous variables) were assessed using Cohen's d and rank-biserial correlation (r_{rb}), respectively. The internal reliability of the CBI was assessed through calculating Cronbach's α value. The burnout domain scores were compared through one-way analysis of variance by ranks using the Kruskal-Wallis (KW) test with post-hoc Dunn's test using Bonferroni-corrected alpha. The demographic and occupational factors, assessed using a Likert-type scale, were coded into ordinal variables for correlation testing. The dependence (differences and correlations) of total burnout levels and scores on participant demographic and occupational factors were assessed using Chi-square, MW, KW, Spearman's correlation and odds ratio tests depending on the variable. Lastly, all comparison and correlation tests were two-tailed at a error of 0.05 and, thus, significance was determined at $P < 0.05$.

Results

Participant demographics

A total of 400 community pharmacists, from all 12 governorates of Jordan, participated including males ($n = 145$, 36.3%) and females (255, 63.8%). All participant responses were complete; thus, none was omitted. The age of the participants ranged from 21 to 74 years, with a mean of 30.96 ± 7.92 years and was higher, by ranks, amongst male (33.7 ± 9.92) compared to female participants (29.4 ± 6.01 , $U = 13695$, $P < 0.01$, $r_{rb} = 0.259$, $d = 0.562$). In addition to age and gender, various other demographic factors were collected and are summarised in Table 1.

The self-reported body weight and height were used to calculate BMI, which was higher, by ranks, for males (26.037 ± 4.012 kg/m²) compared to females (23.898 ± 3.443 kg/m², $r_{rb} = 0.328$, $d = 0.584$, $P < 0.01$). Most participants reported being single (51%), non-smoking (64.5%), not having children (66.3%), living with family (85%) and exhibiting moderate exercise level (43.5%), sleep quality (45%) and financial status (66.3%). The smoking status, exercise level and living arrangements were dependent on gender ($P < 0.05$), with males showing a higher level of smoking, exercise and living alone status than females.

Table 1. Participant demographics.

Demographic Variable	All	Males	Females	P value ¹
Age, mean (SD)	30.96 (7.92)	33.7 (9.92)	29.4 (6.01)	< 0.001*
Weight, mean (SD)	69.69 (13.89)	80.13 (13.43)	63.75 (10.16)	< 0.001*
Height, mean (SD)	167.6 (8.2)	175.4 (6.1)	163.2 (5.5)	< 0.001*
BMI, mean (SD)	24.67 (3.8)	26.04 (4.01)	23.9 (3.44)	<0.001*
Marital Status, n (%)				0.797
Divorced	8 (2)	2 (1.38)	6 (2.35)	
Engaged	28 (7)	12 (8.28)	16 (6.28)	
Married	158 (39.5)	60 (41.38)	98 (38.43)	
Single	204 (51)	70 (48.27)	134 (52.55)	
Widowed	2 (0.5)	1 (0.69)	1 (0.39)	
Smoking status, n (%)				< 0.001*
Non-smoker	258 (64.5)	65 (44.83)	193 (75.69)	
Smoker	142 (35.5)	80 (55.17)	62 (24.31)	
Parenthood status, n (%)				0.65
Have children	135 (33.75)	51 (35.17)	84 (32.94)	
No children	265 (66.25)	94 (64.83)	171 (67.06)	
Exercise level, n (%)				0.019*
Sedentary	23 (5.75)	9 (6.21)	14 (5.49)	
Low	117 (29.25)	36 (24.82)	81 (31.77)	
Moderate	174 (43.5)	57 (39.31)	117 (45.88)	
High	71 (17.75)	33 (22.76)	38 (14.9)	
Very high	15 (3.75)	10 (6.9)	5 (1.96)	
Sleep quality, n (%)				0.095
Very poor	19 (4.75)	10 (6.9)	9 (3.53)	
Bad	68 (17)	26 (17.93)	42 (16.47)	
Moderate	180 (45)	62 (42.76)	118 (46.27)	
Good	115 (28.75)	45 (31.03)	70 (27.45)	
Excellent	18 (4.5)	2 (1.38)	16 (6.28)	
Living arrangement, n (%)				0.014*
Alone	25 (6.25)	15 (10.35)	10 (3.92)	
With family	340 (85)	114 (78.62)	226 (88.63)	
With room-mate(s)	35 (8.75)	16 (11.03)	19 (7.45)	
Financial status, n (%)				0.076
Very poor	12 (3)	5 (3.44)	7 (2.75)	
Minimal	77 (19.25)	38 (26.21)	39 (15.29)	
Moderate	265 (66.25)	85 (58.62)	180 (70.59)	
High	38 (9.5)	15 (10.35)	23 (9.02)	
Very high	8 (2)	2 (1.38)	6 (2.35)	

¹Chi-square test, except age, weight, height and BMI (MW U-test), *Significant (P < 0.05).

Occupational factors

The occupational factors that may influence the burnout level amongst community pharmacists were assessed next. The sample participants had an average of 5.29 ± 5.89 years of community pharmacy practice or experience, ranging from 1 to 35 years and each participant has worked in 2.76 ± 1.69 different community pharmacies so far. The results show that, on average, community pharmacists in Jordan work 8.85 ± 2.08 hours per day and 5.89 ± 0.78 days per week. Most participants report being employees (84.5%) rather than owners, are not in a management position (65.5%), have not worked in other pharmacy sectors (63.75%) and, amongst those who have most preferred the other sectors (64.1%), do not have health insurance (60.8%), but have social security (55%) from their current job, are required to work on national holidays (63%), are paid extra for working overtime or on national holidays (52%), live a moderate distance from their work (42.8%), find it easy (36.5%) or moderately difficult (36.5%) to

travel between home and work, are neutral in regards to their salary being sufficient (33.8%), describe their workload as moderate (50.8%), agree that they enjoy being community pharmacists (36%), have a good relationship with their employer/other employees (38%), work during mid-day shift (40.3%), do not have a fixed number of allowed vacation days per year (60.75%), usually work with others rather than alone (54%) and describe themselves as good community pharmacists (42.8%). Of the 22 assessed occupational factors, 13 factors were significantly associated with and, thus, dependent on gender. The impact of gender on occupational factors amongst the participants is presented in Table 2.

Briefly, male participants have significantly higher experience, have worked in more community pharmacies and work for longer hours per day and more days per week than female participants. In addition, males exhibit a higher distribution of individuals who are pharmacy owners, are in a management position, have worked in other pharmacy sectors, have health insurance and social security, are paid extra for overtime work, live further away from their work, work at night and exhibit a very high or very low level of enjoying their work compared to females who are more neutral. On the other hand, there was no association (P > 0.05) between gender and the remaining occupational factors.

Burnout level

The total burnout level and its three main domains, personal burnout, work-related burnout and client-related burnout, were assessed using the CBI questionnaire, which showed an adequate internal reliability ($\alpha = 0.897$). The total burnout scores amongst the participants were elevated with a mean of 49.72 ± 16.65 ; however, their distribution deviated from normal (SW test statistic = 0.976, P < 0.01, skewness = 0.551, kurtosis = 0.645). The median total score was 48.68 and 172 participants (43%) had a total score above 50, indicating a high total burnout level. The three burnout domain scores were also calculated and are summarised in Table 3. The score means were very similar across the three burnout domains: personal burnout (50.23 ± 21.6), work-related burnout (50.06 ± 18.3) and client-related burnout (48.81 ± 19.81). Analysis of variance by ranks showed no statistically significant differences across the burnout domains in scores (H = 0.634, P > 0.05) or distribution of burnout levels (H = 0.628, P > 0.05).

In relation to participant demographics, six factors were significantly associated with burnout level and influenced the ranks of burnout scores. These include age, weight, exercise level, sleep quality, household living arrangement and financial status. A negative correlation was observed between age and total burnout scores ($\rho = -0.115$, P < 0.05), while a positive correlation was observed for body weight ($\rho = 0.113$, P < 0.05) and BMI ($\rho = 0.108$, P < 0.05) with total burnout scores ($\rho = 0.113$,

Table 2. The impact of gender on community pharmacy occupational factors.

Variable	Male	Female	P value ¹	Variable	Male	Female	P value ¹
Experience²	6.69 (7.73)	4.34 (4.25)	<0.001*	Work hours	9.58 (2.16)	8.44 (1.92)	< 0.001*
Pharmacies³	3.08 (1.96)	2.57 (1.49)	0.026*	Work days	6.06 (0.54)	5.79 (0.88)	0.003*
Work status, n (%)			<0.001*	In a management position, n (%)			0.002*
Employee	104 (71.7)	234 (91.8)		No	81 (55.9)	181 (71)	
Owner	41 (28.3)	21 (8.2)		Yes	64 (44.1)	74 (29)	
Worked in other sectors, n (%)			0.013*	Preferred sector⁴, n (%)			0.715
No	81 (55.9)	174 (68.2)		Current	24 (37.5)	28 (34.6)	
Yes	64 (44.1)	81 (31.8)		Other	40 (62.5)	53 (65.4)	
Health insurance, n (%)			0.01*	Social security, n (%)			0.006*
No	76 (52.4)	167 (65.5)		No	52 (35.9)	128 (50.2)	
Yes	69 (47.6)	88 (34.5)		Yes	93 (64.1)	127 (49.8)	
Work on national holidays, n (%)			0.349	Paid for extra work or overtime, n (%)			< 0.001*
No	58 (40)	90 (35.3)		No	52 (35.9)	140 (54.9)	
Yes	87 (60)	165 (64.7)		Yes	93 (64.1)	115 (45.1)	
Distance from home to work, n (%)			0.003*	Ease of travel to work, n (%)			0.286
Very far	6 (4.1)	2 (0.8)		Very easy	23 (15.9)	41 (16.1)	
Far	32 (22.1)	28 (11)		Easy	52 (35.9)	94 (36.9)	
Moderate	59 (40.7)	112 (43.9)		Moderate	49 (33.8)	97 (38)	
Close	32 (22.1)	74 (29)		Difficult	16 (11)	21 (8.2)	
Very close	16 (11)	39 (15.3)		Very difficult	5 (3.4)	2 (0.8)	
Salary sufficient for work level, n (%)			0.15	Workload, n (%)			0.398
Very low	26 (17.9)	34 (13.3)		Very low	2 (1.4)	1 (0.4)	
Low	40 (27.6)	77 (30.2)		Low	12 (8.3)	30 (11.8)	
Neutral	41 (28.3)	94 (36.9)		Neutral	71 (49)	132 (51.8)	
High	32 (22.1)	46 (18)		High	49 (33.8)	69 (27.1)	
Very high	6 (4.1)	4 (1.6)		Very high	11 (7.6)	23 (9)	
Enjoy community pharmacy, n (%)			0.012*	Relation with employer/staff, n (%)			0.521
Very low	18 (12.4)	18 (7.1)		Very bad	2 (1.4)	4 (1.6)	
Low	17 (11.7)	32 (12.5)		Bad	11 (7.6)	16 (6.3)	
Neutral	35 (24.1)	101 (39.6)		Neutral	39 (26.9)	81 (31.8)	
High	58 (40)	86 (33.7)		Good	52 (35.9)	100 (39.2)	
Very high	17 (11.7)	18 (7.1)		Excellent	41 (28.3)	54 (21.2)	
Have vacation days, n (%)			0.384	Work alone or with others, n (%)			0.327
No	84 (57.9)	159 (62.4)		Alone	62 (42.8)	122 (47.8)	
Yes	61 (42.1)	96 (37.6)		With others	83 (57.2)	133 (52.2)	
Self-assessment as pharmacist, n (%)			0.519	Work time, n (%)			<0.001*
Very bad	2 (1.4)	2 (0.8)		Morning	24 (16.6)	103 (40.4)	
Bad	7 (4.8)	9 (3.5)		Midday	54 (37.2)	107 (42)	
Neutral	32 (22.1)	76 (29.8)		Night	67 (46.2)	45 (17.6)	
Good	65 (44.8)	106 (41.6)					
Excellent	39 (26.9)	62 (24.3)					

¹Chi-square test except experience, pharmacies, work hours and work days (MW U-test), ²years of community pharmacy practice, ³number of community pharmacies the participant has worked in, ⁴for those who have worked in other sectors, *Significant (P < 0.05).

Table 3. Summary of participant burnout scores.

Burnout Category	All	Males	Females	P ¹
Personal Burnout				
High Burnout, n (%)	168 (42)	56 (38.62)	112 (43.92)	0.302
Mean Score	50.23	49.08	50.88	
SD	21.6	21.36	21.75	
Work-Related Burnout				
High Burnout, n (%)	163 (40.75)	54 (37.24)	109 (42.75)	0.282
Mean Score	50.06	49.88	50.17	
SD	18.3	18.99	17.94	
Client-Related Burnout				
High Burnout, n (%)	157 (39.25)	61 (42.07)	96 (37.65)	0.384
Mean Score	48.81	50.32	47.96	
SD	19.81	20.48	19.41	
Total Burnout				
High Burnout, n (%)	172 (43)	63 (43.45)	109 (42.75)	0.891
Mean Score	49.72	49.76	49.7	
SD	16.65	16.98	16.49	

¹Chi-square test.

P < 0.05). The level of exercise was significantly associated with total burnout level ($\chi^2 = 11.47$, P < 0.05) and showed a significant negative correlation with total burnout scores ($\rho = -0.237$, P < 0.01). Indeed, the burnout score ranks varied significantly across exercise levels (H = 24.56, P < 0.01) with the mean burnout scores ranging between 59.2 ± 20.4 for participants with sedentary lifestyle, the lowest level of exercise and 43.7 ± 14.3 for participants reporting high or very high level of exercise. From a different perspective, participants with sedentary or low exercise levels have 130% increase in the odds for having a high burnout level compared to participants with moderate, high or very high level of exercise (OR = 2.303, 95% CI: 1.37–3.88, P < 0.01). This is similar to perceived sleep quality, which was significantly associated ($\chi^2 = 20.19$, P < 0.01) and negatively correlated ($\rho = -0.298$, P < 0.01) with total burnout levels and scores, respectively. Analysis of variance

by ranks showed significant variation across sleep quality levels ($H = 38.74$, $P < 0.01$) with post-hoc analysis indicating that participants reporting excellent (mean burnout score: 38.01 ± 14.55) and good (44.13 ± 13.41) sleep quality have lower burnout ranks than participants with moderate (51.3 ± 16.57), bad (54.01 ± 16.07) or very poor (64.34 ± 21.44) sleep quality. Accordingly, participants with very poor, bad or moderate sleep quality have higher odds for high burnout (OR = 2.65, 95% CI: 1.69–4.16, $P < 0.01$) than participants with excellent or good sleep quality. The financial status of the participants was also associated ($\chi^2 = 14.68$, $P < 0.01$) and negatively correlated ($\rho = -0.189$, $P < 0.01$) with burnout levels and scores, respectively. The burnout score ranks varied across financial levels ($H = 24.7$, $P < 0.01$) with very high (mean score: 31.91 ± 9.97) and high (41.34 ± 14.89) financial status participants having lower burnout ranks than those with minimal (52.97 ± 16.3) or very poor status (52.85 ± 22.52).

Accordingly, participants with very poor, bad or even moderate financial status had significantly higher odds (OR = 3.51, 95% CI: 1.64–7.49, $P < 0.01$) for having a high burnout level than high or very high financial status participants. Lastly, the household living arrangement, which impacted the distribution of burnout levels ($\chi^2 = 20.45$, $P < 0.01$) and score ranks ($H = 20.43$, $P < 0.01$), revealed that living alone (mean burnout score: 58.42 ± 20.02) leads to 269% increase in odds for high burnout (OR = 3.69, 95% CI: 1.5–9.05, $P < 0.01$) than living with family (50.06 ± 16.42) or room-mates (40.23 ± 11.5). The remaining demographic factors: height, gender, marital status, smoking status and parenthood status were not associated with total burnout levels ($P > 0.05$). The impact of occupational factors on total burnout levels was assessed next and the results are summarised in Table 4.

The occupational factors that significantly influenced total burnout amongst the participants were the number

Table 4. The impact of occupational factors on burnout level.

Variable	High Burnout	Low Burnout	P value ¹	Variable	High Burnout	Low Burnout	P value ¹
Experience ²	5.49 (6.66)	5.14 (5.24)	0.566	Work hours	8.56 (1.96)	9.07 (2.15)	0.006*
Pharmacies ³	2.48 (1.46)	2.96 (1.83)	0.024*	Work days	5.94 (0.89)	5.86 (0.7)	0.032*
Work status, n (%)			0.924	In a management position, n (%)			0.724
Employee	145 (42.9)	193 (57.1)		No	111 (42.4)	151 (57.6)	
Owner	27 (43.5)	35 (56.5)		Yes	61 (44.2)	77 (55.8)	
Worked in other sectors, n (%)			0.578	Preferred sector ⁴ , n (%)			0.648
No	107 (42)	148 (58)		Current	22 (42.3)	30 (57.7)	
Yes	65 (44.8)	80 (55.2)		Other	43 (46.2)	50 (53.8)	
Health insurance, n (%)			0.758	Social security, n (%)			0.776
No	103 (42.4)	140 (57.6)		No	76 (42.2)	104 (57.8)	
Yes	69 (43.9)	88 (56.1)		Yes	96 (43.6)	124 (56.4)	
Work on national holidays, n (%)			< 0.001*	Paid for extra work or overtime, n (%)			0.056
No	40 (27)	108 (73)		No	92 (47.9)	100 (52.1)	
Yes	132 (52.4)	120 (47.6)		Yes	80 (38.5)	128 (61.5)	
Distance from home to work, n (%)			0.833	Ease of travel to work, n (%)			0.23
Very far	5 (62.5)	3 (37.5)		Very easy	24 (37.5)	40 (62.5)	
Far	26 (43.3)	34 (56.7)		Easy	56 (38.4)	90 (61.6)	
Moderate	74 (43.3)	97 (56.7)		Moderate	71 (48.6)	75 (51.4)	
Close	45 (42.5)	61 (57.5)		Difficult	19 (51.4)	18 (48.6)	
Very close	22 (40)	33 (60)		Very difficult	2 (28.6)	5 (71.4)	
Salary sufficient for work, n (%)			< 0.001*	Workload, n (%)			< 0.001*
Very low	44 (73.3)	16 (26.7)		Very low	3 (100)	0 (0)	
Low	69 (59)	48 (41)		Low	13 (31)	29 (69)	
Neutral	36 (26.7)	99 (73.3)		Neutral	71 (35)	132 (65)	
High	19 (24.4)	59 (75.6)		High	62 (52.5)	56 (47.5)	
Very high	4 (40)	6 (60)		Very high	23 (67.6)	11 (32.4)	
Enjoy community pharmacy, n (%)			0.003*	Relation with employer/staff, n (%)			0.585
Very low	26 (72.2)	10 (24.8)		Very bad	4 (66.7)	2 (33.3)	
Low	24 (49)	25 (51)		Bad	12 (44.4)	15 (55.6)	
Neutral	54 (39.7)	82 (60.3)		Neutral	56 (46.7)	64 (53.3)	
High	56 (38.9)	88 (61.1)		Good	63 (41.4)	89 (58.6)	
Very high	12 (34.3)	23 (65.7)		Excellent	37 (38.9)	58 (61.1)	
Have vacation days, n (%)			0.05	Work alone or with others, n (%)			0.045*
No	95 (39.1)	148 (60.9)		Alone	89 (48.4)	95 (51.6)	
Yes	77 (49)	80 (51)		With others	83 (38.4)	133 (61.6)	
Self-assessment as pharmacist, n (%)			0.408	Work time, n (%)			0.004*
Very bad	2 (50)	2 (50)		Morning	53 (41.7)	74 (58.3)	
Bad	7 (43.75)	9 (56.25)		Midday	57 (35.4)	104 (64.6)	
Neutral	50 (46.3)	58 (53.7)		Night	62 (55.4)	50 (44.6)	
Good	64 (37.4)	107 (62.6)					
Excellent	49 (48.5)	52 (51.5)					

¹Chi-square test, except experience, pharmacies, work hours and work days (Spearman's correlation), ²years of community pharmacy practice, ³number of community pharmacies the participant has worked in, ⁴for those who have worked in other sectors, *Significant ($P < 0.05$).

of pharmacies the participants have worked in, the number of work hours per day, the number of work days per week, the requirement to work on national holidays, how they would describe their salary and workload, if they enjoy community pharmacy, the time of their work shift and whether they usually work alone or with others. Rank correlation analysis showed that the number of pharmacies the participants have worked in and the number of work hours per day are negatively correlated with total burnout scores ($\rho = -0.113$, $P < 0.05$ and $\rho = -0.137$, $P < 0.01$, respectively). In contrast, the number of work days per week positively correlated with total burnout scores ($\rho = 0.107$, $P < 0.05$). Working on national holidays associated with burnout levels ($\chi^2 = 24.45$, $P < 0.01$) and the participants who are required to work on national holidays (mean burnout score: 52.71 ± 16.53) had higher burnout score ranks ($U = 12566$, $P < 0.01$, $r_{rb} = 0.326$) than the participant who are not required to (44.64 ± 15.637 , $d = 0.498$). The participants' view of their salary level, being sufficient for their work, had the highest impact on total burnout levels ($\chi^2 = 60.5$, $P < 0.01$) and variation in burnout score ranks ($H = 76.91$, $P < 0.01$). Post-hoc analysis showed that the participants viewing their salary as very low (mean burnout score: 62.76 ± 15.83) and low (53.45 ± 14.66) have higher burnout score ranks than participants who are neutral regarding their salary (45.02 ± 14.9) and view it as high (42.51 ± 16.05), but not the 10 participants who view it as very high (47.5 ± 16.36). Indeed, the negative correlation (two-tailed) between the salary view, being sufficient and total burnout scores was significant ($\rho = -0.38$, $P < 0.01$). The participants' view of their workload level also had a major impact on burnout levels ($\chi^2 = 24.61$, $P < 0.01$), influenced the rank distribution of burnout scores ($H = 24.61$, $P < 0.01$) and positively correlated with burnout scores ($\rho = 0.174$, $P < 0.01$). Accordingly, the participants describing their workload as very high (mean burnout score: 59.75 ± 14.3) had higher burnout score ranks than participants describing it as moderate (47.06 ± 15.24) and low (45.93 ± 19.78). In contrast, a negative correlation was observed between burnout scores and how much the participants enjoy their community pharmacy work ($\rho = -0.306$, $P < 0.01$), which also influenced the distribution of burnout levels ($\chi^2 = 15.94$, $P < 0.01$) and score ranks ($H = 33.5$, $P < 0.01$). The mean burnout scores ranged from 42.93 ± 16.96 for the participants who very highly enjoy their community pharmacy work to 68.2 ± 24.55 for those with very low level of enjoyment, whose score ranks were significantly higher than all participants with other enjoyment levels. The work time influenced burnout levels ($\chi^2 = 10.85$, $P < 0.01$) and score ranks ($H = 16.81$, $P < 0.01$) as well, such that working at night (mean burnout score: 54.98 ± 17.29) has higher odds for exhibiting a high burnout level (OR = 2.01, 95% CI: 1.29–3.12, $P < 0.01$) than working early morning (49.1 ± 16.67) or around mid-day (46.55 ± 15.34). Lastly, the results show that participants who usually work alone have higher distribution of burnout levels (48.4% compared to 38.4%, $\chi^2 = 4.01$, $P < 0.05$) and score

ranks (mean burnout score: 52.15 ± 16.92) than the ones who usually work with others (47.65 ± 16.17 , $U = 23370$, $r_{rb} = 0.176$, $d = 0.273$, $P < 0.01$).

On the other hand, the remaining occupational factors were not associated with the burnout level amongst the participants ($P > 0.05$).

Discussion

This study is the first to assess burnout level and associated factors amongst community pharmacists in Jordan. The study sample was well representative in terms of gender (36.25% males vs. 63.75% females) (Alef and Halboup 2016) and included pharmacists from a wide range of age (21 to 74 years) and years of community pharmacy practice (1 to 35 years). The results revealed elevated total burnout scores amongst the participants (mean = 49.72), with 43% of the participants exhibiting a high total burnout level. The results also identified a number of associated demographic and occupational factors to be taken into consideration for future improvements to enhance the well-being of community pharmacists and promote pharmacy practice in Jordan.

In terms of demographics, a negative correlation was observed for age, exercise level, perceived sleep quality and financial status, while a positive correlation was observed for body weight and BMI with the total burnout scores. Regarding household living arrangements, a living-alone status leads to higher odds for high burnout compared to living with family or room-mate(s). The current findings are consistent with previous literature; for instance, results of a study amongst Canadian workers revealed variations in burnout levels amongst various age groups and highlighted that younger individuals are more susceptible to burnout and should be considered in burnout risk-reduction programmes (Marchand et al. 2018). Moreover, a study amongst medical students has noted that participants who are consistent in doing aerobic and/or strength exercises are less likely to experience burnout and have better quality of life (Dyrbye et al. 2017). Furthermore, BMI was also reported to positively correlate with burnout, as obese and overweight individuals were found to exhibit higher burnout scores compared to normal weight individuals (Li et al. 2020). In addition, both sleep quality and financial status were found to impact the quality of life of workers and correlated with increased burnout risk (Śliwiński et al. 2014; Giorgi et al. 2018). At last, regarding household living arrangements, previous studies highlighted that living alone and loneliness in general contribute to increased risk of burnout (Oliveira et al. 2020; Wood et al. 2022). All in all, these factors should be taken into consideration in the development of future burnout risk-lowering interventions amongst community pharmacists.

In terms occupational factors, burnout negatively correlated with the number of pharmacies the participants have worked in, working hours per day, how sufficient the salary was perceived to be and whether they enjoy work-

ing in a community pharmacy. A positive correlation was observed for the number of work days per week, working on national holidays and workload. Moreover, pharmacists working night shifts and working alone both had higher odds for exhibiting a high burnout level. Similar findings can be noted in previous studies; for example, burnout and overall job dissatisfaction are predictive of employees' turnover and workers tend to seriously consider changing their current workplace and ultimately withdrawal from the job for other positions/workplaces (Leiter and Maslach 2009). This, in turn, may provide an explanation for the noted negative correlations between burnout and the number of pharmacies the participants have worked in and their perceived enjoyment for working in a community pharmacy setting. With regards to salaries and job pay, it is little wonder that this was the factor that had the most significant impact on total burnout scores, as a good job pay that is proportional to the actual workload is perceived by the employees as a sign of appreciation and recognition of their work and a motive to enhance their performance (Asaari et al. 2009). Multiple studies have highlighted the relationship between low pay and increased burnout and poor quality of life (Asante et al. 2019; Alibudbud 2023). Nevertheless, salaries vary amongst different countries, as workers from low- and middle-income countries would generally face a problem with their salaries and, in turn, exhibit higher rates of burnout and job dissatisfaction, which differ from workers in high-income countries. For instance, a 2016 study revealed that 72.5% of pharmacists in the United States are satisfied with their jobs; nonetheless, community pharmacists were found to be more prone to burnout compared

to pharmacists working in other sectors (Bridgeman et al. 2018). At last, evidence suggests that increased workload and working on national holidays are contributors to burnout amongst employees and that reducing the job load and increasing leisure time relaxation can alleviate the risk of burnout (Kühnel and Sonnentag 2011).

Conclusion

The results of the current study call for employers and policy-makers to take into consideration the factors influencing burnout amongst community pharmacists in order to develop and implement interventional strategies to mitigate burnout, enhance the well-being of community pharmacists and, overall, promote pharmacy practice in Jordan.

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Competing interests

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