

Prevalence and risk factors of burnout among community pharmacists in Northeast region of Bulgaria - a pilot study

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Abstract

Background: Burnout is described as an emotional, mental and physical exhaustion observed in healthy people and directly related to their professional context. The objective is to study the level of burnout among community pharmacists and to identify the workplace factors affecting it.

Materials and methods: Using a questionnaire, specifically designed by the authors of the study, an anonymous survey was conducted in the region of Varna, as the largest region of Northeastern Bulgaria. The questionnaire contains questions about the demographic characteristics; a standardised burnout measure tool (MBI-HSS-MP), and questions regarding the specifics of the work environment. According to MBI-HSS-MP, burnout is associated with high levels of emotional exhaustion (EE) and depersonalisation (DP) and low level of personal accomplishment (PA).

Results: The participants in the pilot study were 127 masters of pharmacy. Regarding individual factors, a statistically significant relationship was found between age and the scales emotional exhaustion EE ($p = 0.012$), depersonalisation DP (0.028) and personal accomplishment PA ($p = 0.028$). Most susceptible to EE ($p = 0.014$) and DP ($p = 0.008$) were the age group 25–45 years while most satisfied with their PA were in the age group 46–55 years ($p = 0.016$). From the organisational factors, the large number of patients had the greatest impact on burnout (DP $p = 0.000$ /EE $p = 0.006$). The other key factors for burnout were an insufficient number of pharmacy staff, a heavy administrative burden and a wide range of medicinal products.

Conclusion: It is necessary to develop training courses for young professionals to introduce them gradually into the work process and build up skills for effectively coping with stress. Proposals need to be made for reducing the administrative burden of pharmacists and maintaining staffing levels that are adequate to the patient flow and expanding the capabilities of The Specialised Electronic System for Tracing and Analysis System of Medicinal Products (SETASMP).

Keywords

burnout, community pharmacist, factors

Introduction

Burnout is described as an emotional, mental and physical exhaustion observed in healthy people and directly related to their professional context. The symptoms of burnout can occur as a reaction to chronic occupational stress. (Maslach et al. 2001; Thomas 2004; Lecheva and Georgieva 2018). The initial focus of burnout research was on the helping professions, as pharmacists and other healthcare workers were considered the most vulnerable (Freudenberger and Richelson 1980; Bridgeman et al. 2018). Studies have shown that pharmacists have higher burnout levels than other medical professionals (Padgett and Grantner 2020).

Some authors differentiate between two processes – ‘burnout’ as a result of internal factors related to an idealistic self-image and high expectations, and ‘wear out’ – as a result of external factors or the influence of the environment (Fischer 1983). Stress factors leading to burnout can be divided into two categories: individual and organizational i.e. related to the work settings. Surveys among pharmacists identify some individual factors such as gender, age and job experience as predisposing to high level of burnout (Stergachis 2020). Other factors that put at risk of burnout are the personal stressors including the person’s health, family dynamics, financial problems and work-life imbalance (Calgan et al. 2011).

Stress factors at work that lead to burnout are heavy workload, lack of autonomy, negative relationships with fellow workers, complicated documentation requirements, patients who are unhappy or even disruptive, and the use of modern technology (English 2022). Multiple factor analysis shows a number of causes contributing to pharmacists’ burnout such as insecurity due to the healthcare reform, heavy administrative workload, time pressure, many non-pharmaceutical duties, difficult relationships with colleagues and the feeling that their performance is underrated (Calgan et al. 2011).

The Maslach Burnout Inventory Human Services Survey (MBI-HSS (MP)) is used as a standard tool for assessing burnout in healthcare professionals (Maslach et al. 1996) According to Maslach a typical combination of components seen in people affected by burnout is emotional exhaustion (EE), depersonalisation and dehumanization (DP) and reduced personal accomplishment (PA). The burnout syndrome is associated with high scores on one of the scales EE and/or DP and/or reduced PA (Maslach et al. 1996). EE is characterised by lack of energy, chronic fatigue, frequent headaches, tension, sleeplessness and depression (Maslach et al. 2001). DP refers to an unfeeling and impersonal response toward recipients of one’s service and the quick occurrence of conflicts (Maslach et al. 2001). The personal accomplishment scale measures personal satisfaction with achieved results (Maslach et al. 2001).

Overall, the state of burnout is characterised by depletion and exhaustion, accompanied by health problems such as gastritis, sleeplessness, depression, high blood pressure, diabetes (Tsenova and Velkova 1999). It has been proven that burnout affects cognitive functioning and is connected with reduced attention and memory (Deligkaris et al. 2014). Often the syndrome is associated with lower atten-

tion-shifting performance (Liston et al. 2009; ICD-11 2019). Burnout can lead to job dissatisfaction, reduced commitment and distraction which may result in errors that can harm the patients. Neglecting the condition can have serious consequences for pharmacists including depression, anxiety, sleep and substance use disorders (APHA 2021; English 2022). At an organisational level burnout among staff can lead to increased absences and high turnover, creating a ‘churn’ that is expensive in terms of training costs and loss of team efficiency (APHA 2021; English 2022).

In order to keep pharmacists healthy, to create a healthy workplace and minimize the chances for mistakes during work, it is necessary to study the specific factors influencing the development of a high level of burnout.

Objective: To study the level of burnout among community pharmacists and to identify the workplace factors affecting it.

Materials and methods

The pilot study was conducted among masters of pharmacy in community pharmacies in the region of Varna, as the largest region of Northeastern Bulgaria, from April to December 2021, aiming to be expanded to Northeastern Bulgaria. The study has been carried out in the context of the Covid-19 pandemic. The inclusion criteria were the following: masters of pharmacy with more than a year experience, members of RPC – Varna (Regional Pharmaceutical College–Varna), who work in community pharmacies and have signed an informed consent to participate. An additional inclusion criterion is that the pharmacies where the respondents work have a contract with the NHIF (National Health Insurance Fund), as the survey period coincides with the transition to electronic health care and the introduction of electronic prescriptions for medicinal products paid by the NHIF.

The exclusion criteria: masters of pharmacy who are not members of the Bulgarian Pharmaceutical Union; job experience of less than a year; do not work in a community pharmacy or the pharmacy does not work with the NHIF. The number of respondents who met the criteria was 301. The aim of the survey was to cover a third of the target group. Each respondent personally filled a paper survey, after receiving instructions from members of the research team.

The questionnaire consists of three parts:

- Part 1 – captures demographic characteristics including gender, age, work experience.
- Part 2 – includes the specialised Maslach Burnout Inventory (MBI-HSS-MP) (Maslach et al. 1986).

The MBI-HSS-MP contains 22 seven-point items distributed across three dimensions: Emotional Exhaustion (nine items), Personal Accomplishment (eight items), and Depersonalisation (five items). Each dimension is scored individually on a Likert scale (0–7) with each question asking to describe the frequency (from “never” to “every day”) with which they experience the statement. The response scales are defined as follows: 0 = never, 1 = a few times a year

or less, 2 = once a month or less, 3 = a few times a month, 4 = once a week, 5 = a few times a week, and 6 = every day.

The statistical confirmation of the questionnaire was achieved using the reliability coefficient Cronbach's alpha. Data demonstrated a good factor structure and a very good level of reliability coefficients (Cronbach's alpha for subscale Emotional Exhaustion is $\alpha = 0.929$; for subscale Depersonalisation $\alpha = 0.733$, and subscale Personal Accomplishment $\alpha = 0.791$). The reliability coefficient for the entire questionnaire is Cronbach's alpha: $\alpha = 0.808$.

- Part 3 is a questionnaire specifically created by the authors aiming to outline the characteristic features of the respondents' workplace and to identify those factors which make their work difficult and trigger the burnout syndrome. The factors are divided into 3 categories: difficulties with technology; difficulties in the work process associated with the regulatory framework; difficulties associated with the organisation of pharmacy work.

Statistical methods

Data were exported and analysed using the Statistical Packages for the Social Sciences (SPSS) for Windows, Version SPSS 19.

ANOVA analysis was used to determine the impact of independent variables (gender, age, work experience) on dependent variables (DP, PA, EE) in a regression study. The analyses were performed at a level of statistical significance $\alpha = 0.05$. The Games-Howell post hoc test was used to compare the age groups within each of the different scales.

Limitations of the study

The present study was conducted in the context of a spreading pandemic of Covid-19. The Covid-19 pandemic is not an objective of the study, but undoubtedly has implications and should be considered in the analysis of the results obtained. Circumstances necessitated limiting contact and maintaining distance. Initially set ways of gathering information were difficult to implement due to the lack of organized events for pharmacists in the set period. Some of the pharmacists could not spend time due to their busy schedules and did not participate in the study.

Results

The masters of pharmacy who participated in the pilot study were 127. The total number of professionals, members of RPC – Varna (Regional Pharmaceutical College–Varna), who met the inclusion criteria was 301. Thus, the data can be considered statistically significant for the entire region of Varna, the largest region of Northeastern Bulgaria.

Table 1 presents the distribution of the studied subjects by socio-demographic characteristics such as gender, age and work experience. The mean values and standard deviation

Table 1. Distribution of respondents by gender, age and work experience.

Characteristics			EE		DP		PA	
	N	%	M	SD	M	SD	M	SD
Gender								
Female	101	80%	25.51	12.953	12.49	6.57	31.38	7.726
Male	26	20%	29.19	13.081	13.69	5.836	30.73	6.844
p-value			0.2		0.395		0.697	
Age								
25–45 years	73	58%	27.90	13.094	13.75	6.629	30.30	7.214
46–55 years	26	20%	28.54	11	13.19	6.306	34.81	6.723
Over 55 years	28	22%	19.89	10.624	9.86	5.247	31.25	7.868
P-value			0.012		0.028		0.028	
Work experience								
Less than 5 years	43	34%	28.59	13.565	14.64	6.32	30.30	7.523
5–15 years	30	24%	26.20	10.604	12.70	6.38	29.17	6.481
16–25 years	21	16%	25.29	14.588	10.81	6.638	34.57	5.409
26–35 years	11	9%	28.82	6.145	12.36	4.632	34.18	6.047
More than 35 years	21	17%	21.14	15.242	10.90	6.707	31.25	10.12
p-value			0.269		0.111		0.065	
Total	127	100%	26.27	13.012	12.73	6.426	31.25	7.531

are given for each of the groups and for each of the scales. The influence of these demographic factors on the three scales forming the assessment of burnout was monitored.

In this pilot study the male respondents were considerably less than the female ones. The number of female pharmacists employed in community pharmacies is still predominant. Regarding the gender factor a difference in the mean values was observed in the EE scale, where the highest values were for men ($M = 29.19$) compared with $M = 25.51$ for women. However, no statistically significant difference was found. The values of the DP and PA scales were similar to each other as well as to the overall values of the sample. The surveyed subjects were divided into groups according to their job experience to establish if it influenced the levels of EE, DP and PA. It was established that the mean values of the different groups had big differences but they were not statistically significant. Pharmacists with less than 5 years of experience showed the highest score on the DP scale ($M = 14.64$), while those with experience between 16–25 years had the lowest score ($M = 10.81$). The highest levels of EE were reported by subjects with work experience between 26–35 years ($M = 28.82$), and the lowest levels by the ones with more than 35 years of experience ($M = 21.14$). According to the collected data the pharmacists with experience of 16–25 years were the most satisfied by their work ($M = 34.57$) while the least satisfied were those with experience between 5–15 years ($M = 29.17$).

A statistically significant difference was found in the different age groups on the emotional exhaustion scale ($p = 0.012$), on the depersonalisation scale (0.028) and on the personal accomplishment scale ($p = 0.028$). A statistically significant dependence was found for the whole sample ($F = 4.579$, $p = 0.012$) between the level of emotional exhaustion and age. The statistical dependence between the different age groups within the EE scale was also examined. The values on this scale of age groups 25–45 years ($M = 27.90$) and 46–55 years ($M = 28.54$) had a statistically significant difference with the value of those 55 and over ($M = 19.89$). The EE values of age groups 25–45 ($M = 27.90$) and 46–55 ($M = 28.54$) were not statistically significant. Based on the conducted study it was

established that there was a statistically significant difference in the age groups on the Depersonalisation scale ($F = 3.957$, $p = 0.022$). The Games-Howell post hoc test showed that the mean value of the age group 25–45 years ($M = 13.75$) had a statistically significant difference with the mean value of the over 55 age group ($M = 9.86$) and no statistically significant difference with the age group 46–55 ($M = 13.19$). The mean value of the group 46–55 years was not statistically different from that of the over 55 age group. In the Personal Accomplishment scale a relationship with age was also found ($F = 3.697$; $M = 0.028$). The analysis showed that the group of studied subjects between 46–55 years ($M = 34.81$) were more satisfied professionally than the age group of 25–45 ($M = 30.30$), (significance level $p = 0.016$). No statistically significant difference was identified for the rest of the groups.

In order to identify the work environment factors which are crucial for burnout we studied the specific difficulties reported by the respondents. The statistical significance of their impact on EE, DP and PA, the three scales that denote occupational burnout, was also examined. Table 2 presents the studied difficulties as factors for burnout showing the number of respondents, their percentage share, mean values on the three scales and the significance values of each factor on each scale.

The studied subjects reported the unclear regulatory requirements (48%) and the dynamic changes in the regulatory framework (46%) as main problems in their work but those factors did not demonstrate a statistically significant impact on the burnout level. From difficulties associated with the use of technology in community pharmacies, the introduction of The Specialised Electronic System for Tracing and Analysis System of Medicinal Products (SETASMP) had a statistically significant influence on EE ($p = 0.036$). Both external and internal organisational factors affect the level of burnout. The biggest share of respondents (50%) indicated the heavy administrative burden as a problem which had an impact on EE ($p = 0.041$). The wide range of medicinal products maintained in community pharmacies influenced EE ($p = 0.001$) and DP ($p = 0.02$). The large number of patients served affected EE ($p = 0.006$) and DP ($p = 0.000$), whereas pharmacy understaffing influenced DP ($p = 0.01$).

From the internal organisational factors the insufficient number of pharmacy staff influenced DP ($p = 0.01$), while the large number of patients affected both EE ($p = 0.000$) and DP ($p = 0.006$).

Discussion

The development of burnout is due to individual and organisational factors. In the present study, gender does not appear to be significantly related to the level of burnout (Tsenova 2005). Differences in the mean values have been observed leading to the conclusion that men are at a higher risk to develop burnout although many studies indicate that women are more prone to developing occupational burnout than men (Dyrbye et al. 2011; El-Ibiary et al. 2017). Studies among pharmacists prove that subjects with long experience are exposed to a higher risk of burnout (Zhao et al.

Table 2. Influence of workplace factors on Emotional Exhaustion, Depersonalisation, Personal Accomplishment.

Scale	N	%	M	SD	F	p
Difficulties with technology						
Changes in the pharmacy software						
DP	41	32	13.85	6.533	1.698	0.195
EE	41	32	27.37	10.466	0.955	0.33
PA	41	32	30.66	8.257	0.658	0.419
The introduction of e-prescriptions						
DP	50	39	13.2	7.134	0.351	0.555
EE	50	39	25.64	10.919	0.512	0.475
PA	50	39	32.3	7.949	1.127	0.291
The introduction of verification						
DP	54	43	13.07	6.506	0.196	0.659
EE	54	43	28.65	11.008	2.998	0.086
PA	54	43	32.22	6.914	1.063	0.305
The Specialised Electronic System for Tracing and Analysis System of Medicinal Products (SETASMP)						
DP	43	34	14.07	7.072	2.65	0.106
EE	43	34	29.7	11.39	4.518	0.036
PA	43	34	31.91	7.715	0.264	0.609
Difficulties in the work process associated with the regulatory framework						
Dynamic changes in the regulatory framework						
DP	58	46	13.29	6.623	0.679	0.412
EE	58	46	28.53	10.727	2.485	0.117
PA	58	46	32.47	7.74	2.084	0.151
Unclear regulatory requirements						
DP	61	48	13.7	7.279	2.457	0.12
EE	61	48	27.41	10.917	1.437	0.233
PA	61	48	31.62	8.079	0.076	0.783
Difficulties associated with the organisation of pharmacy work						
Heavy administrative burden						
DP	63	50	13.79	7.294	3.16	0.078
EE	63	50	28.76	10.783	4.244	0.041
PA	63	50	30.6	8.441	1.57	0.212
Wide range of medicinal products						
DP	29	23	15.21	6.956	5.544	0.02
EE	29	23	29.86	10.726	10.737	0.001
PA	29	23	31.83	8.627	0.105	0.746
Large number of patients served						
DP	39	31	16.51	6.621	22.138	0.000
EE	39	31	30.56	9.808	7.891	0.006
PA	39	31	31	7.448	0.19	0.663
Pharmacy understaffing						
DP	38	30	15	6.742	6.756	0.01
EE	38	30	29.95	10.596	6.198	0.14
PA	38	30	30.16	8.323	1.609	0.207

2020). In our study, however, the respondents with over 35 years of experience have low scores on EE and DP, which means that the risk of burnout for them is low. Other studies of pharmacists prove that lack of experience is among the key factors for high levels of burnout (Patel et al. 2021). This has been confirmed by the current study where the subjects with less than 5 years of work experience have shown the highest risk of occupational burnout. It indicates the need of additional training for young professionals.

According to some studies, in terms of the age dynamics, a significant increase in the level of burnout is observed with advancing age in healthcare professionals. It has been observed in other professional fields as well (Tzenova 2005). From the studied individual factors age has a statistical significance. A close relationship exists between advancing age and the dimensions of emotional exhaustion and depersonalisation (Richard et al. 1988; Yankova 2017). It has been found that the masters of pharmacy aged over 55 have lower statistically significant values on the EE scale than the other age groups: 25–45 and 46–55. These results are confirmed by other studies too (Higuchi et al. 2016). Although

some studies show a higher level of occupational burnout in the age range 30–40 (Dyrbye et al. 2013) the lower level of professional burnout in the age group over 55 might be due either to established good coping strategies to deal with occupational stress or to the lack of commitment to work. In the DP scale there is a statistically significant difference between the mean values of the group of 25–45 years and the means of the over 55 group. High values on this scale are associated with neglecting patients' needs (Niven and Ciborowska 2015). It means that masters of pharmacy at the age of 25–45 years will not spend the needed time and attention for building an empathic relationship with patients (Kotegawa 2007). In this study pharmacists aged between 46–55 years are the most satisfied with their personal accomplishments. Although they have shown high levels of EE and DP indicating that they are prone to developing a high level of burnout, they feel satisfied with their achievements and their successful career. The respondents in the age group 25–45 years have shown the highest scores on the EE and DP scales. For the prevention of burnout in this age group it is necessary to provide training courses for young professionals to introduce them gradually into the work process and build up skills for effectively coping with stress.

The following dependences between the impact of organisational factors and the level of burnout have been identified:

The technology difficulties that occur during work have no statistically significant impact on the three scales outlining the level of burnout except for SETASMP. The level of burnout is affected by the introduction of new systems for tracking and control of dispensing medicinal products. The reason might be the fact that the system has been viewed by pharmacists as another burden added to their work overload. For them, at this stage, there is no explicitly clear need for its introduction. In the studied subjects who have marked the verification and SETASMP as work problems, a higher level of EE has been observed than in the other groups. In order to increase the efficiency of SETASMP, it is necessary to expand the opportunities for exchanging information and synchronization of prescribing, dispensing and delivery processes involving physicians, wholesalers and retailers. This will provide an opportunity to improve communication between healthcare professionals, optimization the drug-supply process and will prevent drug shortages.

Electronic prescriptions did not show a statistically significant impact on the level of professional burnout, but in the study period, their introduction into practice was another burden on healthcare workers, related to the lack of precise work instructions and the lack of prior information about the introduced changes. Problems that arise are unclear regulatory requirements and frequent changes in regulations (Németh et al. 2023).

The difficulties associated with the organisation of pharmacy work can be divided into external to the organisation: a heavy administrative burden, a wide range of medicinal products and internal: a large number of patients served and pharmacy understaffing. From the organisational factors the heavy administrative burden, the wide range of medicinal products and the insufficient staffing levels, as well as large number of patients served are predis-

posing to the occurrence of a high level of burnout among pharmacists. The heavy administrative burden influences the emotional exhaustion. It greatly worsens the emotional and physical health of the pharmacy practitioners (Jones et al. 2017), which has been confirmed by this study. The lack of generic substitution options necessitates the maintenance of a wide range of medications, which puts a financial burden on pharmacies and limits pharmacists in providing pharmaceutical care and treatment to patients. The wide range of medicinal products and the large number of patients served can lead both to emotional exhaustion and to distancing from patients. The two factors influence the emotional wellbeing, cause more frequent health problems and affect pharmacists' readiness to build therapeutic relationships with the patients. Pharmacy understaffing leads to an increased level of DP. Each of these factors has an impact on burnout which has been proven by other studies (Stergachis 2020; Tarpomanova et al. 2021). The administrative burden results in prolonged time to serve the patients and in order to provide adequate pharmaceutical care pharmacies need to maintain higher staffing levels. This is not always possible, therefore the insufficient staffing levels in community pharmacies lead to work overload for pharmacists who need to serve large numbers of patients (Jacobs et al. 2014). Proposals need to be made for reducing the administrative burden of pharmacists and maintaining staffing levels that are adequate to the patient flow.

Conclusions

Professional burnout in pharmacists can be reduced through regulatory changes that address administrative burden. The new requirements to be preceded by information campaigns and trainings and extending the timeframe for putting into practice the new regulatory changes. There is a need to improve patient access to treatment by expanding the capabilities of SETASMP and reviewing the legislative restrictions on pharmacists for generic substitution.

In order to improve the working environment and performance of pharmacists in pharmacies, it is necessary to emphasize introductory trainings for young professionals aimed at improving communication skills, and building successful coping strategies for stress management and conflict resolution. Trainings aimed at team managers will help optimise the organisation of the working environment, prevent professional burnout and increase staff motivation.

The study aims to expand and cover the entire North-east region, to analyze more comprehensively the factors leading to professional burnout and to draw conclusions. Based on these, recommendations will be developed to overcome the identified problems.

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