

2017

## Pharmacists' satisfaction with their work: Analysis of an alumni survey

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This article was originally published as:

Gustafsson, M., Mattsson, S., Wallman, A., & Gallego, G. (2017). Pharmacists' satisfaction with their work: Analysis of an alumni survey. *Research in Social and Administrative Pharmacy, Article in Press*.

Original article available here:

<https://dx.doi.org/10.1016/j.sapharm.2017.08.006>

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This is the accepted manuscript version of the article published as:

Gustafsson, Maria, Mattsson, Sofia, Wallman, Andy, and Gallego, Gisselle. (2017). Pharmacists' satisfaction with their work: Analysis of an alumni survey. *Research in Social & Administrative Pharmacy, Article in Press*. doi: 10.1016/j.sapharm.2017.08.006

This article has been published in final form at <https://dx.doi.org/10.1016/j.sapharm.2017.08.006>

**Title:** Swedish pharmacists' satisfaction with their work: analysis of an alumni survey

## **Abstract**

**Background** The level of job satisfaction among practicing pharmacists is important because it has been found to affect job performance and employee turnover. The Swedish pharmacy market has undergone major changes in recent years, and little is known about pharmacists' job satisfaction.

**Objectives** The objective of this study was to investigate the level of job satisfaction and associated factors among graduates from the web-based pharmacy programs at [removed for peer review].

**Methods** Job satisfaction of pharmacists was measured as part of an alumni survey conducted with those who graduated from the pharmacy programmes between 2006 and 2014. Data analysis included descriptive statistics, and logistic regression was used to explore factors affecting job satisfaction.

**Results** The total number of graduates who completed the survey was 222 (response rate 43%.) The majority of respondents were female (95%), and most were employed at a community pharmacy (85%). The mean age was 39.7 years. The majority of graduates (91%) were satisfied with their job "most of the time" or "all of the time", and 87% of the respondents would "definitely" or "maybe" choose the same career again. The multivariate analysis showed that increasing years in the current position (OR:0.672 (0.519–0.871)) was associated with lower job satisfaction. Older age (OR: 1.123 (1.022–1.234)), the perception that the knowledge and skills acquired during the education is useful in the current job (OR: 4.643 (1.255–17.182)) and access to continuing professional development (OR:9.472 (1.965–45.662)) were associated with higher job satisfaction.

**Conclusion** Most graduates from the web-based pharmacy programmes are satisfied with their current job. Access to continuing professional development seems to be important for the level of job satisfaction among pharmacists.

**Keywords** Job satisfaction; pharmacy education; continuing professional development

## **Introduction**

Pharmacists' job satisfaction has been of interest for many years and is of great importance in several aspects. Job satisfaction has implications for employee turnover and commitment, and it plays an important role in pharmacists' decisions to leave the profession.<sup>1</sup> Further, poor job satisfaction has been associated with poor job performance, especially for professionals like pharmacists<sup>2</sup>, and this might in turn affect patient care. Decreased interactions between patients and pharmacists<sup>3</sup> or dispensing errors are possible consequences of poor job performance, which might increase the risk of patient harm.<sup>4</sup> Job satisfaction is also important for the individual because it has been shown to affect well-being in other aspects of life.<sup>5,6</sup>

Previous research to identify factors associated with pharmacists' job satisfaction has been performed mostly in the US and the UK. McCann et al. found that job satisfaction in Northern Ireland varied depending on roles and responsibilities,<sup>7</sup> and a higher degree of autonomy has been associated with job satisfaction among pharmacists.<sup>8,9</sup> A study from the US found that job satisfaction might increase when pharmacists enrol in continuing professional development (CPD) programs and/or precept students.<sup>10</sup> Female gender<sup>11</sup> as well as older age have also been positively associated with job satisfaction.<sup>12</sup> Furthermore, community pharmacists have been found to be less satisfied compared to pharmacists working in other sectors,<sup>11</sup> and high levels of job satisfaction have been found among those working part-time.<sup>12</sup>

Up until 2009, the Swedish pharmacy market was entirely state-owned, including both community and hospital pharmacies. In 2009 the pharmacy market in Sweden was re-regulated.<sup>13-15</sup> The market, which had only a single government-owned company for 40 years (Apoteket AB), was replaced by privately owned pharmacies. As a result of rapid market growth and high degree of competition, pharmacists experienced new challenges and tasks

such as new prescription dispensing systems,<sup>16</sup> low availability of medicines, and different business models.<sup>13, 15</sup> These changes might affect job satisfaction in a negative way, especially among community pharmacists. In the light of the new pharmacy market, this study aimed to investigate the level of job satisfaction and factors associated with job satisfaction among graduates from the web-based pharmacy programmes at [removed for peer review] in Sweden.

## **Method**

### *Setting*

In 2015, a survey was distributed to all students who graduated from the web-based Bachelor of Science in Pharmacy programme (a three year web-based program) and/or Master of Pharmaceutical Science programme (a two year web-based program) between 2006 and 2014 (n = 511). In Scandinavia, bachelor graduates are called prescriptionists and graduates from the master program are called pharmacists. For simplicity, the term pharmacist is used in this paper to describe both prescriptionists and pharmacists. Most of the teaching occurs online using a virtual learning environment – containing recorded lectures, text material, animations, and assignments – and a communication software (Adobe Connect). Some mandatory meetings occur on campus (approximately 2–4 times each semester) and include laboratory work, oral presentations, and role play.

### *Survey instrument*

The questionnaire was developed using information from the literature<sup>7, 17</sup> as well as general alumni surveys from other departments within the university. The data used in this study contained information about the characteristics of the graduates' work setting, workload, present duties, and time in their current position. Those who reported working in a community

pharmacy were asked questions about their position (employee or manager), number of pharmacists employed, and employer. There were five questions about job satisfaction measured using a five-item validated version of the satisfaction survey from McCann et al.<sup>7</sup> This was translated into Swedish then back translated into English and pilot tested. Graduates were also asked about their opportunities for CPD and if the knowledge and skills they acquired during their training were useful in their current job. Furthermore, the graduates were asked to provide demographic information, which included, for example, sex, date of birth, country of birth, and individual gross income.

#### *Pilot testing*

Three graduates from the pharmacy programmes reviewed the questionnaire. The graduates were advised that the purpose of the pilot-test was to improve the questionnaire and were asked to critically evaluate it to ensure the clarity of the statements. Minor changes were made to the format as a result of this pilot testing.

#### *Survey administration*

A paper copy of the questionnaire was posted in the beginning of May 2015 to all graduates who had a Swedish address in the university's administrative register (n = 437). The administrative department printed the address labels, and a research assistant posted the surveys. Graduates were given a postage-paid reply envelope to return the survey, and the paper copy also had a link to an online version (identical to the paper version) hosted by Survey Monkey®. The graduates could choose if they wanted to return the survey by post or by completing the online version. An invitation to participate in the online version of the survey was sent by email to graduates with no Swedish address registered (n = 74). The link



to the online version was active for two months until the end of June 2015. No reminders were sent, and participants were not remunerated for their participation.

### **Data analysis**

Data collected via the paper questionnaires were entered into Survey Monkey®, the same online platform used for the online version of the survey. Descriptive statistics were used to summarize the data. Simple logistic regression analyses were conducted to investigate the association between job satisfaction and the factors of age, sex, employee category, employment status, current employment, years in current position, income, graduation degree, years since graduation, year of graduation (2006–2009 or 2010–2014), access to CPD, and if the knowledge and skills they acquired during their training are useful in their current job. In the model, job satisfaction was measured with the question “All things considered, how often are you satisfied with your job?” and the answers were dichotomized into “not satisfied” (those who responded “never or rarely” and “sometimes satisfied”) and “satisfied” (those who responded “satisfied most of the time” and “satisfied all of the time”). To analyse any differences in job satisfaction among those who graduated before and after the re-regulation, year of graduation was dichotomized into 2006–2009 and 2010–2014. The answers to the question about access for CPD were dichotomised into “limited” (“limited” and “very limited”) and “good” (“satisfactory”, “good”, and “very good”). The answers to the question “The knowledge and skills you acquired during your training are useful in your current job” were dichotomized into “disagree” (1–3 points) and “agree” (4–5 points). A multiple logistic regression analysis was conducted including significant variables from the simple models, and these also included age and sex. Results are presented as odds ratios (ORs) with 95% confidence intervals (CIs). The significance level for all statistical tests was set at 5%. All

analyses were conducted using Statistical Package for the Social Sciences (SPSS) for Windows version 23.0.

### *Ethics*

No ethical committee approval was sought prior to beginning this research because it is not mandatory by Swedish law for this type of study. Nonetheless, all respondents were provided information about the aim of the study and were advised that data would be treated as strictly confidential and that all the information would be de-identified.

### **Results**

The total number of people who completed the survey was 222 for a response rate of 43%. All responses were included in the analysis of the results. The characteristics of the respondents are shown in Table 1. The majority of respondents were female (95%) and had graduated from the bachelor program. The mean age was 39.7 years. Most respondents were full-time employed (71%) and worked as community pharmacists (85%). The vast majority were living in Sweden (92%), and 17 of the graduates (8%) were living in Norway when the survey was distributed.

The majority of the respondents (91%) were satisfied with their job “most of the time” or “all of the time”. Only a minority thought that the idea of spending the remainder of their working life in a job like their current one was depressing “most of the time” (4%). To the question how often do you leave work with a “bad” feeling, a feeling that you are doing something you do not enjoy, few graduates answered “most of the time” (4%). Finally, more than half of the respondents (61%) answered “sometimes” to the question how often do you get so

wrapped up (interested) in your work that you lose track of time, and 29% answered “most of the time” or “all of the time” (Table 2).

When graduates were asked whether they would choose the same career again, 41% responded “definitely yes”, 46% “maybe”, 10% “don’t know”, and 3% “definitely not”. When asked about their access to CPD, they answered that they had “very limited” (10%), “limited” (30%), “satisfactory” (23%), “good” (25%), or “very good” (12%) access to CPD. The majority of graduates (88%) agreed or strongly agreed that the knowledge and skills acquired during the university education are useful in their current job.

In order to investigate any associations between job satisfaction and different factors, a regression analysis was performed (Table 3). The simple logistic regression analysis showed that increasing years in the current position were associated with lower job satisfaction (OR: 0.814 (0.685–0.967)), while high access to CPD was associated with higher job satisfaction (OR: 16.125 (3.618–71.857)). Believing the knowledge and skills acquired during the education are useful in the current job was also associated with higher job satisfaction (OR: 5.928 (2.056–17.097)). No association with job satisfaction and other factors were found. In the multivariate analysis, increasing years in current position (OR: 0.672 (0.519–0.871)) were associated with lower job satisfaction, while older age (OR: 1.123 (1.022–1.234)), the perception that the knowledge and skills acquired during the education is useful in the current job (OR: 4.643 (1.255–17.182)) and higher access to CPD (OR: 9.472 (1.965–45.662)) were associated with higher job satisfaction.

## **Discussion**

In this study, the results showed that the majority of graduates were satisfied with their job (91%), and would definitely or maybe choose the same career again (87%). It was also found that older age and access to CPD were associated with higher job satisfaction. The characteristics of the graduates participating in the survey are similar to the Swedish pharmacy workforce where the average age is 40 years and is 95% female <sup>15, 17</sup>.

Compared to other studies, the pharmacists in the present study had a higher level of job satisfaction. For example, 57% of community pharmacists were satisfied with their current job “most of the time” in a study from the UK, <sup>7</sup> and the corresponding proportion was 38% in a study from Jordan.<sup>18</sup> Further, in a study from the US a high level of dissatisfaction among community pharmacists was found, and 57% thought about quitting their position.<sup>19</sup> Likewise, a qualitative study from Australia found that the majority of respondents expressed low professional satisfaction with working in the pharmacy profession.<sup>20</sup> Pharmacy education and job assignments might differ between countries, which makes comparisons difficult.

However, the high level of job satisfaction in the present study also seems higher compared to studies conducted in Sweden. For example, a recent investigation from another university in Sweden found that only 65% of the respondents three years after graduation from the Master of Science in Pharmacy programme were happy or very happy with their job position.<sup>21</sup>

Furthermore, a survey concerning work environment was conducted among pharmacists who are members of one of the Swedish pharmacist labour unions.<sup>22</sup> The investigation reported a high workload and feelings of stress among the pharmacists working in community pharmacies.

Why is job satisfaction higher among these graduates compared to previous research? One explanation could be the structure of the programmes that the participants graduated from.

Web-based programmes attract a certain type of student, and these students are generally female, of older age, and have family commitments.<sup>23-25</sup> The students in this study were on average 32 years old at admission, which is older than the average university student.<sup>26</sup> An association was also seen between older age and job satisfaction in the present study, a finding in line with earlier studies.<sup>12</sup> Many of the students have made career changes and chosen to study pharmacy later in life, and this could make them highly motivated students with a great interest in pursuing a career within pharmacy. In the present study, no difference in job satisfaction was found between those who graduated before and after the re-regulation, i.e. it does not seem that the re-regulation has caused a lower level of satisfaction. However, because all graduates worked in a re-regulated market when the survey was distributed, these results have to be interpreted with caution.

In contrast to the association with older age, increasing years in one's current position were associated with lower job satisfaction. Perhaps there is a discrepancy in expectations between newly graduated and more experienced pharmacists regarding their job assignments and careers. Such discrepancies have been shown in other studies, but these have not differentiated between years of experience.<sup>27, 28</sup> More experienced pharmacists might be less satisfied with their jobs because of lack of career path and opportunities, or because they want a change. In previous research, these are reasons why pharmacists leave the pharmacy profession.<sup>20</sup>

Female pharmacists have been more positively associated with job satisfaction compared to male pharmacists,<sup>11</sup> and pharmacists working in, for example, hospital pharmacies have been found to be more satisfied compared to those working in community pharmacies.<sup>11</sup> However, significant differences could not be found in the present study, possibly due to the sample

size. Further, job position, education level (bachelor/master), and employment status were not significantly associated factors in determining job satisfaction in this study. Interestingly, the same accounted for income. This contradicts one study among practicing pharmacists in the US, which found that higher wage-earning pharmacists reported higher job satisfaction.<sup>29</sup> On the other hand, one study exploring factors that motivate pharmacists in Saudi hospitals found that financial rewards were important among pharmacy managers, but pharmacists ranked other factors such as autonomy and task significance as more important.<sup>30</sup>

Job satisfaction is, according to Bacharach et al., the match between an individual's expectations and the perceived reality of the job.<sup>31</sup> As previously mentioned, there could be a discrepancy between what you think you will do as a pharmacist and what the job actually entails. Under-utilisation of pharmacists' knowledge and skills has previously been found as reasons why pharmacists leave the pharmacy profession.<sup>20</sup> There was an association in the present study between high job satisfaction and the perception that the knowledge and skills acquired during the education is useful in the current job. This association was also significant in the multivariate model, as the association with CPD. The pharmacists' possibilities of CPD strongly increased job satisfaction in this study, results that are consistent with those in previous research.<sup>10</sup> Nevertheless, almost half of the respondents had limited or very limited access to CPD, showing that there is room for improvement in terms of access to CPD.

Results concerning job satisfaction are important because it is found that satisfied employees are less likely to be absent, to engage in behaviour adversely affecting the organisation, and to change jobs.<sup>10</sup> There has been a gap in knowledge regarding job satisfaction among pharmacists in Sweden. The findings in this study provide an opportunity to increase the understanding of job satisfaction, which in turn might be important for future workforce planning.

## **Limitations**

The participants were all recruited from the same university, thus the results in this study might not be generalisable to all pharmacists in Sweden. Also, 8% of the respondents were living in Norway when the survey was distributed. However, we chose to include these people in the analysis because the pharmacy market in Norway is similar to the Swedish market. Furthermore, graduates who are more satisfied with their choice of education and profession might be more likely to answer the survey compared to those who are more negative, which might suggest a selection bias.

## **Conclusion**

Most graduates from the web-based pharmacy programmes at [removed for peer review] in Sweden are satisfied with their jobs. However, job satisfaction appears to decrease with increasing years in the profession. Access to continuing professional development and the perception that the knowledge and skills acquired during the education is useful in the current job seem to be important for the level of job satisfaction among pharmacists.

## **Acknowledgement**

We thank the graduates who participated in the survey.

## **Conflicts of interest**

None.

## **Funding**

[removed for peer review] was supported by Carl Wilhelm Scheele, visiting professor from the Swedish Research Council. The funding body did not influence the data collection, analysis, the writing of the manuscript, or the decision to submit for publication.



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Table 1. Demographic characteristics of respondents

Characteristic	Graduates n (%)
<i>Gender (n=221)</i>	
Women	210 (95.0)
<i>Age (n=219)</i>	
Mean	39.7
Standard deviation	8.9
Range	23-62
<i>Country of birth (n=216)</i>	
Sweden	171 (79.2)
Norway	17 (8.1)
Rest of Europe	10 (4.6)
Asia	16 (7.4)
Other	2 (1.0)
<i>Region of living (n=219)</i>	
Sweden	202 (92.2)
Norway	17 (7.8)
<i>Degree (n=221)</i>	
Bachelor in Science in Pharmacy (prescriptionist)	200 (90.5)
Master in Pharmaceutical Science (pharmacist)	12 (5.4)
Bachelor + Master* (pharmacist)	9 (4.1)
<i>Years since graduation (n=217)</i>	
Mean	5.0

Standard deviation	3.0
<i>Current employment (n=217)</i>	
Community pharmacy	184 (84.8)
Hospital pharmacy	5 (2.3)
County council	5 (2.3)
Pharmaceutical company	6 (2.8)
Drug product manufacturing	2 (0.9)
Dose dispensing pharmacy	3 (1.4)
University	2 (0.9)
Municipality	4 (1.8)
Others**	6 (2.8)
<i>Employee category (n=183)</i>	
Employee	155 (84.7)
Manager	28 (15.3)
<i>Employment status (n=221)</i>	
Full-time	157 (71.0)
Part-time	44 (19.9)
Unemployed	2 (0.9)
Studying	2 (0.9)
Parental leave	11 (5.0)
Others***	5 (2.2)
<i>Years in current position (n=212)</i>	
Mean	3.5
Standard deviation	2.7
<i>Personal monthly income (SEK**** before tax) (n=221)</i>	
Less than 19 999	4 (1.8)

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20 000-25 000	9 (4.1)
25 001-30 000	99 (44.8)
30 001-35 000	60 (27.1)
35 001-40 000	25 (11.3)
40 001-45 000	14 (6.3)
45 000-50 000	5 (2.3)
50 001-55 000	1 (0.5)
55 001-60 000	1 (0.5)
60 001 or more	3 (1.4)

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\* Graduates with both a bachelor and master's degree from [removed for peer review]

\*\*Others include: international clinical testing, medical technology, goods control at head office, teaching pharmaceutical technicians in training, various work places

\*\*\*Others include: self-employed, trainee

\*\*\*\*SEK=Swedish krona

Table 2. Questions about job satisfaction

	Percentage of graduates (%)			
	Never or rarely	Sometimes	Most of the time	All of the time
All things considered, how often are you satisfied with your job? ( <i>n</i> =217)	1.8%	6.9%	<b>71.4%</b>	19.8%
How often do you think the idea of spending the remainder of your working life in a job like your current one is depressing? ( <i>n</i> =209)	<b>69.9%</b>	26.3%	3.8%	0.0%
How often do you leave work with a “bad” feeling, a feeling that you are doing something you do not enjoy? ( <i>n</i> =215)	<b>79.1%</b>	17.2%	3.7%	0.0%
How often do you get so wrapped up (interested) in your work that you lose track of time? ( <i>n</i> =216)	9.7%	<b>61.1%</b>	27.3%	1.9%

**Table 3.** Multivariate logistic regression including different questions regarding job satisfaction

Total number of people	People satisfied with their job n=198	People not satisfied with their job n=19	Simple OR (95% confidence interval)	p-value	Multiple OR (95% confidence interval)	p-value
Age	39.9 ± 9.0	37.4 ± 6.7	1.034 (0.978-1.093)	0.236	1.123 (1.022-1.234)	0.016
Women n (%)	189 (95.5)	17 (89.5)	2.471 (0.494-12.367)	0.271	7.635 (0.779-74.840)	0.081
Employee category						
Manager n (%)	27 (16.5)	1 (5.9)	3.153 (0.401-24.791)	0.275		
Employee n (%)	137 (83.5)	16 (94.1)	Ref			
Employment status						
Full-time n (%)	140 (77.3)	16 (88.9)	0.427 (0.094-1.933)	0.269		
Part-time n (%)	41 (22.7)	2 (11.1)	Ref			
Current employment						
Community pharmacy n (%)	166 (91.4)	16 (84.2)	0.973 (0.268-3.533)	0.966		
Other n (%)	32 (8.6)	3 (15.8)	Ref			
Years in current position	3.4 ± 2.6	5.1 ± 3.4	0.814 (0.685-0.967)	0.019	0.672 (0.519-0.871)	0.003
Personal monthly income (SEK* before tax) n (%)						
>30 000	102 (51.8)	7 (36.8)	1.841 (0.696-4.871)	0.219		
<30 000	95 (48.2)	12 (63.2)	Ref			
Degree						
Bachelor (prescriptionist) n (%)	181 (91.4)	16 (84.2)	1.996 (0.528-7.545)	0.308		
Master (pharmacist) n (%)	17 (8.6)	3 (15.8)	Ref			
Years since graduation	5.0 ± 3.0	5.8 ± 2.7	0.906 (0.770-1.066)	0.234		
Year of graduation						
2006-2009 n (%)	85 (46.2)	10 (52.6)	0.733 (0.300-1.990)	0.593		
2010-2014 n (%)	99 (53.8)	9 (47.4)	Ref			

Access to CPD*						
Good	129 (65.5)	2 (10.5)	16.125 (3.618-71.857)	<0.001	9.472 (1.965-45.662)	0.005
Limited	68 (34.5)	17 (89.5)	Ref			
The knowledge and skills acquired during the education are useful in my current job						
Agree	177 (90.3)	11 (61.1)	5.928 (2.056-17.097)	0.001	4.643 (1.255-17.182)	0.021
Disagree	19 (9.7)	7 (38.9)	Ref			

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CPD; continuing professional development; SEK=Swedish krona