

Original Article

Patient Satisfaction with Pharmaceutical Services in Makkah: A Cross-sectional Study

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INTRODUCTION

The cornerstone of providing pharmaceutical care is the partnership between pharmacists and patients.^[1] The International Pharmaceutical Federation and the World Health Organization define Good Pharmacy Practice (GPP) as any practice that meets the individual needs of those who use pharmacy services by supplying appropriate evidence-based care.^[2] The American Society of Hospital Pharmacists defines the mission of the pharmacist as a direct, responsible provision of medication-related care to achieve specific outcomes to improve the quality of life of the patient.^[3] To ensure the achievement of GPP, assessment of its quality is essential.^[4] One of the management tools to assess and improve the quality of provided services is the evaluation of health care.^[5] Patient perspective has

earned significant attention in the last two decades as a vital source of information for establishing an effective therapeutic plan to improve the quality of health-care services.^[6] Currently, pharmaceutical services have expanded to supply direct patient care. High patient satisfaction leads to improved treatment outcomes of patient care.^[7] Therefore, patient satisfaction with services provided by pharmacists plays a vital role in improving the quality of the services.

Ambulatory care pharmacy practice is the provision of a service to meet the health-care needs of patients by pharmacists. There are many services provided by ambulatory care pharmacists, for example, managing

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ABSTRACT

Objective: Patient satisfaction is considered an essential indicator of the treatment outcomes of pharmaceutical services. This study aimed to assess patient satisfaction with the pharmaceutical services at the Ministry of Health (MOH) hospitals in Makkah city in Saudi Arabia. **Methods:** A cross-sectional study was conducted via an interview-based questionnaire that involved patients who visited the outpatient pharmacy in five MOH hospitals from August 2018 to September 2018. The data were collected using a previously published, validated, and reliable questionnaire. The questionnaire was translated and piloted for the local context. **Findings:** Data of 295 respondents were analyzed. The overall mean score of satisfaction level with the pharmaceutical services was found to be 2.50 out of a maximum score of 3. The item that the patients were most satisfied with was, "The extent of cleanliness in the waiting area for the provision of pharmaceutical services" (mean = 2.80) whereas the item the patients were least satisfied with was, "The information the pharmacist gives you about the proper storage of your medication" (mean = 2.00). "Illiterate" patients and those who visited the pharmacy first time had significantly higher satisfaction levels compared to those with other educational categories and those who had visited the pharmacy before, respectively. **Conclusion:** Our study showed that the overall level of satisfaction of patients with pharmaceutical services was high.

KEYWORDS: *Patient satisfaction, pharmaceutical services, pharmacy practice*

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medication needs while developing a continuous patient relationship. Moreover, the setting of ambulatory care comprises communication and cooperation to provide patient care outside the hospital setting.^[8] Better health-care outcomes may be achieved by suitable patient health behaviors which are mainly affected by the satisfaction of individuals and their partnership with the health-care providers.^[9]

Patient satisfaction plays an essential role in the assessment of health-care services including pharmaceutical services as well as it is considered an indicator of the effectiveness of their care and clinical outcomes.^[10,11] The main factors which may influence patients' satisfaction include the health-care provider-patient relationship and level of patient education.^[12] It was found that a lower patient education level is considered a barrier to patient satisfaction.^[13] Moreover, time spent with the health-care provider, the extent of cooperation of health-care staff, easy accessibility to health-care services, treatment regimen including lower doses, and minimal adverse effects play an essential role in patient satisfaction.^[14,15] A high level of patient satisfaction was found to be achieved by health-care providers through good communication skills and the ability to provide adequate answers to patients' inquiries.^[16]

A study conducted by Kang *et al.* which aimed to assess the degree of satisfaction and needs of pharmaceutical services involving 220 patients with chronic diseases found that both the satisfaction and needs of optimal pharmacy services were found to be high.^[17] Another study conducted by Yang *et al.* aimed to assess the satisfaction of 252 patients with medication counseling given by community pharmacists. This study showed that the level of patient satisfaction was low regarding medication counseling given by community pharmacists.^[18] Furthermore, a study conducted by Surur *et al.* aimed to assess the level of satisfaction of 400 clients with outpatient pharmacy services of Gondar University Referral Hospital in Ethiopia, and the mean satisfaction level of clients of outpatient pharmacy was found to be low.^[19] Moreover, Soeiro *et al.* study showed that the overall satisfaction level with pharmaceutical services was found to be high at Brazilian primary health care.^[20] Additionally, another study by Al-Arifi in Saudi Arabia aimed to provide views and satisfaction of the population with pharmacist performance in a community pharmacy setting and showed that the patients had a good satisfaction level with community pharmacists.^[21]

Patient satisfaction facilitates good communication between pharmacists and patients which ultimately enhances patient safety. No study, according to our knowledge, has been conducted to assess patient

satisfaction with pharmaceutical services in Makkah city in Saudi Arabia. Consequently, this study aimed to assess patient satisfaction with the pharmaceutical services at the Ministry of Health (MOH) hospitals in Makkah.

METHODS

A cross-sectional study was conducted in MOH hospitals of Makkah from August 2018 to September 2018. There are six MOH hospitals in Makkah. The study was conducted only in five hospitals; the sixth hospital was excluded because of crowding and its difficult-to-reach location.

All patients, 18-years-old or above, who came to the outpatient pharmacy in those hospitals with a prescription to be filled during the study period were included in the study. The patient's accompanying family or friends were not included. Moreover, the patients who came to the outpatient pharmacy without a prescription and those with prescriptions who did not complete the questionnaire fully were also excluded.

The level of patient satisfaction was assessed using a previously published, validated, and reliable questionnaire.^[22] It was translated from English into the Arabic language, and the translation was verified by the back-and-forth method by two bilingual authors (AS and GA) who had academic background and experience in providing pharmaceutical services. We also compressed the 5-point scale used in the original questionnaire to a 3-point scale for the ease of completion by patients where 1 denoted "low satisfaction," 2 denoted "moderate satisfaction," and 3 denoted "high satisfaction." Our questionnaire consisted of two sections: the first section focused on obtaining sociodemographic characteristics of respondents while the second section mainly focused on the level of satisfaction. The second section contained 21 questions to assess the level of satisfaction. We deleted the question (question number 8 in the original questionnaire) regarding the cost of medication as all MOH hospitals in Saudi Arabia dispense all medications free of charge to the patients.

The translated questionnaire was reviewed and further revised by two independent academic staff members at Umm Al-Qura University in Makkah for clarity and face validity. Further, the final questionnaire was piloted with two patients and no amendments were required. All authors were trained on recruiting the potential participants, obtaining verbal consent from them, and collecting the data using the final questionnaire within 5–10 min.

The authors collected the data from participants

by interviewing them using the paper questionnaire (structured interview). The data were further transferred online using Google docs by the authors.

On approaching, the participants were informed that their responses would remain completely anonymous, and their identity would never be disclosed under any circumstances. Moreover, no personal and identifiable data was collected from the participants.

The study was approved by the “Local Committee for the Ethics of Research in Health” of Makkah (approval number: H-02-K-076-1809-048). The committee provided us with permission to access all outpatient pharmacies in MOH hospitals. Each participant was provided with a complete explanation of the study and was asked for verbal consent to be involved in the study before data collection by the authors.

The data (patient’s responses) were downloaded from Google docs as a Microsoft Excel file and further transferred to the Statistical Package for the Social Sciences (SPSS) (version 16) (SPSS Inc., Chicago, IL, USA) for descriptive and inferential analysis. The second section of the questionnaire, which was the Arabic translation of the original questionnaire, was also tested for reliability by using Cronbach’s alpha (α).

RESULTS

Our questionnaire was found to be highly reliable ($\alpha = 0.87$). This was better than the reliability of the original questionnaire ($\alpha = 0.7$).^[22]

A total of 400 potential participants were approached on a convenience sampling basis to complete the questionnaire. Responses of 295 participants were included in the analysis with a response rate of approximately 74%. The rest of the 105 could not be included because they either verbally refuse to participate in the study or left the outpatient pharmacy without completing the questionnaire. The sociodemographic characteristics of the respondents are presented in Table 1. Approximately half of the participants were males (49.5%). The majority of the respondents were from the 31–40-year-old age group (33.9%), followed by those <31 years old (30.5%). Most of the respondents were Saudis (92.5%) whereas non-Saudis were only 7.5%. More than half were married (63.7%), others were either single (27.5%), divorced (6.1%), or widowed (2.7%). Regarding educational status, 36.3% of participants had completed high school which constituted the highest proportion of the respondents, followed by the participants with a bachelor’s degree (36.9%). With regard to occupational status, the majority of them were

Table 1: Sociodemographic characteristics of respondents

Characteristic	Frequency (%)
Gender	
Male	146 (49.5)
Female	149 (50.5)
Age (years)	
<31	90 (30.5)
31-40	100 (33.9)
41-50	65 (22.0)
>50	40 (13.6)
Nationality	
Saudi	273 (92.5)
Non-Saudi	22 (7.5)
Marital status	
Married	188 (63.7)
Single	81 (27.5)
Divorced	18 (6.1)
Widowed	8 (2.7)
Educational status	
High school	116 (39.3)
Elementary school	11 (3.7)
Diploma	22 (7.5)
Bachelor’s degree	109 (36.9)
Master’s degree	23 (7.8)
PhD degree	8 (2.7)
Illiterate	6 (2.0)
Occupation	
Government sector	84 (28.5)
Private sector	57 (19.3)
Student	72 (24.4)
Unemployed	82 (27.8)
Patronage	
First time dispensing	42 (14.2)
Repeated prescription	253 (85.8)

those who worked in the government sector (28.5%), followed by those who were unemployed (27.8%). The majority of the respondents came to the outpatient pharmacy for repeat prescriptions (85.8%).

Table 2 illustrates the patient satisfaction level with pharmaceutical services. The overall mean score of satisfaction with pharmaceutical services was 2.50 out of a maximum score of 3. Participants were found to be most satisfied with the items, “The extent of cleanliness in the waiting area for the provision of pharmaceutical services” (mean = 2.80) and “The care the pharmacy professional takes while supplying your medications” (mean = 2.75). They were found to be least satisfied with the items, “How well the pharmacist explains possible side effects” (mean = 2.15) and “The information the pharmacist gives you about the proper storage of your medication” (mean = 2.00). We observed that the patients who visited the outpatient

Table 2: Satisfaction scores of respondents with the pharmaceutical services

Questionnaire item	Low (%)	Moderate (%)	High (%)	Mean (SD)
The pharmacy professional's interest in your health	12 (4.1)	86 (29.2)	197 (66.8)	2.63 (0.56)
The professionalism of all the pharmacy staff	10 (3.4)	90 (30.5)	195 (66.1)	2.63 (0.55)
The courtesy and respect shown to you by the pharmacy staff	8 (2.7)	64 (21.7)	223 (75.6)	2.73 (0.50)
The privacy of your conversations with the pharmacist	32 (10.8)	101 (34.2)	162 (54.9)	2.44 (0.68)
How well the pharmacist explains possible side effects	73 (24.7)	104 (35.3)	118 (40.0)	2.15 (0.79)
The promptness of prescription medication service	14 (4.7)	104 (35.3)	177 (60.0)	2.55 (0.58)
The care the pharmacy professional takes while supplying your medications	8 (2.7)	58 (19.7)	229 (77.6)	2.75 (0.49)
The fairness of cost of medications in the pharmacy	17 (5.8)	100 (33.9)	178 (60.3)	2.55 (0.60)
The amount of time the pharmacy professional spends with you	12 (4.1)	117 (39.7)	166 (56.3)	2.52 (0.57)
The clarity of the pharmacy professional's instructions about how to take your medication	18 (6.1)	59 (20.0)	218 (73.9)	2.68 (0.58)
The information the pharmacist gives you about the proper storage of your medication	113 (38.3)	69 (23.4)	113 (38.3)	2.00 (0.87)
How well the pharmacy professional answers your questions	19 (6.4)	97 (32.9)	179 (60.7)	2.54 (0.61)
The information the pharmacy professional gives you about the results you can expect from your medication therapy	75 (25.4)	99 (33.6)	121 (41.0)	2.16 (0.80)
The way your pharmacist works together with your doctor to make sure your medications are the best for you	53 (18.0)	91 (30.8)	151 (51.2)	2.33 (0.76)
The amount of time you spend waiting for your prescription to be filled	25 (8.5)	140 (47.5)	130 (44.1)	2.36 (0.63)
The availability of medications that are prescribed to you in the pharmacy	28 (9.5)	148 (50.2)	119 (40.3)	2.31 (0.63)
The clarity of the label on the medication supplied to you	12 (4.1)	76 (25.8)	207 (70.2)	2.66 (0.55)
Your feelings of the quality of medication dispensed to you	10 (3.4)	102 (34.6)	183 (62.0)	2.59 (0.55)
The overall cleanliness and comfort of the waiting area	7 (2.4)	45 (15.3)	243 (82.4)	2.80 (0.45)
The location of the pharmacy relative to other service areas	12 (4.1)	73 (24.7)	210 (71.2)	2.67 (0.55)
Your pharmacy services overall	10 (3.4)	82 (27.8)	203 (68.8)	2.65 (0.54)

SD: Standard deviation

pharmacy for the first time had a significantly higher overall mean satisfaction level (mean = 2.56) as compared to those who came for the repeat prescription (mean = 2.49) ($P = 0.005$) [Table 3]. Similarly, participants who reported themselves to be illiterate were found to have a significantly higher overall mean satisfaction level (mean = 2.74) as compared to those with a diploma (mean = 2.33) ($P = 0.016$) [Table 4].

DISCUSSION

To our knowledge, our study is the first to evaluate patient satisfaction with pharmaceutical services at MOH hospitals in Makkah. The mean satisfaction level in our study was found to be high as it is 2.50 out of 3 on our modified Likert scale. This finding is similar to the findings of a study conducted by Ahmed Alomi *et al.* in Riyadh which assessed the satisfaction level with pharmaceutical care in MOH primary care centers.^[23] This could be due to the development process that the whole kingdom, especially MOH services, is currently undergoing. On the other hand, the mean satisfaction level in our study was higher compared to that reported in two other studies: the first one was conducted by Alturki and Khan in Alahsah in Saudi Arabia which reported that the level of satisfaction among Saudi adults was low,^[24] and the second study was conducted by Ayalew *et al.* in Gondar in Ethiopia

Table 3: Comparison of satisfaction level by sociodemographic characteristics (independent samples *t*-test)

Variable	Mean (SD)	<i>P</i>
Gender		
Male	2.51 (0.32)	0.854
Female	2.50 (0.35)	
Nationality		
Saudi	2.49 (0.34)	0.062
Non-Saudi	2.64 (0.25)	
Patronage		
First time dispensing	2.56 (0.24)	0.005*
Repeat prescription	2.49 (0.35)	

*Statistically significant. SD: Standard deviation

which also reported the same.^[25] This could be attributed to relatively older pharmaceutical services provided in these studies as well as differences in the culture and the demographic characteristics of the sample.^[26] It is to be noted that some demographic characteristics were not included in our study, for example, religion and payment status which were included in Surur *et al.* study.^[19]

The lowest mean score of satisfaction was reported for the item, "The information the pharmacist gives you about the proper storage of your medication" followed by the item, "How well the pharmacist explains possible side effects."

Table 4: Comparison of satisfaction level by sociodemographic characteristics (one-way ANOVA test)

Variable	Mean (SD)	P
Age (years)		
<31	2.54 (0.28)	0.353
31-40	2.46 (0.36)	
41-50	2.53 (0.35)	
>50	2.49 (0.34)	
Marital status		
Married	2.52 (0.35)	0.257
Single	2.51 (0.32)	
Divorced	2.37 (0.25)	
Widowed	2.27 (0.33)	
Educational status		
High school	2.57 (0.28)	0.016*
Elementary school	2.61 (0.22)	
Diploma	2.33 (0.32)	
Bachelor's degree	2.42 (0.38)	
Master's degree	2.51 (0.31)	
PhD degree	2.69 (0.25)	
Illiterate	2.74 (0.30)	
Occupational status		
Government sector	2.47 (0.37)	0.470
Private sector	2.48 (0.33)	
Student	2.50 (0.31)	
Unemployed	2.55 (0.33)	

*Statistically significant. SD: Standard deviation

These are considered to be two of the most essential components of patient counseling. Successful patient counseling should aim to improve patients' medication adherence and treatment satisfaction resulting in better clinical outcomes as reported by the study conducted by Sanii *et al.* in Tehran.^[27] Further studies can explore to what extent patients' awareness of side effects can impact adherence and treatment satisfaction outcomes.

In our study, it was revealed that the patients who frequently visited the outpatient pharmacy for refill had a statistically significantly lower mean satisfaction level compared to the patients who visited the pharmacy for the first time. This is different from the finding of the study conducted by Surur *et al.* in Ethiopia that showed no significant difference between the patronage.^[19] Similarly, our results showed a statistically significant difference in the satisfaction level of participants with different educational statuses such as illiterate patients had the highest level of satisfaction compared to the other categories. This is identical to the results from Surur *et al.* study,^[19] however, different from the results reported by Alturki and Khan study which showed no significant difference in satisfaction level with regard to the educational status of the participants.^[24] The highest level of satisfaction among illiterate patients could be attributed to the low level of education and the lack of

understanding of the services that they should expect from the pharmacy. Hence, it is crucial to increase the awareness and understanding of this group of patients in order to increase their satisfaction with the services they receive from health-care providers and possibly medication adherence. This recommendation is in line with the findings of Clayton *et al.* study which reported increased medication adherence and understanding of the services by illiterate patients which was achieved by using a new style of prescription-based pictures rather than words.^[28]

Moreover, Surur *et al.* found that there was a significant difference in the satisfaction level between different categories of the two additional demographic characteristics: age and occupational status.^[19] Likewise, Alturki and Khan found that there was a significant difference between different categories of the three demographic characteristics age, gender, and nationality.^[24] This could be attributed to the larger sample size in these studies compared to ours. There was no significant difference found in the satisfaction level between different categories for the rest of the demographic characteristics in our study.

One of the limitations of this study was the time constraint; the data had to be collected in 1 month which limited the number of participants that could be included in the study. Moreover, we collected the data regarding the educational status but not health literacy of the participants which might have impacted our findings. Furthermore, once the patients received their refilled medications, they left the pharmacy with no interest in completing the questionnaire.

Our study showed that the mean satisfaction level of patients with the pharmaceutical services, who visited outpatient pharmacies in MOH hospitals in Makkah, was high. Educational status and patronage were found to be the main factors that influence the satisfaction level. In order to improve patients' satisfaction with the pharmaceutical services, pharmacists in the outpatient setting need to educate patients more about: medication's side effects and its appropriate storage. We believe that improving the pharmaceutical services in such a way will increase the satisfaction level of the users of these services and will ultimately improve the treatment and/or counseling outcomes for the patients. However, further studies with larger sample size, including private health facilities, will be required in order to depict a better picture of the situation and the impact of the improved services. Moreover, qualitative studies will be helpful in exploring the in-depth reasoning underlying the low-scoring statements.

AUTHORS' CONTRIBUTION

A. Salamatullah conceived and supervised the project. A. Alharbi, A. Ballmer, R. Jalal, D. Alshareef, and G. Alhajjaji designed the data collection form and collected and analyzed the data. M. Ali supervised the project and helped in data analysis. M. Elrkkal supervised the data analysis and reporting. All authors contributed to writing the manuscript and have approved the final version of the manuscript.

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Conflicts of interest

There are no conflicts of interest.

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