Assessment of Patient’s Satisfaction with Pharmaceutical Care Services in Community Pharmacies in the United Arab Emirates

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Abstract

Objective: To determine some aspects of patient’s satisfaction of pharmaceutical services provided by the community pharmacist. To assess consumer’s attitude towards the services provided in the community pharmacy. Methods: An anonymous pre-piloted questionnaire-based study was conducted in the various Emirates of the United Arab Emirates. Data were analyzed using SPSS and results were expressed as frequency and percentage of respondents. Results: The response rate was 93.8% with more female than male respondents. The majority of participants were Arabs (80.5%) of young age and with no medical background. Slightly more than half of the respondents (198, 52.8%) visited the pharmacy to collect prescriptions, and 50.5% of them were able to collect the prescriptions straight away. Only 31.7% of respondents visited the pharmacy to purchase items and of these group 289 (77.1%) were satisfied with the pharmacist’s help. When asked to describe their usual pharmacist, “experienced,” “trustworthy,” and “confident” were the descriptions given by 27.7%, 22.9%, and 67.9% respondents, respectively. The majority (74.1%) of respondents agreed that the pharmacist delivers their medicines in a polite way, and 43.7% agreed that the instructions were clearly labeled by the pharmacist on each medication and 24.5% agreed that the pharmacists provided them with information on drug storage. About 38.4% agreed that the place of pharmaceutical counseling respects their privacy. Conclusion: Results of the present study showed a general patient’s satisfaction of the help provided by the community pharmacist. However, the pharmacist needs to fully practice his/her role to the advantage of the patients and the latter needs to be aware of what to expect and demand from the community pharmacist.

Keywords: Community pharmacist, community pharmacy, patient’s satisfaction, pharmaceutical care services, United Arab Emirates

Introduction

The United Arab Emirates (UAE) population is around 9,577,000, of which 1,084,764 (11.32%) are nationals.[1] Besides governmental hospitals and clinics, there are private hospitals, medical centers, and clinics. Patients visiting the later facilities can obtain their medications from around 1906 community pharmacies in all the seven Emirates of the country. The number of practicing pharmacists in these pharmacies approaches 5225.[2] The role of pharmacists in the health-care system has tremendously evolved to embrace pharmaceutical care.[3] The profession is no longer product-centered, but it became widely patient-centered. Through patient assessment, disease management, proper consultation, and follow-up, so that great improvement can be achieved in therapeutic outcomes. Moreover, patients’ adherence to medication has been reported to be significantly improved as a result of increased patient satisfaction.[4,5] Pharmacists practicing in community pharmacies can significantly contribute to national efforts directed towards improvement of health care and quality of life of patients. Such contribution can be achieved by the initiative of the pharmacist to provide the best of pharmaceutical care. However, the health-care system in the UAE is well standardized and organized with well-defined role for pharmacists in community pharmacies. Health-care authorities in the UAE are immensely concerned with patient satisfaction of all health-care issues. However, the pharmacist is not given full

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authority to practice his/her full roles in the domain of patient’s centered pharmaceutical care, and governmental efforts are mainly directed to patient satisfaction from the physician’s perspective.\textsuperscript{[6]}

It remains remains a usual practice that in most pharmacies, and unlike western countries, the practice is product-centered rather than patient-centered. It has been emphasized that changes in the health care system affect all aspects including the role of pharmacist, pharmaceutical care delivery, and patients’ expectations and attitude.\textsuperscript{[6]} It has been suggested that pharmacists and managers are challenged to distinguish between what patients want and what responsible pharmaceutical care mandates they should receive.\textsuperscript{[7]}

The community pharmacist role in, for example, patients’ counseling as part of pharmaceutical care delivery is important where the pharmacist can advocate rational drug use by giving patients drug information in terms of appropriate drug usage, administration, dosage, side effects, storage, and drug-food interactions.\textsuperscript{[9]} Patients’ satisfaction and attitudes to community pharmacy services have been the subject of a plethora of investigations.\textsuperscript{[9]-[12]} In general, patient satisfaction aspects may include, but not limited to, aspects to aspects such as consultation privacy, language, communication skills and barriers, rapid dispensing, complete explanation with regard to use, side effects, and storage of medication, in addition to the role of the pharmacist in educating the public and increasing their awareness of rational drug use, consequences of antibiotic misuse, healthy diet, and other lifestyle habits.\textsuperscript{[13]} The results of questionnaires to explore patient satisfaction of pharmaceutical services must be useful to managerial authority of the pharmacy to implement changes to improve pharmaceutical care delivery. Evaluation of patient satisfaction can determine the needs, expectations, and attitudes of patients to pharmaceutical care delivery in community pharmacies.\textsuperscript{[13]}

It is also an important indicator for stakeholders to continue monitoring and improving the quality of the health care system.\textsuperscript{[13]} In a more recent study, the questionnaire was structured around three pharmaceutical care grounded dimensions of satisfaction including monitoring outcomes, providing information and education, and giving personalized, collaborative, and preventive care.\textsuperscript{[7]} It has also been suggested that the practicing pharmacist and the pharmacy manager must distinguish between what patient expect and what responsible pharmaceutical care delivery must be.\textsuperscript{[7]}

In a Saudi study, the author suggested that an important factor in advancing pharmacy practice is a better understanding of needs and expectations.\textsuperscript{[14]} It has also been reported that results of such studies improve the quality of current services, evaluate the need for new services and enhance communication and expectations between two sides.\textsuperscript{[15]} Patient’s satisfaction may depend on various determinants and needs. These may be expressed in need for explanations about medications, communication and convenient opening hours, location of the pharmacy and availability of trusted pharmacist, confidentiality and respecting privacy, friendly staff and efficient service.\textsuperscript{[14,16-18]}

In the UAE, studies on patient’s satisfaction and attitude toward the services provided by the community pharmacy seem scarce and therefore the present study was conducted to investigate such aspects. Results of this study may point out the expectations and needs of patients and help pharmacy managers in implementing changes to improve services and health authorities to accept evolving roles of the pharmacist.

### Methods

The anonymous questionnaire-based study was conducted in the various Emirates of the UAE. The questionnaire used in the present study was modified from the Community Pharmacy Patient Questionnaire (PSNC) – United Kingdom and patient satisfaction survey of pharmaceutical care services in rural area – the Ministry of Health in Saudi Arabia.\textsuperscript{[19,20]} The questionnaire was pre-piloted by distributing it to ten persons with medical and nonmedical educational background, and all their recommendations were considered in the final version of the questionnaire to ensure that the responses matches the predetermined purpose of the study and to reduce the technical errors. There was also a section inviting comments at the end of the questionnaire [A copy of the questionnaire is available in Appendix 1]. The study was approved by the Research and Ethics Committee of the Medical Campus of the University of Sharjah. The survey contained both open- and closed-ended questions and mainly took an average time of 10 min to be completed. A total of 400 questionnaires in both English and Arabic languages were distributed between June and September 2015. The survey consisted of four sections. The first section included questions about demographic information from respondents such as gender, age, nationality, spoken language, and educational background. The second section included questions to evaluate the services provided to participants on their last visit to the pharmacy. These included the time it took to collect the prescription, whether the respondent’s experience in the pharmacy was satisfactory, and if the participants visited the same pharmacy every time they needed to collect a prescription or another product. The third section enquired about educational information participants received on their visit to community pharmacy with regard to disease and healthy lifestyle. Questions covered smoking cessation, healthy dieting, physical exercise, diabetes, hypertension, and antibiotic use in cold and flu. The fourth section of the questionnaire was the overall patient’s satisfaction of pharmacy services. Questions in this section dealt with whether all information about medications were delivered by the pharmacist in a polite way and whether all side effects and proper way of storage were discussed, and if the pharmacist discussed the patient’s condition or assessed the medication therapy while respecting the patient’s privacy. Respondents were also asked about the reason of their visit to the pharmacy, the amount of time pharmacist spends with them and to describe their usual pharmacist by using different answer options. The questionnaire was distributed to participants after they left the pharmacy and was completed by each participant onsite.
Statistical analysis

The participants’ responses were encoded, and the data were analyzed using Statistical Package for the Social Sciences (SPSS version 20, Chicago, IL, USA). The questions were in different distinct formats. Three categories of the relevant responses (agree, neutral, and disagree) were used in questions related to patient’s satisfaction of the services provided by community pharmacy. The 95% confidence interval (CI) was determined for the yes answers [Table 1] to estimate the expected range of “yes” response of the general population. This enabled more reader comprehensible CIs for the relative proportions to be calculated. “Yes” or “no” answer options were used in evaluation of the community pharmacy services and on the role of pharmacist in patient education.

Descriptive analysis was used to calculate the proportion of each group of respondents who agreed/disagreed with each statement in the questionnaire.

Chi-squared test was used to identify any significant difference among the participants’ responses regarding certain statements in the questionnaire with a significance level of $P < 0.05$.

Results

The response rate was 93.8%, where out of the 400 questionnaires distributed, 375 were filled in and returned. These included 103 surveys in Arabic and 272 in English. Table 2 shows the sociodemographic data of the respondents. The respondents include 155 (41.3%) males and 220 (58.7%) females. The majority of participants were Arabs comprising 302 (80.5%) respondents and only 73 (19.5%) were non-Arabs.

The respondents were of different age groups, but the majority (164, 43.7%) were of age 20–24 years followed by 25–34 years (84, 22.4%) and the least age group participated in the study were those of 55–64 years of age (14, 3.8%).

None of the respondents were in the category of >65 years age group. Most of the respondents have a University postgraduate degree (157, 41.7%), followed by University first degree (133, 35.6%) and high school certificate (85, 22.7%). None of the respondents was illiterate.

Respondents with no medical background comprised the majority (265, 70.7%) and only 110 (29.3%) of the participants have medical backgrounds. There were 270 respondents (72%) speaking both Arabic and English, while only 9 respondents (2.4%) were speaking Arabic, English, and Urdu, those speaking only Arabic were 40 (10.7%), and those speaking only English were 27 (7.2%). The number of participants from each emirate of the UAE is shown in Figure 1.

Table 3 shows evaluation of the community pharmacy service by the respondents. Slightly more than half of the respondents (198, 52.8%) visited the pharmacy to collect prescriptions for themselves, their family members or their friends, and 50.5% of them were able to collect the prescriptions straight away, 39.4% of them waited in the pharmacy for some

### Table 1: Patient’s satisfaction with the services provided by the community pharmacist

<table>
<thead>
<tr>
<th>Variable</th>
<th>Agree (%)</th>
<th>Neutral (n=375) (%)</th>
<th>Disagree (%)</th>
<th>95% CIs for agree responses*</th>
<th>$P$ (Chi-square test)**</th>
</tr>
</thead>
<tbody>
<tr>
<td>The pharmacist delivers your medicines in a polite way</td>
<td>278 (74.1)</td>
<td>61 (16.3)</td>
<td>36 (9.6)</td>
<td>69.7-78.5</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>The instructions were clearly labeled by the pharmacist on each medication</td>
<td>164 (43.7)</td>
<td>149 (39.7)</td>
<td>62 (16.6)</td>
<td>38.7-48.7</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>The pharmacist clearly explains to you all possible side effects</td>
<td>101 (26.9)</td>
<td>117 (31.2)</td>
<td>157 (41.9)</td>
<td>22.5-31.4</td>
<td>0.002</td>
</tr>
<tr>
<td>The pharmacist provides you written/printed information about drug therapy and/or diseases</td>
<td>138 (36.8)</td>
<td>100 (26.7)</td>
<td>137 (36.5)</td>
<td>31.9-41.6</td>
<td>0.002</td>
</tr>
<tr>
<td>The pharmacist uses information about your previous condition/drugs when assessing your drug therapy</td>
<td>59 (15.7)</td>
<td>82 (21.9)</td>
<td>234 (62.4)</td>
<td>12.1-19.4</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>The pharmacist provides you with information about the proper method of storage of your medication</td>
<td>90 (24)</td>
<td>86 (22.9)</td>
<td>199 (53.1)</td>
<td>20.2-28.8</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>The place of pharmaceutical counseling respects your privacy</td>
<td>144 (38.4)</td>
<td>129 (34.4)</td>
<td>102 (27.2)</td>
<td>33.5-43.3</td>
<td>0.03</td>
</tr>
</tbody>
</table>

*95% CI for single proportion (%) of respondents who agreed with each statement. **A significant level of $P<0.05$. CIs=Confidence intervals
time to collect their prescriptions, and only 10.1% came back later to collect their prescriptions. Respondents visiting the pharmacy to purchase items other than medications counted to 31.7% of total respondents. The majority (40.3%) purchased cosmetics, supplements (25.2%), baby’s products (16%), and woman’s products (15.1%).

A large number of respondents (289, 77.1%) were satisfied with the pharmacist’s help when visiting the pharmacy to collect items other than medications. The language was not a barrier in communication for the majority (292, 77.9%) of respondents [Table 3]. On average, the time pharmacists spend with respondents varied from <5 min (144, 38.4%) to 30 min (8, 2.1%).

However, most of the respondents (275, 73.3%) were satisfied with the time the pharmacist spends with them. “My usual pharmacist is very helpful,” this description was expressed by 118 (31.5%) of respondents when asked to describe their usual pharmacist, while experienced, trustworthy, and confident were the descriptions given by 104 (27.7%), 86 (22.9%), and 67 (17.9%) of respondents, respectively [Table 3].

Table 4 shows positive responses that were rather low when enquiring about the educational information given by the pharmacist to respondents. Information given to participants by the community pharmacist covered smoking cessation (12, 3.2%), healthy diet (59, 15.7%), exercise (41, 10.9%), anabolic steroids (16, 4.3%), hypertension (73, 19.5%), diabetes (28, 7.5%), oral contraceptives (43, 11.5%), and the use of antibiotics in cold and flu (91, 24.3%).

Table 1 shows patients satisfaction with the services provided by community pharmacy. All agreed responses fell within the 95% CIs. The majority (278, 74.1%) of respondents agree that the pharmacist delivers their medicines in a polite way while only 36 (9.6%) disagree. Slightly less than half of the participants (164, 43.7%) agree that the instructions were clearly labeled by the pharmacist on each medication while only 62 (16.6%) of the respondents disagreed.

Only 101 (26.9%) of the respondents agreed that the pharmacist clearly explains all possible side effects while a higher percentage (156, 41.9%) of respondents disagreed. It is clear from Table 1 that almost equal percentages (138, 36.8%) of the respondents agreed and disagreed about the pharmacist providing them with written/printed information on drug therapy and/or diseases.

Only 59 (15.7%) of the respondents agreed that pharmacist uses information of the previous condition/drugs when assessing the drug therapy. Almost one quarter (92, 24.5%) of the respondents agreed that the pharmacists provided them with information about the proper method of drug storage. More than one-third of participants (144, 38.4%) agreed that the place of pharmaceutical counseling respects their privacy.

**Discussion**

Pharmacists through responsible practice in community pharmacies can markedly improve health-care outcomes and the quality of life of patients. Results of studying patient’s satisfaction can improve the quality of current services, assess the need for new services and enhancing communication and expectations between the pharmacist and patient.[15]

The present study was undertaken to determine some aspects of patient’s attitude and satisfaction of pharmaceutical services provided by the community pharmacist.
majority of respondents were from the younger population sector with their ages ranging between 20 and 34 years and with good educational level. However, the majority of participants were of non-medical background. These and the fact that they are mostly Arabs who can speak a second language may have significantly contributed to the high response rate obtained in the present study. This is further supported by the fact that both the vocabulary and language used in the questionnaire were simple making it easily understood by the participants. It is also worth noting that the surveys were distributed both in Arabic and English languages, and the investigators were present to explain any unclear points.

When asked about the time spent before they collected their prescription, most answers of respondents ranged from “straight away” to “wait for some time.” Rapid dispensing in a community pharmacy may be a contributing factor to patient’s satisfaction on the services in general. However, despite the fact that most respondents feel that the time spent in the pharmacy was enough, the average time spent with a patient in this study varied from <5 min up to 10 min. Such a time seems short when considering the time required for a pharmacist to interview the patient, assess his/her condition, provide instructions and mention the possible side effects. This may indirectly point out that satisfaction of patients with community pharmacy services may not necessarily reflect a rational pharmaceutical care delivery. It has previously been pointed out that distinguishing between what the patients expect and what responsible pharmaceutical care delivery must be important.[7]

When answering the question on whether the pharmacist help in getting other products was “satisfactory” or “not,” most respondents selected “yes.” Such a result supports the importance of the role of pharmacist even with advice on other matters such as supplements and women’s and babies products. It has been stressed that consultation service provided by the community pharmacist is of vital importance for the pharmacist’s image and consumer satisfaction.

In the present study, the majority (74.1%) and (43.7%) of the respondents agreed that the pharmacist delivers their medicines in a polite way, and instructions were clearly labeled on each medicine respectively. On the other hand, between 25% and

### Table 3: Evaluation of the community pharmacy services

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency, ( n=375 ) (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Why did you visit the pharmacy?</td>
<td></td>
</tr>
<tr>
<td>To collect prescriptions</td>
<td>198 (52.8)</td>
</tr>
<tr>
<td>To purchase items other than medications</td>
<td>119 (31.7)</td>
</tr>
<tr>
<td>For consultation</td>
<td>58 (15.5)</td>
</tr>
<tr>
<td>If you choose in previous question “to purchase items other than medications,” what are those items?</td>
<td></td>
</tr>
<tr>
<td>Cosmetics</td>
<td>48 (40.3)</td>
</tr>
<tr>
<td>Supplements</td>
<td>30 (25.2)</td>
</tr>
<tr>
<td>Baby’s products</td>
<td>19 (16)</td>
</tr>
<tr>
<td>Woman’s products</td>
<td>18 (15.1)</td>
</tr>
<tr>
<td>Other</td>
<td>4 (3.4)</td>
</tr>
<tr>
<td>If you choose in previous question “to collect prescriptions”</td>
<td></td>
</tr>
<tr>
<td>I was able to collect it straight away</td>
<td>100 (50.5)</td>
</tr>
<tr>
<td>I waited in the pharmacy for some time</td>
<td>78 (39.4)</td>
</tr>
<tr>
<td>I came back later to collect it</td>
<td>20 (10.1)</td>
</tr>
<tr>
<td>The pharmacist’s help to get other items was satisfactory</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>289 (77.1)</td>
</tr>
<tr>
<td>No</td>
<td>86 (22.9)</td>
</tr>
<tr>
<td>The nationality of the pharmacist</td>
<td></td>
</tr>
<tr>
<td>Arab</td>
<td>229 (61.1)</td>
</tr>
<tr>
<td>Indian</td>
<td>125 (33.3)</td>
</tr>
<tr>
<td>Other</td>
<td>21 (5.6)</td>
</tr>
<tr>
<td>Was there a language barrier in communication?</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>292 (77.9)</td>
</tr>
<tr>
<td>Yes</td>
<td>83 (22.1)</td>
</tr>
<tr>
<td>How can you describe the last pharmacy you visited?</td>
<td></td>
</tr>
<tr>
<td>This is one of several pharmacies that you use when you need to</td>
<td>226 (60.2)</td>
</tr>
<tr>
<td>This is the pharmacy that you choose to visit if possible</td>
<td>127 (33.9)</td>
</tr>
<tr>
<td>This pharmacy was just convenient for you once</td>
<td>22 (5.9)</td>
</tr>
<tr>
<td>The amount of time the pharmacist spends with you</td>
<td></td>
</tr>
<tr>
<td>Enough</td>
<td>275 (73.3)</td>
</tr>
<tr>
<td>Not enough</td>
<td>100 (26.7)</td>
</tr>
<tr>
<td>On average time (min)</td>
<td></td>
</tr>
<tr>
<td>&lt;5</td>
<td>144 (38.4)</td>
</tr>
<tr>
<td>5</td>
<td>101 (27)</td>
</tr>
<tr>
<td>10</td>
<td>77 (20.5)</td>
</tr>
<tr>
<td>15</td>
<td>45 (12)</td>
</tr>
<tr>
<td>30</td>
<td>8 (2.1)</td>
</tr>
<tr>
<td>How do you describe your usual pharmacist?</td>
<td></td>
</tr>
<tr>
<td>Helpful</td>
<td>118 (31.5)</td>
</tr>
<tr>
<td>Experienced</td>
<td>104 (27.7)</td>
</tr>
<tr>
<td>Trustworthy</td>
<td>86 (22.9)</td>
</tr>
<tr>
<td>Confident</td>
<td>67 (17.9)</td>
</tr>
</tbody>
</table>

* A significant level of \( P<0.05 \). \( P \) values (Chi-square test) for all variables were <0.001

### Table 4: Educational information given by the pharmacist to respondents. Participants were asked whether they were given an advice about any of the following topics by the pharmacist

<table>
<thead>
<tr>
<th>Variable</th>
<th>Yes (( n=375)) (%)</th>
<th>No (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoking</td>
<td>14 (3.7)</td>
<td>361 (96.3)</td>
</tr>
<tr>
<td>Healthy diet</td>
<td>58 (15.5)</td>
<td>317 (84.5)</td>
</tr>
<tr>
<td>Exercise</td>
<td>41 (10.9)</td>
<td>334 (89.1)</td>
</tr>
<tr>
<td>Anabolic steroids</td>
<td>16 (4.3)</td>
<td>359 (95.7)</td>
</tr>
<tr>
<td>Hypertension</td>
<td>74 (19.7)</td>
<td>301 (80.3)</td>
</tr>
<tr>
<td>Diabetes</td>
<td>28 (7.5)</td>
<td>347 (92.5)</td>
</tr>
<tr>
<td>Oral contraceptives</td>
<td>43 (11.5)</td>
<td>332 (88.5)</td>
</tr>
<tr>
<td>Antibiotics use in flu and cold</td>
<td>89 (23.7)</td>
<td>286 (76.3)</td>
</tr>
<tr>
<td>Other</td>
<td>12 (3.2)</td>
<td>363 (96.8)</td>
</tr>
</tbody>
</table>

* A significant level of \( P<0.05 \). \( P \) values (Chi-square test) for all variables were <0.001
30% of respondents agreed that the pharmacist explains all possible side effects, provide information on proper storage of medication and drug therapy and/or disease.

As most, if not all, community pharmacies in the UAE do not have an isolated counseling area; it seems intriguing that about 38.4% of the respondents agreed that the place for counseling respects their privacy. This can be explained by the politeness of patients to give others the chance to have private discussion with the pharmacist and their expectation to have the same during their turn and the short time a patient has to wait for his/her turn.

Our results showed that respondents had no problems with regard to communication and the language did not pose a barrier as most respondents mastered more than one language. Respondents stated that they visit several pharmacies and do not prefer a particular one. Many factors may contribute to such attitude including availability of medications, location of pharmacy, personal factors, and the level of services received. In a Saudi study, the convenience of location and availability of trusted pharmacists were the primary determinants in pharmacy selection. \[21\] However, patients would prefer a pharmacy in which they receive the best pharmaceutical care delivered by a professionally competent pharmacist. On the other hand, the satisfaction level and the patient’s attitude can play a major role in the counseling process as a factor in patient’s preference for a single pharmacy. Pharmacists have major roles in educating the patients and providing them with information about the use of medications, common chronic conditions, ways of prophylaxis, and how to maintain healthy lifestyle. Most likely patients would not have the time to listen to the pharmacist directions due to other commitments such as workload pressure, which in general makes a pharmacy preference and the satisfaction level less as the patient would visit the nearest pharmacy. It is also worth noting that some patients may frankly indicate an adequate knowledge based on their previous experience with the condition and the medication or their need for rapid service because of shortage of time.

In addition, patient’s perception toward pharmacy profession as product, rather than patient-oriented certainly affects satisfaction with community pharmacy services. It is rather intriguing that in some studies the level of patients’ satisfaction was high regardless of the low rating for counseling levels. \[22\] Other studies indicated that the higher the frequency of counseling and monitoring and the more directed the guidance, the greater the satisfaction rating. \[23,24\] It has also been stressed that patient counseling might not be as regular or as comprehensive due to the absence of demand for these services. \[23\] These findings emphasize the need to educate the public of the services the pharmacist can provide.

In the present study, small numbers of respondents described the pharmacist as “helpful,” “experienced,” “trustworthy” or “confident.” These rather low responses total to 100%, which may indicate that despite the explanation that they can select more than one statement respondents have selected only one statement. The possibility that patients may have a more preference for physicians in matters related to health issues cannot be completely ruled out.

The number of respondents who received health educational information in the community pharmacy was rather low with regard to smoking and use of anabolic steroids. Increasing public awareness to important health-related issues is essential particularly in light of the fact that most respondents were of young age groups. Moreover, smokers in the UAE start the habit at a young age\[^{21}\] and bodybuilding is becoming a common practice among youngsters.

It has been reported that a high proportion of adolescent females in the UAE is overweight or at risk for overweight, and the incidences of diabetes and hypertension are high. \[25-27\]

To increase the level of patient’s satisfaction of community pharmacy services, pharmacist must actively participate in educating the public on at least issues that are pertinent to the community. Again, the number of respondents who received information about the responsible use of antibiotics or oral contraceptives was rather low. Concerning the first issue, the prevalence of irrational use of antibiotics is high\[^{28}\] and a national program to increase public awareness must be adopted to avoid misuse of antibiotics and the emergence of microbial resistance. With regard to oral contraceptives and despite the fact that females constituted more than half the participants in the present study, the low response may be attributed to cultural issues where Arab females seek help and talk freely on such matters with female pharmacists only.

For the questions with agree, neutral, and disagree responses, all selected agree responses were within the 95% CI for agreed responses reflecting the response of the general population. Results of the present study indicate the need to educate the public about the crucial information they should demand to receive while purchasing prescription or over-the-counter drugs from a community pharmacy.

**Conclusion**

Results of the present study showed a general satisfaction of the help they receive from the community pharmacist in the UAE. However, our results also indicated that while the respondents regarded the community pharmacist as helpful, experienced, trustworthy, and confident, the pharmacist needs to fully practice his/her role to the advantage of the patients. This particularly true in the light of the fact that most patients are not aware of what information to expect and should receive while dispensing a prescription. Topics on responsible pharmacy practice must be incorporated in curriculum of undergraduate pharmacy students and continuing pharmaceutical educational programs for practicing pharmacists. In addition, programs must be initiated and directed to increase public awareness of the information they should not only expect but demand when purchasing medications from the community pharmacy.
Limitation of the study
Despite the fact that participants were randomly selected from the various Emirates in the UAE, the sample size was small. Moreover, the use by respondents of several community pharmacies makes their satisfaction assessment a general rather than specific grading. We suggest for future research a study based on questionnaire that deals with patient’s expectation and knowledge of pharmacist on what services should be provided.

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Conflicts of interest
There are no conflicts of interest.

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APPENDIX 1

Investigation into consumer’s attitude toward community pharmacy services in the United Arab Emirates

The objective of this study is to assess consumer’s attitude toward the services provided in the community pharmacy in the United Arab Emirates (UAE). Health-care authorities in the UAE are immensely concerned with patient satisfaction of all health-care issues. Evaluation of patient satisfaction of the services provided in the community pharmacy can determine the needs, expectations and attitudes of patients to pharmaceutical care delivery in community pharmacies. Your help in answering this questionnaire would be greatly appreciated.

A. Demographics
1. Age (years): □ 20–24 □ 25–34 □ 35–44 □ 45–54 □ 55–64 □ >65
2. Gender: □ Female □ Male
3. Nationality: □ Arab □ Non-Arab
4. Living in: □ Dubai □ Sharjah □ Abu Dhabi □ Ajman □ Fujairah □ Al Ain □ Umm al-Quwain □ Ras al-Khaimah
5. Educational level: □ Illiterate □ High school □ University degree □ Graduate degree
6. Professional background: □ Medical/Health □ Non-medical/Health
7. Spoken language(s): □ Arabic only □ English only □ Urdu + English □ Arabic + English □ Arabic + English + Urdu

B. Evaluation of the community pharmacy service
8. Why did you visit the pharmacy?
□ To collect a prescription (for myself, someone else or both)
□ For consultation
□ To purchase items other than medications
□ Cosmetics □ Baby’s product (milk, food)
□ Supplements □ Woman’s products □ Others

9. If your answer in question 8 “To collect a prescription:”
□ I was able to collect it straight away.
□ I waited in the pharmacy for some time
□ I came back later to collect it

10. The pharmacists’ help to get other items was satisfactory: □ Yes □ No
11. The nationality of the pharmacist: □ Arab □ Indian □ Other
12. Was there a language barrier in communication with the pharmacist:
□ Yes □ No

13. How can you describe the last pharmacy you visited?
□ This is the pharmacy that you choose to visit if possible
□ This is one of several pharmacies that you use when you need to
□ This pharmacy was just convenient for you once

14. The amount of time the pharmacist spends with you: □ Enough □ Not enough
15. On average time: □ <5 min □ 5 min □ 10 min □ 15 min □ 30 min
16. How do you rate your usual pharmacist?
□ Experienced □ Trustworthy □ Confident □ Helpful

C. The role of the pharmacist in patient education
17. Have you ever been given an advice about any of the following by the pharmacist?
- Smoking cessation □ Yes □ No
- Healthy eating □ Yes □ No
- Physical exercise □ Yes □ No
- Anabolic steroids □ Yes □ No
- Hypertension □ Yes □ No
- Diabetes □ Yes □ No
- Oral contraceptives □ Yes □ No
- Antibiotics use in flu and cold □ Yes □ No
- Others (______________________)
D. Patients’ satisfaction with the services provided by the community pharmacist

18. The pharmacist delivers your medicines in a polite way
   □ Agree    □ Neutral    □ Disagree

19. The instructions were clearly labeled by the pharmacist on each medication
   □ Agree    □ Neutral    □ Disagree

20. The pharmacist clearly explains to you all possible side effects
   □ Agree    □ Neutral    □ Disagree

21. The pharmacist provides you with written/printed information about drug therapy and/or diseases
   □ Agree    □ Neutral    □ Disagree

22. The pharmacist uses information about your previous condition/drugs when assessing your drug therapy
   □ Agree    □ Neutral    □ Disagree

23. The pharmacist provides you with information about the proper method of storage of your medication
   □ Agree    □ Neutral    □ Disagree

24. The place of pharmaceutical counseling respects your privacy
   □ Agree    □ Neutral    □ Disagree

25. Any recommendations you think will improve the performance of the pharmacist and the pharmaceutical care delivery