Patient Satisfaction with Pharmaceutical Services in Jordan: A Cross-Sectional Study

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ABSTRACT

Objectives: Pharmacists’ responsibilities have become more patient-oriented so exploring patients’ satisfaction would lead to identifying and improving the quality of pharmaceutical services. The aim of the present study was to assess patients’ satisfaction with pharmaceutical services in Jordan.

Methods: A cross-sectional study was conducted between December 2018 and April 2019. Patients’ satisfaction was assessed using three subscales; managing therapy, interpersonal relationship, and general satisfaction, in addition, to the socio-demographic questionnaire. Participants were asked about the degree of their satisfaction with the pharmaceutical services in all subscales’ questions using a 5-point Likert scale.

Results: A total of 1,333 patients participated in the study. The mean patient age was 32.4 years (SD = 11.6) 52.5% (n = 700) were female. Patients had a good satisfaction score for overall pharmaceutical services with a mean score of 51.4 ± 11.4 out of 70. Among the subscales, the interpersonal relationship subscale showed a satisfaction score of 75.7% while the other two subscales (general satisfaction and managing therapy) showed slightly lower scores with 75.0% and 69.6%, respectively. Having good health and governmental or military health insurance, visiting the pharmacy more frequently, and dispensing medications from governmental hospitals, primary healthcare centers, or military hospital pharmacies were important predictors of better patient satisfaction with pharmaceutical services (p < 0.05).

Conclusion: This study presents some nationwide patient-reported outcomes about patient satisfaction in general pharmacy settings in Jordan. Focusing on patients’ satisfaction while providing pharmaceutical services is needed.

Keywords: Patient; pharmacist; pharmaceutical services; questionnaire; satisfaction.

INTRODUCTION

The role of pharmacists was more medication-centered in the past. They focused more on the dispensing and compounding of different drugs¹. Fortunately, nowadays, this situation has changed in an optimistic and dramatic way, and pharmacists’ responsibilities have become more patient-oriented². Pharmacists focus more on the interaction between them and their patients. Through this interaction and because of their responsibility to provide appropriate advice to consumers, pharmacists contribute positively by enhancing the quality of life, decreasing morbidity, and preventing and controlling so many diseases³.

In this context, numerous new pharmacy terms have emerged such as clinical pharmacy, pharmaceutical care, and pharmacy practice. Previous studies defined “pharmaceutical care” as “The directly responsible provision of medication-related care for the purpose of achieving definite outcomes that improve patient's quality of life⁴. A great part of pharmaceutical care is achieved during a patient’s visit to the pharmacy. Proceeding from the fact that pharmacists are considered as an accessible
resource for health and medication information due to their quick approachability and frequent contact with the public, many studies have emphasized on the importance behind professional communication between pharmacists and patients which may lead to optimum health care benefits.

Earliest studies clarified that pharmacists may engage in preventing, decreasing, or reporting medication errors, improve the patient’s knowledge about the optimum use of medications, and increase patient satisfaction with various pharmaceutical services. One way to assess the quality of pharmaceutical services is to assess patient satisfaction, which reveals whether the services are meeting the public’s expectations and values or not. Patient satisfaction is the degree of positive feelings patients experience with a service. It has become an essential component of the quality of healthcare services.

Exploring patient satisfaction would lead to the identification of the healthcare sectors, including pharmacies, which need improvement. For instance, if patient is satisfied, positive effects of the healthcare organization in terms of improving patient retention rates, securing a positive local reputation, and preventing medical malpractice claims will be evident and the opposite is also true. In addition, satisfaction with pharmaceutical services motivates patients to take their medications appropriately. Therefore, it is very important to conduct a study on this topic which will be helpful for pharmacy managers to understand patient satisfaction and to plan strategies to improve and advance the quality of healthcare delivery. To the best of our knowledge, there are limited studies that have explored patient satisfaction with pharmaceutical services in Jordan. The most recent study investigated patient satisfaction with the medication management review service provided by pharmacists. However, the study only included two community pharmacies with a small sample size which may limit the generalizability of the study findings. The main aim of the present study was to assess patient satisfaction with pharmaceutical services provided by pharmacies in different healthcare sectors (i.e. community pharmacies, hospital pharmacies, healthcare centers pharmacies) in Jordan.

**MATERIAL AND METHODS**

A cross-sectional questionnaire study was conducted in Jordan from December 2018 to April 2019. The ethical approval to conduct the present study was gained from Isra University (PH/1/19). The survey questionnaire tool was adapted and developed based on a previous study conducted in Spain. The original questionnaire was adapted to focus on the elements of pharmaceutical services that are applicable in Jordan. The original questionnaire tool was translated into Arabic language using a forward-backward translation technique and pretested in a small sample of the general public who met the inclusion criteria as mentioned below.

The study questionnaire tool contained four main sections which were sociodemographic information in addition to three 5-point Likert subscales: managing therapy (five questions), interpersonal relationship (seven questions), and general satisfaction (two questions). The questions considered the multidimensional structure of patient satisfaction. A patient’s score (out of 100%) was estimated by dividing the mean score for each subscale by the maximum obtainable score for the same scale and then multiplied by 100.

Patients over 18 years of age that had visited one particular pharmacy at any region in Jordan more than once during the last three months were approached and anonymously asked to participate and complete the questionnaire using a convenience sampling technique. Completion and return of the questionnaire by the participant implied consent. Patients who participated in the study were asked about the degree of their satisfaction with the pharmaceutical services and the applicability to them of each item in the questionnaire tool using a 5-point Likert scale. Patients’ responses ranged from 1 to 5, where 1 means “poor” and 5 means “excellent.”

Data were analyzed using the SPSS software, version
22. The descriptive analysis was reported as mean (± SD) for quantitative variables. Categorical data were reported as percentages and frequencies. Patients’ scores were interpreted as a continuous scale. Significant predictors of satisfaction toward pharmaceutical services were determined using multiple linear regression analysis. A confidence interval of 95% (p < 0.05) was applied to represent the statistical significance of the results and the level of significance was assigned as 5%.

**RESULTS**

A total of 1,500 questionnaires were distributed of which 1,333 were filled out validly (response rate 88.9%). The time needed to fill out the questionnaire ranged from 5 to 7 minutes. The mean patient age was 32.4 (SD = 11.6) years of which 52.5% (n = 700) were females, and most of the respondents had a college or university degree (n = 957, 71.8%). Table 1 shows the detailed demographic data of the study participants.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age (mean ± SD)</strong></td>
<td>32.4 ±11.6</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>633 (47.5%)</td>
</tr>
<tr>
<td>Female</td>
<td>700 (52.5%)</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
</tr>
<tr>
<td>High school or less</td>
<td>253 (19.0%)</td>
</tr>
<tr>
<td>College or Bachelor degree</td>
<td>957 (71.8%)</td>
</tr>
<tr>
<td>Higher degree studies</td>
<td>123 (9.2%)</td>
</tr>
<tr>
<td><strong>Occupation</strong></td>
<td></td>
</tr>
<tr>
<td>Medical worker</td>
<td>495 (37.1%)</td>
</tr>
<tr>
<td>Non-medical worker</td>
<td>837 (62.8%)</td>
</tr>
<tr>
<td>Not working or retired</td>
<td>1 (0.1%)</td>
</tr>
<tr>
<td><strong>Income</strong></td>
<td></td>
</tr>
<tr>
<td>Below 500 JD</td>
<td>731 (54.8%)</td>
</tr>
<tr>
<td>500 to 1000 JD</td>
<td>460 (34.5%)</td>
</tr>
<tr>
<td>1001 to 1500 JD</td>
<td>101 (7.6%)</td>
</tr>
<tr>
<td>More than 1500 JD</td>
<td>41 (3.1%)</td>
</tr>
<tr>
<td><strong>Marital status</strong></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>625 (46.9%)</td>
</tr>
<tr>
<td>Married</td>
<td>641 (48.1%)</td>
</tr>
<tr>
<td>Divorced</td>
<td>32 (2.4%)</td>
</tr>
<tr>
<td>Widowed</td>
<td>35 (2.6%)</td>
</tr>
<tr>
<td><strong>Medical insurance</strong></td>
<td></td>
</tr>
<tr>
<td>No medical insurance</td>
<td>495 (37.1%)</td>
</tr>
<tr>
<td>Private medical insurance</td>
<td>356 (26.7%)</td>
</tr>
<tr>
<td>Governmental medical insurance</td>
<td>335 (25.1%)</td>
</tr>
</tbody>
</table>
The type of pharmacy, the number of visits, and the number of medications dispensed are summarized in Table 2. The majority of participants (61.3%) visited community pharmacies more than once during the last couple of months. The mean number of visits to the same pharmacy within the last month was close to 2 (1.92 ± 1.98), and the mean number of medicines dispensed in the last visit was around 3 (2.75 ± 1.61). About 85% of participants recommended the pharmacy they dealt with to their friends and family.

A total of 14 items that reflected patient satisfaction with three dimensions of pharmaceutical services were evaluated. Patients had good satisfaction scores regarding overall pharmaceutical services with a mean score of 51.4 ± 11.4 out of 70. Patients also had good satisfaction scores in the three subscales. The highest subscale was interpersonal relationship with a mean of 26.5 ± 5.5 out of 35 (75.7%), followed by general satisfaction with a mean of 7.5 ± 1.9 out of 10 (75%), and the lowest was managing therapy with a mean of 17.4 ± 4.8 out of 25 (69.6%), as seen in Table 3.
From the subscales, the most positively evaluated item was “The courtesy and respect shown to you by the pharmacy staff” (4.1 ± 0.9; 82.0%) and then “The professional appearance of the pharmacy” (4.0 ± 0.9; 80.0%), both from interpersonal relationship. The following items recorded the lowest scores: “The information the pharmacist gives you about the proper storage of your medication” (3.2 ± 1.3; 64.0%) and “The advice you get from the pharmacist about problems that might occur with your medication” (3.3 ± 1.3; 66.0%), both from managing therapy.

Having a good health status, having governmental or military health insurance, visiting the pharmacy more frequently, and dispensing medications from governmental hospitals, primary healthcare centers, or from military hospital pharmacies were important predictors of better patient satisfaction with pharmaceutical services (p < 0.05) according to the results (Table 4).

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Number of items</th>
<th>Maximum obtainable score</th>
<th>Mean (SD)</th>
<th>Patients score out of 100% §</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managing therapy</td>
<td>5</td>
<td>25</td>
<td>17.4 (4.8)</td>
<td>69.6%</td>
</tr>
<tr>
<td>Interpersonal relationship</td>
<td>7</td>
<td>35</td>
<td>26.5 (5.5)</td>
<td>75.7%</td>
</tr>
<tr>
<td>General satisfaction</td>
<td>2</td>
<td>10</td>
<td>7.5 (1.9)</td>
<td>75.0%</td>
</tr>
<tr>
<td>All scales</td>
<td>14</td>
<td>70</td>
<td>51.4 (11.4)</td>
<td>73.4%</td>
</tr>
</tbody>
</table>

§ Estimated by dividing the mean score by the maximum obtainable score for each sub-scale multiplied by 100.
Patient satisfaction is a crucial measure of how well pharmaceutical services are offered. To the best of our knowledge, the present study was unique to assess patient satisfaction with pharmaceutical services provided in different aspects in pharmacies in Jordan.

A thorough search in the literature showed that previously validated questionnaires that assessed satisfaction with pharmaceutical services were multidimensional and defined similar aspects, i.e., managing therapy, interpersonal relationship, and general satisfaction. In fact, managing therapy is a vital element of pharmaceutical services since it includes items on managing drug therapy and solving therapy problems. Moreover, interpersonal relationship is also an essential component of pharmaceutical services because effective communication improves the use of medications by patients and ensures optimal therapeutic outcomes.

The survey results generally showed a high patient satisfaction with pharmaceutical services provided in different pharmacies types, particularly in the term of interpersonal relationships. This finding is consistent with other published studies. The items that received high satisfaction scores were the courtesy and respect provided by the pharmacist and the professional appearance of the pharmacy. Hasan et al. (2013) showed that a pharmacist’s personality, competence, and ability to reach to a patient affect consumer satisfaction.

Managing therapy was rated with the lowest score compared to other subscales. This confirmed the findings of previous studies that found a low satisfaction score in this subscale specifically, where respondents scored managing therapy items lower than they did on the interpersonal relationship and general satisfaction. Our findings revealed that the respondents were dissatisfied with a few items from this dimension specifically in providing information about proper medication storage and side effect management. This dissatisfaction may be attributed to educational factors, such as lower knowledge of antibiotics, which could contribute to the irrational use of antibiotics. Similarly, Sharif et al. (2017) found in his study that only 25-30% of respondents agreed that the pharmacist explains all possible side effects and provides information on proper storage of medication. These findings are not surprising since counselling patients about their medications is not always applicable, in particular in military and governmental hospitals, because of the large numbers of visitors and dispensed medications.

This study identified that higher satisfaction scores were associated with a good self-reported health status by the patient, having governmental or military insurance, having larger number of visits to the pharmacy, and dispensing medications from governmental hospitals.
primary healthcare centers, or from military hospital pharmacies. A number of published studies reported an association between patient health status and patient satisfaction. Xiao and Barber’s study (2008) reported similar findings that higher scores were found for patient satisfaction in patients who rated their health status as excellent or good. Another study by Rahmqvist reported that patients with poor health status were more likely to be dissatisfied. Good satisfaction by the patients with governmental or military insurance who visited governmental centers or military hospitals could either mean that patient satisfaction received a lot of attention in these institutions or the patients were more concerned that their healthcare services would be affected if they mentioned dissatisfaction. Regarding patient insurance, a recent report by Riffkin showed that satisfaction with healthcare among Americans is highest among patients with the military as well as governmental health insurance and is lower among those with self-paid insurance. Americans with no medical insurance were the least satisfied of all patients. Similar results were found in the present study since patients with military insurance, who usually attend military hospitals, or those with governmental insurance who visit governmental hospitals and primary healthcare centers were more satisfied from pharmaceutical services than others.

The number of visits to the pharmacy was a positive predictor of patient satisfaction in the present study. Visiting the same pharmacy frequently and not going to another one could imply that the patients are feeling more comfortable and satisfied with the services offered to them in that specific pharmacy. A previous study in Palestine highlighted that around 38.8% to 49.1% of the patients reported that they visited the same pharmacy to dispense their medications or to receive the required pharmaceutical care. On the other hand, a previous study from Lebanon found that patient satisfaction was positively and significantly correlated with the patient’s reason for visiting the pharmacy rather than the number of visits. Patients prefer specific pharmacies over others due to different reasons such as geographic proximity, convenient working hours of the pharmacy, and the presence of trusted and qualified pharmacists and friendly staff.

Although participants were randomly selected from the various sectors of pharmacy and the sample size was considered good, the present study has some limitations. First, this study might be subjected to social desirability bias because the questionnaire was about pharmaceutical services provided by the pharmacy that the participant frequently visits. Second, the nature of the pharmaceutical services provided are different among different pharmacy sectors which might affect patient satisfaction.

CONCLUSION
This study presents some nationwide patient-reported satisfaction in pharmacies in Jordan. However, modification of pharmacists’ professional behavior, namely in managing the therapy of patients, is necessary. This is because most patients are not made aware of drug related information, such as storage conditions and managing side effects, when a prescription is dispensed.

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Conflict of interests
The authors declare that they have no conflict of interests.
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رضأ المرضى عن الخدمات الصيدلانية في الأردن: دراسة مقطعية

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ملخص
المقدمة: أصبحت مسؤوليات الصيدلة أكثر توجهاً نحو المريض، لذا فإن استكشاف رضا المرضى سيؤدي إلى تحديد وتحسين جودة الخدمات الصيدلانية. كان الهدف من هذه الدراسة هو تقييم رضا المرضى عن الخدمات الصيدلانية في الأردن.

منهجية البحث: أجريت دراسة مقطعية بين ديسمبر 2018 وأبريل 2019. تم تقييم رضا المرضى باستخدام ثلاثة نطاقات فرعية؛ إدارة العلاج والالتحاق الشخصية والرضا العام، بالإضافة إلى استبيان المعلومات الديموغرافية. سُئل المشاركون عن درجة رضاهم عن الخدمات الصيدلانية في جميع أسللة المقاييس الفرعية باستخدام مقياس ليكرت المكون من 5 نقاط.

النتائج: شارك ما مجموعه 1333 مريضا في الدراسة. كان متوسط عمر المريض 32.4 سنة (SD = 11.6)، منها 52.5% (ن = 700) من الإناث. كان لدى المرضى درجة رضا جيدة عن الخدمات الصيدلانية الإجمالية بمتوسط درجة 51.4 ± 11.4 من 70. من بين النطاقات الفرعية، أظهر المقياس الفرعي للعلاقات الشخصية درجة رضا تبلغ 75.7% بينما أظهر المقياسان الفرعيان الأخرى (الرعاية العامة وإدارة العلاج) درجات أقل قليلاً بنسبة 75.0% و69.6% على التوالي. كانت الصحة الجيدة للأشخاص، وتوفر تأمين صحي حكومي أو عسكري، وزيارة الصيدلية بشكل متكرر، وصرف الأدوية من المستشفيات الحكومية أو مراكز الرعاية الصحية الأولية أو صيدليات المستشفيات عوامل تنبؤية مهمة لرضا المرضى بشكل أفضل عن الخدمات الصيدلانية (p < 0.05).

الاستنتاجات: تقدم هذه الدراسة بعض النتائج التي أبلغ عنها المرضى على الصعيد الوطني حول رضا المرضى في البيئات الصيدلانية العامة في الأردن. هناك حاجة إلى التركيز على رضا المرضى أثناء تقديم الخدمات الصيدلانية.

الكلمات الدالة: مريض، صيدلاني، خدمات صيدلانية، استبيان، رضا.

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