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Original article

Assessment of employee engagement in pharmaceutical care service at King Abdulaziz Medical City – Central region (KAMC): A cross-sectional study

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ABSTRACT

Background: Job engagement and satisfaction are crucial for any successful institution, in recent years, organizations around the globe have begun measuring the engagement level of employees in order to improve productivity and profitability. Employee engagement has the potential to significantly affect employee retention and loyalty. This study was conducted by the pharmacy-Quality Improvement Section to assess pharmacy staff engagement in KAMC-CR in 2019 and to develop a tool to be used as employee engagement key performance indicator (KPI).

Aim: (1) Assessing employee engagement and satisfaction in the pharmacy Care services- central region. And (2) to develop a tool to be used as employee engagement Key Performance Indicator (KPI).

Methods: This study was conducted at the Pharmaceutical Care Service at King Abdulaziz Medical City (KAMC) and King Abdullah Specialized Children Hospital (KASCH) in Riyadh, Saudi Arabia. A validated survey was selected for the study and was then distributed via e-mail to the pharmacy staff by the quality pharmacy section in October-November 2019. The included participants were comprised of administrators, administrative assistants, clinical pharmacists, pharmacists, technicians, pharmacy aides, and pharmacy residents. There are 20 questions in the survey, and the answers were reported using a five-point Likert scale (1 = strongly disagree; 5 = strongly agree). The survey was composed of sections including demographic data, and section for staff engagement and rating of facility.

Results: Participants in this study included 228 (54 %) employees out of a total of 420 employees. The mean health facility rating was 6.51 + 1.94 out of 10. As for the employee engagement, the mean score was 65.53 ± 13.84, and the engagement level was 24 (10.5%) had low level of engagement, 122 (53.5%) had moderate level of engagement, and 82 (36%) had high level of engagement. High level of engagement was reported among the studied sample. Employee engagement was significantly associated with occupation, work experience ($p = 0.001$), as well as rating of the facility (satisfaction) ($p < 0.05$).

Conclusion: Pharmaceutical care services participants overall average rate of the facility by pharmaceutical care services staff as a workplace is 6.5 out of 10. The Employees engagement improves employee performance and efficiency, which contribute to an organization's overall success.

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1. Introduction

Job engagement and satisfaction are essential factors in any institution, particularly in the healthcare sector. High employee engagement is associated with high-quality services provided by the Care Quality Commission in England (Wake and Green, 2019). Factors associated with positive work engagement include managers, communication, and behavior (Kunie et al., 2017). Further, employee satisfaction contributes to better performance and sustainability. The two most common reasons for satisfaction were salary and the work environment (Bodur, 2002). Many studies have assessed and discussed job satisfaction in the nursing field globally (AL-Dossary, 2012; Yaktin et al., 2003; AlAhmadi, 2009; Havlovic et al., 2002; Ravari et al., 2011). Studies were conducted in Saudi Arabia regarding nurse satisfaction, and the results were neutral, with job satisfaction associated with supervision, co-workers, and the nature of work (AL-Dossary, 2012; AlAhmadi, 2009). One study associated age with satisfaction and experience (Yaktin et al., 2003; AlAhmadi, 2009). Another study correlated shifts and overtime with dissatisfaction (Havlovic et al., 2002). In addition, payments and benefits are factors associated with nurse satisfaction (Ravari et al., 2011); however, fewer studies have been conducted in the field of pharmacy. There is one study on pharmacists' satisfaction at work, which was conducted at a hospital that restructured clinical pharmacy services, resulting in higher pharmacist job satisfaction. In addition, most agreed that working hours were reasonable (Mysak et al., 2010). Another study, which included a 120-item questionnaire, was conducted to examine hospital pharmacist satisfaction in metropolitan areas. It showed that hospital pharmacists experienced low job satisfaction, with an average of 2.53 on a five-point scale. However, they had a more significant commitment to their work and ethics (Johnson et al., 1977). Although pharmacist job satisfaction is an important topic; especially with all the new technologies used to aid in their work, no recent studies have been conducted in our region or globally. This study aimed to assess employee engagement and satisfaction in pharmacy service departments.

2. Objectives of the study:

The aim of the study is to assess employee engagement and satisfaction in the pharmaceutical care service- central region.

Primary Objectives:

- 1- Evaluate the quality of the working environment in pharmacy service departments.
- 2- Assess the development of staff when acquiring new skills in their work environments.

Secondary Objectives: Measure the workload in the pharmacy service department.

3. Methodology:

3.1. Study Setting:

This study was conducted by the quality pharmacy section at the Pharmaceutical Care Service at King Abdulaziz Medical City (KAMC) and King Abdullah Specialized Children Hospital (KASCH) in Riyadh, Saudi Arabia. Using a convenient sampling technique, we collected all the data by sending an email to all the employees working under the pharmacy service department using an ethically and scientifically validated questionnaire to assess employee engagement (Alpern et al., 2013). The questionnaire was distributed to the staff via e-mail in October–November 2019.

3.2. Study Subjects:

All pharmacy department staff were included. They consist of administrators, administrative assistants, clinical pharmacists, pharmacists, pharmacy aides, residents, and technicians.

3.3. Study Design:

A cross-sectional design.

3.4. Sample Size:

The sample size in this setting was 420 participants.

3.5. Sampling Technique:

This non-probability sampling approach voluntarily involves all staff of the pharmacy departments at KAMC and KASCH, MNG-HA, in Saudi Arabia, Riyadh. For the study, a validated survey was chosen and then sent out to the participants via e-mail. There were 20 questions in the survey, and the answers were reported using a five-point Likert scale (1 = strongly disagree; 5 = strongly agree).

3.6. Data collection methods, instruments used measurements:

The tool that was developed following the survey is validated, freely available for research purposes, and composed of three main sections: 1) Cover letter: The cover letter serves as the front page and includes a welcoming letter that explains the purpose of the study and encourages participants to voluntarily participate. The contact information of the PI is stated as a reference when any clarification is needed and Informed Consent Form 2) Sample characteristics domain (demographic data): A few sample characteristics are collected as independent variables or disclosures. These include job title, years of experience, and hospitals worked at. 3) The staff satisfaction domain includes workload, promotions, and work environment.

3.7. Data Analysis:

Data analysis was performed using the Statistical Package for the Social Sciences, SPSS 23rd version. Categorical variables were displayed as frequencies and percentages. The minimum, maximum, mean, and standard deviation were used to represent the numerical variables. The Chi-square test was used to test for associations between categorical variables. The independent t-test and ANOVA test were also used to test for associations. The ANOVA test was followed by the Tukey post-hoc test to determine the exact difference between subgroups. The level of significance was set at $P < 0.05$.

Ethical Consideration:

Ethical approval (institutional review board [IRB] no: RC19/438/R) was obtained from the ethical approval committee of the Ministry of National Guards Health Affairs before the start of the study.

The collection of data sheets was framed with confidentiality in a matter where the participant's name, contact information, or file number won't be identified or traced by anyone.

4. Results

Out of the 420 pharmacy employees who received the survey, a total of 228 responded, with a response rate of (54%). Fig. 1 shows the hospitals where the participants work. 165 (72.4%) of the participants worked at King Abdulaziz Medical City (KAMC), and 63

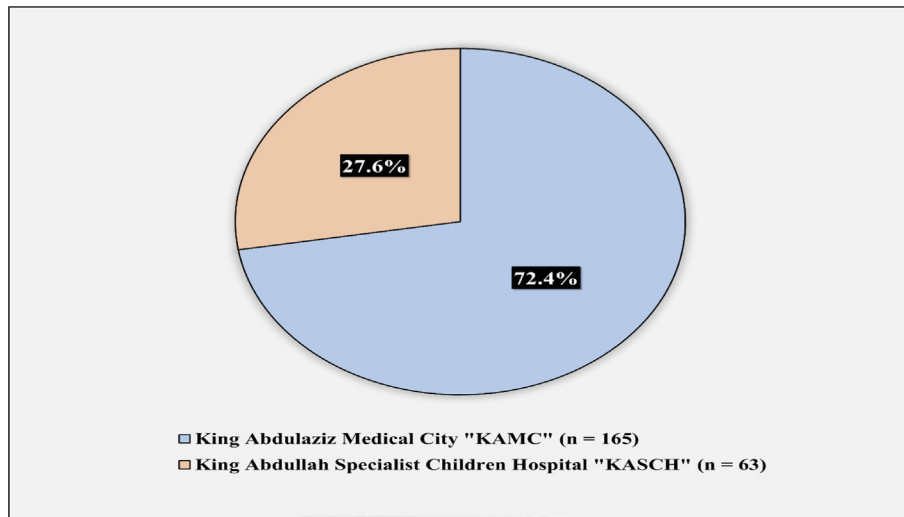


Fig. 1. Participants Hospitals.

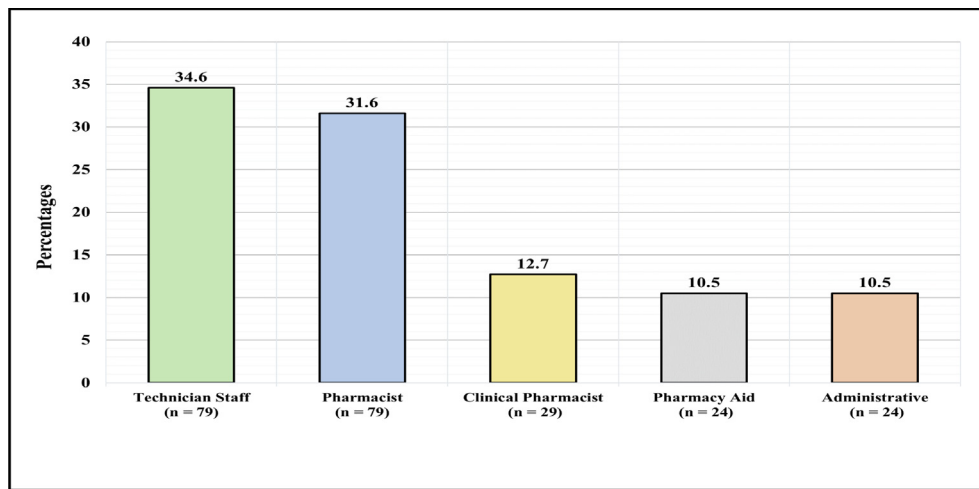


Fig. 2. Occupation of the participants.

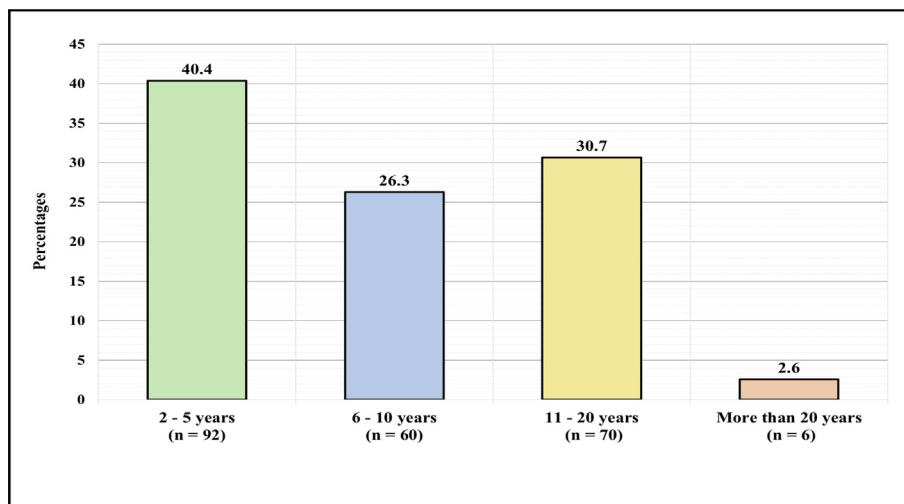


Fig. 3. Participants Experience in years.

Table 1
Employee Engagement Questionnaire (n = 228).

Question	n	%
Q1/ The management of this organization is supportive of me		
Strongly Disagree	11	4.8
Disagree	19	8.3
Neutral	44	19.3
Agree	118	51.8
Strongly Agree	36	15.8
Q2/ I receive the right amount of support and guidance from my direct supervisor		
Strongly Disagree	10	4.4
Disagree	26	11.4
Neutral	33	14.5
Agree	108	47.4
Strongly Agree	51	22.4
Q3/ I am provided with all trainings necessary for me to perform my job		
Strongly Disagree	10	4.4
Disagree	26	11.4
Neutral	30	13.2
Agree	112	49.1
Strongly Agree	50	21.9
Q4/ I have learned many new skills in this position		
Strongly Disagree	6	2.6
Disagree	16	7
Neutral	28	12.3
Agree	103	45.2
Strongly Agree	75	32.9
Q5/ I feel encouraged by my supervisor to offer suggestions and improvements.		
Strongly Disagree	14	6.1
Disagree	28	12.3
Neutral	36	15.8
Agree	94	41.2
Strongly Agree	56	24.6
Q6/ The management makes changes based on my suggestions and feedback.		
Strongly Disagree	15	6.6
Disagree	42	18.4
Neutral	60	26.3
Agree	90	39.5
Strongly Agree	21	9.2
Q7/ I am appropriately recognized when I perform well at my regular work duties		
Strongly Disagree	12	5.3
Disagree	37	16.2
Neutral	48	21.1
Agree	103	45.2
Strongly Agree	28	12.3
Q8/ The organization rules make it easy for me to do a good job.		
Strongly Disagree	15	6.6
Disagree	31	13.6
Neutral	56	24.6
Agree	106	46.5
Strongly Agree	20	8.8
Q9/ I am satisfied with my chances for promotion.		
Strongly Disagree	58	25.4
Disagree	53	23.2
Neutral	48	21.1
Agree	61	26.8
Strongly Agree	8	3.5
Q10/ I have adequate opportunities to develop my professional skills.		
Strongly Disagree	24	10.5
Disagree	40	17.5
Neutral	46	20.2
Agree	104	45.6
Strongly Agree	14	6.1
Q11/ I have an accurate written job description.		
Strongly Disagree	14	6.1
Disagree	23	10.1
Neutral	42	18.4
Agree	119	52.2
Strongly Agree	30	13.2
Q12/ The amount of work I am expected to finish each week is reasonable.		
Strongly Disagree	27	11.8
Disagree	51	22.4
Neutral	42	18.4
Agree	91	39.9
Strongly Agree	17	7.5
Q13/ My work assignments are always clearly explained me.		
Strongly Disagree	7	3.1

Table 1 (continued)

Question	n	%
Disagree	22	9.6
Neutral	44	19.3
Agree	126	55.3
Strongly Agree	29	12.7
Q14/ My work is evaluated based on a fair system of performance standards		
Strongly Disagree	24	10.5
Disagree	34	14.9
Neutral	47	20.6
Agree	105	46.1
Strongly Agree	18	7.9
Q15/ My department provides all the equipment, supplies, and resources necessary for me to perform my duties		
Strongly Disagree	33	14.5
Disagree	42	18.4
Neutral	43	18.9
Agree	90	39.5
Strongly Agree	20	8.8
Q16/ The buildings, grounds and layout of this facility are adequate for me to perform my work duties.		
Strongly Disagree	18	7.9
Disagree	29	12.7
Neutral	40	17.5
Agree	117	51.3
Strongly Agree	24	10.5
Q17/ My coworkers and I work well together.		
Strongly Disagree	4	1.8
Disagree	22	9.6
Neutral	44	19.3
Agree	109	47.8
Strongly Agree	49	21.5
Q18/ I feel I can easily communicate with members from all levels of this organization.		
Strongly Disagree	7	3.1
Disagree	29	12.7
Neutral	46	20.2
Agree	112	49.1
Strongly Agree	34	14.9
Q19/ I would recommend this health facility to other workers as a good place to work.		
Strongly Disagree	14	6.1
Disagree	28	12.3
Neutral	55	24.1
Agree	101	44.3
Strongly Agree	30	13.2

(27.6%) worked at King Abdullah Specialist Children Hospital (KASCH).

Fig. 2 displays the different occupations of the participants. 79 (34.6%) of the participants were technician staff, 79 (31.6%) were pharmacists, 29 (12.7%) were clinical pharmacists, 24 (10.5%) were pharmacy aides, and 24 (10.5%) had administrative work.

Fig. 3 demonstrates the participants experience in years. 92 (40.4%) had 2–5 years of experience, 60 (26.3%) had 6–10 years

Table 2
Participants Rating for The Facility (n = 228).

Question	n	%
How would you rate this health facility as a place to work on a scale of 1 (the worst) to 10 (the best)?		
1	6	2.6
2	3	1.3
3	5	2.2
4	17	7.5
5	40	17.5
6	28	12.3
7	43	18.9
8	61	26.8
9	18	7.9
10	7	3.1
Rating (Maximum Rating = 10)		
Mean	6.51	
Standard Deviation	1.94	

Table 3
Score and Level of Employee Engagement Questionnaire (n = 228).

Virtual Clinic	
Score for Employee Engagement (Maximum score = 95)	
Mean	65.53
Standard Deviation	13.84
Minimum	20
Maximum	94
Level of Employee Engagement	
Low (<50% of max score)	24 (10.5%)
Moderate (50% – 75% of max score)	122 (53.5%)
High (More than 75% of max score)	82 (36%)

of experience, 70 (30.7%) had 11–20 years of experience, and 6 (2.6%) had more than 20 years of experience.

Table 1 illustrates the participants' responses toward the employee engagement questionnaire.

Table 2 displays, on a scale from 1 to 10, how the participants rated the health facility where they worked (1 was the worst and 10 was the best). The average rate was 6.51 + 1.94.

Table 3 shows the participants' scores and level of employee engagement. The minimum score was 20, the maximum score was 94, and the mean was 65.53 ± 13.84. As for the level, 24

Table 4
Factors Associated with Employee Engagement Score.

Socio-demographic Characteristics	Employee Engagement Score		P-value
	Mean	Standard Deviation	
Hospital			0.528
KAMC	65.18	13.90	
KASCH	66.44	12.39	
Occupation			0.001*
Technician Staff	66.17	15.62	
Pharmacist	61.03	12.88	
Clinical Pharmacist	72.08	10.62	
Pharmacy Aid	66.66	10.53	
Administrative	70.54	9.34	
Experience			0.014*
2–5 years	66.32	13.11	
6–10 years	62.68	14.80	
11–20 years	65.64	12.23	
More than 20 years	80.67	9.69	

* Significant at level 0.05.

(10.5%) had a low level of engagement, 122 (53.5%) had a moderate level of engagement, and 82 (36%) had a high level of engagement.

Table 4 demonstrates the association between employee engagement and some of their characteristics. No significant association was found between hospitals and employee engagement ($p = 0.528$). A significant association was found between occupation and employee engagement ($p = 0.001$). The Tukey post-hoc test reveals a significant difference between the technician staff score and both administration staff ($p = 0.003$), and pharmacy aid ($p = 0.017$), where the score of technician staff was 61.03 ± 12.88 compared to 72.08 ± 10.61 in administration staff and 70.54 ± 9.34 in pharmacy aid. A significant relationship was also observed between years of experience and employee engagement score ($p = 0.014$). The Tukey post-hoc test revealed a significant difference between those with more than 20 years of experience and those with 6 – 10 years of experience ($p = 0.009$) and those with 11 – 20 years of experience ($p = 0.041$). Where the mean score of those with more than 20 years of experience was 80.67 ± 9.69 compared to 62.68 ± 14.8 for those with 6–10 years of experience and 65.64 ± 12.23 for those with 11 – 20 years of experience.

Table 5 presents the relationship between employee engagement level and employee rating for the facility. A significant association was found between employee engagement level and employee rating for the facility (hence the level of their satisfaction). It was observed that the higher the rating, the higher the level of engagement. The Tukey post-hoc test revealed that the higher the levels of engagement, the significantly higher the rating ($p < 0.05$).

Table 5
Relationship between Employee Engagement Level and Employee Rating for The Facility.

Socio-demographic Characteristics	Employee Rating for their Facility		P-value
	Mean	Standard Deviation	
Level of Employee Engagement			0.001*
Low (<50% of max score)	3.54	1.769	
Moderate (50% – 75% of max score)	6.20	1.552	
High (More than 75% of max score)	7.84	1.222	

* Significant at level 0.05.

5. Discussion

The primary goals of modern pharmaceutical care are to optimize patients' safety, therapeutic outcomes, and overall quality of life (Durham et al., 2018). Pharmacists play a crucial role in ensuring that patients receive safe, high-quality care (Liekweg et al., 2004). A pharmacist's motivation and productivity are significantly influenced by job satisfaction (Rachelle, 2013). Since pharmacists now have more face-to-face interactions with patients, one of the new psychological challenges they face is burnout (Durham et al., 2018). It was reported that half of the pharmacists surveyed admitted they were at risk for burnout (Durham et al., 2018). Practicing such professions, while satisfying, can simultaneously be highly stressful. However, stress can manifest itself through decreased job satisfaction and increased intention to leave the employment (Zhao et al., 2020).

Job satisfaction in pharmacy work has been studied many times in research, and many factors have been found, which affect a pharmacist's job satisfaction in different pharmacy practice settings. These include gender, age, and practice settings (Seston et al., 2009). Previous research discovered that community pharmacists showed low levels of satisfaction because they felt that, compared to hospital pharmacists, they used their skills less as they did not participate in patient care services (Maio et al., 2004). Moreover, many people experience stress at work for various reasons. Such reasons may be related to pharmacists, their work-related environments (Sporrong et al., 2005), patients (Yeh et al., 2009; Young, 1996), and/or physicians (Bryant et al., 2009). Recent studies have suggested that interpersonal conflict (which exists whenever two or more individuals interact and disagree) (Hassell, 2006) is one of the major reasons why pharmacists choose to leave the profession and is one of the major predictors of stress in the workplace (Herzog, 2010). Although pharmacists struggle to establish relationships with physicians, they sometimes need to work hard to build trust and form collaborative working relationships (CWR) (Austin et al., 2010), which may contribute to stress in their workplace.

To the best of our knowledge, this is the first study in Saudi Arabia that assesses the level of job engagement and satisfaction among pharmacy staff in hospital settings. This study involved 228 participants, including technicians, pharmacists, clinical pharmacists, residents, and pharmacy aides. This variation in qualifications and job description may provide more opportunities to judge the work environment in inclusive healthcare facilities. Previous studies only included pharmacists who were selected as a random sample in Saudi Arabia. Those pharmacists were assigned to highly competitive jobs within organizations such as pharmaceutical companies, hospitals, and pharmaceutical distributors.

Although overall job satisfaction can be measured relatively, it is sometimes difficult to interpret the results because they can be affected by many factors that are difficult to control (Tahaine et al., 2009). This study is an example of a sample study entailing cultural and demographic variations, which could affect satisfaction and engagement. The participants included rated the health facility they worked in out of 10 (with 1 being the worst and 10 the best), and a mean rating of 6.51 ± 1.94 . When regarding the participant's scores and level of employee engagement, the minimum score was 20; the maximum score was 94, and the mean was 65.53 ± 13.84 (out of 95). When considering levels, 24 (10.5%) showed a low level of engagement, 122 (53.5%) a moderate level of engagement, and 82 (36%) a high level.

As discovered in previous research by Maio et al. (Maio et al., 2004); Hassell (Seston et al., 2009), and McCann et al. (Sangiriy and Ngo, 2003), this study revealed that hospital pharmacists were generally the most satisfied among the participants. In contrast,

community pharmacists were the least satisfied. This can be explained by the fact that pharmacists, whether in chain or independent community pharmacies, felt that they were less likely to use their professional skills (patient-oriented functions like direct patient care and clinic-related activities) than their clinical or hospital peers.

In a systemic review conducted by Janes et al. (McCann et al., 2009), it was concluded that *meta*-analyses indicated a small but consistent, statistically significant relationship between staff engagement and patient safety, thus, increasing staff engagement could be an effective means of enhancing patient safety. These results illustrate the importance of employee engagement in health care facilities.

Job satisfaction and job-related stress were found to be interconnected. In this study, a significant association was found between employee engagement level and employee ratings of the facility (i.e., the level of their satisfaction). It was observed that the higher the rating, the higher the level of engagement. This agrees with the results of Al Khalidi et al. (Janes et al., 2021). They concluded that pharmacists' job satisfaction was significantly affected by the type of pharmacy practice setting ($P = 0.038$), pharmacists' registration year ($P = 0.048$), and marital status ($P = 0.023$). Moreover, job-related stress situations, such as patient care responsibility, were significantly associated with the type of pharmacy practice settings ($P = 0.043$) and pharmacists' registration year ($P = 0.013$). Other job stressors, such as long working hours, a lack of advancement, promotion opportunities, and poor physician–pharmacist relationships, were also reported by participants. The study concluded that community pharmacists in Amman were less satisfied with their jobs than their hospital counterparts.

Regarding the association between employee engagement and some of their characteristics, a significant relationship was found between employee engagement, occupation, and number of years of experience. This agrees with another study conducted by Al-Omar et al. (Al Khalidi and Wazaify, 2013), who reported a significant correlation between pharmacists' perceptions of organizational support, years of experience, and their engagement ($\beta = 0.31$, $p < 0.05$).

Engaged employees also tend to be more proactive, showing initiative and “going the extra mile” in their task-oriented activities. This can make a crucial difference to an organization's failure or success in service industries, such as healthcare, where employees who lack commitment and engagement can drag down the quality of service provided, perform poorly, or fail to turn up to work at all (Al-Omar et al., 2019). This study precludes the fact that engagement in the studied sample of healthcare providers is accepted regardless of their job and educational variations, which is one of the most common indicators of the success of the administrative board in any health care facility.

Most Saudi pharmacists work in hospitals because practicing as a hospital pharmacist is one of the best and most advanced professions in Saudi Arabia (Sundaray, 2011). This explains the high level of engagement observed in our study.

6. Limitations and strengths:

This study had some limitations, such as a small sample size and a small number of hospitals included in the survey. Additionally, the data were collected in a self-administrated manner, where the results could be subjected to bias and lower accuracy. The strength of this study lies in shedding light on a topic not very well explored in the region.

7. Conclusion and recommendation:

Employee engagement is an important issue to be considered in health care practice. In our study, a high level of engagement was recorded, especially between pharmacists. We recommend that employee engagement be assessed periodically in health care facilities to assess and evaluate the level of engagement and its impact on the working process. We will develop and implement strategies for improvement, focusing on:

- Increasing communication, less micromanaging, and giving greater responsibilities to the employees
- Defining the employee's role in fulfilling the organization's purpose
- Supporting and valuing employees
- Creating sustainable reward systems
- Developing feedback and reinforcement mechanisms
- Involving staff in decision making that directly affect their work areas

Declaration of Competing Interest

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

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