

# Factors of Pharmacy Practice on Pharmacy Technician Job Satisfaction in Saudi Arabia

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## ABSTRACT

**Purpose:** To explore the Pharmacy practice factors on pharmacy technician job satisfaction in Saudi Arabia.

**Methods:** It is a 4-months cross-section survey of the stress factors impact of pharmacy technician job satisfaction in Saudi Arabia. The study consisted of 35 questions divided into two-part demographic information and the second part consisted of three parts. Part one was about stress-related factors of pharmacy job. It included pharmacy management policies, pharmacy stress factors, pharmacy personal time, salary and benefits, pharmacy motivation factors. Part two included the questions about pharmacy services units of pharmacy job. It included pharmacy management structure, dispersing and patient education, clinical pharmacy services, pharmacy technology, pharmacy store and overall job satisfaction. Part three questions consisted of communication and relationships factors of pharmacy technician job. It included pharmacy supervisors, relationship with coworkers and pharmacist interaction with other healthcare providers, customer interaction and overall job satisfaction. The questionnaire was made as an electronic format and it analyzed through survey monkey system about part one about pharmacy services units of pharmacy technician job. **Results:** The total responders were 96. The gender distribution 83 (86.46%) were males and 13 (13.54%) were females. The majority of them 86 (89.58%) were in age group (20-39 years). The average pharmacy technician satisfaction score of pharmacy management structure was (3.14), clinical pharmacy technician activities was (3.16), pharmacy technician satisfaction of pharmacy informatics was (2.76), pharmacy technician satisfaction score of pharmacy store factors were (2.87) and the overall job satisfaction was (3.62). The finding showed for factor there are no significant differences between male or female and social status married or single, experiences of current position and the most of salary income for all pharmacy services elements satisfaction ( $p > 0.5$ ). **Conclusion:** The pharmacy services with an emphasis on information technology and pharmacy inventory management affected negatively to the pharmacy technician job satisfaction. All pharmacy services satisfactions should be corrected to improve the pharmacy technician in the Kingdom of Saudi Arabia.

**Keywords:** Pharmacy, Practice, Factors, Pharmacy Technicians, Job, Satisfaction, Saudi Arabia.

## INTRODUCTION

Over the past few years tremendous improvement has been observed in pharmacy services, including the pharmacy technicians activities,<sup>1</sup> like intravenous admixture services, unit dose drug distribution system, total parenteral nutrition, Medications safety and computerized physician order entry.<sup>2-4</sup> Generally, if any healthcare providers, including pharmacy technicians, face the pharmacy culture improvement, they will be satisfied with their job. Besides, the staff had more freedom of doing activities to improve the pharmacy services will enjoy the job performances. Dividing the pharmacist responsibility based on the dosage form (for the compounding of sterile and Non-Sterile) or based on patient care area (Inpatient pediatrics, adults, renal patients, cardiac and hepatic impaired patients, oncology patients, that was the drive for the pharmacists to communicate with the physicians and nurtures as member of the patient care team of the area that the pharmacist assigned to serve. That was giving the satisfaction to the pharmacist and he/she validate his contribution as pharmacist that was the result after studying 6 years in university.<sup>5</sup> During the pharmacist involvement with clinical team (Physician, Nurse) in inpatient area as personal efforts as clinical reference in regard of the

medication's managements after the coordination with pharmaceutical care department leadership. So that was given the chance to attend the daily clinical rounds and attending the clinical discussion which was enriching the knowledge and increase the interest in readings which increase the experience in short period, since the reading was focused and from updated resources, that was the greatest source of job satisfaction, after the positive impression from the leader of the clinical team.<sup>6</sup> Few studies discussed pharmacy technician job satisfaction with expanding and services improved.<sup>7-10</sup> Based on best of knowledge, the authors not familiar with any publications about this subject in the Kingdom of Saudi Arabia or Gulf and Middle East countries. The aim of the study to explore pharmacy technician's job satisfaction with an emphasis on pharmacy services in Saudi Arabia.

## METHODS

It is a 4-months cross-section survey of the stress factors impact of pharmacy technician job satisfaction in Saudi Arabia. The study consisted of 35 questions divided into two-part demographic information and the second part consisted of three parts. Part one was about stress-related factors of

pharmacy job. It included pharmacy management policies, pharmacy stress factors, pharmacy personal time, salary and benefits, pharmacy motivation factors. Part two included the questions about pharmacy services units of pharmacy job. It included pharmacy management structure, dispensing and patient education, clinical pharmacy services, pharmacy technology, pharmacy store and overall job satisfaction. Part three questions about communication and relationships factors of pharmacy technician job. It included pharmacy supervisors, relationship with coworkers and pharmacist interaction with other healthcare providers, customer interaction and overall job satisfaction. The 5-point Likert response scale system closed ended questions used. Several factors involved in the analysis of pharmacy technician's job satisfaction (gender, age, social status, experiences current position, salary). The questionnaire made as an electronic format and it analyzed through survey monkey system about part one in pharmacy services units of pharmacy technician job.

## RESULTS

The total responders were 96. Of those 96 (100%) was Saudi and 0 (0%) was non-Saudi. The gender distribution 83 (86.46%) were males and 13 (13.54%) were females. The majority of them 86 (89.58 %) were in age group (20-39 years). Most of the pharmacy technicians were married 67 (74.44%) while 23 (25.56%) were singles (Table 1). In an age group (30-39 years) more male gender than age group (20-30 years) with significant differences ( $p<0.05$ ). While in age group (20-30 years) more female gender than the male with significant differences ( $p<0.05$ ). In an age group (30-39 years) more marriage than single status (20-30 years) with significant differences ( $p<0.05$ ). While in age group (20-30 years) more single than marriage status with significant differences ( $p<0.05$ ).

Most of the pharmacy technicians worked at outpatient pharmacy 50 (59.52%) compared to inpatient pharmacy 24 (28.57%). In all age categories, there are no significant differences between all categories at current pharmacy works ( $p>0.5$ ). Most of the responders spent less than three were 28 (29.17%) three years, followed by six to ten years 26 (27.08%) and three to five years 24 (25.00%) and worked in the current position. In an age (30-39 years) more total years of experience ( $p>6$  years) in the current position than age group (20-30 years) with significant differences ( $p<0.05$ ). While in age group (20-30 years) more total years of experience ( $<3$  years) than age (30-39 years) with significant differences ( $p<0.05$ ).

While most of the responders receive 7,000-9,000 SR monthly salary 45 (47.87%) and 10,000-12,000 SR monthly salary 32 (34.04%) (Table 2). In an age (30-39 years) more salary (10,000 and above SR) than age (20-30 years) with significant differences ( $p<0.05$ ). While in age group (20-30 years) more salary (7,000-9,000 SR) than age group (30-39 years) with significant differences ( $p<0.05$ ). In salary income (10,000-12,000 SR) more marriage than salary income (7,000-9,000 SR) with significant differences ( $p<0.05$ ). While in the salary income (7,000-9,000 SR) more singular than salary income (10,000-12,000 SR) with significant differences ( $p<0.05$ ). In salary income (10,000-12,000 SR) more working at the primary care center and continue to stay in the Pharmacy field than salary income (7,000-9,000 SR) with significant differences ( $p<0.05$ ). Most of the responders worked at Ministry of health 48 (50%) followed by MOH government Hospital 24 (25.00%) and private hospital 16 (16.67%). In an age group (30-39 years) more working at MOH than MOH hospitals (20-30 years) with significant differences ( $p<0.05$ ). While in age group (20-30 years) more MOH hospitals than MOH with significant differences ( $p<0.05$ ).

The responders worked at ( $< 50$  beds) hospitals 14 (20.00%) followed by (100-199 beds) 13 (18.57%) and (200-299 beds) hospitals 11 (15.71%) and the most hospitals were accredited by Saudi Commission for Health

**Table 1: Demographic social information.**

Nationality	Response Count	Response Percent
Saudi	95	100.00%
Non- Saudi	0	0.00%
Answered question	95	
Skipped question	1	
Gender	Response Count	Response Percent
Male	83	86.46%
Female	13	13.54%
Answered question	96	
Skipped question	0	
Age	Response Count	Response Percent
<19	0	0.00%
20-29	36	37.50%
30-39	50	52.08%
40-49	10	10.42%
50-59	0	0.00%
>60	0	0.00%
Answered question	96	
Skipped question	0	
Marital status	Response Count	Response Percent
Single	23	25.56%
Married	67	74.44%
Other (please specify)	0	0.00%
Answered question	90	
Skipped question	6	

Specialties 44 (57.14%) followed by Saudi Central Board for Accreditation of Healthcare Institutions (CBAHI) 24 (31.17%) and Joint commission of hospital accreditations USA 9 (11.69%) (Table 3). In all age categories, there are no significant differences between all categories at hospital bed capacity ( $p>0.5$ ). The finding showed for gender factor there are no significant differences between male or female and social status (married or single), experiences of current position and most of salary income factors for all communication parameters ( $p>0.5$ ).

The average pharmacy technician satisfaction score of pharmacy management structure was (3.14). In the clinical pharmacy technicians' activities was (3.16), in an age (30-39 years) more participants disagree in drug use evaluation and participate in follow up and documentation of significant drug interactions than age (20-30 years) with significant differences ( $p<0.05$ ). The average pharmacy technicians satisfaction of pharmacy informatics was (2.76), in age group (20-30 years) more strongly agree of Pharmacy informatics meet the urgent requirement and had general satisfaction of Pharmacy informatics than age group (30-39 years) with significant differences ( $p<0.05$ ) and patient counseling satisfaction was (3.90) (Table 4 and 5). The average pharmacy technician's satisfaction score of pharmacy store factors were (2.87), In all age group categories, there are no significant differences between all categories at pharmacy medications storage satisfaction elements ( $p>0.5$ ). And the overall job satisfaction was (3.62), there are no significant differences

**Table 2: Demographic responder qualifications information.**

The practice area	Response Count	Response Percent
Inpatient Pharmacy	24	28.57%
Outpatient Pharmacy	50	59.52%
Narcotics	1	1.19%
Extemporaneous Preparation	1	1.19%
Inventory Control	0	0.00%
Emergency pharmacy	4	4.76%
Drug Information	0	0.00%
All (All previous sections)	2	2.38%
PCC pharmacy	2	2.38%
Pharmacy licensees	1	1.19%
Answered question	84	
Skipped question	12	
Total years you worked in current position	Response Count	Response Percent
<3	28	29.17%
3-5	24	25.00%
6-10	26	27.08%
11-15	6	6.25%
> 15	12	12.50%
Answered question	96	
Skipped question	0	
Monthly income	Response Count	Response Percent
<6.000	2	2.13%
7.000 - 9.000	45	47.87%
10.000 - 12.000	32	34.04%
14,000 - 16,000	9	9.57%
18,000 - 20,000	5	5.32%
>25.000	1	1.06%
Answered question	94	
Skipped question	2	

**Table 3: Demographic hospital information.**

Sector of work	Response Count	Response Percent
Ministry of Health	48	50.00%
General Medical Directorate in Region	2	2.08%
MOH government Hospital	24	25.00%
Non- MOH government Hospital	5	5.21%
MOH-Primary Care Center	1	1.04%
Private Hospital	16	16.67%
Community pharmacy	0	0.00%
Other (please specify)	0	0.00%
Answered question	96	
Skipped question	0	
Number of beds at your hospital	Response Count	Response Percent
< 50	14	20.00%
50-99	6	8.57%
100-199	13	18.57%
200-299	11	15.71%
300-399	9	12.86%
400-499	5	7.14%
500-599	4	5.71%
= or > 600	2	2.86%
Medical City	6	8.57%
Answered question	70	
Skipped question	26	
The hospital accreditation	Response Count	Response Percent
CBAHI	24	31.17%
Joint Commotion USA	9	11.69%
Canada	0	0.00%
Saudi commission of health accreditation	44	57.14%
Answered question	77	
Skipped question	19	

between all age categories at overall job satisfaction elements ( $p>0.5$ ) (Table 6 and 7). The finding showed for gender factor there are no significant differences between male or female and social status married or single, experiences of current position and the most of salary income for all pharmacy services elements ( $p>0.5$ ).

## DISCUSSION

Job dissatisfaction of pharmacy technician is one of the key contributing factor towards decreased performance and enlarged turn over. The pharmacy technician's satisfaction with pharmacy management and structure does not reach the optimal level. That is related to most reasons, including the physical management arrangement for patient care was not appropriate and work schedule not sufficient for pharmacy technicians that's similar to previous study.<sup>7</sup> When the duties and responsibilities are not clear through official policy describing the job description for day by day responsibilities and tasks that could lead to chaos in working environment, because the work load is there and the workflow is not clear.

So many of the institution recently develop clear job description for each working area and the success of that job description if it is designed to utilize the manpower properly through measurement of the workload and considering the available facilities. Scheduling the duties and responsibilities of the staff and to what extent the officer for developing flexible schedule that may suit the majority of the working staff and how he can (the officer) find incentives for the staff who are doing the hard duty shifts with coordination of the leadership of the department, which at the end will increase the staff satisfaction.

The pharmacy technicians were not fully satisfied with clinical pharmacy services as they did not participate in providing education for health-care professionals and not share in the medical round because of those, not primary duties. Also, no assess in the drug use evaluation activities. Maybe most pharmacy technicians do not have any clinical activities or help clinical pharmacist duties. The clinical pharmacy technicians system should be implemented at healthcare institutions that may improve pharmacy technician job satisfaction as same as pharmacist showed in the previous studies.<sup>11,12</sup> The revolution in the information technology

**Table 4: Pharmacy administration and clinical pharmacy satisfaction.**

	Pharmacy management structure	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Rating Average	Response Count
1	My pharmacy management software system is overly complicated to work with.	16	18	29	26	6	3.13	95
2	Management does not make clear what type of duties (patient consultation, managerial, dispensing) are expected of me.	21	23	28	20	3	3.41	95
3	My work schedule is flexible.	9	30	25	17	12	3.08	93
4	The physical arrangement of the prescription area facilitates communication with patients.	11	23	24	23	14	2.94	95
	Average						3.14	
Answered question 95, Skipped question 1								
	Clinical pharmacy activities (I am satisfied with ...)	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Rating Average	Response Count
1	Participating in drug-use evaluation	5	29	37	11	5	3.21	87
2	Providing patient education regarding drug therapy	13	30	28	8	9	3.34	88
3	Participating in medical or health care team rounds	10	26	28	11	12	3.13	87
4	Participating in the detection, monitoring, documentation, management and reporting of adverse drug reactions	12	28	29	9	10	3.26	88
5	Providing educational sessions or materials for other health care professionals	14	18	20	17	21	2.86	90
	Average						3.16	
Answered question 90, Skipped question 6								

**Table 5: pharmacy informatics and patient counselling satisfaction.**

	Information Technology	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Rating Average	Response Count
1	Information Technology department respond to your urgent requirement promptly.	3	19	33	24	13	2.73	92
2	You are satisfied with overall services provided by Information Technology department to you.	3	19	37	21	12	2.78	92
	Average						2.76	
Answered question 93, Skipped question 3								
	Dispensing vs. patient consultation duties	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Rating Average	Response Count
1	I do not have enough time to perform many patient consultation duties at my job.	24	31	22	15	2	3.64	94
2	Patients are only concerned about getting their medication as cheaply / quickly as possible.	43	32	11	7	1	4.16	94
	Average						3.90	
Answered question 94, Skipped question 2								

and automation in the pharmaceutical care services is tremendous. One of the limitations for the automation in the field that it needs the involvement of the pharmacist as expert in the medication management which needed to assist in operating and maintaining those software or equipment and introducing them to practice in a practical way by pharmacy technician that assure the patient safety with proper cost saving. In the current study the pharmacy technicians are not satisfied with Pharmacy informatics that's related to computerized system not responding or meeting the urgent situation and informatics services not fully implemented with pharmacy technicians. Maybe the pharmacy Informatics program with pharmacy technicians involved is required to improve pharmacy technician job satisfaction.<sup>13</sup>

The pharmacy technicians showed acceptable satisfaction with patient education as part of clinical pharmacy activities similar to previous pharmacist job satisfaction studies.<sup>11,12</sup> The pharmacy technicians were satisfied when they challenged in patient care through giving the essential information related to medication(s) either through direct contact with the patient or when the information needed by physician or nurse

**Table 6: pharmacy inventory management satisfaction.**

	Store Related Issues	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Rating Average	Response Count
1	The availability of pharmaceutical items (percentage of items received compared to ordered) was 90% or more most of the times	5	35	29	16	10	3.09	95
2	The availability of non-pharmaceutical items (percentage of items received compared to ordered) was 90% or more most of the times	4	21	38	25	7	2.89	95
3	The item shortages that you have is similar in other hospitals pharmacies	7	41	23	16	8	3.24	95
4	When you have urgent order, you receive the goods from store within 24 hr in most cases	6	29	16	23	21	2.75	95
5	You have regular update from store about new products in the market	3	14	30	26	19	2.52	92
6	You have regular update from store about the shortages in the market	3	19	27	24	20	2.58	93
7	warehouse take your undelivered items seriously	7	21	39	13	12	2.98	92
8	You are satisfied with overall services provided by warehouse to you	2	32	27	22	11	2.91	94
	Average						2.87	
Answered question 95, Skipped question 1								

or for drug evaluation. Patient counseling is one of the most interested tasks done by the pharmacist, as a result from this survey and forms the discussions with our colleges that were the most popular task for the pharmacist to do since it will give him a chance to deliver the information related to his medication or treatment plan through a professional way. The heavy working load environment and the lacking in the community for the important role of the pharmacy as source of the drug information. As results, in the study showed the pharmacy technicians do not have time for patient education. The pharmacy technicians wish to participate in the patient counseling of their medications, but there is no time for that. Work schedule with time arrange may solve the problems. The pharmacy technicians had poor satisfaction with pharmacy storage in most aspects. The most aspects were the Pharmacy store not informed the pharmacy technicians about new medications or shortage of medications in the market. The pharmacy inventory management system should revise and implement accordingly. The pharmacy technician's job

**Table 7: The overall pharmacy technicians job satisfaction.**

	Overall job satisfaction	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Rating Average	Response Count
1	I find challenge in my work.	33	37	15	11	0	3.96	96
2	Knowing what I know now, if I had to decide all over again whether to go into pharmacy, I would choose another field.	25	14	12	26	19	3.0	96
3	If I were free to pursue any type of career I wanted, I would stay in pharmacy.	32	35	20	5	4	3.9	96
Answered question 3.62, Skipped question 96								

satisfaction was acceptable, despite had several challenges. In the past, they would change their pharmacy field, but currently, they wish to continue on Pharmacy specialty. That is related to spending extended time and it is difficult to change now. It's wastage of time and money. Some of our health care institutions purchase ready platform for operating software to be used to run and document the daily activity. This software supposed to be supported to facilitate the workflow and the documentation process, while this software needs time to be customized according to the need of each department because it is tough to find software meet the specific demand of each department of the health institution. The difficulties and the time will be a factor of dissatisfaction when the support and maintenance of this software needed.

## CONCLUSION

Pharmacy technician's job satisfaction was affected negatively with absent of clinical pharmacy services, patient counseling services and pharmacy informatics. Targeting of corrections of pharmacy services affected positively the pharmacy technician's job satisfaction in the Kingdom of Saudi Arabia.

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None.

## CONFLICT OF INTEREST

The authors declare that there are no conflicts of interest.

## ABBREVIATIONS

**KSA:** Kingdom of Saudi Arabia; **MOH:** Ministry of Health; **B.Sc. Pharm:** Bachelor in pharmacy; **Pharm D:** Doctor of Pharmacy; **CBAHI:** Saudi Central Board for Accreditation of Healthcare Institutions.

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