

BMJ Open Job satisfaction, work commitment and intention to leave among pharmacists: a cross-sectional study

Nedaa Al-Muallem,¹ Khaled Mohammed Al-Surimi^{1,2,3}

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¹Department of Health System Management, College of Public Health and Health Informatics, King Saud bin Abdulaziz University for Health Sciences, Riyadh, Saudi Arabia

²Department of Primary Care and Public Health, School of Public Health, Imperial College London School of Public Health, London, UK

³King Abdullah International Medical Research Center, Riyadh, Saudi Arabia

Correspondence to

Dr Khaled Mohammed Al-Surimi; kalsurimi@gmail.com

ABSTRACT

Objectives We assessed job satisfaction, work commitment and intention to leave among pharmacists working in different healthcare settings in Saudi Arabia.

Design This was a cross-sectional study utilising a previously validated questionnaire.

Setting We surveyed the workforce at different healthcare settings in Riyadh, Saudi Arabia.

Participants The participants were pharmacists licensed by the Saudi Commission for Health Specialties.

Outcome measures We examined job satisfaction, work commitment and intention to leave.

Results In total, 325 out of 515 pharmacists completed the questionnaire, yielding a response rate of 63%. Over half of them were women (57.8%), 78.2% were Saudi Arabian nationals and 61.8% were married. The majority (88.1%) worked between 36 and 44 hours per week; 96.6% were full-time employees, and 63.4% were government employees working in public hospitals or primary healthcare centres. Although most of the pharmacists were satisfied (satisfied and slightly satisfied) with their current job (39.1% and 24.6%, respectively), about two-thirds (61.9%) had the intention to leave. Multiple logistic regression analysis showed that the most important predictors of pharmacists' intentions to leave were related to job satisfaction and work commitment (OR=0.923; 95% CI 0.899 to 0.947; p<0.001 and OR=1.044; 95% CI 1.014 to 1.08; p=0.004, respectively), whereas respondents' demographic characteristics had no effect.

Conclusions Although the pharmacists surveyed were satisfied and committed to their current job, they had the intention to leave. Further research is recommended to clarify why pharmacists in Saudi Arabia have the intention to leave their pharmacy practice job.

BACKGROUND

In addition to managerial and administrative roles, pharmacists have become more clinically involved in patient care at many points in healthcare system. These emerging roles for pharmacists have increased the need for qualified individuals to occupy the position. The employment of pharmacists is projected to increase by 3% between 2014 and 2024, which is slower than the average for all healthcare occupations.^{1 2} The traditional role of the pharmacists in Saudi Arabia was limited

Strengths and limitations of this study

- This study depended on a valid list of licensed pharmacists by the Saudi Commission for Health Specialties, who are working in different healthcare settings in capital city, Riyadh.
- This is the first study, to the best of our knowledge, being conducted in Saudi Arabia studying together the pharmacists' job satisfaction, work commitment and intention to leave.
- This study provides local empirical evidence for devising health policies to improve staff retention, satisfaction and work commitment.
- Our results were the self-reported perceptions of the participants; therefore, they may be subject to bias and ungeneralisable to all pharmacists in Saudi Arabia.

in dispensing medications; however this role has changed recently to include other related medications issues, for example counselling patients in the hospital and community pharmacies, and getting involved in advising physicians about the appropriate therapeutic dose and drug-related problems such as drug-drug interactions³ in different clinical settings ambulatory care, oncology and haematology, cardiology, among others.⁴ However, job turnover among pharmacists is relatively high and the issue of retaining pharmacists is a major concern among institutional managers.⁵ One of the most significant factors that affects job turnover is job satisfaction. Job satisfaction has been defined as 'the extent to which people like (satisfaction) or dislike (dissatisfaction) their job'.⁶ Intrinsic and extrinsic job characteristics are the two main factors that influence the level of job satisfaction. Intrinsic factors include performance, challenge and autonomy and depend on the characteristics of an employee, and extrinsic factors include workload, job security, promotion opportunities and relationships with co-workers.⁷

As far as the satisfaction of health professional is concerned, previous studies indicated that 40% of primary healthcare female



nurses in Saudi Arabia were dissatisfied and had turnover intentions to leave.⁸ The most common influencing factors that contribute to Saudi's female nurses are the negative public attitudes and perception towards the nursing profession and the nature of their work that needed mixing with men.⁸ Likewise, it has been reported about 25.2% of physicians working in Saudi primary healthcare centres are burnout and might among the potential factor of intention to leave.⁹ Worldwide, intentions to leave among health worker professionals are an increasing problem that affects the functioning of any healthcare system, especially in developing countries.¹⁰

Both international and regional studies have identified determinants of professional satisfaction among healthcare workers, including pharmacists. Among healthcare workers, 69% of turnover intentions are significantly associated with job satisfaction and motivation from managers.¹¹ Some psychological morbidity is also associated with reduced job satisfaction.¹² A high level of employee stress, which is related to a high workload, has a significant impact on staff performance.¹³ Longer working hours also contribute to reduced job satisfaction. Job autonomy is another variable that influences job satisfaction.⁷ In addition, sociodemographic characteristics, occupation, educational background, years of service and income have significant effects on the job satisfaction of healthcare staff.¹⁴ More than 68% of pharmacists have experienced job stress.¹⁵ Intrinsic factors such as job security are among the primary determinants of pharmacists' job satisfaction.¹⁶ Lack of financial support and acceptance by medical staff are also barriers to the professional satisfaction of pharmacists.¹⁷ A high-pressure working environment is another factor that frequently influences pharmacists' job satisfaction.¹⁸

The turnover intention of pharmacists is growing as a result of factors including job satisfaction, age, sex and strength of desire to practice pharmacy.¹⁹ Reportedly, the turnover rate among pharmacists in the USA is 14.4% for several reasons: promotion opportunities, pay and benefits, working hours, educational development opportunities and professional challenges.²⁰ The annual turnover rates are greater among women than men (15% and 9.7%, respectively).²¹

Several studies have addressed pharmacists' job satisfaction globally. In the USA, both community and hospital pharmacists report moderate levels of job satisfaction, which the authors link to stress levels.²² Another study found that age, income and practice site can predict job satisfaction among practicing pharmacists.²³ A study involving pharmacists working in chain pharmacies reported that their job satisfaction was lower (53%) than that of pharmacists working in other settings.²⁴ In addition, several studies conducted in the UK have demonstrated a link between increasing pharmacist job dissatisfaction and stress related to high workload and its impact on community pharmacists.²⁵ Pharmacists' performance can be affected by many factors related to workload and working environment.²⁶ Job satisfaction is an

important contributory factor to motivation and productivity among pharmacists.¹¹

The indicators of job satisfaction include employee effectiveness, good mental and emotional status, behaviour that improves worker functioning and performance and good professional relationships with staff, colleagues and physicians.^{27 28} Also, quality of work is considered a measure of job satisfaction by the European Commission.⁷ Job satisfaction, turnover intention and patient care and safety are important contributors to pharmacists' quality of work life.²⁹ Studies have shown there are significant associations between burnout and poor patient safety such as medical errors.³⁰ Moreover, one of the predictors of burnout among healthcare professionals is job insecurity.³¹

Work commitment is highly related to duration of employment and age. Younger pharmacists have a lower level of satisfaction and organisational attachment.³² Other predictors of organisational commitment include supervisor support, perceptions of the effect of the pharmaceutical care movement and practice setting.³³ High job satisfaction will positively affect work commitment, consequently decreasing turnover intention among pharmacists.³⁴

Medication errors lead to increased healthcare costs and morbidity and mortality rates.³⁵ Pharmacists have a specific role in reducing medication errors by performing interventions that improve medication safety, such as risk assessments in clinical pharmacies and developing methods to detect patients at high risk of adverse drug reactions.³⁵ One of the recommendations to reduce medication errors is to use the 'five rights': the right dose, right patient, right drug, right route and right time.³⁶ Of dispensing errors, 46% are related to organisational factors, and 41% are related to individual factors.³⁷ The number of medication errors is influenced by pharmacists' years of practice and recognition of stress. A better perception of safety culture is an indicator of a decreased number of medication errors.³⁸ A high level of pharmacist job satisfaction has direct positive impact on the safety of medication dispensing, and this in turn has a huge impact on the quality of patient care.³⁹

Among the Arab countries, low satisfaction among community pharmacists has been reported in Jordan, and Yemeni pharmacists have expressed dissatisfaction with their working conditions and opportunities.^{40 41} In 2014, a high rate of job satisfaction was reported among Saudi Arabian healthcare professionals.¹³ However, in a 2015 study, Saudi Arabian pharmacists, especially community pharmacists and those working in dispensaries and chain pharmacies, reported a low level of job satisfaction.⁴² This is inconsistent with the findings of a study conducted in 2005, which indicated that the job satisfaction of Saudi Arabian community pharmacists is high.²⁷ To the best of our knowledge, only two studies have investigated job satisfaction among Saudi Arabian pharmacists. Therefore, in this study, we assessed the level of job satisfaction and work commitment, and their impact on turnover

rate and intention to leave, among pharmacists working in different healthcare settings in Saudi Arabia. Our findings will inform and advise policymakers and health planners in the development of an evidence-based retention policy for health human resources, both in general and in pharmacists in particular.

METHODS

Settings and participants

This study involved pharmacists working at different healthcare settings in Riyadh, Saudi Arabia, including public and private hospitals, community chain pharmacies, community independent pharmacies, primary care centre pharmacies, industrial pharmacies and academic pharmacies. The study population comprised pharmacists licensed by the Saudi Commission for Health Specialties and working in the Riyadh region, regardless of their sex and workplace.

Methods of measurement

Based on the data provided by the Saudi Commission for Health Specialties, we calculated the required sample size. Using an online sample calculator (Raosoft, Inc, Seattle, Washington, USA; <http://www.raosoft.com/samplesize.html>), with a chosen accepted error margin of 5%, a 95% confidence level and a 50% response distribution within the pharmacist population in Riyadh, the minimum required sample size was 309 participants. Taking into consideration a non-respondent rate of 20%, the final targeted sample size was 387 participants. We sent a self-administered questionnaire to all 515 pharmacists licensed by the Saudi Commission for Health Specialties in Riyadh; thus, no sampling technique was applied. The self-administered questionnaire was combined with a letter that explained the purpose of the study and assured them of the confidentiality of their responses. Data were collected using an English version of a questionnaire developed and used in a Malaysian study by Chua *et al*⁴³ to assess job satisfaction, organisation commitment and retention in the public workforce among pharmacists. Although the validity and reliability of the study tool has been reported in Malaysian study by Chua *et al*,³⁸ we have conducted a pilot study to test the reliability of the study tool in the Saudi context, and the Cronbach's alpha for the job satisfaction and work commitment scale were 0.94 and 0.77, respectively. The questionnaire consisted of eight sections: sociodemographic characteristics, current job features, job satisfaction and work commitment (scored using a 6-point Likert scale ranging from strongly disagree to strongly agree and comprising 15 statements), overall satisfaction with their current job, intention to leave their current job, overall patient safety at their workplace and opinions on how to improve job satisfaction and work commitment among pharmacists working in Saudi Arabia. The questionnaires were sent to respondents as online survey via the validated emails list provided by Saudi Commission for Health Specialties in

Riyadh, and at end of survey, there was a link to submit and send back the completed survey.

Statistical analysis

All data were managed and analysed using SPSS V.22 (IBM Corp, Armonk, New York, USA). Both descriptive and analytical statistics were used as needed; categorical variables were presented as frequencies and percentages, and continuous variables as means and SD. Non-parametric tests, including the Mann–Whitney and Kruskal–Wallis tests, and the χ^2 test were used as appropriate, and multivariate logistic regression analysis was performed to determine the association between demographic variables, job satisfaction and work commitment and the participants' likelihood to leave their current job. A p value <0.05% and 95% CI were used to indicate statistical significance.

Patient and public involvement

Patients were not involved.

RESULTS

Sociodemographic characteristics of the participants

In total, 325 of 515 pharmacists completed the study questionnaire, yielding a response rate of 63.1%. The majority of the respondents were women (n=188, 57.8%) and aged between 25 and 30 years (35.7%). Of them, 78.2% were Saudi Arabian nationals, 61.8% were married and 52.6% held a bachelor's degree. The average working hours of more than half of the respondents (n=171, 52.6%) were between 36 and 44 hours, equating to full-time employment status. Of the respondents, 51.4% worked at public hospital pharmacies and filled the staff pharmacist position (n=182, 56.5%). Most participants had 6 to 15 years of experience (table 1).

Job satisfaction and work commitment

Table 2 shows the pharmacists' responses across all items of job satisfaction and work commitment. Approximately 60% of the respondents reported that they were satisfied with their job: they were happy going to work every day, they described their job to family and friends as a great job to have, the job provided them with opportunities to use their abilities, they had flexibility to choose any method of doing the job, they had sufficient freedom to use their own judgement in their job and they got a feeling of accomplishment from their work. However, 62% of the respondents said that they were not satisfied at the end of each working day, and they felt that the day had not been well spent. Forty-seven per cent were unsatisfied by the fringe benefits offered by their current job, and 36% felt unlucky to have their job.

Regarding work commitment, 83% of the respondents said that they were willing to put in effort beyond that normally expected to help the workplace be successful. More than 70% were proud to tell others that they are a part of their organisation and really cared about its fate. More than 60% of respondents were extremely glad that

Table 1 Demographic characteristics of the respondents

| Demographic characteristics | n (%) |
|--------------------------------------|------------|
| Sex | |
| Male | 137 (42.2) |
| Female | 188 (57.8) |
| Age (years) | |
| <25 | 14 (4.3) |
| 25–30 | 116 (35.7) |
| 31–35 | 94 (28.9) |
| 36–40 | 47 (14.5) |
| >40 | 54 (16.6) |
| Marital status | |
| Single | 113 (34.8) |
| Married | 201 (61.8) |
| Divorced | 11 (3.4) |
| Income/month (SR) | |
| <5000 | 16 (4.9) |
| 5000–10 000 | 52 (16.0) |
| 11 000–15 000 | 117 (36.0) |
| >15 000 | 140 (43.1) |
| Nationality | |
| Saudi Arabian | 254 (78.2) |
| Non-Saudi Arabian | 71 (21.8) |
| Highest level of education | |
| Bachelor's degree | 171 (52.6) |
| Master's degree | 94 (28.9) |
| Pharm D | 36 (11.1) |
| PhD | 13 (4.0) |
| Other | 11 (3.4) |
| Average hours worked per week | |
| ≤35 | 33 (10.2) |
| 36–44 | 171 (52.6) |
| >44 | 121 (37.2) |
| Employment status | |
| Full-time | 314 (96.6) |
| Part-time | 11 (3.4) |
| Place of practice | |
| Public hospital pharmacy | 167 (51.4) |
| Private hospital pharmacy | 15 (4.6) |
| Community pharmacy | 15 (4.6) |
| Primary care centre | 39 (12) |
| Industrial companies | 55 (19.6) |
| Academic/university | 17 (5.2) |
| Other | 17 (5.2) |
| Years of practice | |
| ≤5 | 125 (38.5) |
| 6–15 | 130 (40.0) |

Continued

Table 1 Continued

| Demographic characteristics | n (%) |
|-------------------------------|------------|
| 16–20 | 42 (12.9) |
| >20 | 28 (8.6) |
| Current position | |
| Pharmacist manager/supervisor | 96 (29.8) |
| Pharmacist staff | 182 (56.5) |
| Pharmacy owner | 2 (0.6) |
| Others | 42 (13) |
| Unknown | 3 (0.9) |

Pharm D, Doctor of Pharmacy; PhD, Doctor of Philosophy; SR, Saudi riyals.

they chose to work at their organisation, and described their workplace to family and friends as a great organisation to work for. However, 54% of respondents disagreed, stating that choosing to work for their organisation was a definite mistake. Forty-six per cent of the respondents felt very little loyalty to their organisations. More than 50% said that they could just as well be working for a different organisation, that they did not think there was much to be gained by sticking with their organisation and that they found it difficult to agree with their organisations' policies on matters related to its employees. In addition, the respondents agreed that it would take a very little change in their present circumstances to prompt them to leave their organisation.

Overall satisfaction, intention to leave and patient safety perception

Pharmacists' overall job satisfaction was assessed by one global question: 'How satisfied are you with your current job?' (table 3). The results indicated that the majority of pharmacists were satisfied (satisfied and slightly satisfied) with their current job (39.1% and 24.6%, respectively); the proportion of pharmacists who were extremely dissatisfied was only 7.1%. However, most (61.2%) of the pharmacists stated that it was their intention to leave their current job, whereas only 38.7% said that they were unlikely to leave (perceptions of table 3). The pharmacists patient safety at their workplace are presented in table 3. The majority reported that patient safety at their workplace was good or better (n=223, 68.6%), but about one-fifth of the respondents (24.3%) had concerns about patient safety issues at their workplace.

Factors affecting respondents' likeliness to stay in their current job, job satisfaction and work commitment

The associations between respondents' demographic variables and likelihood to stay in their current job are shown in table 4. A significant association was evident between participants' likelihood to remain in their current job and income (p=0.047), place of practice (p=0.026) and current position (p=0.008). Table 5 shows the association between respondents' demographic characteristics and

Table 2 Job satisfaction and work commitment among the respondents

| No. | Statement | Strongly disagree n (%) | Disagree n (%) | Slightly disagree n (%) | Slightly agree n (%) | Agree n (%) | Strongly agree n (%) | Mean score (SD) |
|-------------------------|---------------------------------------------------------------------------------------------------|-------------------------|----------------|-------------------------|----------------------|-------------|----------------------|-----------------|
| Job satisfaction | | | | | | | | |
| 1 | I look forward to coming to work everyday | 29 (8.9) | 35 (10.8) | 34 (10.5) | 70 (21.5) | 108 (33.2) | 49 (15.1) | 4.05 (1.51) |
| 2 | I talk about my job with my family and friends because it is a great job | 27 (8.3) | 53 (16.3) | 37 (11.4) | 67 (20.6) | 99 (30.5) | 42 (12.9) | 3.87 (1.52) |
| 3 | My job provides me with broad opportunities to use my abilities | 27 (8.3) | 40 (12.3) | 47 (14.5) | 53 (16.3) | 112 (34.5) | 46 (14.2) | 3.99 (1.52) |
| 4 | I have sufficient freedom to use my own judgement in my job | 17 (5.2) | 42 (12.9) | 46 (14.2) | 64 (19.7) | 112 (34.5) | 44 (13.5) | 4.06 (1.42) |
| 5 | My job provides me with flexibility to choose any method of doing the job | 21 (6.5) | 44 (13.5) | 44 (13.5) | 82 (25.2) | 103 (31.7) | 31 (9.5) | 3.91 (1.39) |
| 6 | I get a feeling of accomplishment from my job | 22 (6.8) | 32 (9.8) | 39 (12.0) | 86 (26.5) | 115 (35.4) | 31 (9.5) | 4.02 (1.36) |
| 7 | At the end of each working day, I feel that the day has been well spent | 119 (36.0) | 33 (10.2) | 49 (15.1) | 86 (26.5) | 0 (0) | 38 (11.7) | 2.78 (1.68) |
| 8 | If I were to start my career again, I would choose this job | 53 (16.3) | 33 (10.2) | 42 (12.9) | 58 (17.8) | 85 (26.2) | 54 (16.6) | 3.77 (1.7) |
| 9 | Other people would be very lucky to get a job like mine | 42 (12.9) | 29 (10.8) | 46 (14.2) | 84 (25.8) | 82 (25.2) | 42 (12.9) | 3.8 (1.54) |
| 10 | I am satisfied with my job | 35 (10.8) | 32 (9.8) | 37 (11.4) | 82 (25.2) | 104 (32.0) | 35 (10.8) | 3.90 (1.49) |
| 11 | I am satisfied with my salary | 65 (20.0) | 48 (14.8) | 37 (11.4) | 70 (21.5) | 77 (23.7) | 28 (8.6) | 3.4 (1.65) |
| 12 | I am satisfied with the fringe benefits offered by my job | 58 (17.8) | 54 (16.6) | 48 (14.8) | 71 (21.8) | 70 (21.5) | 24 (7.4) | 3.35 (1.58) |
| 13 | I am satisfied with the working conditions | 44 (13.5) | 48 (14.8) | 51 (15.7) | 76 (23.4) | 85 (26.2) | 21 (6.5) | 3.53 (1.51) |
| 14 | I am satisfied with the personnel policies of this organisation | 41 (12.6) | 48 (14.8) | 59 (18.1) | 72 (22.2) | 84 (25.8) | 21 (6.5) | 3.53 (1.48) |
| 15 | I am satisfied with the style and quality of supervision | 43 (13.2) | 51 (15.7) | 53 (16.3) | 72 (22.2) | 80 (24.6) | 26 (8.0) | 3.53 (1.53) |
| Work commitment | | | | | | | | |
| 1 | I am willing to put in effort beyond that normally expected to help my workplace to be successful | 15 (4.6) | 17 (5.2) | 22 (6.8) | 58 (17.8) | 123 (37.8) | 90 (27.7) | 4.62 (1.34) |
| 2 | I talk about my workplace to my friends because it is a great organisation to work for | 31 (9.5) | 41 (12.6) | 53 (16.3) | 65 (20.0) | 103 (31.7) | 32 (9.8) | 3.81 (1.49) |
| 3 | I feel very little loyalty to my organisation | 58 (17.8) | 70 (21.5) | 47 (14.5) | 60 (18.5) | 69 (21.2) | 21 (6.5) | 3.23 (1.58) |
| 4 | I would accept almost any type of job assignment to keep working at this organisation | 36 (11.1) | 39 (12.0) | 61 (18.8) | 76 (23.4) | 74 (22.8) | 39 (12.0) | 3.71 (1.51) |
| 5 | I find that my values and my organisation's value are very similar | 29 (8.9) | 52 (16.0) | 45 (13.8) | 64 (19.7) | 97 (29.8) | 38 (11.7) | 3.81 (1.52) |
| 6 | I am proud to tell others that I am a part of my organisation | 27 (8.3) | 25 (7.7) | 32 (9.8) | 68 (20.9) | 105 (32.3) | 68 (20.9) | 4.24 (1.5) |
| 7 | I could just as well be working for a different organisation | 24 (7.4) | 33 (10.2) | 56 (17.2) | 86 (26.5) | 96 (29.5) | 30 (9.2) | 3.88 (1.37) |
| 8 | My workplace inspires my best job performance | 41 (12.6) | 55 (16.9) | 56 (17.2) | 80 (24.6) | 70 (21.5) | 23 (7.1) | 3.47 (1.48) |
| 9 | It would take a very little change in my present circumstances to make me leave this organisation | 29 (8.9) | 51 (15.7) | 57 (17.5) | 84 (25.8) | 81 (24.9) | 23 (7.1) | 3.63 (1.42) |
| 10 | I am extremely glad that I chose this organisation to work for | 30 (9.2) | 36 (11.1) | 43 (13.2) | 70 (21.5) | 99 (30.5) | 47 (14.5) | 3.96 (1.51) |

Continued

Table 2 Continued

| No. | Statement | Strongly disagree n (%) | Disagree n (%) | Slightly disagree n (%) | Slightly agree n (%) | Agree n (%) | Strongly agree n (%) | Mean score (SD) |
|-----|--------------------------------------------------------------------------------------------------------------------|----------------------------|-------------------|----------------------------|-------------------------|----------------|-------------------------|-----------------|
| 11 | There is not much to be gained by sticking with this organisation | 35 (10.8) | 60 (18.5) | 61 (18.8) | 84 (25.8) | 58 (17.8) | 27 (8.3) | 3.46 (1.46) |
| 12 | Often, I find it difficult to agree with my organisation's policies on important matters relating to its employees | 44 (13.5) | 52 (16.0) | 60 (18.5) | 80 (24.6) | 57 (17.5) | 32 (9.8) | 3.46 (1.52) |
| 13 | I really care about the fate of my organisation | 20 (6.2) | 21 (6.5) | 35 (10.8) | 65 (20.0) | 115 (35.4) | 69 (21.2) | 4.36 (1.41) |
| 14 | For me, this is the best of all possible organisations to work for | 33 (10.2) | 49 (15.1) | 56 (17.2) | 68 (20.9) | 85 (26.2) | 34 (10.5) | 3.69 (1.51) |
| 15 | Deciding to work for this organisation was a definite mistake | 103 (12.0) | 69 (21.2) | 67 (20.6) | 39 (12.0) | 38 (11.7) | 9 (2.8) | 2.59 (1.46) |

job satisfaction and work commitment. A significant association was found between age, monthly income, working hours per week, place of practice, current position and job satisfaction ($p < 0.05$). Likewise, there was a significant association existed between age, nationality and level of education and work commitment ($p < 0.05$).

Determinants of respondents' likeliness to leave their current job

Table 6 shows the results of a multiple logistic regression analysis of the effects of respondents' demographic characteristics, job satisfaction and work commitment on their

likelihood to leave their current job. The most important predictors of intention to leave were job satisfaction and work commitment ($p < 0.001$ and $p < 0.005$, respectively). There were no significant associations between respondents' demographic characteristics and intention to leave. However, older respondents were twice as likely as younger respondents to leave their jobs. Residents and pharmacists with a diploma-level education (other) were six times more likely to leave their job than the pharmacists with bachelor or master degrees, and those with full-time jobs were three times more likely to quit their job than those with part-time jobs, although without statistical significance.

Table 3 Respondents' overall satisfaction, intention to leave and patient safety

| | n (%) |
|--------------------------------------------------------------|------------|
| How satisfied are you with your current job? | |
| Extremely dissatisfied | 23 (7.1) |
| Dissatisfied | 36 (11.1) |
| Slightly dissatisfied | 35 (10.8) |
| Slightly satisfied | 80 (24.6) |
| Satisfied | 127 (39.1) |
| Extremely satisfied | 24 (4.7) |
| How likely are you to leave your current job for any reason? | |
| Very unlikely | 32 (9.8) |
| Unlikely | 94 (28.9) |
| Likely | 144 (44.3) |
| Very likely | 55 (16.9) |
| How much you rate patient safety in your working place? | |
| Poor | 28 (8.6) |
| Fair | 51 (15.7) |
| Good | 108 (33.2) |
| Very good | 56 (17.2) |
| Excellent | 59 (18.2) |
| Not applicable | 23 (7.1) |

DISCUSSION

In this study, we assessed job satisfaction and work commitment, and their determinant factors and the intention to leave, among pharmacists working at different healthcare settings in Riyadh.

Job satisfaction

Across all job satisfaction items in this survey, the respondents were moderately varied in their satisfaction. Numerous factors affected respondents' job satisfaction, including salary, workload, continuous education and development, supervision, motivation and working environment, that is work setting. These findings are largely consistent with the results of earlier studies on job satisfaction among pharmacists and other healthcare workers.^{43 44} Another study also reported that working environment, motivation and income are factors that influence job satisfaction.⁴⁵ Overall, job satisfaction among the study respondents was high, but their reported likelihood to leave their current job was also high, suggesting that job satisfaction does not necessarily mean that pharmacists are not planning to leave. Lower motivation and job satisfaction, as well as the presence of work-related factors, are significantly associated with the intention to leave among healthcare workers.¹¹ These findings are consistent with

Table 4 Association between respondents' demographic characteristics and likelihood to stay in their current job

| Demographic characteristics | Unlikely to stay n (%) | Likely to stay n (%) | P value |
|--------------------------------------|---------------------------|-------------------------|---------|
| Sex | | | |
| Male | 56 (44.4) | 81 (40.7) | 0.565 |
| Female | 70 (55.6) | 118 (59.3) | |
| Age (years) | | | |
| <25 | 4 (3.2) | 10 (5) | 0.381 |
| 25–30 | 45 (35.7) | 71 (35.7) | |
| 31–35 | 34 (27) | 60 (30.2) | |
| 36–40 | 16 (12.7) | 31 (15.6) | |
| >40 | 27 (21.4) | 27 (13.6) | |
| Marital status | | | |
| Single | 37 (29.4) | 76 (38.2) | 0.157 |
| Married | 86 (68.3) | 115 (57.8) | |
| Divorced | 3 (2.4) | 8 (4) | |
| Income/month (SR) | | | |
| <5000 | 3 (2.4) | 13 (6.5) | 0.047 |
| 5000–10 000 | 16 (12.7) | 36 (18.1) | |
| 11 000–15 000 | 42 (33.3) | 75 (37.7) | |
| >15 000 | 65 (51.6) | 75 (37.7) | |
| Nationality | | | |
| Saudi Arabian | 99 (78.6) | 155 (77.9) | 1 |
| Non-Saudi Arabian | 27 (21.4) | 44 (22.1) | |
| Highest level of education | | | |
| Bachelor's degree | 71 (56.3) | 100 (50.3) | 0.218 |
| Master's degree | 38 (30.2) | 56 (28.1) | |
| Pharm D | 11 (8.7) | 25 (12.6) | |
| PhD | 5 (4) | 8 (4.0) | |
| Other | 1 (0.8) | 10 (5.0) | |
| Average hours worked per week | | | |
| ≤35 | 15 (11.9) | 18 (9) | 0.106 |
| 36–44 | 73 (57.9) | 98 (49.2) | |
| >44 | 38 (30.2) | 83 (41.7) | |
| Employment status | | | |
| Full-time | 121 (96.0) | 193 (97.0) | 0.755 |
| Part-time | 5 (4.0) | 6 (3.0) | |
| Place of practice | | | |
| Public hospital pharmacy | 51 (40.5) | 116 (58.3) | 0.026 |
| Private hospital pharmacy | 6 (4.8) | 9 (4.5) | |
| Community pharmacy | 4 (3.2) | 11 (5.5) | |

Continued

Table 4 Continued

| Demographic characteristics | Unlikely to stay n (%) | Likely to stay n (%) | P value |
|-------------------------------|---------------------------|-------------------------|---------|
| Primary care centre | 18 (14.3) | 21 (10.6) | 0.026 |
| Industrial companies | 28 (22.2) | 27 (13.6) | |
| Academic/university | 10 (7.1) | 7 (3.5) | |
| Other | 9 (7.1) | 8 (4) | |
| Years of practice | | | |
| ≤5 | 44 (34.9) | 81 (40.7) | 0.19 |
| 6–15 | 49 (38.9) | 81 (40.7) | |
| 16–20 | 17 (13.5) | 25 (12.6) | |
| >20 | 16 (12.7) | 12 (6) | |
| Current position | | | |
| Pharmacist manager/supervisor | 47 (37.3) | 49 (25.0) | 0.010 |
| Pharmacist staff | 58 (46.0) | 124 (63.3) | |
| Other | 21 (16.7) | 23 (11.7) | |

Pharm D, Doctor of Pharmacy; PhD, Doctor of Philosophy; SR, Saudi riyals.

a study on job satisfaction, sources of stress and workload among New Zealand healthcare professionals, in which pharmacists were significantly less satisfied as a result of job-related stress.¹² The greatest level of job satisfaction was reported by pharmacists with a higher income.²³ In some studies, job dissatisfaction among pharmacists was found to be related to their place of work, especially among pharmacists working in community chain pharmacies. Conversely, pharmacists working in hospital pharmacies have a better level of satisfaction than those working in other practice settings.^{24 40} A high degree of job satisfaction may help to lower employee absenteeism and consequently turnover intentions.²⁸

Work commitment

In this study, the majority of respondents expressed commitment to their work, showing qualities such as loyalty, workplace environment, agreement with organisation policies and interest in organisational procedures and fate. These findings have commonalities with those of a previous study, which defined three basic components necessary for employees' work commitment: loyalty, acceptance of an organisations' policies and good leadership behaviour.⁴⁶ Another study demonstrated that the interpersonal environment of a work setting has an effect on nurses' work commitment.⁴⁷ These different findings emphasise that enhancing employee empowerment has a positive effect on organisational trust and commitment.⁴⁸ A previous study

**Table 5** Effect of respondents' demographic characteristics on job satisfaction and work commitment

| Demographic characteristics | Job satisfaction Median (IQR) | P value | Work commitment Median (IQR) | P value |
|--------------------------------------|----------------------------------|------------------|---------------------------------|--------------|
| Sex | | | | |
| Male | 61 (47–70) | 0.154 | 58 (49–65) | 0.721 |
| Female | 55 (44–68) | | 57 (50–64) | |
| Age (years) | | | | |
| <25 | 60 (34–67) | | 60 (41–63) | |
| 25–30 | 59 (46–71) | | 58 (52–65) | |
| 31–35 | 56 (42–65) | 0.008 | 56 (49–64) | 0.038 |
| 36–40 | 52 (34–68) | | 53 (45–63) | |
| >40 | 66(53–71) | | 60 (54–67) | |
| Marital status | | | | |
| Single | 57 (42–67) | | 58 (50–64) | |
| Married | 59 (47–71) | 0.328 | 57 (50–65) | 0.962 |
| Divorced | 57 (48–65) | | 59 (46–65) | |
| Income/month (SR) | | | | |
| <5000 | 52 (28–59) | | 57 (36–63) | |
| 5000–10 000 | 55 (45–70) | 0.006 | 59 (52–69) | 0.091 |
| 11 000–15 000 | 56 (39–68) | | 56 (46.5–64) | |
| >15 000 | 60 (50–71) | | 58 (50–65) | |
| Nationality | | | | |
| Saudi Arabian | 58 (44–68) | 0.464 | 57 (49–64) | 0.014 |
| Non-Saudi Arabian | 59(48–70) | | 60 (54–67) | |
| Highest level of education | | | | |
| Bachelor's degree | 60 (49–70) | | 59 (52–66) | |
| Master's degree | 58 (43–69) | | 55 (49–66) | |
| Pharm D | 55 (38–68) | 0.065 | 54 (44–6) | 0.017 |
| PhD | 52 (43–64) | | 51(45–61) | |
| Other | 50 (32–53) | | 58 (45–67) | |
| Average hours worked per week | | | | |
| ≤35 | 59 (38–67) | | 56.5 (40–68) | |
| 36–44 | 61 (49–71) | 0.001 | 58 (51–66) | 0.281 |
| >44 | 53 (39–65) | | 57 (49–63) | |
| Employment status | | | | |
| Full-time | 58 (46–69) | 0.962 | 57 (50–65) | 0.695 |
| Part-time | 60 (42–64) | | 54 (48–66) | |
| Place of practice | | | | |
| Public hospital pharmacy | 54 (39–65) | | 57 (49–64) | |
| Private hospital pharmacy | 55 (38–69) | | 58 (47–74) | |
| Community pharmacy | 59 (43–67) | | 58 (54–61) | |
| Primary care centre | 55 (43–71) | <0.001 | 58 (45–69) | 0.599 |
| Industrial companies | 68 (58–73) | | 59 (56–64) | |
| Academic/university | 60 (45–71) | | 57 (50–69) | |
| Other | 60 (48–74) | | 53 (49–67) | |
| Years of practice | | | | |
| ≤5 | 57 (43–70) | | 57 (47–64) | |

Continued

Table 5 Continued

| Demographic characteristics | Job satisfaction Median (IQR) | P value | Work commitment Median (IQR) | P value |
|-------------------------------|----------------------------------|--------------|---------------------------------|---------|
| 6–15 | 58 (43–68) | 0.027 | 56 (50–64) | 0.123 |
| 16–20 | 56 (47–68) | | 60 (49–69) | |
| >20 | 66 (57–73) | | 61 (54–69) | |
| Current position | | | | |
| Pharmacist manager/supervisor | 62 (51–73) | 0.001 | 59 (52–66) | 0.284 |
| Pharmacist staff | 54 (40–67) | | 57 (47–64) | |
| Other | 60 (49–71) | | 57 (50–64) | |

IQR, interquartile range; Pharm D, Doctor of Pharmacy; PhD, Doctor of Philosophy; SR, Saudi riyals.

found that job turnover intention was mediated by organisational commitment.³⁴ Organisational commitment influences the willingness of employees to leave.

This is consistent with the observation that overall job satisfaction and work commitment affects job turnover rate.⁴⁹

Table 6 Multiple logistic regression analysis of the effects of respondents' demographic characteristics, job satisfaction and work commitment on their likelihood to leave their current job

| Variables | Coefficient (SE) | OR (95% CI) | P value |
|------------------------------|------------------|------------------------|------------------|
| Job satisfaction | −0.08 (0.013) | 0.923 (0.899 to 0.947) | <0.001 |
| Work commitment | 0.043 (0.016) | 1.044 (1.014 to 1.08) | 0.004 |
| Monthly income (SR) | | | |
| <5000 | – | – | – |
| 5000–10 000 | 0.171 (0.786) | 1.187 (0.255 to 5.535) | 0.827 |
| 11 000–15 000 | −0.427 (0.759) | 0.653 (0.147 to 2.889) | 0.574 |
| >15 000 | −0.328(0.783) | 0.721 (0.155 to 3.245) | 0.676 |
| Place of pharmacy practice | | | |
| Public hospital pharmacy | – | – | – |
| Private hospital pharmacy | −0.865 (0.670) | 0.421 (0.113 to 1.567) | 0.197 |
| Community pharmacy | 0.097 (0.706) | 1.101 (0.276 to 4.397) | 0.891 |
| Primary care centre pharmacy | −0.587 (0.416) | 0.556 (0.246 to 1.256) | 0.158 |
| Industrial company | −0.254 (0.421) | 0.776 (0.340 to 1.771) | 0.546 |
| Academic/university hospital | −1.203 (0.708) | 0.300 (0.075 to 1.203) | 0.089 |
| Other | −0.846 (0.644) | 0.429 (0.122 to 1.516) | 0.189 |
| Years of practice | | | |
| ≤5 | – | – | – |
| 6–15 | −0.053 (0.329) | 0.948 (0.498 to 1.807) | 0.872 |
| 16–20 | −0.280 (0.483) | 0.756 (0.293 to 1.948) | 0.562 |
| >20 | −0.283 (0.946) | 0.753 (0.257 to 2.212) | 0.606 |
| Current position | | | |
| Pharmacy manager/supervisor | – | – | – |
| Pharmacist | 0.249 (0.344) | 1.283 (0.653 to 2.520) | 0.470 |
| Other | 0.319 (0.500) | 1.376 (0.516 to 3.666) | 0.523 |
| Constant | 3.089 (1.25) | 21.959 | 0.041 |
| Pseudo R ² | | 0.212 | |
| −Log likelihood | | 354.488 | |

OR, odds ratio; Pharm D, Doctor of Pharmacy; PhD, Doctor of Philosophy; SE, standard error; SR, Saudi riyals.

Respondents' likelihood to leave their current job

Although the study findings show that the pharmacists were satisfied with and committed to their current jobs, most stated that they were likely to leave. This is largely consistent with the findings of a study involving family physicians in the UK, in which high levels of job satisfaction did not mitigate their intentions to leave the profession.⁵⁰ The top three significant factors affecting our respondents' likelihood to stay in their current jobs were monthly income, place of practice and current position. This is partially in agreement with a previous study assessing healthcare workers' intentions to leave, which showed that pay and benefits and place of practice were significantly predictive of nurses' intentions to leave their current employment.⁵¹ Pharmacists working in community sectors have a higher tendency to intend to quit than pharmacists working in other sectors.¹⁹ These findings are similar to those of a study of Chinese physicians, who had a greater tendency to quit their jobs if they had a low income than a higher income or a technical position than a managerial position.⁵² Several studies have emphasised that poor salary is one of the primary predictors of intention to leave among pharmacists and other healthcare workers.^{21 53 54} A pharmacist's position has a significant effect on job turnover intention.⁵⁵ This is especially true among independent pharmacy owners, who demonstrate more positive attitudes toward their work than other pharmacists positions.³⁴ In contrast, excessive employee workloads and poor relationships with supervisors play an important role in intentions to leave.^{53 56} In our study, demographic characteristics such as sex and age had no influence on pharmacists' likelihood to stay in their current job. These results are similar to those of a study involving physicians, which found that age and sex have no significant effect on intention to leave.⁵² In general, women have a higher annual intention to leave than men.²¹ Our findings differ from those of some other studies, in which sex and age are primary factors affecting pharmacists' intentions to quit their profession.¹⁹ Other studies have also found that predictors such as relocation and layoffs were common reasons for the high turnover rate of pharmacists.³⁸

Associations and determinate factors

The analysis of the study findings showed that respondents' characteristics such as age, income, workload, practice setting, experience and current position were significantly predictive of their level of job satisfaction. Likewise, a previous study found that working in hospitals and independent settings influences the level of job satisfaction among pharmacists.²² Similarly, another study showed that age, income and place of practice are significant predictors of job satisfaction. However, work experience is not a significant determinant of job satisfaction.¹⁶ Our results also demonstrated that respondents' sex, marital status, nationality, level of education and employment status were not among the factors that influenced job satisfaction. These results are consistent

with those of a study conducted at a Ministry of Health hospital in Saudi Arabia.⁵⁷ Sex was previously identified as a predictor of job satisfaction, especially in female pharmacists, but this was not the case our study.¹⁹ Suleiman⁴² defined a series of factors that influence job satisfaction, including working conditions, the nature of the work, salary, opportunities and management. In the UK, two studies emphasised that workload and high-pressure working environments contribute to a decrease in pharmacists' job satisfaction.^{18 23} Consistently, another study performed in Saudi Arabia agreed that workload is an important source of dissatisfaction among physicians in primary healthcare centres.⁵⁸ Another factor affecting job satisfaction identified in a previous study was being of Saudi Arabian nationality, but nationality had no influence on job satisfaction in this study.¹³ Pharmacists who work in administrative offices have higher job satisfaction than those working in health clinics and hospitals.⁴³ Indeed, pharmacists' positions were the factor most significantly associated with high job satisfaction.⁵⁹

Regarding work commitment, our study identified three significant predictors: age, nationality and level of education. Age had a high correlation with employee organisational attachment. Younger pharmacists were less committed to their work, especially those with less than 7 years of employment.³² In contrast, a US study emphasised that age has no effect on career or organisational commitment. Management support has a positive effect on work commitment.³³ Improved work-related attitudes were also found to increase work commitment.^{33 34} In addition, increased access to knowledge, development, support and opportunities increase organisational commitment.⁶⁰ Among nurses, higher level of education has a positive effect on organisational commitment and job satisfaction.⁶¹ Training and professional development are also considered important aspects of job satisfaction by pharmacists.⁴³ In our study, demographic characteristics such as sex, marital status, income, workload, practice setting and years of experience had no significant effect on pharmacists' commitment. This opposes a previous finding that married pharmacists are more committed to their work.²⁰ Another study found that workload has a great impact on lowering employees' organisational commitments.⁵⁶

Our study shows that job satisfaction and work commitment are significantly related to pharmacists' intentions to leave. In contrast, a previous study reported that high job satisfaction and work commitment have an inverse association with the intention to leave.⁵⁶ Another study found that high levels of job satisfaction and work commitment decrease the likelihood of job turnover intention.³⁴ Opposing outcomes were found in a study conducted in Pakistan on the determinants of employees' intentions to leave, in which organisational commitment, job satisfaction and intention to leave were not significantly associated.⁵⁶ Job turnover intentions among pharmacy faculty staff are influenced by organisational commitment.⁵³ Among physicians, previous results have shown that job

satisfaction is an important predictor of their intentions to leave their profession.⁵⁰ Furthermore, our results did not show any significant association between respondents' demographic characteristics and their intentions to leave. Working hours, marital status, income and continuation of education influence the rate of job turnover among hospital pharmacists.²⁰ Among nurses, a high level of education and an equitable workload equate to greater commitment, productivity and effectiveness in their organisations, and thus they are less likely to leave their jobs.⁶¹ Another study found that productive and effective organisation is generated by a high level of employee satisfaction and commitment.⁶¹ Furthermore, an earlier study demonstrated that a high level of job satisfaction equates to reduced employee absenteeism and intentions to leave.⁴²

Limitation and strengths

This study had some limitations that can be summarised as follows. Because of the study design used, there is a chance that the associations identified may have been misinterpreted. The limited duration and timing of data collection prevented us from getting more responses and cooperation from more pharmaceutical companies, community chain pharmacies and pharmacies at private hospitals to cover most practice settings in Riyadh. Therefore, it may not be possible to generalise our results, which analysed only pharmacists in Riyadh, to all pharmacists in other parts of Saudi Arabia. Furthermore, our results were based on the self-reported perceptions of the study's participants and are therefore subject to bias. Despite these limitations, the study has provided interesting baseline results, which will help to inform better research in future.

Regarding the strengths of the study, the Saudi Commission for Health Specialties provided a list of contact details for all licensed pharmacists in Riyadh. Web-based surveys facilitated data collection and reduced costs. No other studies have investigated job satisfaction, work commitment and intention to leave among pharmacists in Saudi Arabia. Previous studies have focused on healthcare workers other than pharmacists.

CONCLUSION

Our results reveal differing levels of job satisfaction and work commitment between pharmacists working in different practice settings in Riyadh. Our findings indicate that a significant relationship exists between pharmacists' job satisfaction and work commitment and their intention to leave. In general, the pharmacists surveyed were satisfied with their jobs, but at the same time, they expressed a desire to leave their current positions. Further research is required to determine why the intention to leave is increasing among pharmacists in Saudi Arabia.

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