

Prevalence and risk factors of burnout among Lebanese community pharmacists in the era of COVID-19 pandemic: Results from the first national cross-sectional survey

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Abstract

Background: The increasing occupational challenges inflicted on community pharmacists (CPs) in the wake of COVID-19 lays this valuable human resource at increased risk of burnout.

Objectives: This study aimed to assess the prevalence of burnout among Lebanese CPs in the era of COVID-19 and to identify its associated factors.

Methods: A web-based cross-sectional study was conducted among Lebanese CPs between the 1st of February and the end of March 2021 using a snowball sampling technique. Data was collected using an anonymous Arabic self-administered questionnaire that includes information on socio-demographic characteristics, exposure and work-related variables, and two scales: the Copenhagen burnout inventory (CBI) which includes personal, work-related, and patient-related dimensions of burnout, and the COVID-19 threat perception scale. To evaluate the prevalence of burnout, CBI scale cut-off score of 50 was used. Bivariate and multivariable logistic regression analyses were used to identify the factors associated with burnout among CPs.

Results: Burnout was detected among 81.9% of surveyed CPs, where 61% had a moderate burnout and 20.9% had a high level of burnout. Client burnout (CB) ranked first among other burnout aspects (89.7%) followed by personal burnout (77.8%) and work-related burnout (76.8%). Younger age, female gender, being staff pharmacist, working in pharmacy operating around the clock and working more than 40 hours per week were associated with higher level of burnout. Similarly, suffering from comorbidity, having a dependent child or living a family member with comorbidities, experiencing sleep disturbance and high perception of COVID-19 threat were also associated with higher burnout. However, being married, having large professional experience, having high socioeconomic situation, accepting the risk of dealing with COVID-19 cases and having previous history of COVID-19 were negatively associated to burnout.

Conclusion: Burnout hits 81.9% of the Lebanese CPs. This alarming prevalence called health authorities to take prompt and warranted measures based on the factors associated with this syndrome unearthed in this study, to prevent burnout and mitigate among CPs in order to support resiliency in the profession.

Background

Similar to other demanding jobs, burnout syndrome is, unfortunately, affecting all disciplines of the healthcare workforce, and community-pharmacy personnel is no exception [1-4]. The role of community pharmacists (CPs) has expanded in the past two decades with increasingly autonomous, direct patient care roles across all settings such as immunizations and medication therapy management [5]. However, this pivot from product-based care to service-based care won't happen overnight and CPs were confronted by several challenges when chasing to achieve the healthcare provider status [6]. This has added extra layers of intricacy such as juggling the delicate balance of incorporating clinical services into traditional dispensing environments while being forced into performance metrics [7, 8].

By focusing squarely on the patient and delivering medical services, CPs faced performance metrics, such as dispensing medications and immunization quotas, along with the pressure of counseling patients, calling physicians, and coordinating with suppliers and pharmaceutical companies [9, 10]. Furthermore, overwrought performance goals that create unbearable stress, difficult clients' behavior, the complexity of workflow, and

dismally low compensation could also contribute to the increase of burnout among CPs [11-14]. Of note, stressors confronted by CPs mirror those of physicians, including an ineffective work environment, the burden of non-clinical and administrative duties, and excessive workloads combined with a dearth of resources required to realize desired goals and upshots [15]. On other hand, the negative consequences of CPs' burnout are similar to what found among other healthcare workers (HCWs) and could affect patient care, the healthcare system, and the provider health such as lower care quality, increased medical errors, dwindled patient or client satisfaction, reducing provider productivity, and increasing provider turnover [16]. Finally, burnout can lead to poor self-care, substance abuse, depression, and suicidal ideation [17-20].

However, burnout is not deeply explored in the landscape of the CPs population. Some studies reported that burnout is prevalent among pharmacists. A systematic review appraised that the prevalence of overall burnout among pharmacists ranged from 52% to 61% [21]. Another study conducted with the assistance of the American Pharmacists Association (APhA) before the pandemic, has estimated that 75% of the study participants suffered from burnout [22]. Given the large heterogeneity in the role and responsibilities of CPs within health systems and across practice settings [23], hence it is essential when assessing CPs burnout to take into consideration differences among pharmacy practice settings that could contribute to differing levels of burnout.

Since the onset of COVID-19, increased demand for medical services has strained worldwide the health care systems to their limits [24]. Subsequently, the majority of non-urgent operations and medical services in health facilities were canceled or suspended to allow the healthcare system to manage the soar of severe cases of COVID-19. As result, the public turned to community pharmacists (CPs) since they remain the most accessible face-to-face primary healthcare provider during a period where in-person healthcare consultations are reserved [25]. Hence, the enormous potential role of CPs in alleviating the burden imposed on the shoulder of other healthcare providers was emphasized during these unprecedented times. In addition, the pivot from medicine-centered to patient-centered care was hastened by the pandemic. Despite that continuing face-to-face care might provide an opportunity for education and counseling for patients, it also carried a risk of exposure to COVID-19 [26]. In addition, working conditions in the community-pharmacy setting have been hastily changing and increased responsibilities making the pharmacy service an industry prone to disturbance [27]. Some countries have recognized these settings as an ideal access point for patients and allowed CPs to run COVID-19 testing along with COVID-19 vaccination services. These inflicted duties on the shoulder of community-pharmacy personnel in the wake of COVID-19 have created ideal conditions to place and to leave this valuable human resource at increased risk of burnout in the aftermath. Several studies described the psychological impacts of the COVID-19 pandemic on healthcare workers [28] but CPs are rarely included in such studies despite their public-facing roles during pandemics.

In regards to Lebanon, this small Middle Eastern country is stranded amidst a mixture of crises, blending the COVID-19 pandemic with a terrible economic downfall and political turmoil [29]. After about a year of working in such an environment combining financial hardship to the COVID-19 pandemic, the vital resource represented by the healthcare workforce is foundering. CPs are front-line HCWs playing a major role in medication management during the pandemic [1]. The novel, unique challenges squarely associated with the COVID-19 are aggravating an already stressful work environment in community pharmacy [27]. Besides, the economic collapse and the steep loss of the value of the Lebanese currency combined with the inflation of the prices of the medicines and the imposed lockdown, escalate concerns among the Lebanese population towards an imminent shortage in medicines in the Lebanese market. Turned into panic mode, the Lebanese population experienced an

unprecedented race to purchase medicines by patients. These stressors such as the soaring demand for medicines, limited supply chain, the financial crisis, the threat of COVID-19, and the increased responsibilities created ideal conditions to leave burned-out pharmacy personnel in the aftermath. Furthermore, precautions measures implemented in the pharmacy setting, managing crowding, and social distancing have been also shown to have the potential to increase work-related stress [30, 31]. With healthcare workers reporting psychological impacts from the COVID-19 pandemic, burnout syndrome has not been assessed among CPs whereas these professionals are exposed to patients' demands and difficulties every day. Therefore, it is of great interest to assess the extent of burnout among CPs specifically in the context of double hit using a validated tool and to identify its associated factors to orient interventions to be adopted by health authorities and pharmacy professional organizations to mitigate and prevent burnout. This study aimed to assess the prevalence of burnout among Lebanese CPs using the Copenhagen Burnout Inventory and to identify its associated factors.

Methods

Study design and population:

A national web-based cross-sectional study was conducted among Lebanese community pharmacists over 2 months from the 1st of February 2021 till the end of March 2021. In compliance with social distancing restrictions, participants were selected using a snowball sampling technique. Participants were identified via the list of registered CPs provided by the Lebanese order of pharmacists (OPL) and were electronically invited to participate. Before their enrollment in the study, CPs were contacted via phone call and notified about the survey and its purpose. Upon their agreement to participate, and based on their preference of the way to receive the link of the study, an online questionnaire using a Google form was sent to them via emails or WhatsApp. They were also invited if possible to disseminate the link of the survey among their colleagues. The link of the study included a brief explanation of the study purpose and electronic informed consent.

All CPs of either gender or profile (owner, manager, or staff pharmacist) working in pharmacy setting at the time of the survey, who had access to the internet and who agreed to participate in the study were eligible for participation. These professionals were defined as the pharmacy team. Exclusion criteria were defined as follows: clinical pharmacists, retired community pharmacists, those who were out of the country at the time of the survey, trainees and pharmacy students or other professionals (e.g., dietician, beautician), and other pharmacies staff as well as those not practicing actually. Pharmacists who were unreachable due to a change in their contact information during the time of the survey and those who refused to give informed consent were also excluded from the study. There was no age limitation. All methods were performed following the relevant guidelines and regulations such as the STROBE (Strengthening the Reporting of Observational Studies in Epidemiology) guidelines for reporting observational studies [32]. Since the study has no foreseeable risks, written consent was obtained in an electronic format. Participants haven't received any compensation for their participation in the study.

Ethical consideration

Participation in this survey was voluntary and participants were allowed to leave the study at any time. Electronic informed consent was obtained for each participant. All information was gathered anonymously and handled

confidentially. The study design assured adequate protection of study participants. None of the survey questions asked for information that could harm the participant in any way.

Sample size calculation

The digital Raosoft sample size calculator was used to calculate the sample size of the study, based on a total population size of 4185 community pharmacies registered with OPL, a 95% confidence level and an absolute error of 5%, a minimal sample of 352 pharmacists was required.

Instrumentation:

A 58-items questionnaire was developed by the authors to assess the study objectives and to cover important aspects of burnout in the Arabic and the English languages through an online platform via Google forms. The utilized scales used were translated into Arabic following the guidelines for forward and backward translation, except for the CBI-A already validated among Lebanese HCWs and available in the Arabic language (Youssef et al. submitted) and the HADS scale validated. A consensus was used to resolve inconsistencies between the original and translated versions. A pilot survey was also conducted among 20 community pharmacists and some reformulations for some questions were made throughout its course. Of note, the answers to the pilot survey were excluded from the final data of this study. The finalized anonymous, self-administered questionnaire was comprehensible and took 9 to 12 minutes to complete. The questionnaire included mainly closed-ended questions. It consisted of three sections: (a) sociodemographic characteristics, (b) occupational and exposure to COVID-19 variables, and (c) the measurements.

The first section collected sociodemographic data of the participants, including gender, age, marital status, profile, residency, education level, and health status. It also included questions about the history of medical illnesses, the health status of people living with the participant, and the presence of an elderly or dependent child at home. The second section covered the topic of occupational conditions and exposure to COVID-19. Physicians were queried to answer on whether they have worked in the frontline, dealing with COVID-19 patients, (b) been tested for COVID-9 (c) been diagnosed as COVID19 case, (d) had a family member relative or colleague infected by COVID-19. Each of these variables was answered on a yes or no basis.

The third section consisted of 2 scales to objectively assess COVID-19 threat perception, and burnout among the participants.

1-The perceived threat and altruistic acceptance of risk questionnaire:

This tool was developed by Chong et al to assess the risk perception of COVID-19 among HCWs, the perceived threat questionnaire [33]. It consisted of 10 items where nine of these items described HCWs' perception toward COVID-19 threat and one item related to altruistic acceptance of COVID-19 risk. Ratings were given based on a five-point Likert scale (1=strongly disagree, 2= disagree, 3 = neutral, 4=agree, 5=strongly angry). Responses were dichotomized into positive responses 'agree' or 'strongly agree', while 'strongly disagree', 'disagree', and 'not sure' were considered negative. The Cronbach alpha of this scale was equal to 0.703.

2- The Arabic version of Copenhagen Burnout scale A-CBI:

The 19-items CBI version validated among CPs (Youssef et al.) was used in the current study to evaluate the three aspects of burnout: personal-related (6 items), work-related (7 items), and client-related (6 items) burnout [34]. In our study, the Cronbach's alpha of this scale was equal to 0.787. The CBI items were mixed with questions on other topics in order to avoid stereotyped response patterns. CPs were asked to rate how often they felt exhausted on a five-point Likert scale as follows:(0=never, 25= Seldom, 0 = Sometimes, 75= Often, 100= Always). Other questions were also ranked on a five-point Likert scale but using different answers (to a very high degree, to a high degree, somewhat, to a low degree, to a very low degree). The coding was reversed for item 7 asking about having enough energy for family and friends during leisure time as a positive response was an indicator of a low burnout. The mean item was calculated for each subscale. A cut-off of 50 was used to assess the prevalence of burnout among CPs. The score was dichotomized as follows: a score equal or more than 50 is considered a high burnout level whereas a score less than 50 signify a low burnout level. Of note, when assessing the prevalence of burnout we split the high burnout level in two levels: a score 50-74: moderate, >75 high (Ref) in order to have more explanatory information [35].

Statistical analysis:

The generated data on an excel spreadsheet was transferred to the statistical software IBM SPSS® software (Statistical Package for Social Sciences) version 24.0 for analysis. Before analyzing it, the database was weighed according to the governorate where pharmacy is located, based on the list provided by the OPL. Descriptive statistics were reported using frequency with percentages for categorical variables and mean and standard deviation for continuous variables. Given that the response to all of the questions was mandatory, no missing data was recorded. For descriptive analysis, frequency and percentage were used for categorical variables, the mean and standard deviation for quantitative variables. The normality distribution of CBI scale items was confirmed by calculation of skewness and kurtosis values which are lower than 1 [36]. The categorized CBI using a cut-off was used in the bivariate and multivariable analysis. For the bivariate analysis of continuous variables, the Chi-2 test was used to compare categorical variables. All variables that showed a p-value< 0.2 in the bivariate analysis were included in the multivariable analysis as independent variables. Four logistic regressions using were conducted to identify the correlates of each of the CBI scales using overall burnout, personal burnout, work-related burnout and client-related burnout respectively as dependent variable. A P-value less than 0.05 is considered statistically significant.

Results

1-Baseline information of the participants:

A total of 387 CPs participated in the survey. Of the total, 53.7% were females; 60.5% were married, 43.2% were aged less than 40 years old, and 65.9% were residents of urban areas. Around half of the participants hold a BS degree in pharmaceutical sciences, had less than 10 years of professional experience (56.9%), working more than 40 hours per week (59.9%), having a monthly income more than 2 Million Lebanese pounds (53.9%) and were pharmacy' owner (55.3%). Most of surveyed CPs worked in pharmacies located in Mount-Lebanon governorate, which is mainly operating around 50-120 hours per week (81.6%). Of note, 77.5% have a good health status. In terms of family members, nearly half of participants had currently a dependent child (55.5%) or were living with the elderly (51.4%) or a family member with comorbidities living with them at home (59.4%). In terms of exposure,

76.7% of them were tested for COVID-19 and 23% were diagnosed with COVID-19. A detailed description of the baseline characteristics of the surveyed community pharmacists is presented in table 1.

2-Description of the scales:

In this sample of CPs, overall burnout had a mean of 65.34 ($SD=17.39$) while the value for personal burnout, work-related burnout and client-related burnout scales were 67.17 ($SD=16.82$), 67.02($SD=14.15$), and 69.38 ($SD=20.78$) respectively. The normality of the all used scales was assumed since skewness and kurtosis were lower than 1 for all, and the sample size larger than 300. All the used scales showed good reliability; CBI ($\alpha=0.868$); personal burnout ($\alpha=0.912$); work-related burnout ($\alpha=0.847$), client-related burnout ($\alpha=0.891$) and threat perception scale ($\alpha=0.719$). Quietly similar higher burnout level was shown in the dimension related to work (67.02 ± 14.15) and the one related to personal burnout (67.17 ± 17.39) followed by client-related burnout (63.98 ± 20.78). A detailed description of the scales is presented in Table 2.

3- Risk perceptions and altruistic acceptance of risk during the COVID-19 pandemic

More than 90% of surveyed CPs believed that their job was putting them at risk and were afraid to pass COVID-19 to others including their families and friends. In addition, 86.1% of them felt extra stress at work and 62.1% were afraid of falling ill with COVID-19, while 61.1% were worried that people avoid their families because of their work. More than half of CPs considered they had little control over being infected or not. 53.4% of participants were concerned that their families and friends feared to get infection through them. Only 1.03% of CPs believed that they would die if they get infected and 4.9% thought about resigning because of COVID-19. As for altruistic acceptance of risks, most participants (78.8%) accepted taking the risk of caring for COVID-19 patients (Figure 1).

Prevalence of burnout among Lebanese community pharmacists

Using a cut-off of 50 for CBI, burnout was detected among 81.9% of surveyed CPs, where 61% had a moderate burnout and 20.9% had a high level of burnout. Client burnout (CB) ranked first among other burnout aspects, where we can found that 89.7% of CPs suffered from CB with 17.3% of them reported high levels. As for work-related burnout (WB), it was detected moderate among more than three-quarters of CPs (76.8%), where 37% of them presented a high level of WB. In regards to personal burnout (PB), it was detected among 77.8% of CPs. Notably, 65.9% of participants experienced high level of personal burnout (Figure 2).

Table 1: Socio-demographics characteristics of surveyed Lebanese community pharmacists (N=387)

	n	%
Gender		
Male	179	46.30%
Female	208	53.70%
Age (years)		
Less than 40 y	254	65.60%
≥ 40 y	133	34.40%
Marital status		
Single and other*	153	39.50%
Married/Engaged	234	60.50%
Pharmacy location		
North & Akkar	48	12.40%
Mount Lebanon	145	37.50%
Beirut	60	15.50%
South & Nabatayah	79	20.40%
Bekaa & Baalbeck-Hermel	55	14.20%
Urbanicity (Residency)		
Rural	132	34.10%
Urban	255	65.90%
Years of experience		
0-10 years	220	56.90%
More than 10 years	167	43.20%
Profile		
Staff pharmacist	135	34.90%
Owner	214	55.30%
Manager	38	9.80%
Highest education level		
BS pharmacy	216	55.80%
Other (Master, PharmD, PhD...)	171	44.20%
Number of hours per week pharmacy is open		
Less than 50 hours	40	10.40%

50-120 hours	316	81.60%
7 days 24/24h	31	8.00%
Pharmacist working hours		
Less than 40 h		
40 hours or more	155	40.10%
Household income		
<2 Millions	232	59.90%
>2 Millions	178	46.10%
>2 Millions	209	53.9%
Health status		
Fair and Below	87	22.50%
Good and above	300	77.50%
Presence of dependent child		
No	172	44.50%
Yes	215	55.50%
Presence of elderly people at home		
No	188	48.60%
Yes	199	51.40%
Living with family member with comorbidities		
No	157	40.60%
Yes	230	59.40%
Ever tested for COVID-19		
No	90	23.30%
Yes	297	76.70%
Personal history of COVID-19 diagnosis		
No	298	77.00%
Yes	89	23.00%
Family member/friend ever diagnosed with COVID-19		
No	256	66.10%
Yes	131	33.90%
Colleague ever diagnosed with COVID-19		
No	35	9.00%

Yes

352

91.00%

*Note: n: Frequency, % Percentage, *Other included divorced or widowed*

Table 2: Descriptive statistics of the scales used in the study

#	Scale items	Mean	S.D
TPS	Threat perception scale ($\alpha=0.719$)	36.68	1.92
Threat1	My job puts me at great risk	3.96	0.63
Threat2	I feel more stress at work	3.86	0.77
Threat3	I have little control over whether I get infected or not	3.01	0.10
Threat4	I have little chance of survival if I were to get SARS	2.16	0.48
Threat5	I think of resigning because of SARS	2.16	0.48
Threat6	I am afraid that I will pass SARS to others	4.23	0.83
Threat7	My family and friends are worried they get infected through me	3.85	0.53
Threat8	People avoid my family because of my work	4.03	0.93
Threat9	I am afraid of falling ill with SARS	3.82	0.72
ALtru1	I accept the risk of caring for SARS patient ^R	3.63	0.74
CBI	Copenhagen burnout inventory scale ($\alpha=0.868$)	65.34	17.39
	Personal burnout ($\alpha=0.912$)	67.17	16.82
PB1	How often do you feel tired?	66.41	16.56
PB2	How often you are physically exhausted?	66.41	16.56
PB3	How often you are emotionally exhausted?	66.41	16.56
PB4	How often do you think:"I can't take it anymore"?	69.06	12.48
PB5	How often do you feel worn out?	67.38	16.88
PB6	How often do you feel weak and susceptible to illness?	67.38	16.88
	Work-related burnout ($\alpha=0.847$)	67.02	14.15
WB1	Is your work emotionally exhausting?	64.08	13.42
WB2	Do you feel burnt out because of your work?	68.67	11.18
WB3	Does your work frustrate you?	69.12	11.91
WB4	Do you feel worn out at the end of the working day?	69.77	11.53
WB5	Are you exhausted in the morning at the thought of another day at work?	66.15	12.24
WB6	Do you feel that every working hour is tiring for you?	69.51	11.26
WB7	Do you have enough energy for family and friends during leisure time? ^R	66.60	12.09
	Client burnout ($\alpha=0.891$)	69.38	20.78
CB1	Do you find it hard to work with clients?	68.27	21.39

CB2	Do you find it frustrating to work with clients?	62.82	22.39
CB3	Does it drain your energy to work with clients?	67.67	23.53
CB4	Do you feel that you give more than you get back when you work with clients?	68.82	24.29
CB5	Are you tired of working with clients?	72.03	24.98
CB6	Do you sometimes wonder how long you will be able to continue working with clients?	69.30	21.23

M:mean, SD: Standard deviation, R: reversed coding

Factors associated with overall burnout:

Table 3 displayed factors associated with overall burnout among CPs. Female CPs ($aOR=1.632$, 95% CI (1.213-3.381)) were 1.6 times more prone to higher level of burnout comparing to males. Similarly, younger CPs ($aOR=1.792$, 95% CI (1.314-3.904)), staff pharmacists ($aOR=3.020$, 95% CI(1.892-4.217)) and CPs suffering from comorbidities ($aOR=2.312$, 95% CI (1.541-3.871)) were more likely to experience higher level of burnout than older CPs and pharmacy' owner. In the contrary, married CPs ($aOR=0.731$, 95% CI (0.598-0.834)) were less likely to suffer from higher burnout comparing to CPs without partner. Having large professional experience ($aOR=0.621$, 95% CI (0.502-0.833)), sufficient sleeping hours ($aOR=0.609$, 95% CI(0.323-0.898)) and higher socio-economic status ($aOR=0.452$, 95% CI(0.238-0.611)) were associated with lower burnout level. However, working in pharmacies operating round the clock ($aOR=3.78$, 95% CI (2.113-5.487)) and extensive working hours ($aOR=2.311$, 95% CI(1.817-3.087)) were associated with higher odds of burnout. In terms of living conditions, having a dependent child ($aOR=4.171$, 95% CI (3.273-8.312)), living with family member with comorbidities ($aOR=3.028$, 95% CI (2.139-5.123)) and having high perception of COVID-19 threat ($aOR=1.303$, 95% CI (1.187-2.786)) were associated positively with higher level of burnout. However, having a previous history of COVID-19 ($aOR=0.765$, 95% CI (0.436-0.908)) and accepting the risk of dealing with COVID-19 ($aOR=0.652$, 95% CI (0.583-0.789)) were associated with lower odds of burnout.

Table 3: Factors associated with the overall burnout scale

	Low (<50)	High(≥50)	Total	P-value	aOR	Confidence Interval 95%	
	n(%)	n(%)				Lower	Upper
Gender							0.003
Male	49(27.4%)	130(72.6%)	179(46.3%)		Ref		
Female	21(10.1%)	187(89.9%)	208(53.7%)		1.632	1.213	3.381
Age (years)							0.023
≥ 40 y	31(23.3%)	102(76.7%)	133(34.4%)		Ref		
Less than 40 y	39(15.4%)	293(84.6%)	254(65.6%)		1.792	1.342	3.904
Marital status							0.041
Single and other*	18(11.8%)	135(88.2%)	153(39.5%)		Ref		
Married/Engaged	42(17.9%)	192(82.1%)	234(60.5%)		0.731	0.598	0.834
Pharmacy location							0.187
North & Akkar	9(18.7%)	39(81.3%)	48(12.4%)				
Mount Lebanon	31(21.4%)	124(79.6%)	145(37.5%)				
Beirut	10(16.7%)	50(83.3%)	60(15.5%)				
South & Nabatyeh	15(18.9%)	64(81.2%)	79(20.4%)				
Bekaa & Baalbeck-Hermel	7(12.72%)	48(87.2%)	55(14.2%)				
Years of experience							0.028
0-10 years	22(10%)	198(90%)	220(56.9%)		Ref		
More than 10 years	48(28.7%)	119(71.3%)	167(43.2%)		0.621	0.502	0.833
Profile							0.021
Owner	49(22.8%)	165(77.1%)	214(55.3%)		Ref		
Manager	9(23.7%)	29(76.3%)	38(9.8%)		1.261	0.913	1.512
Staff pharmacist	12(8.9%)	123(91.1%)	135(34.9%)		3.02	1.892	4.217
Highest education level							0.119
BS pharmacy	41(18.9%)	175(81.1%)	216(55.8%)				

Other (Master, PharmD, PhD..)	29(16.9%)	142(83.1%)	171(44.2%)				
Number of hours per week pharmacy is open					<0.001		
Less than 50 hours	21(27.5%)	29(72.5%)	40(10.4%)		Ref		
50-120 hours	46(14.5%)	260(85.5%)	316(81.6%)		1.92	0.989	2.338
7 days 24/24h	3(9.7%)	28(90.3%)	31(8%)		3.78	2.113	5.487
Pharmacist working hours					<0.001		
Less than 40 h	48(31%)	107(69%)	155(40.1%)		Ref		
40 hours or more	22(9.5%)	210(90.5%)	232(59.9%)		2.311	1.817	3.087
Subjective classification of the current economic situation					<0.001		
Low	17(6.1%)	261(95.7%)	278(46.4%)		Ref		
Middle	38(28.8%)	42(71.2%)	80(20.7%)		0.865	0.467	1.897
High	15(51.7%)	14(48.3%)	29(43.6%)		0.452	0.238	0.611
Having an underlying condition/comorbidity					0.023		
No	61(20.5%)	237(79.5%)	298(77.00%)		Ref		
Yes	9(10.1%)	80(89.9%)	89(23%)		2.312	1.541	3.871
Presence of dependent child					<0.001		
No	58(33.7%)	114(66.27%)	172(44.5%)		Ref		
Yes	12(5.6%)	203(89.9%)	215(55.5%)		4.171	3.273	8.312
Living with family member with comorbidities					<0.001		
No	52(33.1%)	105(66.7%)	157(40.6%)		Ref		
Yes	18(7.8%)	212((92.2%)	230(59.4%)		3.028	2.139	5.123
Personal history of COVID-19 diagnosis					<0.001		
No	53(89.9%)	245(89.9%)	298(77%)		Ref		
Yes	27(89.9%)	62(89.9%)	89(23%)		0.765	0.436	0.908
Family member/friend ever diagnosed with COVID-19					0.189		
No	46(17.9%)	210(82.1%)	256(66.1%)				
Yes	24(18.3%)	107(81.7%)	131(33.9%)				
Colleague ever diagnosed with COVID-19					0.079		

No	7(20%)	28(80%)	35(9%)			
Yes	63(17.9%)	289(82.1%)	352(91%)			
Sleeping hours	0.008					
<6 hours	23(13.8%)	154(86.2%)	167(43.2%)	Ref		
≥6 hours	47(21.4%)	173(78.6%)	220(56.8%)	0.609	0.323	0.898
Altruism	0.002					
Disagree	8(9.7%)	76(91.3%)	82(21.25%)	Ref		
Agree	62(20.3%)	243(79.7%)	305(78.8%)	0.652	0.583	0.789
Threat perception scale	0.044					
				1.303	1.187	2.786

Note: n: Frequency, % Percentage, *Other included divorced or widowed, C.I: Confidence interval, aOR: adjusted Odds Ratio

Factors associated with personal burnout:

Younger age (aOR=1.792, 95% CI (1.342-1.904)), female gender (aOR=2.632, 95% CI (1.913-4.187)), being staff pharmacist (aOR=2.116, 95% CI (1.618-3.807)), working more than 40 hours per week (aOR=1.663, 95% CI (1.321-2.732)) were positively associated with higher level of burnout. Similarly, having a dependent child (aOR=2.632, 95% CI (1.913-4.187)), insufficient sleeping hours (aOR=3.219, 95% CI (2.013-6.127)), having a colleague diagnosed with COVID-19 (aOR=1.852, 95% CI (1.347-2.786)) and high perception of COVID-19 threat (aOR=1.852, 95% CI (1.347-2.786)) were also associated with higher burnout. However, CPs who were married (aOR=0.876, 95% CI (0.669-0.942)), having high socioeconomic situation (aOR=0.367, 95% CI (0.218-0.605)), and accepting the risk of dealing with COVID-19 cases (aOR=0.812, 95% CI (0.623-0.918)) were less likely to experience high level of burnout comparing to their counterparts (Table 4).

Table 4: Factors associated with Personal burnout scale among CPs

	Low (<50)	High(≥50)		P- value	aOR	Confidence interval 95%	
	n(%)	n(%)	Total			Lower	Upper
Gender				0.022			
Male	48(26.8%)	138(73.2%)	179(46.3%)		Ref		
Female	38(18.3%)	170(81.7%)	208(53.7%)		2.632	1.913	4.187
Age (years)				0.023			
≥ 40 y	50(37.5%)	83(62.5%)	133(34.4%)		Ref		
Less than 40 y	36(14.2%)	218(85.8%)	254(65.6%)		1.792	1.342	1.904
Marital status				0.048			
Single and other*	39(25.4%)	114(74.6%)	153(39.5%)		Ref		
Married/Engaged	47(20%)	187(80%)	234(60.5%)		0.876	0.669	0.942
Profile				0.039			
Owner	54(25.2%)	160(74.8%)	214(55.3%)		Ref		
Manager	8(21.1%)	30(79.9%)	38(9.8%)		1.213	0.907	1.813
Staff pharmacist	24(17.7%)	111(82.3%)	135(34.9%)		2.116	1.618	3.807
Pharmacist working hours				0.026			
Less than 40 h	32(20.6%)	123(79.4%)	155(40.1%)		Ref		
40 hours or more	54(23.2%)	178(76.8%)	232(59.9%)		1.663	1.321	2.732
Subjective classification of the current economic status				<0.001			
Low	49(16.9%)	242(87.1%)	278(46.4%)		Ref		
Middle	16(21.3%)	63(78.7%)	80(20.7%)		0.871	0.689	0.914
High	21(72%)	187(89.9%)	29(43.6%)		0.367	0.218	0.605
Presence of dependent child				<0.001			
No	66(38.9%)	106(61.1%)	172(44.5%)		Ref		
Yes	20(9.3%)	195(90.7%)	215(55.5%)		4.017	3.818	7.432
Personal history of COVID-19 diagnosis				0.079			
No	70(23.4%)	228(76.6%)	298(77%)				
Yes	16(17.9%)	73(82.1%)	89(23%)				

Family member/friend ever diagnosed with COVID-19				0.102
No	55(21.5%)	201(79.5%)	256(66.1%)	
Yes	31(23.7%)	100(76.3%)	131(33.9%)	
Colleague ever diagnosed with COVID-19				0.006
No	19(54.3%)	16(45.7%)	35(9%)	Ref
Yes	67(19.1%)	285(80.9%)	352(91%)	4.73 2.782 7.112
Sleeping hours				<0.001
≥6 hours	54(24.5%)	166(75.5%)	220(56.8%)	Ref
<6 hours	32(19.1%)	135(86.2%)	167(43.2%)	3.219 2.013 6.127
Altruism				0.042
Disagree	20(24.4%)	62(75.6%)	82(21.25%)	Ref
Agree	66(21.6%)	239(78.4%)	305(78.8%)	0.812 0.623 0.918
Threat perception scale				0.032 1.852 1.347 2.786

Note: n: Frequency, % Percentage, *Other included divorced or widowed. C.I: Confidence interval, aOR: adjusted Odds Ratio

Table 5: Factors associated with work-related burnout scale among CPs

	Low (<50)	High(≥50)	Total	P-value	aOR	Confidence interval 95%
	n(%)	n(%)				
Age (years)						0.023
≥ 40 y	42(31.6%)	91(68.4%)	133(34.4%)		Ref	
Less than 40 y	48(18.9%)	206(91.1%)	254(65.6%)		2.132	1.168 3.005
Years of experience						0.013
0-10 years	39(17.7%)	181(82.3%)	220(56.9%)		Ref	
More than 10 years	51(30.5%)	116(69.5%)	167(43.2%)		0.761	0.532 0.898
Profile						0.011
Owner	65(30.3%)	149(69.7%)	214(55.3%)		Ref	
Manager	14(36.8%)	24(63.2%)	38(9.8%)		1.812	0.923 3.107
Staff pharmacist	11(8.2%)	124(91.8%)	135(34.9%)		4.12	2.192 6.117
Number of hours per week pharmacy is open						<0.001
Less than 50 hours	20(50%)	20(50%)	40(10.4%)		Ref	
50-120 hours	65(20.5%)	251(79.5%)	316(81.6%)		3.128	2.129 5.338
7 days 24/24h	5(16.1%)	26(83.9%)	31(8%)		4.178	2.781 6.553
Pharmacist working hours						<0.001
Less than 40 h	58(37.4%)	97(62.6%)	155(40.1%)		Ref	
40 hours or more	32(13.7%)	200(86.3%)	232(59.9%)		1.709	1.221 3.405
Presence of underlying condition						<0.001
No	73(24.4%)	225(75.6%)	298(77.00%)		Ref	
Yes	17(19.1%)	72(80.9%)	89(23%)		1.821	1.239 3.011
Presence of dependent child						<0.001
No	70(40.7%)	102(59.3%)	172(44.5%)		Ref	
Yes	20(9.3%)	195(90.7%)	215(55.5%)		2.361	1.765 3.812
Dealing with COVID-19 case						0.032
No	60(29.7%)	142(70.3%)	202(48.1%)		Ref	
Yes	30(16.3%)	155(83.7%)	185(51.9%)		1.912	1.682 3.829
Sleeping hours						<0.001

≥ 6 hours	64(29.1%)	156(70.9%)	220(56.8%)	Ref			
<6 hours	26(15.5%)	141(84.4%)	167(43.2%)	2.918	1.812	5.218	
Subjective classification of the current economic status						<0.001	
Low	50(17.9%)	228(82.1%)	278(46.4%)	Ref			
Middle	22(27.5%)	58(72.5%)	80(20.7%)	0.871	0.689	1.914	
High	18(62.1%)	11(37.9%)	29(43.6%)	0.367	0.218	0.605	
Altruism						0.042	
Disagree	66(80.4%)	16(19.6%)	82(21.25%)	Ref			
Agree	24(7.9%)	281(92.1%)	305(78.8%)	0.722	0.512	0.909	
Threat perception scale						0.016	2.853 1.472 3.885
Colleague ever diagnosed with COVID-19						0.001	
No	20(57.1%)	15(42.9%)	35(9%)	Ref			
Yes	70(19.9%)	282(80.1%)	352(91%)	3.819	2.011	7.415	

Note: n: Frequency, % Percentage, *Other included divorced or widowed

Table 6: Factors associated with the client-related burnout scale

	Low (<50)	High(≥50)	Total	P-value	Confidence interval		
	n(%)	n(%)			aOR	Lower	Upper
Age (years)	0.023						
≥ 40 y	31(23.3%)	102(76.7%)	133(34.4%)		Ref		
Less than 40 y	39(15.4%)	293(84.6%)	254(65.6%)		1.792	1.342	1.904
Profile	0.021						
Owner	53(24.7%)	161(75.3%)	214(55.3%)	Ref			
Manager	7(18.4%)	31(81.6%)	38(9.8%)		1.322	0.879	3.512
Staff pharmacist	10(7.4%)	123(92.6%)	135(34.9%)		3.021	1.892	5.327
Pharmacist working hours	<0.001						
Less than 40 h	49(31.6%)	106(68.4%)	155(40.1%)		Ref		
40 hours or more	21(9.1%)	211(89.9%)	232(59.9%)		4.302	2.918	7.503
Dealing with COVID-19 case	0.012						
No	65(32.2%)	137(67.8%)	202(48.1%)		Ref		
Yes	5(2.7%)	180(97.3%)	185(51.9%)		3.781	1.467	7.412
Altruism							
Disagree	8(9.5%)	58(91.5%)	82(21.25%)		Ref		
Agree	62(20.3%)	243(79.7%)	305(78.8%)		0.582	0.381	0.765
Threat perception	0.043			2.032	1.283	4.066	

Factors associated with work-related burnout

Younger age CPs (aOR=2.132, 95% CI (1.168-3.005)), CPs working as staff pharmacist (aOR=4.12, 95% CI (2.192-6.117)), with extensive working hours (aOR=1.709, 95% CI (1.221-3.405)), having a dependent child (aOR=2.361, 95% CI (1.765-3.812)) and dealing with COVID-19 cases (aOR=1.912, 95% CI (1.682-3.829)) were more prone to have higher level of burnout. Similarly, working in a pharmacy which is operating more than 50 hours per week (aOR=4.178, 95% CI (2.781-6.553)), having insufficient sleeping hours (aOR=2.918, 95% CI (1.812-5.218)), having a colleague diagnosed with COVID-19 (aOR=3.819, 95% CI (2.011-7.415)) and high perception of COVID-19 threat (aOR=2.853, 95% CI (1.473-3.885)), were also associated with higher burnout. However, CPs who have high socioeconomic status (aOR=0.367, 95% CI (0.218-0.605)), those who accepted the risk of dealing with COVID-19 cases (aOR=0.722, 95% CI (0.512-0.909)) and those with large professional experience (aOR=0.761, 95% CI (0.532-0.898)) were less likely to have high level of burnout comparing to their counterparts (Table 5).

Factors associated with client-related burnout

As seen in table 6, the odds of client-related burnout was higher among younger CPs ($aOR=1.792$, 95% CI (1.342-1.904)), staff pharmacists ($aOR=3.021$, 95% CI (1.892-5.327)), those who worked for more than 40 hours ($aOR=4.302$, 95% CI (2.918-7.503)), those dealing with COVID-19 cases ($aOR=3.781$, 95% CI (1.461-7.412)) and those who had higher perception of COVID-19 threat ($aOR=2.032$, 95% CI (1.283-4.066)). However, altruism ($aOR=0.582$, 95% CI (0.381-0.765)) was negatively associated to higher level of burnout.

Discussion

To the best of our knowledge, this study is the first nationwide survey assessing burnout syndrome among CPs during the COVID-19 pandemic and examining factors associated with burnout. Our results showed that burnout was prevalent among 81.9% of surveyed CPs and client-related burnout was the most expressed aspect of burnout (89.7%). Younger age, female gender, being staff pharmacist, working in pharmacy operating around the clock and working more than 40 hours per week were associated with higher level of burnout. Similarly, suffering from comorbidity, having a dependent child or living a family member with comorbidities, experiencing sleep disturbance and high perception of COVID-19 threat were also associated with higher burnout. However, being married, having large professional experience, having high socioeconomic situation, accepting the risk of dealing with COVID-19 cases and having previous history of COVID-19 were negatively associated with burnout. On the other hand no relation was found between burnout and geographical location of the pharmacy as well as the education level.

Our findings showed that more than 80% of Lebanese CPs suffered from burnout and 20.9% of them had high level of burnout. This was predictable since Lebanese CPs were stranded under a perfect storm that could instigate burnout. Our results were higher than what has been reported in other studies. A study conducted among CPs showed that 74.9% of respondents experienced burnout in at least 1 of the 3 subscales of the MBI-HSS [37]. A study conducted in Serbia reported that 44.4% of community pharmacists had high levels of burnout [38]. A systematic review found the prevalence of burnout in pharmacists ranged from 19% to 37% [21]. Another study conducted among pharmacists in Saudi Arabia showed that 25.16% of pharmacists had high emotional exhaustion, 55.97% had high depersonalization, and 63.52% had low scores for personal accomplishment [39]. However, such comparison should be cautious since different scales were used.

In terms of work-related burnout, our results showed that 76.8% of surveyed CPs suffered from WB and 37% of them reported high level of WB. Overall, such alarming level of burnout among CPs in all three dimensions stressed the importance of urgent action to tackle such epidemic. Due to the uncertainty of the length of the current pandemic and the ongoing economic crisis, no one can neglect the considerable lasting impact of this syndrome.

In terms of sociodemographic factors associated with burnout, the first relevant finding was associated to the role of gender on the development of burnout among CPs. Our results showed that female CPs were more likely to experience high level of burnout comparing to males. Our results were consistent with the findings of a nationwide survey performed among the American Pharmaceutical Association membership which revealed higher level of burnout in women with respect to men pharmacists [40]. A study conducted among CPs in central Italy demonstrated no significant differences in burnout levels [41]. In the contrast, other studies disclosed that men suffer significantly more of burnout than women and men seem to suffer more from higher levels of stress [42-44].

44]. In addition, younger age was found to be associated with higher level of burnout. Consistently to a study conducted in United States by Jones et al. among hospital clinical pharmacy practitioners where age was found to be protective against burnout [12]. Our findings showed that younger CPs were more prone to burnout comparing to older CPs. This could be explained by the fact that younger pharmacists have the most workload, as the beginning of a pharmacist's job can be loaded with night shifts, and maintaining patient's safety, which can enhance the feeling of disconnect with themselves. However, a study conducted in Serbia found that burnout was more common among older community pharmacists (51–60 years) compared with their younger colleagues [38]. These results can be clarified seeing that younger pharmacists have less professional experience, and thus, they presumably present a greater emotional load during their compared to older ones.

Comparing to pharmacy owners, staff pharmacists had higher odds of burnout. These results were in line with the findings of an Italian study which revealed that CPs most exposed to exhaustion were those who played the role of employee compared to those who held the role of holder, manager or other management roles [41]. Such finding was expected, as the staff pharmacists experience a relevant workload and were more exposed to clients than managers and owners, especially in larger pharmacies [45]. In terms of health status, CPs suffering from comorbidities were more likely to experience higher level of burnout than those with good health status. These findings were not surprising since subjects with COVID-19 were more concerned about their health which can prompt a high level of anxiety which can lead in turn to high level of burnout. This was supported by a study conducted among CPs pharmacists and pharmacy technicians that reported strong association between burnout syndrome and the presence of comorbidities such as depression and anxiety [42].

With regard to marital status, married CPs were found less likely to suffer from higher burnout comparing to unmarried CPs including single, widowed and divorced. Consistently with other studies, unmarried respondents had significantly higher exhaustion than married [46]. This could be explained by the fact that CPs who were receiving support from their partners experience less burnout when compared to those who do not. Of note, one of the suggested ideas found in the literature to overcome burnout was the building of support systems through family to enhance self-esteem and reduce burnout.

Interestingly, CPs with large professional experience had lower level of burnout comparing with those with a work experience less than 10 years. Several studies highlighted the role of years of practice in lowering level of burnout. For example, a study conducted in Turkey, found that burnout was higher in pharmacists working for less than 10 years than those working for 10–19 years and more than 29 years [44]. Calgan et al. reported that pharmacists who worked for less than 10 years have a higher level of emotional exhaustion and depersonalization than those working for more than 10 years. Similarly, Durham et al. reported that pharmacists working for less time were more exposed to burnout [11]. In these studies, experience seems to be a protective factor for burnout risk. This could be explained by the fact, that the CPs adapt themselves to confront job stressors and learn to cope with challenging situations. However, older experienced pharmacists have spent several/many years of their life in contact with patients, and probably, they have "accumulated" greater fatigue and exhaustion. Therefore, there were incongruent findings related years of practice experience [40, 47-49].

In regards to sleeping hours, our study showed that sleeping more than 6 hours daily was associated with lower level of burnout. Of note, the role of extensive working hours and sleep deprivation, were reported as risk factor for

burnout among CPs in several studies especially when working in pharmacies operating round the clock with night shift [20, 49].

With the economic collapse and the steep loss of the value of the Lebanese currency combined with the inflation of the prices of the medicines and the imposed lockdown, concerns of Lebanese population towards an imminent shortage in medicines in the Lebanese market turned them into panic mode, and an unprecedented race to purchase medicines from pharmacies was reported. Hence, Lebanese CPs are facing intense workload, extensive working hours, which eventually impact physicians sleeping hours and burnout [50, 51].

A study conducted prior to the pandemic showed that 33% of the HCWs were screened positive for the sleeping disorder and this was associated with 4-fold bigger odds of burnout [52]. These results were in line with the findings among Saudi Arabian pharmacists where Sleeping hours per day were significantly correlated with burnout. Of note, sleep disturbances was positively associated with impaired performance, emotional changes, tiredness, loss of concentration, and mood disorders as anxiety or depression [53]. In addition to all of the above high socio-economic status ($aOR=0.452$, 95% CI (0.238-0.611)) were associated with lower burnout level. Several studies showed a correlation income satisfaction and burnout. Other study showed that low annual salary was associated with higher burnout [46]. In terms of living conditions, having a dependent child, living with family member with comorbidities was associated with higher burnout level. This could be due to the fears expressed by CPs to transfer the infection to their families especially for family members with comorbidities as they were more at risk of COVID-19 complications. Similarly higher perception of COVID-19 threat, in terms of catching the infection, transmission of the COVID-19, stigmatization of family was associated with higher level of burnout. These findings were not surprising as CPs believed that their job was putting them at risk and were afraid to pass COVID-19 to others including their families and friends. However, a study showed that pharmacists who had no children were more susceptible to exhaustion [46]. Remarkably, CPs with previous history of COVID-19 expressed lower level of burnout. Such finding could be due that CPs felt less anxious about COVID-19. Their natural immunity offers them a feeling of control over the infection. Lastly, accepting the risk of dealing with COVID-19 was associated with lower odds of burnout among CPs. As for altruistic acceptance of risks, most participants (78.8%) accepted taking the risk of caring for COVID-19 patients

Several limitations should be acknowledged in our study. First, the cross-sectional design of our study does not allow us to infer causality or temporal order. In addition, the sample was not random; hence, selection bias is possible due to the used snowball technique for data collection which limits the generalizability of the findings. Unfortunately, given the online nature of collection tool, we are unable to report a response rate of those who our study was actually applicable to complete, as the query generated by ACCP was only able to tell us the total number of individuals who participate. However, our data was weighed by geographical location according to the list of CPs provided by the OPL, in addition our study involve a great variability of demographic characteristics, lifestyles, and working conditions, therefore, our results may represent the best representative case scenario of pharmacists' burnout. The collected data was also based on self-reported information which makes it disposed to social desirability and might drive the results towards the null, leading to underestimation of some associations. Furthermore, because survey respondents voluntarily completed the survey, only those who may have had available time during the pandemic may have participated. This may have led us to capture less of a selection of CPs that had higher demands on the job during this period, possibly leading to underreporting of burnout during the pandemic. On other hand, another possibility was that CPs who were suffering from this syndrome were more interested to participate. In addition, lack of reward for completing the survey may have further contributed to

refusal of participation. Third, although the questionnaire was piloted and adjusted before adopting the final version, it was only available online, thus restricting the participation of CPs with little computer literacy and poor internet access. Fourth, since we did not have comparable data about burnout of CPs just prior to the pandemic, we were not able to evaluate any incremental effect of the COVID-19 pandemic on burnout. Finally, although taking into consideration of some potential confounders in the multivariable models, residual confounding is still possible. Further studies exploring the independent and combined effect of the economic crisis on the burnout of Lebanese CPs would be highly recommended in the future since the financial hardship was found also associated to higher level of burnout.

The level of burnout detected among Lebanese CPs is disquieting since it could reveal only the tip of the iceberg of the crisis in Lebanon. The closure of some pharmacies and the reduced operating hours reflected the burnout negative impacts that would not be restricted to CPs mental health and financial status but would also affect the patient care. Of note, preventing burnout is complicated as factors causing burnout in CPs can be unique to this career, more pervasive risk factors present in similar healthcare professions suggest an encompassing problem. However, to date, there were no tangible interventions and action taken by health organizations to combat burnout that concentrated on healthcare worker burnout in Lebanon including CPs. Hence, it is important to address factors identified by our study that potentially contributing to burnout among CPs and to mitigate the long-term negative consequences. Some reported strategies including ideas and considerations of burnout prevention from compiled literature could be outlined to offer a framework to address burnout. This includes encouraging leadership qualities that facilitate staff wellbeing, decreasing workload, improving achievement of quality measures, choosing incentives wisely, and encouraging a work-life balance such as offering greater scheduling flexibility. In addition, encouraging peer support, building support systems through family, friends, and interdisciplinary teamwork collaboration can boost morale and reduce burnout.

Conclusion

Our study showed that burnout hits 81.9% of the Lebanese CPs and unveiled several risk factors significantly affecting burnout. In the context of economic collapse and politic turmoil, other individual confounding/interfering factors of the risk of burnout in pharmacists should be investigated. This alarming prevalence called health authorities to take prompt and warranted measures based on the factors associated with this syndrome unearthed in this study, to prevent burnout and mitigate among CPs in order to support resiliency in the profession. Prevention strategies and interventions on individual and organizational basis like focusing on work-life balance, minimizing the level of chronic stress, increasing work satisfaction, peer support, counseling and self-care were needed.

Declarations

Author Contributions:

D.Y. was involved with study conception and design, data collection and analysis, drafted and revised the manuscript.

J.Y was involved with study conceptualization and design, drafting and revising the article.

L.A.A and H.S were involved in the revision of the manuscript. All authors have read and approved the final version of the article.

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Informed Consent Statement:

Informed consent for participating in the study was obtained digitally through Google Forms from all subjects, and all methods were carried out in accordance with the relevant guidelines and national regulations for the Non-clinical studies. Specifically, at the beginning of the questionnaire, participants were asked whether they agree to participate in the research in order to be included in the study. Participants were also informed that their participation was voluntary and that they had the right to leave at any time without providing any explanation. No incentives were provided to the study participants.

Data Availability Statement:

The datasets generated during the current study are not publicly available but are available from the corresponding author on reasonable request.

Conflicts of Interest

The authors declare that they have no competing interests and they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Consent for publication

Not applicable.

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Figures

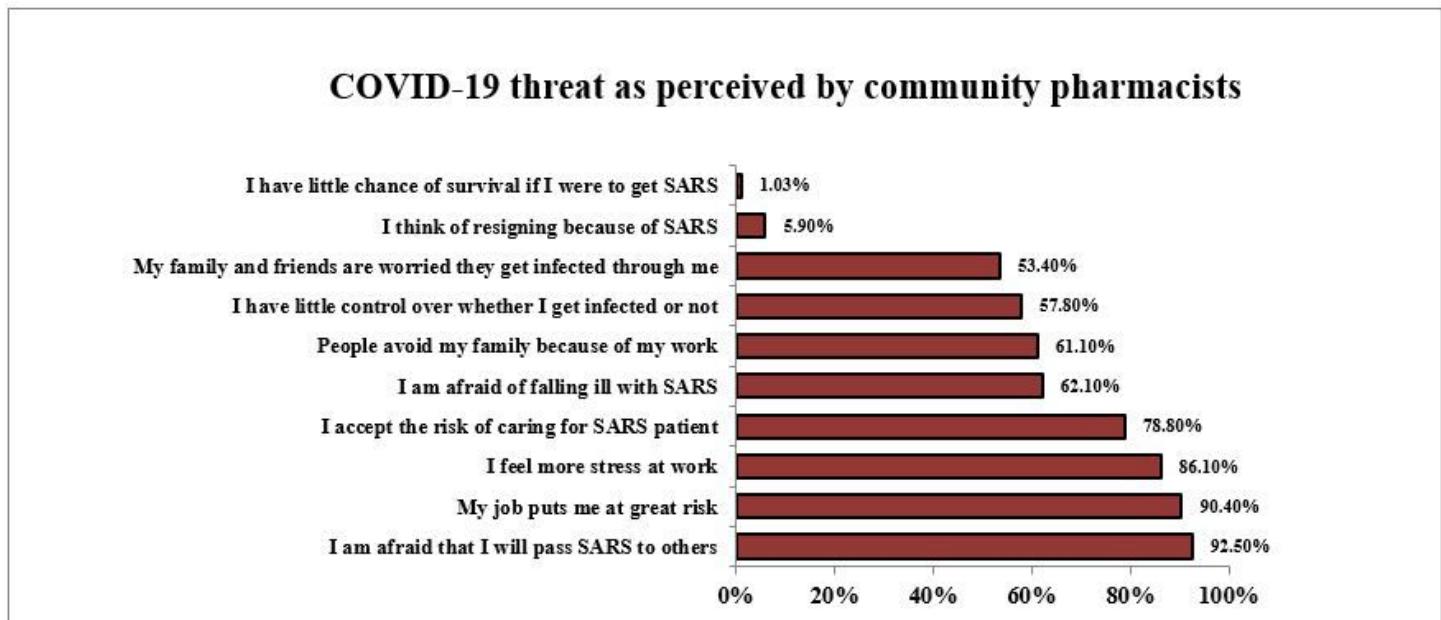


Figure 1

Community pharmacists' perception of COVID-19 threat

Prevalence of burnout among Lebanese community pharmacists

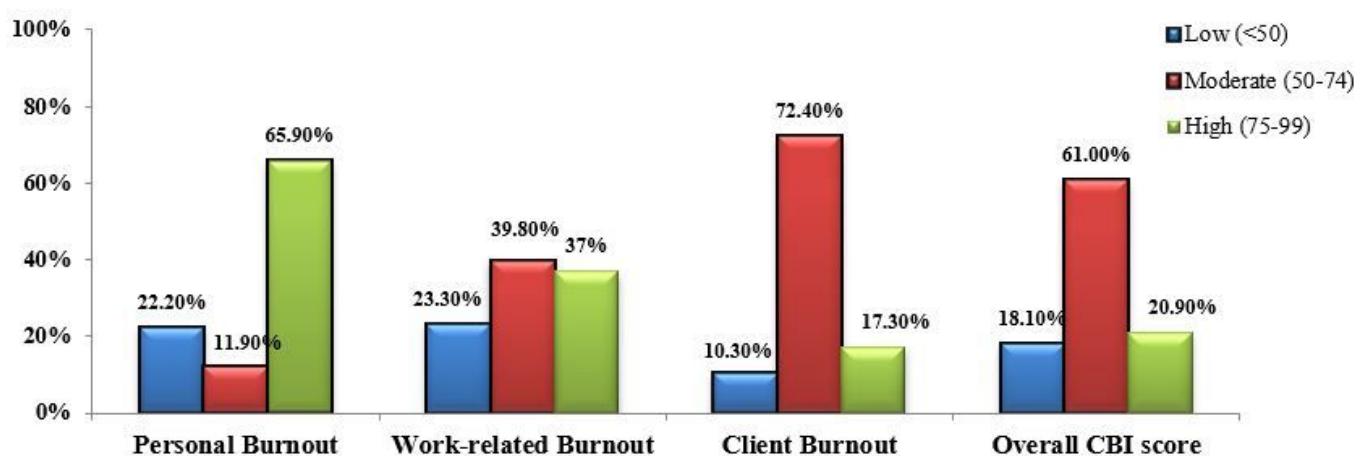


Figure 2

Prevalence of burnout among Lebanese community pharmacists