

Patient Satisfaction of Ambulatory Care Pharmacy Services in Tabuk City, Saudi Arabia

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Abstract

Rationale, Aims, and Objectives: To explore the patient satisfaction of outpatient care services at Tabuk, Saudi Arabia. **Methods:** A cross-sectional survey was conducted at two tertiary care hospitals located in Tabuk, Saudi Arabia over three months duration. A semi-structured questionnaire composed of eight different domains of pharmaceutical care services through face-to-face patient interview and electronic format using website. **Results:** A total of 508 participants responded to the survey. Among the respondents, male gender (51.8%) was predominant and most of them (83%) were below 46 years old. The average scores of domains 1, 2, 3, 4, 5, 6, 7, and 8 were 4.51, 4.11, 4.30, 3.70, 3.57, 3.82, 3.63, and 4.15, respectively. The general evaluation of pharmacy services domain was found to be very satisfied (245; 48.2%) and satisfied (143; 28%) with 380 (76.4%) respondents were willing to recommend the pharmacy to their family or friends. There was no statistically significant difference in regard to the overall satisfaction of the respondents in all domains of pharmacy services among the two hospitals ($p>0.05$). **Discussion:** The majority of respondents were satisfied with outpatient care pharmacy services at Tabuk, Saudi Arabia. More efforts are needed to improve the service of following-up on patients' adherence by the pharmacists.

Title:

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Short running title

Patient Satisfaction of Pharmacy Care Services

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KEY WORDS: Outpatient care services, Patients Satisfaction, Pharmacy care.

INTRODUCTION

Patients' satisfaction is an integral component of the quality of healthcare and it has been adopted as a proxy to assess the quality and improve the sustainability of healthcare services in many countries¹. Worldwide, patients' satisfaction with pharmacy services reflects the extent to which their expectations, concerns and preferences are met²⁻⁴. The measurement of satisfaction will help to identify pharmacy services in need of improvement, enhance patients' adherence to their medications and to provide a positive impact on patient health outcomes⁵⁻⁷.

Ambulatory or outpatient pharmacy practice is an integral part of the healthcare system that provides pharmaceutical care to the patients who are not admitted to the hospital. Ambulatory care pharmacists have the responsibility to improve the patient's knowledge about the proper use of medicines, assess the patient's need of medication, manage the patient's medication-related problems and develop a relationship with the patients and their families⁸.

In Saudi Arabia, the General Administration of pharmaceutical care at the Ministry of Health (MOH) published a strategic plan in 2012 for five years, and one of the dimensions of follow-up assessment was patient satisfaction with pharmacy services⁹. In such context, patient satisfaction survey had been conducted at more than 250 hospital pharmacies and 2500 primary care center pharmacies in Saudi Arabia (KSA)¹⁰. The survey was constructed based on several indicators such as law domains, policy domains, medication safety domains, patient outcome domains, and customer needs domains¹⁰.

Some previous studies have reported on patient satisfaction of pharmaceutical care in terms of evaluating performance of outpatient services in primary care centers¹¹, tertiary care hospitals in Riyadh city 2019¹² and the Northern area¹³, specialized hospitals in Jeddah city¹⁴, the Eastern region¹⁵ and pharmacy care services in East Province⁸. These studies concluded that the patient satisfaction of pharmacy services was adequate at MOH hospital overall. The outcomes showed a lack in pharmacists' interaction with patients and exertions, medication reconciliation, medication adherence, and pharmacy communication domains which require more focus and improvement by pharmacists. A study recommended conducting training courses to improve staff skills and attitudes to deal with patients¹⁴.

A recent study on 746 patients attending outpatient pharmacies at public hospital at Al-Jouf region of Northern KSA concluded a low satisfaction level of patients with regards to pharmacy facilities and patient's counseling¹³. A variety of factors might be involved in patients' satisfaction process including but not

limited to services accessibility, waiting time, availability of medications, and pharmacy staff attitude in providing medication information and counseling^{14,16}.

To the best of our knowledge, there is no study that evaluated patient satisfaction of outpatient care services at the Northwestern area of the KSA. This study focused on exploring the level of satisfaction among patients attending outpatient pharmacies of two tertiary care hospitals in Tabuk city.

METHODS

Study Site

The survey conducted on patients' satisfaction of outpatient pharmacy services for the period of three months (January to March 2021) at two tertiary care hospitals in Tabuk city and belongs to the Ministry of Health, Saudi Arabia. The Institutional Review Board, Health Affairs, Tabuk approved this study (reference number TU 077/020/070).

The first hospital is a tertiary care hospital consisted of 300 beds. It has adult emergency care, ambulatory care services and a diabetic center with different medical specialties and surgical wards. The hospital has pharmaceutical care department that consists of inpatient pharmacy, outpatient and emergency pharmacies with limited clinical pharmacy services. The pharmacy services are provided through a very comprehensive computerized physician order entry and unit dose distribution system. The pharmacy department provides total parenteral nutrition services and IV admixture for adult patients, drug information services, medication safety services and total quality management services.

The second hospital consists of 270 beds. It has an emergency services for adults, ambulatory care clinics and surgical and medical wards for inpatient adults care. The pharmacy includes inpatient pharmacy, emergency pharmacy and outpatient care pharmacy services. The pharmacy provides clinical activities through total parenteral nutrition, and medications safety.

Study Population and Data Collection

All the visitors to the outpatient pharmacy with 18 years of age or older interested to participate in the survey were included. A face-to-face interview was carried out by using a semi-structured questionnaire. Almost one-half of the respondents were included by using this method and the remaining half of the respondents were obtained via an embed link on web page and a link via Twitter.

The questionnaire was developed by Yousef Alomi 2016¹⁰ and consisted of 48 questions divided into two parts: the first part collects demographic information and the second part contains questions on 10 domains. However, in this study we combined the related domains and analyzed the collected data on eight domains which included: (1) medication availability, (2) patient counseling, (3) pharmacist and patient relationship, (4) medication reconciliation, (5) medication aberrance, (6) pharmacy location and waiting area, (7) pharmacy communications and waiting time, (8) overall patient satisfaction of pharmacy services. The response of patients was obtained on 5-point Likert response scale (from 1 very poor to 5 excellent). All questions were closed-ended questions.

Statistical Analyses

All the statistical analyses were performed using the SPSS version 22 (SPSS Inc., Chicago, IL, USA). The significance level was set at p value <0.05.

Standard descriptive analysis was summarized to describe the demographic characteristics of the patients. Categorical variables were expressed as percentages, and continuous variables were expressed as mean and standard deviation. Chi-Squared test was used to test the differences in demographic characteristics of the participants and the difference in the average scores of the survey among participants of the two hospitals.

RESULTS

Participants' Baseline Characteristics

A total of 508 respondents agreed to participate in this study, of whom 492 (96.9%) were Saudi; 263 (51%) were males and 432 (83%) were below 46 years of age (Table 1). Age over sex distribution of the participants is illustrated in Figure 1. There were no statistical differences in the demographic characteristics of the respondents who attended either hospitals (Table 1).

The average scores of domains medication availability, patient counseling, pharmacist and patient relationship, medication reconciliation, medication adherence, pharmacy location and waiting area, pharmacy communications and waiting time, and overall patient satisfaction of pharmacy services, were 4.51, 4.11, 4.30, 3.70, 3.57, 3.82, 3.63, and 4.15, respectively (Table 2). The general evaluation of pharmacy services domain was reported excellent by 245 (48.2%) respondents and very good (143; 28%), with 380 (76.4%) respondents were willing to recommend the pharmacy to their family or friends.

The respondents' satisfactions were compared in the two hospitals and there was no significant difference ($p>0.05$) between them concerning all the domains of outpatient services such as medication availability, patient counseling, pharmacist and patient relationship, medication reconciliation, medication aberrance, pharmacy location and waiting area, pharmacy communications, waiting time, and overall patient satisfaction of pharmacy services (Table 2).

Overall, more than one-half of respondents (265; 52.2%) were very satisfied with pharmacy services and 233 (45.8%) were satisfied, whereas very few respondents (10; 2%) were dissatisfied with pharmacy services. There were no statistically significant differences between the overall satisfaction among respondents attending the two hospitals ($p>0.05$) (Table 3). The results showed no statistical significant difference between the satisfactions of respondents scored on paper questionnaire and web-based questionnaires (Table 4).

DISCUSSION

In this study, we explored the satisfaction with outpatient pharmacy services among respondents attending two tertiary care hospitals with variant medical specialties in the city of Tabuk, KSA. The study assessed patients' responses on eight domains of outpatient pharmacy services. There was no statistical difference in all demographic characteristics between the participants of the two hospitals. Most of the respondents were Saudi nationals, which was expected because healthcare services are provided through cooperative health insurance regulations and insurance packages and only a small proportion of non-Saudi residents are allowed to receive healthcare services from governmental sectors¹⁷. Most of the respondents were young adults below 46 years old who agreed to participate in the study, whereas a few number of respondents was elderly. This may be due to the interest in participating the survey through internet by the young adult population¹⁸. Moreover, the general health conditions of many elderly patients were sick and it was not convenient for them to respond to the face-to-face interview.

We used mixed-mode survey in our study to improve the response rate as the previous studies recommended to add paper-based questionnaire with web-based questionnaire to increase the response rate. Though we used mixed-mode survey in our study, it did not affect the self-reported satisfaction of the respondents as previous studies in this regard have already ruled out this phenomenon¹⁹⁻²¹.

The respondents reported high satisfaction with medicines availability domain and medication labeling and written instructions provided by the hospital pharmacists. Our results were similar to that reported in a recent study conducted in public, pediatric and emergency hospitals in Riyadh city¹² and to outpatient services of primary healthcare centers in Saudi Arabia¹¹. Since the availability of medicines in hospitals remains the focus of the government, and labeling of medicines is the traditional activity of pharmacists, it might be a possible reason that respondents had higher satisfaction scores in these domains. However, a recent study demonstrated frequent drug shortages in ten largest Ministry of Health-hospitals in Riyadh city, Saudi Arabia offers the potential interest to conduct larger studies in order to enlighten the patient satisfaction regarding the drug availability in the near future²².

Respondents scored less but still very good in the level of satisfaction with pharmacist counseling about the purpose of medications, explaining the side effects and storage of the medications (3.93, 3.65 and 3.74)

as compared to medication labeling and providing written instructions. This was also consistent with a recent study in Al-Jouf province in the Northern Saudi Arabia which reported lower scores (3.08 and 3.11) in medication counseling¹³. Lack of counseling areas in outpatient pharmacies along with inappropriate location of such areas might be the cause of patients' lower satisfaction in this domain¹³. However, in the current study, the participants scored very good to the question of whether counseling area was appropriate and respect the privacy. Our results were higher than those scored to ambulatory service at tertiary care hospitals in Riyadh city (2.2, 1.96 and 2.23) [4]. Low satisfaction levels were also associated with poor counseling practices provided by outpatient hospital pharmacies to diabetic patients²³. Whereas, knowledge, skills and the quality of pharmaceutical care counseling were determinants of willingness to pay for the service in Saudi Arabia⁷. Older age, high educated patients, comorbidities, illness type and longer duration of treatment, few number of pharmacy staff in the hospitals, increased workload, and lack of continuous education for pharmacy service providers were reported as contributors to the low patients' satisfaction with pharmacy services in the literature

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This study demonstrated low satisfaction rating (2.73) with the service of follow-up of patients' adherence by the pharmacists. This service is not supported at the majority of hospitals and pharmacies. In fact, the average patients' satisfaction rating of this service was very low (1.75) in three hospitals in Riyadh city¹².

Waiting time is one of the fundamental contributors to patient satisfaction. In the current study patients reported very good satisfaction with waiting time and waiting area and pharmacy location in both hospitals. The waiting time was found to be acceptable as most of the patients preferred to get their medications in less than 30 min. Waiting time domain was found to be significant among the three tertiary care hospitals in Riyadh city, which is related to the differences in the distribution of the organization system and the number of pharmacy staff at each of these hospitals¹². Waiting time was the only predictor of satisfaction among patients attending emergency care center in Riyadh city¹⁶.

The results regarding the satisfaction with pharmacist's attitude and patient relationship were very good, and were a bit higher than those reported in tertiary care hospitals in Riyadh city¹². It was similar to those reported in a national study conducted in the primary healthcare centers¹¹.

High satisfaction was reported in the area of medication reconciliation. Our results were higher than other previous studies^{11,12}. The results on pharmacy location, waiting area and waiting time were found to be good as reported in the literature.

This study has some limitations. The study design was cross-sectional study over a short duration of time with limited number of study sites which may affect the drawn conclusion as respondents' beliefs and perceptions are dynamic and based on exposure to the pharmacy services. In this context, the response might be based on the respondent's experience with regard to their frequent visits and the reception of outpatient pharmacy services. The study did not explore factors affecting the respondents' response. However, the majority of respondents reported high satisfaction to all domains of pharmacy services which did not necessitate for further investigations of the reasons.

In conclusion, the current study demonstrated overall very good satisfaction scores with the outpatient pharmacy services. More efforts are needed to improve the service of following-up on patients' adherence by the pharmacists. Most of the respondents expressed their willingness to recommend the pharmacy to their friends and family. Our results were found to be better than those reported in the literature in many domains. Notably, the result implicates the professionalism and attitude adopted by the pharmacists towards the respondents which resembles from the high satisfaction level of the respondents.

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CONFLICT OF INTEREST . The authors declare there is no conflict of interest.

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Table 1: Participants' baseline characteristics

Character	Hospital	Hospital	Hospital	p value
	First hospital	Second hospital	Count (%)	
Nationality				
Saudi	282	210	492 (97)	0.28
Non-Saudi	7	9	16 (3)	
Sex				
Female	135	110	245 (48.2)	0.43
Male	154	109	263 (51.8)	
Age (years)				0.34
18-25	100	82	182 (35.8)	?/?
26-35	80	65	145 (28.5)	
36-45	53	43	96 (18.9)	
46	56	29	85 (16.7)	
Education				0.94
Illiterate	5	3	8 (1.6)	
Secondary	67	48	115 (22.6)	
Vocational	48	40	88 (17.3)	
University	169	128	297 (58.5)	
Type of visit				
First visit	229	212	441 (86.8)	<0.001
Follow-up	60	7	67 (13.2)	

Table 2: Scores of patients' satisfaction to outpatient pharmacy services

Satisfaction domains

- 1. Medication Availability Domain
 - 1.1 Have you received all the medications ,that has been prescribed to you
 - 1.2 You have received a prescription refill of your medicines to continue dispensing from pharmacy directly next months.
- 2. Patient Counseling Domain
 - 2.1 All medications you received were packed.
 - 2.2 Instructions were labeled on each medication
 - 2.3 Instructions that contain of: (patient’s name, medication’s name, medication’s strength, and how to use) were written c
 - 2.4 The pharmacist provides you written/ or printed information about drug therapy and/or diseases.
 - 2.5 The pharmacist explains to you how to know if medications are working
 - 2.6 The pharmacist explains all the possible side effects
 - 2.7 The pharmacist provides you information about the proper storage of your medication.
 - 2.8 The pharmacist provides you with thorough medication counseling and encourages you to ask questions
 - 2.9 You understand what pharmacist saying
- 3. Pharmacist and Patient Relationship Domain
 - 3.1 When you’re receiving your prescription medications, the pharmacist delivers your medicines in a polite way
 - 3.2 Pharmacists have technical skills (thoroughness, carefulness, competence).
 - 3.3 All pharmacists characterized with courtesy and respect.
 - 3.4 The way the pharmacist answers your questions excellent.
 - 3.5 The amount of time the pharmacist spends with you.
- 4. Medication Reconciliation Domain
 - 4.1 Pharmacist uses information about your previous conditions/drugs when assessing your drug therapy.
 - 4.2 You have received a copy of prescription contains all medications prescribed to you and may use during outpatient

Table 2: continued

Satisfaction domains	Satisfaction score (Mean +SD)	Satisfaction score (Mean +SD)	Satisfaction score (Mean +SD)		
	First hospital	Second hospital	Average	p value	p value
5. Medication Adherence Domain					
5.1 Did the pharmacist ask about medication compliance	3.44 (1.50)	3.34 (1.49)	4.40(1.50)	0.45	0.45
5.2 Did the pharmacist follow up you and call you after taking your medications as prescribed	2.72(1.28)	2.75(1.30)	2.73(1.29)	0.74	0.74

Satisfaction domains	Satisfaction score (Mean +SD)	Satisfaction score (Mean +SD)	Satisfaction score (Mean +SD)	
6. Pharmacy Location and Waiting Area Domain				
6.1 Is the pharmacy conveniently located	3.75(1.20)	3.72(1.26)	3.74(1.22)	
6.2 Is the waiting area of pharmacy comfortable, convenient	3.75(1.21)	3.72(1.24)	3.74(1.23)	0.37
6.3 The amount of time you have been waiting before seeing a pharmacist was	4.01(1.05)	4.05(1.00)	4.03(1.03)	0.42
6.4 The place of pharmaceutical counseling respects your privacy.	3.72(1.27)	3.84(1.28)	3.77(1.27)	0.55
7. Pharmacy Communication and Waiting Time Domain				
7.1 Getting through to the pharmacy by phone	3.23(1.44)	3.23(1.37)	3.23(1.43)	0.97
7.2 The amount of time it takes to get a prescription filled at your pharmacy.	4.01(1.05)	4.05(1.00)	4.03(1.03)	0.38
8. Overall Patient Satisfaction of Pharmacy Services Domain				

Satisfaction domains	Satisfaction score (Mean +SD)	Satisfaction score (Mean +SD)	Satisfaction score (Mean +SD)	
8.1 Do you recommend your family and friends to visit the pharmacy?	4.15(1.49)	4.19 (1.50)	4.17(1.50)	0.74
8.2 Your general evaluation for the pharmaceutical care	4.17(0.95)	4.21(0.92)	4.19(0.94)	0.75
8.3 Your satisfaction about hotline service (937).	4.10(1.01)	4.06(1.07)	4.08(1.04)	0.88

Table 3: Overall respondents' satisfaction with outpatient pharmacy services.

Degree of satisfaction	First hospital	Second hospital	Count	p value
Very satisfied	145	120	265	0.06
Satisfied	105	70	175	0.67
Somewhat satisfied	34	24	58	0.18
Dissatisfied	5	5	10	0.46
Very dissatisfied	0	0	0	0

Table 4: Overall respondents' satisfaction by the mode of survey.

Degree of satisfaction	Paper-based	Web-based	Count	p value
Very satisfied	94	171	265	0.35
Satisfied	58	117	175	0.15
Somewhat satisfied	17	41	58	0.69
Dissatisfied	4	6	10	0.49
Very dissatisfied	0	0	0	0

Figure legend:

Figure 1: Age and sex distribution of the participants.

