



## Research Article

# Patients' perspectives on the quality of pharmaceutical services in Saudi hospitals

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## ABSTRACT

Patient satisfaction is considered as a measure of the quality of care in health system. Investigation of satisfaction with pharmaceutical services will reveal gaps in practice and barriers of implementation. The study aims to elaborate the effect of pharmacy location, pharmacists' interpersonal manner, technical competency, and waiting time, on satisfaction. A convenient sample of 637 patients was recruited from patients in two hospitals (King Faisal and King Abdul-Aziz). The duration of the study was six months period. The study was cross-sectional, and a questionnaire was distributed after patients received their prescribed medicines. Most of the patients were of Saudi nationality (91.2%). The majority of the respondents were males (77.6%) and they were from younger generations of 18-35 years (72.4%). Most of the respondents were either students (40.5 %) or governmental employees (25.1%). The level of education was university and above level (57.8%). The lowest rates of satisfaction were given for pharmacist concerns with patient health condition and pharmacist explanation of the expected side effects (33.9% and 27%), respectively. The highest rates of satisfaction were given for courtesy and respect shown by the pharmacy staff (56.8%), convenience of pharmacy location (52.5%), and pharmacist competency in explaining drug use instructions (50.8%). The results showed a lack in pharmacists' interaction with patients, and efforts should be directed towards involvement in a more patient-oriented practice in Saudi hospital pharmacies.

**Key words:** Patient satisfaction; Pharmaceutical services; Healthcare; Saudi Arabia.

## INTRODUCTION

Patient satisfaction with health services emerged to be as an important indicator of quality of services provided. Patient satisfaction may be considered to be one of the desired outcomes of care, even an element in health status itself, and satisfaction information is important in assessing and designing management of health care systems.<sup>1</sup> Patient satisfaction with pharmaceutical services is an important mean for improving the service in both community and hospital settings. Many studies investigated patient satisfaction with pharmaceutical services.<sup>2-6</sup> Satisfaction is focused in either: general services, interventions or cognitive services. Many instruments were used to measure patient satisfaction with pharmaceutical services, which includes: Pharmacy Encounter Survey (PES),<sup>7</sup> Larson and Mackeigan instrument, which is modified for ambulatory pharmacy clinic setting<sup>8</sup>, and Service quality

scale (SERVQUAL).<sup>9</sup> In study from Spain,<sup>10</sup> evaluating patient satisfaction in outpatient pharmacy. The results showed high patient satisfaction for services provided. Pharmacist's skills scored the highest rate. Least points in the patient satisfaction were given mainly to the dispensing area (waiting room and access to the outpatient pharmacy) and the dispensing process (waiting time and consultation hours). Assessment of patient satisfaction with pharmaceutical services in a Nigerian teaching hospital reported that nearly half of patients (46%) rated the amount of time spent by pharmacists with them as poor. Only 49% felt satisfied with pharmaceutical services. The study used survey instrument directed to measure satisfaction with pharmaceutical care services.<sup>11</sup> The findings of study in Qatar<sup>12</sup> showed that patient satisfaction with pharmaceutical services is positively influenced by service promptness, pharmacist attitude, medication counseling, pharmacy location and waiting area. Several demographic characteristics have statistically

different effect on satisfaction notably: gender; marital status; health status; age; educational level; and ethnicity .

In Saudi Arabia few studies investigated patient satisfaction with pharmaceutical services in hospital setting. A study at a teaching hospital in Riyadh city in Saudi Arabia,<sup>13</sup> exploring the relationship between patient's satisfaction and the level of pharmaceutical care services received; showed that time taken to receive prescriptions and language barrier between pharmacist and patients are the most two factors associated with dissatisfaction. Alturki and Khan<sup>14</sup> investigated the level of satisfaction with the health services provided by the pharmacist at

ENT hospital. The questionnaire used measure the patient interaction with pharmacist and their satisfaction with pharmacy services provided to them. The results showed a good satisfaction level with significant differences in some of the demographics including: age, gender and race.

The aim of the current study was to investigate patients' satisfaction in an outpatient hospital pharmacy setting. The specific objectives were to evaluate four dimensions of satisfaction: convenience of pharmacy location; pharmacist interpersonal manner; technical quality; and time for filling the prescriptions

## MATERIAL AND METHODS

The study was carried in two tertiary health care hospitals: King Faisal and King Abdu Aziz hospitals, at Al Taif city. The two were urban hospitals of 250 and 500 beds respectively.<sup>15</sup> The study duration was 6-months, from 1<sup>st</sup> September 2014 to 1<sup>st</sup> march 2015. A total sample of 637 was chosen conveniently from patients after receiving their prescribed medicines from pharmacy department, consent of each patient was obtained before filling the questionnaire. The study was a cross-sectional study done at one time. The research instrument was questionnaire adapted from literature.<sup>7,16</sup> The questionnaire was translated into Arabic language, and pre-piloted in twenty patients. Slight changes were made after piloting. Reliability or internal consistency of the questionnaire items was assessed by measuring Cronbach's alpha and found to be within acceptable range (0.912). Four trained intern PharmD students distribute the questionnaires. Patients were first given idea about the purpose of the survey and that the data will be treated anonymously. Educated patients self –completed the questionnaire and illiterate patients were helped by the students, to understand all items and choose their responses accordingly. The questionnaire was explained in English or simple language for other non-Arabic speaking nationalities.

The questionnaire consisted of two sections. The first section was covering socio-demographic profile and general information about patients. These were: nationality, gender, occupation, level of education, level of health condition (good, mild, and severe) and stage of the health condition (acute or chronic).

The second section consisted of 14 items. The questionnaire examines four dimensions of patient satisfaction: convenience

of pharmacy location, pharmacist interpersonal manner, Technical quality, and Time for filling prescriptions. A five point- Likert scale was used to measure satisfaction: excellent=5, very good=4, good=3, fair=2, and poor=1.

The research was approved by the ethical and research committee in the Faculty of Pharmacy, University of Al Taif.

## Statistical Analysis

Questionnaire items were coded and data were first entered in Microsoft Excel and checked prior to entering in the SPSS Package (statistical package of social sciences) version 20. The Likert type scale for questionnaire items consisted of 5-points, from poor to excellent (1-5 marks). The midpoint 3 is considered the lowest level of satisfaction with the pharmaceutical services. The lowest possible score for the 14 questionnaire items was 14 and the highest was 70. The midpoint was assumed to be 42, and this was considered the lowest level for acceptable total score of satisfaction. Descriptive statistics was used (means, frequency, percentages and standard deviation). Association between various socio-demographic variables and the questionnaire items were explored using Student t-test and One-Way Anova. P-values less than 0.05 were considered statistically significant.

## RESULT

A total of 637 patients' responses to the questionnaire were obtained from a convenient sample, chosen from patients in two hospitals (King Faisal and King Abdul-Aziz). The socio-demographic profile is shown in Table 1. Most of the patients were of Saudi nationality (91.2%). The majority of the respondents were males (77.6%) and they were from younger generations of 18-35 years (72.4%). Most of the respondents were either students (40.5%) or governmental employees (25.1%). The level of education was mostly university and above level (57.8%), with considerable responses from high secondary school (27.6%). The majority of the patients described their health condition at the time of the survey as "Good" (81%) and they were visiting the hospital for acute conditions (76.6%). Table 2 shows the percentages of responses to the satisfaction items.

The lowest rates of satisfaction (poor response) were given for pharmacist concerns with patient health condition and pharmacist explanation of the expected side effects of the medications (33.9% and 27%), respectively. The highest rates of satisfaction (summation of very good/excellent) were given for courtesy and respect shown by the pharmacy staff (56.8), convenience of pharmacy location (52.5%), and pharmacist competency in explaining drug use instructions (50.8%). Table 3 illustrates the mean scores to the satisfaction items. Overall, the respondents rated their experience with pharmaceutical services as mean score of 45. This value is slightly above the midpoint of 42, which is assumed as acceptable level of satisfaction. The mean scores results were coinciding with the percentage results showing the highest scores for courtesy of pharmacy staff (3.65), convenience of pharmacy location (3.51)

and pharmacists role in giving clear instructions for drug use (3.46). The subtotal mean for all the satisfaction items is  $3.23 \pm 1.29$ , which indicates an acceptable level of satisfaction (above midpoint 3).

**Table 1: "Patient's Socio-demographic Profile"**

Item	Number	Percentage
<b>Nationality</b>		
Saudi	581	91.2
Egyptian	13	2.0
Yemenis	19	3.0
Sudanese	4	0.6
Other	20	3.1
<b>Gender</b>		
Male	494	77.6
Female	143	22.4
<b>Age in year</b>		
18-35	461	72.4
36-50	120	18.8
Above 50	56	8.8
<b>Occupation</b>		
Governmental employee	160	25.1
Private business	64	10.0
Merchant	22	3.5
Teacher	75	11.8
Student	258	40.5
Not working	58	9.1
<b>Level of education</b>		
Illiterate	41	6.4
Elementary	15	2.4
Intermediate	37	5.8
Secondary	176	27.6
University and above	368	57.8
<b>Health condition</b>		
Good	516	81.0
Mild	102	16.0
Severe	19	3.0
<b>Stage of health condition</b>		
Chronic	149	23.4
Acute	488	76.6

**Table No 2: " Percentages of responses to the satisfaction items"**

Item	Poor	Fair	Good	Very good	Excellent
Convenience of pharmacy location	4.9	17.3	25.4	27	25.4
Distribution of dispensing windows	13.7	19.0	26.8	22.1	18.4
Waiting time before seeing the pharmacist	14	19.9	26.5	20.6	19.0
Convenience and suitability of waiting area	12.2	19.2	24.0	21.7	22.9
Enough time taken with the pharmacist	9.4	18.1	26.1	24.0	22.4
Status of drug availability	9.7	16.3	23.7	23.4	24.8
How well the pharmacists explains	8.3	15.5	25.3	23.2	27.6

Item	Poor	Fair	Good	Very good	Excellent
instructions					
How well the pharmacists explains what your medication do	9.4	14.4	27.5	23.9	24.8
How well the pharmacists label your medication in easy language	15.9	14.1	20.6	22.1	27.3
The pharmacist's interest in your health	33.9	17.9	18.1	15.1	15.1
The courtesy and respect shown you by the pharmacy staff	4.2	14.9	24.0	24.8	32.0
How well the pharmacist explains possible side effects	27.0	20.6	21.5	15.9	15.1
The privacy of your conversation with the pharmacist	17.0	21.2	25.3	18.1	18.5
Your pharmacy service overall	8.2	14.0	32.0	25.1	20.7

**Table No 3: "Mean scores of responses to the satisfaction items"**

Item	Mean score*	SD
Convenience of pharmacy location	3.51	1.18
Distribution of dispensing windows	3.13	1.30
Waiting time before seeing the pharmacist	3.11	1.31
Convenience and suitability of waiting area	3.29	1.33
Enough time taken with the pharmacist	3.32	1.26
Status of drug availability	3.39	1.28
How well the pharmacists explains instructions	3.46	1.27
How well the pharmacists explains what your medication do	3.40	1.26
How well the pharmacists label your medication in easy language	3.31	1.41
The pharmacist's interest in your health	2.60	1.46
The courtesy and respect shown you by the pharmacy staff	3.65	1.19
How well the pharmacist explains possible side effects	2.71	1.40
The privacy of your conversation with the pharmacist	3.00	1.35
Your pharmacy service overall	3.36	1.19
Subtotal mean score	3.23	1.29
Total score	45.24	18.19

\*Mean score is the mean score of 5 point scale for each item: Excellent =5; Very good =4; Good=3; Fair =2; Poor =1 (above 3 considered as acceptable level). S.D=standard deviation.

The general trend of the results indicated a significant difference between socio-demographic variables and the questionnaire items. Gender showed statistical difference (P 0.001), as males

(mean46) were more satisfied than females (mean42). There is statistical difference regarding age (P0.015). Respondents of age range 18-35 years were more satisfied than those of 36-50 years. Level of education differences (P0.002) is illustrated in the fact that those of elementary level of education were more satisfied than illiterate, secondary and university and above levels of education. There are no statistical differences regarding nationality and occupation.

## DISCUSSION

This study is the first study of its type in the western area of Saudi Arabia. The general results of the current study showed an acceptable level of satisfaction with pharmaceutical services. This is similar to the results of other studies from Saudi Arabia.<sup>6, 14</sup>

The most favorable acceptable services were a combination of the dimensions of convenience of pharmacy location, technical quality: e.g. well explained instructions of drug use, and interpersonal manner: e.g. courtesy. Courtesy and good relations with patients was a pre-requisite for building a rapport relationship with patients, and although too early to conceptualize, since pharmaceutical care was not yet clearly implemented in most of Saudi hospitals, it is a point which worth further strengthening and a trust which should not be lost, to be utilized when the trend of pharmaceutical care starts its real steps. Waiting time for prescriptions to be dispensed was found to be within acceptable levels (mean score 3.11), which indicates the promptness of the service and the availability of enough staff in the pharmacy. This in agreement with the previous mentioned study from Saudi Arabia<sup>14</sup> and in contrast to a study from Nigeria,<sup>11</sup> which resulted in below the midpoint point level of satisfaction, where nearly half of the patients rated the amount of time pharmacist offered to stay with them as poor, and one –third rated promptness of prescription service as poor. Although most respondents were satisfied with the technical role of the pharmacist, an input should be directed towards more improvement in pharmaceutical services, to attain a considerably higher level of patient' satisfaction. The lowest rates of satisfaction were given for pharmacist concerns with patient health condition and pharmacist explanation of expected side effects of the medications. This result is similar to a study from Ethiopia, which showed low scores for information given to patients about storage of medications, and explanation of possible side effects.<sup>17</sup> Clinical pharmacist should be involved in pharmaceutical care and medication review programs within pharmacy department, and should be given chances to have enough time with patients. As primary step, consultation should be done for high risk medications and chronic disease patients who use more than four medications. This result revealed the barriers for the pharmacist role in counseling patients. The construction of the pharmacy section did not provide a suitable consultation area, and even windows used for dispensing medications are only suitable for quick interaction and therefore time and facility design were considered as important barriers for the shift of the pharmacist to patient- oriented practice. The pharmacist has no time to ask patients about their health

condition and interact for that, or give information about expected drug problems. Saudi Arabia had witnessed a shift to Pharm D pharmacy education in most of pharmacy colleges,<sup>18</sup> which means many pharmacy students will be graduated as clinical pharmacy practitioners. These qualified graduates should be utilized in implementing pharmaceutical care and medication consultation in pharmacy section. These staff can be completely free from dispensing activities or some of them will undergo dispensing activities and other should be completely free for extensive drug consultations. With minimum resources this can be organized within pharmacy department whenever a clinical pharmacist is available.

The study showed that some socio-demographic variables have significant different effect on satisfaction. Males were found to be more satisfied with overall pharmaceutical services than females. This is in agreement with other health services studies.<sup>19,20</sup> This difference, in some way, reveals a lack in satisfying females' needs for medication information in pharmacy sections, and more time should be given to females 'queries. Those of young age (18-35), were more satisfied than other ranges. Those of elementary level of education were more satisfied than other levels. This was in agreement with previous study which showed that less educated patients were more satisfied compared with those with higher educational levels.<sup>12</sup> This could be explained by the fact that in this category the maximum satisfaction level is less than those of higher education who usually expects very high standard of services.

**Limitations of the study:** The study has some limitations. The results cannot be generalized for all Saudi Hospitals since it was done in only two hospitals in the western area. The use of convenient sample is another limitation. Bias cannot be completely excluded for the self –completed questionnaire, although all precautions, to minimize this, were done.

## CONCLUSION

Pharmaceutical services were found to be within an acceptable level of satisfaction. Patients were dissatisfied with less counseling about their health condition and the need for information about medication side effects. Pharmacy staff (particularly clinical pharmacists) should be more involved in patient counseling.

Socio-demographic variables of gender, age, and level of education were found to affect degree of satisfaction and these should be further investigated.

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