

Original article

Job satisfaction among pharmacists

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Abstract: Job satisfaction among pharmacists affects the quality of pharmaceutical care and patient health. Our study targeted the evaluation of job and salary satisfaction levels in pharmacists and the factors affecting these levels.

Methods — We conducted the survey of 407 pharmacists working at community pharmacies in Saratov Oblast (Russia).

Results — The proportions of pharmacists satisfied with their jobs and their salaries were $77.1 \pm 0.4\%$ and $52.8 \pm 0.4\%$, respectively. We discovered that salary satisfaction was influenced primarily by the household composition ($p=0.004$) and professional commitment ($p<0.001$). Pharmacists who were more satisfied with their jobs belonged to the age category 'up to 44 years' ($p=0.002$). They were less likely to change their employment ($p<0.001$) and more likely to experience positive emotions when performing their professional activities ($p<0.001$). Also, they were more satisfied with their salaries ($p<0.001$), committed to their profession ($p<0.001$), and more likely to perceive the social importance of their profession ($p<0.001$).

Conclusion — Our findings suggested that formal traits of pharmaceutical professionals had a smaller impact on their job satisfaction, while the greatest impact was caused by the personal characteristics (perception of the social importance of their profession, professional commitment), salary satisfaction, age and frequency of changing jobs.

Keywords: job satisfaction, salary satisfaction, pharmacist, community pharmacy.

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Introduction

Job satisfaction in pharmaceutical professionals affects the quality of pharmaceutical care [1]. That is why it deserves studying by the scientists and specialists from different countries (USA, Great Britain, Sweden, Saudi Arabia, China, Malaysia, etc.).

According to the publications by international researchers, job satisfaction among pharmacists depends on various factors with direct and reverse effects. Job satisfaction is influenced by gender, age [2], professional experience, marital status, personality type [3], working hours and relationships with colleagues [4]. Different factors contribute to increasing job satisfaction: an adequate salary, promotion opportunities [4] (this is an important characteristic since the profession of a pharmacist does not always complies with a person's ambitions), organizational fairness at the workplace [5], convenient work schedule, part-time employment for a specialist, and a positive work environment [6].

At the same time, some factors, such as stress, overinflated workload [7], conflicts, lack of professional recognition, want of regular interactions with clinicians [4], staff turnover rate, absenteeism and diminished professional commitment [8], lead to augmented pharmacists' dissatisfaction with their work. Low degree of satisfaction with a job and profession (pharmacy prestige, workplace equipment, wages, organization of labor at a pharmacy, management quality, team work, etc.) may contribute to developing emotional burnout syndrome in pharmacists and increased frequency of workplace conflicts [9].

Organization of the work process at pharmacies in Russia has its own features, compared with other countries. In particular, at Russian pharmacies, individuals with secondary specialized education (at vocational schools) and higher education may be employed in the same positions [10]. From this standpoint, when studying the problems of employee satisfaction, a comparative analysis of the pharmacists' opinions (those with higher education versus those with secondary specialized education in pharmaceuticals) is quite relevant.

Objective: to investigate an influence of various factors on job satisfaction and salary satisfaction in pharmaceutical professionals.

Material and Methods

Research design

We conducted the sociological study in 2018, using an anonymous survey of pharmacists working at pharmacies of Saratov Oblast, Russia (the estimated general population size of 4,515 professionals). The survey was carried out during the refresher training and professional scientific events held at Saratov State Medical University. Our survey involved 407 pharmacy technicians and managers. We insist that this sample size was sufficient for quantitative representation with a standard error of 5%. The criteria for inclusion in our study were education in pharmaceuticals and employment at a pharmacy.

The original questionnaire included questions characterizing pharmacists from various standpoints. Most questions were

related to sociodemographic features (gender, age, marital status, presence of school-age and preschool-age children, presence of elderly people in the household, and income) and professional qualification level (educational level, qualifications, work experience, and position). There were some specific questions as well related to job satisfaction and salary satisfaction. In the course of developing the questionnaire, the validation procedure was carried out with participation of 30 respondents, after which the questionnaire was amended in accordance with obtained results.

Characterization of respondents

The surveyed pharmacists were 20-71 years old, and their vast majority were women (96.1±0.5%). It is worth noting that majority of respondents (84.8±0.5%) were young people (up to 44 years of age), so that the average age of specialists was 30.80±0.51 years.

As for their marital status, 61.4±0.4% of respondents were married, while 38.6±0.3% were single. Some other parameters of surveyed pharmacists were as follows: 37.3±0.3% had children of preschool and/or school age, 11.5±0.2% had elderly people in their households, 36.4±0.3% of pharmacists were characterized by the low per capita family income (i.e., below the average), 54.5±0.4% had medium income, and 9.1±0.2% had high income (above average).

Secondary specialized education in pharmaceuticals and qualification of pharmacy technician was characteristic of 74.7±0.4% of respondents versus 25.3±0.2% of surveyed subjects with higher education and qualification of pharmacist. At the time of survey, 77.9±0.4% of specialists held the position of pharmacy technician. The professional employment duration in our respondents ranged from 0.5 to 50 years (with an average experience of 8.63±0.47 years, mode of 5 years and median of 5 years as well).

Data analysis

The respondents were distributed among the groups based on their employment positions: *Pharmacy technician, Senior pharmacy assistant, Pharmacist, Pharmacy resident, Trainee pharmacist, or a Pharmacy manager*. The latter category included those who worked in the positions of a director, deputy director, manager and deputy manager at the time of the survey. Also, the respondents were dichotomously divided, in terms of their ages, into two categories: *Young employees* (44 years old and under) and *Employees* (45 and older).

Job satisfaction and salary satisfaction were evaluated via using the questions, 'Are you satisfied with your job?' and 'Are you satisfied with your salary?'. The responses were dichotomously clumped into *Satisfied* (those who replied 'entirely satisfied' or 'marginally satisfied') and *Dissatisfied* (those who replied 'not sure', 'entirely dissatisfied' or 'marginally dissatisfied'). The question, 'How do you feel at your workplace?', was evaluated by the following responses: 'I feel happy and enthusiastic about my job', 'it varies, depends on the day' and 'I anticipate working too hard'. The first response corresponded to the classification category *happy and enthusiastic*, while the other two answers were grouped into the category *other feelings*. When constructing the logistic regression model, the responses to the question, 'How often did you changed jobs during your career?', were dichotomously grouped into *rarely* (those who changed jobs 1-2

times or never) and *often* (those who changed jobs 3-5 times or more).

We presented the data as frequencies (*n*) and percentages (%), along with means and their standard errors (*M±m*).

Frequencies were compared via the Chi-squared (χ^2) test. Statistical significance was assumed at the level of 95% ($p < 0.05$). Significance of differences in multiple comparisons was considered with the Bonferroni correction ($p < 0.005$). The identified factors were included in the regression analysis. When constructing the logistic regression model, *job satisfaction* was our dependent variable, whereas independent variables were represented by pharmacists' *gender, age, work experience, frequency of job changes, educational level, position, professional commitment, income level, salary satisfaction, feelings/emotions at a workplace*.

Ethical issues

The program and research tools underwent the examination by the Ethics Committee of Saratov State Medical University and were certified to comply with the requirements of medical ethics. All prospective respondents were provided with information about the study objective and were assured that the results would be treated as strictly confidential, and that all responses would be anonymous.

Results

There were significantly more pharmacists satisfied with their jobs than those who were dissatisfied: 77.1±0.4% vs. 22.9±0.2%. At the same time, the proportions of pharmacists satisfied or dissatisfied with their salaries were similar: 52.8±0.4% and 47.2±0.3%, respectively.

Our respondents rarely changed their employment: 36.1±0.3% never changed it, 44.5±0.3% changed their jobs 1-2 times. Just 19.4±0.2% of the study subjects changed their jobs more often (3-5 times or more). Simultaneously, our results implied that 30.5±0.3% of pharmacists worked with enthusiasm, while the remaining 69.5±0.4% experienced different emotions at their workplace.

Most respondents (71.0±0.4%) replied 'pharmacist' to the question, 'If you had an opportunity to choose your profession once again, which one would you choose?', 17.2±0.2% would choose the profession of a doctor, and only 11.8±0.2% would prefer pursuing another career path (not related to medicine or pharmaceuticals). To the question, 'Do you consider your job socially important?', the majority of respondents (88.7±0.5%) replied 'yes', 3.9±0.1% answered 'no', whereas 7.4±0.1% were not sure.

We discovered the significant patterns of pharmacists' satisfaction with their jobs and salaries (Table 1). Salary satisfaction was influenced by the presence of dependent family members (children of preschool or school age and/or elderly people in need of support) and profession commitment. Marital status and family structure altogether affected the salary satisfaction: married professionals with children were less satisfied with their salaries than families without dependents ($\chi^2=9.492$, $p=0.024$).

Our results implied the direct correlation of salary satisfaction with job satisfaction: higher salary satisfaction in our respondents was matched by their higher job satisfaction ($\chi^2=49.942$, $p < 0.001$). Besides salary satisfaction, other factors causing an impact on job satisfaction were identified, among which age, frequency of job

changes, professional commitment and internal motivations (feelings/emotions at a workplace) had the greatest effect. Satisfaction was higher in the 'Young employees' category (≤ 44 years old) than in 'Employees' group (≥ 45 years of age), i.e., it was decreasing with age.

Job satisfaction affected the frequency of job changes: satisfied pharmacists vs. dissatisfied professionals were less susceptible to job changes, more likely to be enthusiastic about their jobs and to perceive its social significance ($\chi^2=18.351$, $p<0.001$), and less likely to regret about the chosen profession.

The following factors had a smaller effect on job satisfaction: marital status, family structure, employment position, educational level, and income. Concurrently, we established that specialists with higher education in pharmaceuticals changed their jobs more often than those with a secondary specialized education ($\chi^2=6.469$, $p<0.05$).

We modeled an impact of various factors (predictors) on job satisfaction and salary satisfaction via using multiple logistic regression analysis. In the logistic regression models, the dependent variables, *Job satisfaction* and *Salary satisfaction*, were represented as binary variables (dissatisfied =0, satisfied =1). Logistic regression models were developed via the stepwise exclusion of predictive factors, resulting in the minimum set of predictors based on their estimates of Nagelkerke's R-square (an approximation of the R^2 value showing – for each factor – the proportion of the total impact of all model predictors on the variance of a dependent variable).

Logistic regression analysis, comparing the pharmacists satisfied with their jobs vs. those dissatisfied, in terms of their gender, age and other factors, was performed in four steps. The fraction of correct predictions at step 4 for those satisfied with their job was 90.1% vs. 48.4% for those who were dissatisfied. The overall ratio of correct predictions was 80.6% and Nagelkerke's R-square was 0.339. The level of certainty formed by the impact of these factors was 33.9%.

The variables used in the logistic regression model are presented in *Table 2*. We revealed that job satisfaction in pharmacists was to a greater extent influenced by such factors, as feelings/emotions at a workplace, salary satisfaction, professional commitment, age, and frequency of changing jobs. To a lesser extent, job satisfaction is influenced by such characteristics as gender, level of education, work position, work experience and income.

Discussion

Our study has revealed that most pharmacists were satisfied with their jobs (77.1%), while supported the estimates for other countries: 91.4% in Sweden [1], 63.7% [22] in Saudi Arabia. Exactly as in Sweden, most Russian pharmacists would choose their profession again, if given another chance (71.0% in Russia vs. 80.7% in Sweden) [1].

Table 1. Pharmacists' satisfaction with their jobs and salaries, n (%)

Characteristics	Job satisfaction				Salary satisfaction			
	Satisfied (n=314)	Not satisfied (n=93)	χ^2	p	Satisfied (n=215)	Not satisfied (n=192)	χ^2	p
Female, n (%)	305 (97.1)	86 (92.5)	4.127	0.043	210 (97.7)	181 (94.3)	3.111	0.078
Age ≤ 44 years, n (%)	276 (87.9)	69 (74.2)	10.436	0.002	188 (87.4)	157 (81.8)	2.526	0.112
Age ≥ 45 years, n (%)	38 (12.1)	24 (25.8)			27 (12.6)	35 (18.2)		
Marital status								
Married, n (%)	192 (61.1)	58 (62.4)	0.045	0.832	132 (61.4)	118 (61.5)	0.000	0.990
Single, n (%)	122 (38.9)	35 (37.6)			83 (38.6)	74 (38.5)		
Family structure								
Presence of dependents, n (%)	130 (41.4)	47 (50.5)	2.437	0.119	79 (36.7)	98 (51.0)	8.436	0.004
Income								
Low, n (%)	111 (35.4)	37 (39.8)	1.325	0.516	63 (29.3)	85 (44.3)	10.481	0.006
Medium, n (%)	176 (56.1)	46 (49.5)			128 (59.5)	94 (49.0)		
High, n (%)	27 (8.6)	10 (10.8)			24 (11.2)	13 (6.8)		
Education								
Secondary specialized, n (%)	237 (75.5)	67 (72.0)	0.448	0.504	164 (76.3)	140 (72.9)	0.607	0.437
Higher, n (%)	77 (24.5)	26 (28.0)			51 (23.7)	52 (27.1)		
Position								
Manager, n (%)	41 (13.1)	7 (7.5)	2.110	0.147	26 (12.1)	22 (11.5)	0.039	0.843
Technician, n (%)	273 (86.9)	86 (92.5)			189 (87.9)	170 (88.5)		
Job changes								
Never, n (%)	111 (35.4)	36 (38.7)	16.937	<0.001	74 (34.4)	73 (38.0)	3.986	0.137
1-2 times, n (%)	154 (49.0)	27 (29.0)			105 (48.8)	76 (39.6)		
3 or more times, n (%)	49 (15.6)	30 (32.3)			36 (16.7)	43 (22.4)		
Feelings/emotions at a workplace								
Enthusiasm, n (%)	119 (37.9)	5 (5.4)	35.822	<0.001	77 (35.8)	47 (24.5)	6.151	0.014
Other, n (%)	195 (62.1)	88 (94.6)			138 (64.2)	145 (75.5)		
Professional commitment								
Pharmacist, n (%)	241 (76.8)	48 (51.6)	37.086	<0.001	168 (78.1)	121 (63.0)	22.979	<0.001
Doctor, n (%)	52 (16.6)	18 (19.4)			37 (17.2)	33 (17.2)		
Other, n (%)	21 (6.7)	27 (29.0)			10 (4.7)	38 (19.8)		

Table 2. Variables in the logistic regression model of pharmacists' job satisfaction

Covariates	B	S.E.	Wald	df	p	Exp(B)
Feelings/emotions at a workplace	2.256	0.493	20.908	1	0.000	9.542
Salary satisfaction	1.447	0.290	24.932	1	0.000	4.252
Professional commitment	0.796	0.281	8.014	1	0.005	2.217
Age	0.789	0.389	4.111	1	0.043	2.201
Job changes	0.691	0.350	3.900	1	0.048	1.996
Constant	-7.460	1.118	44.498	1	0.000	0.001

The studies published in other countries indicated that the gender and age of pharmacists affected their job satisfaction [1, 13]. A recent foreign study [13] has revealed that female pharmacists were more satisfied with their jobs than men, despite the fact that women moved up the career ladder less often. Contrary to the above, in our study, the effect of gender on job satisfaction was not established. According to studies conducted outside Russia, there were proportionally many more male pharmacists working at community pharmacies in other countries than in Russia [1, 14, 15, 19, 21]. In Russia, the profession of a pharmacist is perceived, so to speak, as a 'female profession', since there were traditionally very few male specialists pursuing such career path. This statement is supported by the fact that the profession of a pharmacist was not considered highly profitable, and hence was less prestigious, as compared to other medical professions. Also, pharmacists were often perceived as technicians rather than the specialists. Such male-to-female ratio in the profession has developed in most post-Soviet states.

At colleges and universities in Russia and adjacent countries, pharmaceuticals student groups consisted, and still consist, predominantly of female students, which could present a psychological barrier for men choosing this field of study. Upon graduation, men may not stay in the profession due to the fact that their prospective jobs are carried out on all-female teams, the work per se involves multitasking and has a high communication load. Simultaneously, the profession is rather stressful: many studies showed that the overall pharmacists' productivity and satisfaction with their jobs are negatively affected by heavy workload and stress at a workplace [4, 7, 11, 12]. Also, the profession of a pharmacist requires advanced knowledge in a specialized field, along with diligence and attention in implementing labor functions. Other studies demonstrated substantial relationship between occupational burnout and job dissatisfaction in pharmacists [3, 20, 21].

Our study demonstrated that specialists were becoming less satisfied with their jobs with age. This finding could be explained by several reasons, among which we should mention a heavy workload, the monotony of performed work duties, the discrepancy between the expected and actual salaries, and poor career development. In one of the foreign studies [13], age also affected job satisfaction, but the dependence was not as straightforward: middle-aged pharmacists were less satisfied than both younger and older employees. According to a study conducted in the United States [16], both age and work experience affected their professional commitment. Young pharmacists had lower job satisfaction and were more likely to change their employment. Other predictors of commitment to a current job included interpersonal relationships on the team, leadership support and working conditions [17]. High job satisfaction positively affected professional commitment, which, in turn,

reduced the employee turnover rate at community pharmacies [18].

As for our research project outcomes, an overall job satisfaction was high. However, we detected no differences in job satisfaction between employees with a higher vs. secondary specialized education in pharmaceuticals. The fact that professionals with higher education in pharmaceuticals were more likely to change their employment vs. those with secondary specialized education may indicate lower job satisfaction in the former. This, in turn, could be due to the circumstance that differentiation of labor functions at Russian community pharmacies among employees with a higher education vs. secondary specialized education in pharmaceuticals is not distinct. Community pharmacists perform various work duties, such as constructing drug formularies, advising customers on the selection, dosages, interactions, and side effects of medications; receiving and storing pharmaceutical merchandise, etc. Moreover, there is often no differentiation in the salaries of the professionals with different educational levels. Furthermore, both specialist with a higher education and professional with a secondary specialized education in pharmaceuticals may be equally likely promoted to a position of a manager if they have a certain length of service.

Universities train specialists able to work in pharmaceutical industry and at analytical laboratories rather than solely at pharmacies. Hence, the substantial fraction of knowledge gained at a higher education institution remains unclaimed if a pharmaceuticals professional pursues the career path working at a community pharmacy. These factors can tangibly affect pharmacists' job satisfaction with their profession.

We advise that comparisons with other countries should be made with a certain caution because of different contexts, and also due to the fact that job satisfaction studies in Russia are scarce.

Conclusion

Our study did not reveal the relationship between job satisfaction and such formal traits of pharmacists as gender, educational level, qualifications, work experience, position, and income, which implied their inferior influence on job satisfaction. Our other finding suggested that pharmacists' job satisfaction was significantly influenced by their personal characteristics formed in the process of successful professionalization (emotions and feelings evoked at the workplace, professional commitment, perception of the social importance of their profession), along with the salary satisfaction, age and frequency of changing jobs.

Conflict of interest

None declared.

Ethical approval

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

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