

Original Research

Unlocking Customer Insights: A Cross-Sectional Study on the Future of Community Pharmacies Services in Saudi Arabia

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Abstract

Patient satisfaction is crucial for evaluating healthcare quality and guiding policy decisions to improve services. Globally, community pharmacies are shifting towards patient's care but faces the diverse perceptions. This study aims to explore the community pharmacy services in Saudi Arabia by conducting a nationwide patient satisfaction survey. A multicentred online study was conducted across the Kingdom of Saudi Arabia. Through extensive literature review, a questionnaire was developed that was assessed for validity, and reliability. A sample size of 565 customers was calculated. The data was analysed by using SPSS for descriptive analysis and the Chi-square test. About 68.4% of participants were under the age of 35. Over half of the study's participants (60.3%) were female. Around half (51.9%) possessed a bachelor's degree. Over 70% expressed satisfaction with the education, training, age, and behaviour of the pharmacist. Additionally, more than 57.2% reported satisfaction with the presence of a noise-free separate counselling area within the pharmacy. The majority of participants (68.2%) expressed satisfaction or high satisfaction with the involvement of a prescriber in medicine dispensing. Over 66% reported satisfaction or high satisfaction with the readability of instructions on labels. Additionally, more than 55% expressed satisfaction or high satisfaction with the counselling and re-counselling process. These findings reveal the positive perception of community pharmacy services among participants. Further trainings of pharmacist and staff may strengthen the counselling services from the pharmacies.

Keywords: Community Pharmacy, Pharmacy Services, Healthcare Quality, Patient Care

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INTRODUCTION

Quality of care has become increasingly central in healthcare, driven by quality assurance, improvement programs, and patient advocacy^{1,2,3}. Patient satisfaction serves as a crucial gauge of healthcare quality, providing insight into how well providers meet clients' expectations, which are most pertinent to them^{4,5,6}. It establishes a baseline for new strategies and optimizes resource utilization. Globally, studies evaluate patient satisfaction with community pharmacy services, with growing interest in developing countries. Varying performance among pharmacies leads to diverse patient needs and



perceptions^{7,8,9} Patient satisfaction surveys help healthcare providers pinpoint areas needing improvement and inform policymakers about patient needs for strategic planning^{10,11}. Enhanced patient satisfaction leads to improved behavioural intentions, like adherence to treatment and follow-up appointments, ultimately resulting in better health outcomes and recommendations for services to others^{12,13,14}.

Community pharmacies, often the first point of contact for the public, play a crucial role in promoting health, educating patients, and ensuring appropriate medication use^{15,16}. The evolution of community pharmacy away from mere dispensing towards patient-centered care has been beneficial. Studies indicate that implementing pharmaceutical care services improves patient outcomes and reduces healthcare costs, particularly in managing chronic conditions. This shift requires building and maintaining professional relationships based on trust, communication, and collaboration between pharmacists and patients^{17,18,19,20}. Challenges arise when expectations differ, potentially affecting the quality of consultation. Public perception of community pharmacy services serves as a key indicator of service quality, influencing demand and communication between pharmacists and patients^{21,22}.

While various studies worldwide have assessed public satisfaction with community pharmacy services, perceptions vary. For example, in Canada, there are positive expectations regarding pharmacists' knowledge and capabilities, whereas Chinese patients express dissatisfaction due to distrust in pharmacists' qualifications. In the United Kingdom and Malta, public opinion is generally favourable towards community pharmacy services^{23,24,25,26}. In the Arab world, where similarities in challenges and opportunities exist among countries, pharmacy practice predominantly occurs in community settings. However, outdated laws govern pharmacy practice, limiting the scope of services to traditional dispensing with minimal patient-centered care^{27,28,29,30,31,32}.

The practice of community pharmacy in KSA has witnessed significant expansion in services, with a growing emphasis on patient-centered care due to the recent transformation of the healthcare system^{33,34}. In addition to traditional services, a variety of pharmacist-led services are now offered in large chain community pharmacies. These services encompass vaccinations, diabetes management programs, weight management programs, and the measurement of vital signs and biomarkers^{35,36}. Evaluating patient satisfaction with these services is important for several reasons^{37,38,39}.

In the Kingdom of Saudi Arabia (KSA), several previous studies^{39,40,41,42,43} have been conducted indicating a varied pattern of patient satisfaction. These studies reflect the perspectives of patients from specific cities or regions. However, there is a lack of studies representing nationwide perspectives on patient satisfaction with community pharmacy services. This study was aimed to have comprehensive understanding and evaluate the needs, preferences, and experiences of patients across the entire country. The quality of services will identify the area for improvements, and inform policy-making to enhance care that will strengthen the healthcare system.

METHODS

A multicentred, online survey was conducted across the KSA after the approval of research ethics department at King Fahad Medical City of KSA. (IRB Log Number: 23-647)

Questionnaire

A thorough literature review was conducted to shape the development of the questionnaire, drawing insights from relevant research and publications^{23-32, 46-55}. Subsequently, an initial version of the questionnaire was formulated based on the literature findings.

To ensure the questionnaire's quality and relevance, rigorous evaluations for both content and face validity were conducted by a team of experts in the field. Ratings for each item were determined using an item-objective congruence (IOC) score method, where a score of 1 indicated clear measurement, 0 indicated unclear content, and -1 indicated the content was clearly not measured. An average IOC score exceeding 0.5 was considered indicative of good content validity. Following expert feedback, adjustments were made to address redundancy and improve clarity. Questions perceived as difficult to understand were either revised or removed entirely. Furthermore, field tests were carried out on a small sample of 25 customers, though their data were ultimately excluded from the analysis. The questionnaire's reliability was evaluated through pre-testing on a sample of 25 customers, with their data excluded from the final analysis. Cronbach's α value was also calculated for each portion was 0.79 (accessibility) and 0.76 (performance). These results indicate a satisfactory level of internal consistency and reliability for each section of the questionnaire. The questionnaire underwent translation by three language experts using forward and back translation techniques, resulting in the development of a bilingual questionnaire. To ensure translation accuracy, an inter-rater reliability method was utilized, with agreement among two or more raters considered indicative of good agreement. Final questionnaire has 46 questions. Five questions were related to the demographics of the participants, 18 about accessibility and 23 for performance evaluation.

Sample size calculation

Firstly, a sample size of 565 customers was calculated using Raosoft online software⁵⁶. This calculation was based on specific parameters set to achieve a margin of error of 4%, a high confidence level of 95%, and an assumed response distribution of 59%. These parameters were chosen to ensure the statistical accuracy and validity of the results.

Sampling and data collection

Convenient sampling⁵⁷ was employed, wherein all participants were informed of the study's objectives and were given the option to withdraw at any point; those who consented proceeded to complete the study. The study utilized a Google Form with a QR code for easy access. Participants could scan the code to answer survey questions. No incentives were offered. Pharmacists informed customers about the study between Sep 2023 to Jan 2024 via QR code scanning.



Data analysis

Descriptive analysis was employed using SPSS to examine the percentages and frequencies of demographics and responses. The relationship between demographic and accessibility & performance was assessed using the Chi-square test. The statistical significance determined by p-values ($p < 0.05$).

RESULTS

Out of 565 participants, 551 successfully completed the research, resulting in a response rate of 97.5%. About 68.4% of participants were under the age of 35. Over half of the study's participants (60.3%) were female. Around half (51.9%) possessed a bachelor's degree. The majority (98.0%) were of Saudi nationality as given in Table 1.

Over 70% expressed satisfaction with the education, training, age, and behavior of the pharmacist. Additionally, more than 57.2% reported satisfaction with the presence of a noise-free separate counseling area within the pharmacy, as indicated in Table 2.

The majority of participants (68.2%) expressed satisfaction or high satisfaction with the involvement of a prescriber in medicine dispensing. Over 66% reported satisfaction or high satisfaction with the readability of instructions on labels.

	Category	n	% age
Age (Years) *	less than or 25	192	34.8
	26-35	185	33.6
	36-45	107	19.4
	46-55	43	7.8
	More than or 55	24	4.4
Gender	Male	219	39.7
	Female	332	60.3
Income (SAR**)	Less than or 3000	230	41.7
	3001-5000	69	12.6
	5001-10,000	101	18.3
	10,001-20,000	131	23.7
	More than 20,000	20	3.7
Educational level	Below secondary	21	3.6
	Secondary	111	20.1
	Bachelor	286	51.9
	Graduation	53	9.6
	Other (Diploma)	80	14.5
Employment status	Employed	301	54.6
	Students	136	5.8
	Retired	32	24.7
	Unemployed	82	14.9
Nationality	Saudi	540	98
	Non-Saudi	11	2

Additionally, more than 55% expressed satisfaction or high satisfaction with the counseling and re-counseling process, as detailed in Table 3.

The patient's satisfaction wasn't linked to nationality. However, a noteworthy correlation was observed with responses from the participants, as outlined in Table 4.

DISCUSSION

The perception of customers regarding the services provided by the pharmacy was highly positive. The majority expressed satisfaction with both the accessibility of the pharmacy and the performance of its staff. Consistent levels of satisfaction were observed across Brazilian, Korean, and Malaysian studies^{58,59,60}. According to a Korean study, 74.6% of patients expressed satisfaction with pharmacy services, with a majority reporting being either "very satisfied" or "satisfied"⁵⁸. In contrast, a separate study in Brazil found that 58.4% of patients were satisfied with pharmaceutical services⁵⁹. In line with a Malaysian study, our research also uncovered customer satisfaction regarding the location and spatial layout of the pharmacy. Over half of the surveyed customers found the waiting area to be adequately accommodating. Moreover, the cleanliness and organization of the distribution area were similarly deemed satisfactory by our respondents⁶¹. The consensus on service waiting times, mirroring a study conducted in Addis Ababa, Ethiopia, was also favourable. Both studies yielded identical results regarding patient satisfaction with counselling services⁶².

The provision of needed or prescribed medicines are proper as described in a previous study from KSA⁶³. Our findings align with a prior study conducted in Makkah, indicating a notable degree of customer satisfaction regarding the storage of medicines. This highly scores the safety and appropriateness of the storage practices⁶⁴. In our study, over fifty percent of customers indicated that the provided medicine exhibits high quality, reflecting the findings from a study conducted in Bahir Dar, Ethiopia⁶⁵. Customer satisfaction regarding medication costs or prices, at 52%, appears relatively lower compared to a previous report by Alanazi from a comprehensive regional study conducted in Pakistan. They reported that 70% of were satisfied with the cost of medications. They also reported that the staff numbers were insufficient for providing service, but our findings contrast with theirs. More than half of our respondents believe that pharmacies have adequate staffing⁶⁶. The study participants found the training and education of pharmacists and pharmacy staff to be satisfactory. However, some previous findings from KSA suggested that training courses are needed to enhance staff skills and attitudes in dealing with patients^{42,67,68,69,70,71}. Age differences among pharmacists may contribute to variations in job performance. Our respondents expressed high satisfaction with the ages of among pharmacists and pharmacy staff⁷². A report from Pakistan highlights that negatively impact the quality of pharmacy services is associated with the lack of professionalism⁷³. However, in our study, over two-thirds of respondents indicated satisfaction with the behaviour of pharmacists and pharmacy staff, suggesting a positive perception of their conduct. Another research conducted in KSA emphasized the



Table 2. Customer's satisfaction about accessibility

Questions	Very satisfied		Satisfied		Neutral		Dissatisfied		Very dissatisfied	
	n	%	n	%	n	%	n	%	n	%
The distance of pharmacy suits to you?	179	32.5	213	38.7	92	16.7	35	6.4	32	5.8
The parking of pharmacy is good enough	134	24.3	203	36.8	126	22.9	59	10.7	29	5.3
The pharmacy is clean enough	173	31.6	225	40.8	99	18	40	7.3	14	2.5
The pharmacy has proper waiting area or not	125	22.7	208	37.7	140	25.4	59	10.7	19	3.4
The pharmacy has proper distribution area or not	143	26	226	41	111	20.1	55	10	16	2.9
The pharmacy has noise free separate counselling area	126	22.9	189	34.3	118	21.4	87	15.8	31	5.6
Medicines are properly provided as needed or prescribed?	160	29	206	37.4	112	20.3	45	8.2	28	5.1
Medicines are available as needed or prescribed?	145	26.3	192	34.8	116	21.1	69	12.5	29	5.3
Medicine storage is safe and proper	146	26.5	221	40.1	125	22.7	42	7.6	17	3.1
Quality of medicine is satisfactory?	155	28.1	208	37.7	121	22	46	8.3	21	3.8
Prices of medicine are satisfactory?	131	23.8	172	31.2	131	23.8	73	13.2	44	8
The pharmacy has proper staffing?	125	22.7	203	36.8	128	23.3	68	12.3	27	4.9
Pharmacy' staff is well educated and trained	153	27.8	204	37	126	22.9	48	8.7	20	3.6
Pharmacist is educated and trained well	150	27.2	236	42.8	111	20.1	41	7.4	13	2.4
Ages of pharmacy staff are suitable for work	146	26.5	229	41.6	116	21.1	43	7.8	17	3.1
Age of pharmacist is suitable for work	159	28.9	218	39.6	118	21.4	38	6.9	18	3.3
Pharmacy' staff behaves very well	133	24.1	234	42.5	119	21.6	46	8.3	19	3.4
Pharmacist behaves very well	154	27.9	238	43.2	106	19.2	31	5.6	22	4

Table 3. Customer's satisfaction about performance.

Questions	Very satisfied		Satisfied		Neutral		Dissatisfied		Very dissatisfied	
	n	%	n	%	n	%	n	%	n	%
Dispensation duration is suitable	173	31.4	204	37.0	114	20.7	37	6.7	23	4.2
Medicine's dispensing is with consultation of prescriber	151	27.4	225	40.8	102	18.5	51	9.3	22	4.0
Dispensed medicines are correct and well labeled	159	28.9	206	37.4	113	20.5	54	9.8	19	3.4
Instructions on the label are easily readable	148	26.9	221	40.1	114	20.7	48	8.7	20	3.6
Waiting time is satisfactory for you?	133	24.1	207	37.6	141	25.6	52	9.4	18	3.3
Counseling person's conduct is satisfactory	146	26.5	214	38.8	125	22.7	43	7.8	23	4.2
Counseling person's knowledge is satisfactory	133	24.1	217	39.4	141	25.6	39	7.1	21	3.8
Counseling time is satisfactory	132	24.0	220	39.9	133	24.1	47	8.5	19	3.4
Medication counselling is satisfactory	143	26.0	215	39.0	128	23.2	43	7.8	22	4.0
On request re-counselling is satisfactory	138	25.0	223	40.5	132	24.0	32	5.8	26	4.7
Privacy during counseling is satisfactory	146	26.5	210	38.1	120	21.8	45	8.2	30	5.4
Information about the medication storage is satisfactory	148	26.9	215	39.0	124	22.5	42	7.6	22	4.0
Dietary instructions to cure disease are satisfactory	145	26.3	195	35.4	130	23.6	47	8.5	34	6.2
The interest in health improvement is satisfactory	144	26.1	196	35.6	135	24.5	49	8.9	27	4.9
Provided special instructions about medication are satisfactory	150	27.2	195	35.4	122	22.1	55	10.0	29	5.3
Explanations about the therapy duration are satisfactory	147	26.7	192	34.8	136	24.7	47	8.5	29	5.3
Counseling for medication administration is satisfactory	154	27.9	196	35.6	120	21.8	51	9.3	30	5.4



Public health campaigns are supported or initiated by pharmacy	138	25.0	186	33.8	119	21.6	75	13.6	33	6.0
Additional unpaid services are provided	138	25.0	186	33.8	119	21.6	75	13.6	33	6.0
Smoking cessation services are satisfactory provided?	143	26.0	188	34.1	143	26.0	49	8.9	28	5.1
The serving time of pharmacy is suitable for you?	164	29.8	210	38.1	99	18.0	55	10.0	23	4.2
The serving time during public holidays suitable for you?	145	26.3	204	37.0	124	22.5	49	8.9	29	5.3
Emergency services rather than normal serving time	150	27.0	171	31.0	139	25.2	55	10.0	36	6.5

Table 4. Association of demographics with responses (Chi-Square test)

Demographics	Responses	P- Value
Age	Medicine storage is safe and proper	0.016
	Ages of pharmacy staff are suitable for work	0.015
	Additional unpaid services are provided	0.042
	Pharmacy' staff behaves very well	0.019
	Counseling person's knowledge is satisfactory	0.014
	On request re-counseling is satisfactory	0.031
Gender	The distance of pharmacy suits to you	0.059
	The pharmacy has proper staffing?	0.031
	Medicines are properly provided as needed or prescribed?	0.036
	Quality of medicine is satisfactory?	0.019
	Counseling time is satisfactory	0.036
	Smoking cessation services are satisfactory provided?	0.005
Education	The distance of pharmacy suits to you	0.013
	The pharmacy has noise free separate counselling area	0.012
	The parking of pharmacy is good enough	0.053
	Medicines are available as needed or prescribed?	0
	Quality of medicine is satisfactory?	0.019
	Prices of medicine are satisfactory	0
	Emergency services rather than normal serving time	0.021
	Dispensation duration is suitable	0.005
	Waiting time is satisfactory for you?	0.001
	Counseling person's knowledge is satisfactory	0.005
	Information about the medication storage is satisfactory	0.037
Income	The parking of pharmacy is good enough	0.051
	Pharmacy' staff behaves very well	0.002
	Pharmacist behaves very well	0.005
	Dispensed medicines are correct and well labeled	0.002
	Waiting time is satisfactory for you	0
	Smoking cessation services are satisfactory provided?	0.012
	Provided special instructions about medication	0.003



Employment	The distance of pharmacy suits to you	0.003
	Medicines are properly provided as needed or prescribed?	0.027
	Medicine storage is safe and proper	0,040
	Prices of medicine are satisfactory	0.015
	Pharmacist is educated and trained well	0.002
	Emergency services rather than normal serving time	0.025
	Public health campaigns are supported or initiated	0.025
	Additional unpaid services are provided	0.025
	On request re-counselling is satisfactory	0.012
	Privacy during counseling is satisfactory	0.01
	Dietary instructions to cure disease are satisfactory	0.007
	Information about the medication storage is satisfactory	0.042
	Provided special instructions about medication	0.012

significance of personality traits, thinking style, and emotional intelligence among pharmacy staff in ensuring safer patient care⁷⁴. In line with Alotaibi's research in outpatient pharmacies, our findings indicate that over 60% of respondents expressed satisfaction with dispensing and labelling services⁷⁰. Similar to Irish pharmacies, pharmacies in KSA are offering satisfactory dietary instructions for treating illnesses, with over 60% of our respondent expressing satisfaction or high satisfaction⁷⁵. The emerging role of pharmacies in enhancing the overall health of the population is increasingly recognized. Our study's findings, with 58% satisfaction among participants, suggest that pharmacies are actively supporting or even initiating public health campaigns⁷⁶.

CONCLUSION

This study revealed high levels of customer satisfaction with

both the accessibility and performance of pharmacies in KSA. The customers expressed contentment with various aspects such as waiting times, medication quality, and the conduct of pharmacy staff. It also highlights the vital function of pharmacies in public health education. Further trainings of pharmacist and staff may strengthen the medication counselling from the pharmacies.

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