

Original Research Article

Measuring patient satisfaction and expectations with minor ailment management services in Jordanian community pharmacies

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Abstract

Purpose: To investigate the satisfaction and expectations of community pharmacy customers with the pharmacy services in minor ailments management.

Methods: This study was conducted using a cross-sectional structured questionnaire distributed to adults from the general public in Jordan over two months. Data were analyzed using descriptive statistics (frequencies, percentages) to summarize the findings. The chi-squared test and a regression model were employed to identify predictors of patient satisfaction.

Results: A total of 498 participants were approached out of which 394 were included in the data analysis. Within the past year, 269 (68.3 %) visited a community pharmacy for treating minor ailment and 125 (31.7 %) did not. Among the participants who visited the pharmacy in the last 12 months, 91 (33.8 %) went for relieving pain, 68 (25.3 %) to manage flu symptoms, and 46 (17.1 %) to address digestion problems. Of those participants ($n = 269$), 189 (70.3 %) were satisfied with the pharmacy services in minor ailment management. Among the study participants, 306 (77.7%) had high expectations of pharmacy services in managing minor ailments.

Conclusion: A significant number of Jordanians turned to community pharmacies for managing minor ailments, with the majority expressing satisfaction with the services provided. However, satisfaction levels varied based on gender and geographical location, and individuals with chronic illnesses had high expectations from these pharmacy services.

Keywords: Patient Satisfaction, Minor Ailments Management, Jordan

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INTRODUCTION

Community pharmacies play crucial roles in managing minor ailments in developing nations for various reasons. Such countries face difficulties related to limited healthcare resources, shortage of health professionals and infrastructure limitations, as well as financial constraints. Hence, community pharmacies

become important healthcare providers, especially for individuals seeking relief from minor conditions through their services [1,2].

Minor ailments have an unusually high burden in developing and developed countries, accounting for a substantial portion of healthcare visits and placing significant pressure on healthcare systems. Their presence is linked to various

factors, including poor sanitation, overcrowded living, inadequate access to clean water, and limited public health education. These factors contribute to increased risk for respiratory tract infections, digestive disorders, or skin conditions, among others [3].

Jordan, with an expanding population, places great value on community pharmacies as sources of treatment for minor ailments. Due to access challenges, particularly in rural regions where access may be restricted, primary healthcare may not always be accessible and immediate relief may not always be accessible or convenient; community pharmacies serve this role well by being closely located to communities where treatment may be sought for minor ailments quickly and conveniently [4].

Therefore, this study ascertains the expectations of consumers as well as their level of satisfaction with pharmacy services related to minor ailments care.

METHODS

Study design

This study was conducted using a cross-sectional structured questionnaire distributed to adults from the general public in Jordan for two months (June to July 2023). The Research Ethics Committee at the University of Petra approved it (S/1/8/2023).

Sample size and participants

Given the lack of prior studies describing the satisfaction of minor ailment management in Jordanian community pharmacies, it was challenging to determine the sample size accurately. Nonetheless, Raosoft's sample size calculator was used to calculate the sample size [5]. Assuming standard parameters for a large population (a 95 % confidence level and a ± 5 % margin of error) and setting the response distribution at 50 % to ensure the most conservative and largest possible sample size, the minimum recommended sample size was calculated to be 385.

In this study, convenience sampling was employed to select participants based on accessibility and availability to the researchers. Participants came from various demographic backgrounds spanning age groups, gender identities, and socioeconomic statuses; individuals were selected based on their availability and willingness to participate. This allowed efficient data collection while

guaranteeing diverse perspectives among its participants.

Inclusion and exclusion criteria

Individuals aged 18 years or above who live permanently in Jordan were included in the study, while those with disabilities, who were prevented from visiting community pharmacies or did not speak Arabic, were excluded.

Structure, validity, and reliability of the questionnaire

The questionnaire was designed based on the literature and validated using a committee of experts [6]. Three experts in clinical pharmacotherapy carefully reviewed the survey questions, instructions, and the response options to determine the appropriateness, clarity, and relevance of the content. When reviewing the survey instrument, they used their extensive knowledge of minor ailments and pharmacotherapy to leverage their review.

In terms of reliability testing, 15 adults from the target population took part in the survey. The responses of 15 adults representing the target population were collected and analysed to determine the internal consistency of the instrument. Cronbach's coefficient alpha, which was 0.85, indicated good internal consistency of the survey.

The final draft of the questionnaire consisted of three sections comprising 30 questions each. The first section focused on collecting demographic details about respondents and documenting their frequency and patterns of visits to community pharmacies among participants. The second section of the survey sought to measure public satisfaction with pharmacy services related to managing minor ailments. The last section of the survey focused on gathering expectations regarding pharmacy services for managing minor ailments.

Data collection

The researcher distributed the electronic survey online and also approached participants in pharmacies, restaurants, malls, and cafés. For these in-person interactions, researchers first introduced themselves and clearly explained the study's purpose, its voluntary nature, and the time required for completion. After confirming eligibility, verbal informed consent was obtained from each individual who agreed to participate. The questionnaire was administered anonymously, ensuring that no personally

identifiable information, such as names or contact details, was collected to maintain participant confidentiality.

Data analysis

Statistical Packages for the Social Sciences version 26 software was used for data analysis. Normality assessment was done with Shapiro-Wilk test. Data were not normally distributed ($p < 0.05$). Descriptive statistics, such as median and interquartile range for continuous variables, were computed, while frequencies and percentages were obtained for categorical data. To compare two independent groups with continuous variables, Mann-Whitney U Test was utilized. The Chi-Square test was used to examine associations among categorical variables.

To create the outcome variable for the regression analysis, the satisfaction score was dichotomized. Participants who rated their satisfaction on a scale of 1 - 10 were classified into two groups: the 'satisfied' group (comprising those who were 'completely satisfied' or

'somehow satisfied') and the 'not satisfied' group (comprising those who were 'neutral' or 'not satisfied'). A regression model was developed to assess predictors of people's satisfaction with pharmacy services in the management of minor ailments. Findings from the regression analysis were presented as adjusted odds ratios with 95 % confidence interval.

RESULTS

A total of 498 participants were approached, of which 406 (81.5 %) completed the questionnaire, and 394 were included in the data analysis. The rest had missing data. As shown in Table 1, 237 (60.2 %) were females. In terms of age distribution, majority aged between 25 - 40 years (214, 54.3 %), and a small fraction were above 55 years (17, 4.3 %). In terms of health, 107 participants (27.2 %) reported having comorbidities. Within the past year, the majority, 269 (68.3 %), visited a community pharmacy to treat a minor ailment.

Table 1: Sociodemographic information (N = 394)

Parameter	Total, n (%)
Gender	
Female	237 (60.2%)
Male	157 (39.8%)
Age (Years)	
25-40	214 (54.3%)
41-55	163 (41.4%)
>55	17 (4.3%)
Place of residence	
Amman	102 (25.9%)
Northern Area (Jerash, Irbid, Ajloun)	68 (17.3%)
Central Area (Zarqa, Balqa, Madaba)	53 (13.5%)
Southern Area (Karak, Maan, Tafelah, Aqaba)	171 (43.4%)
Marital status	
Married	205 (52.0%)
Single	177 (44.9%)
Divorced	12 (3.0%)
Highest educational level	
High school	90 (22.8%)
Diploma	62 (15.7%)
Bachelor degree	192 (48.7%)
Master's or higher	50 (12.7%)
Employment status	
Full-time employee	210 (53.3%)
Part-time employee	58 (14.7%)
Freelancer	48 (12.2%)
Student	78 (19.8%)
Comorbidities	
Yes	107 (27.2%)
No	287 (72.8%)
Visited a community pharmacy to treat a minor ailment in the last 12 months	
Yes	269 (68.3%)
No	125 (31.7%)

Among the participants who visited the pharmacy in the last 12 months ($n = 269$), 91 (33.8 %) went to relieve pain, 68 (25.3 %) to manage flu symptoms, 46 (17.1 %) to address digestive tract problems, 38 (14.1 %) went for skin issues and 26 (9.7 %) had other purposes.

Overall, after calculating the satisfaction score and classifying participants who visited the pharmacy in the last 12 months for managing minor ailments into satisfied and not satisfied, 189 (70.3 %) were satisfied.

In detail, out of 269 participants, 109 (40.5 %) and 84 (31.4 %) were completely satisfied and somewhat satisfied, respectively, with the care provided by the community pharmacist during their last visit; whereas, 36 (13.4 %) and 40 (14.9 %) were neutral and not satisfied, respectively. Out of 269 participants, on a scale of 1 to 10,

36.4 % of the participants chose 10 to reflect their satisfaction with the recommendations of community pharmacists regarding minor ailments. On the other hand, 20.1 and 8.2 % picked 9 and 5, respectively (Figure 1).

In terms of accessibility, 118 (43.9 %) and 75 (27.9 %) thought getting access to medications recommended by pharmacists was very easy and easy, respectively. There were 18 (6.7 %) neutral responses. However, 45 (16.7 %) and 13 (4.8 %) thought it difficult. In terms of services, 135 (50.2 %) reported that community pharmacists did not follow up with them after the initial visit regarding managing minor ailments (Figure 2). In addition, 118 (43.9 %) reported that community pharmacists did not explain the potential side effects of the recommended medications for the minor ailments.

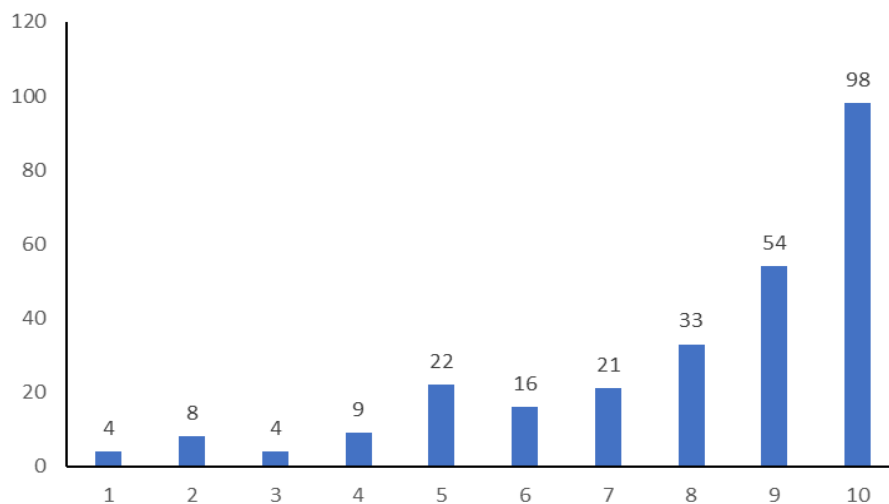


Figure 1: Satisfaction of participants with the recommendations of community pharmacists regarding minor ailments (N=269)

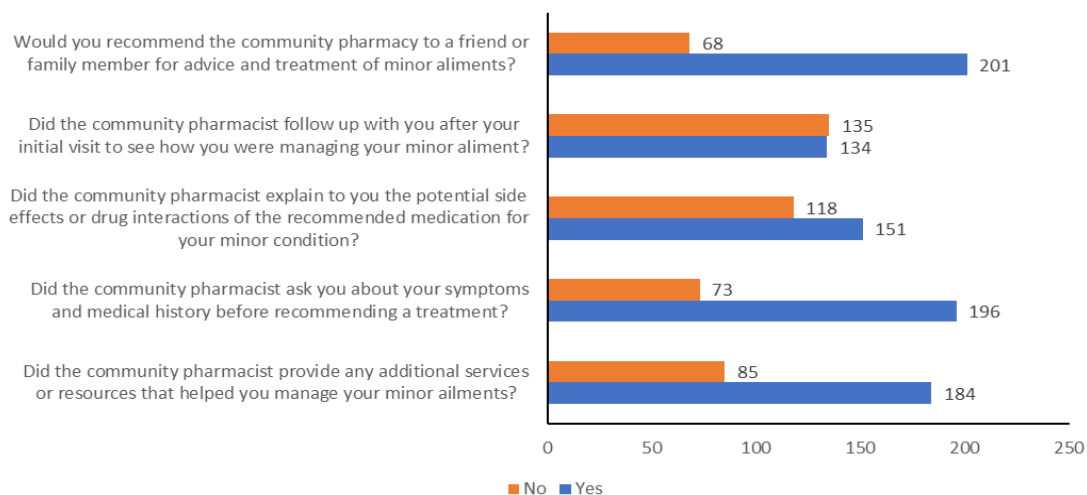


Figure 2: Services provided by pharmacists reported by participants (N=269)

Based on participants' experience, most of them reported that they were very likely (141, 52.4 %) and likely (84, 31.2 %) to return to the community pharmacies for advice for minor ailments in the future. About 30 participants (11.2 %) were neutral; however, 10 (3.7 %) and 4 (1.5 %) were unlikely and very unlikely, respectively. In terms of the amount of time needed to speak with the pharmacist about minor ailments, 136 (50.4 %) and 67 (24.8 %) participants reported that they needed less than 5 minutes and 5-10 minutes, respectively. However, some participants (35, 13 %) and (32, 11.9 %) reported that they needed 11-15 minutes and more than 15 minutes, respectively. Among the study participants, 306 (77.7%) had high expectations of pharmacy services in managing minor ailments. Specifically, 317 (80.5 %) participants anticipated receiving high-quality advice, while 287 (72.8 %) expected pharmacists to rely on trustworthy sources for treatment recommendations. Additionally, 302 (76.6 %) esteemed pharmacists were recognized for their commitment to service. Notably, 274 (69.5 %) believed that pharmacists had specialized training tailored for minor ailments. Furthermore, 280 (71.1 %) of respondents anticipated expert guidance in selecting appropriate treatment options. The importance of continuity of care was underscored by 293 (74.4 %) of participants, emphasizing the value of post-treatment follow-ups. Concerning medication safety and efficacy, 310 (78.7 %) expected to receive sound advice. A prominent expectation, shared by 320 (81.2 %) of respondents, revolved around the professional and respectful demeanor of pharmacists. Moreover, 298 (75.6 %) emphasized the importance of pharmacists being available during convenient hours for patients. On a progressive note, 260 (66.0 %) were open to innovative methods, highlighting an interest in services, such as telepharmacy.

Males were less likely to be satisfied with the pharmacy services in management of minor ailments compared to females (AOR: 0.623; 95 % CI: 0.135-0.891; $p = 0.012$; Table 2). In addition, people in southern Jordan were more likely to be satisfied compared to those living in Amman (AOR: 1.841; 95 % CI: 1.236 - 2.589; $p = 0.038$).

Participants with comorbidities were more likely to have high expectations regarding the community pharmacy services in management of minor ailments (AOR: 1.663; 95 % CI: 1.147-5.639; $p = 0.016$; Table 3).

DISCUSSION

Community pharmacies have solidified their role as essential healthcare hubs for addressing minor health complaints [7]. Given their accessibility, extended operational hours, and the expertise of pharmacists, they stand as a preferred initial point of consultation for many seeking relief from minor ailments. However, the role of community pharmacies extends beyond merely dispensing medications and advice [8]. Thus, for community pharmacies, ensuring top-tier service and fostering patient trust are paramount for their continued relevance and success in the healthcare landscape. Therefore, a sample of the Jordanian population was surveyed to assess their satisfaction with the community pharmacists' management of minor ailments as well as their expectations.

The study highlighted that 27.2 % of participants grappled with multiple health conditions, necessitating consistent healthcare attention. The presence of comorbidities introduced complexities in managing minor ailments, as they could influence symptom presentation, treatment responses, and potential drug interactions.

Table 2: Predictors of participants' satisfaction with the pharmacy services in the management of minor ailments

Independent variable	variables vs reference	Satisfaction (Satisfied vs not satisfied)	
		AOR (95 %CI)	P-value
Gender	Male vs Female	0.623 (0.135-0.891)	0.012*
Place of residence	Central area vs Amman	0.751 (0.442-1.006)	0.136
	Northern area vs Amman	0.896 (0.267-1.130)	0.423
	Southern area vs Amman	1.841 (1.236-2.589)	0.038*

Only variables with significant predictors were listed. *: significant

Table 3: Predictors of participants' expectations regarding community pharmacy services in the management of minor ailments

Independent variable (variables vs reference)		Expectations (high vs low)	
		AOR (95 %CI)	P-value
Having comorbidities	Yes vs. No	1.663 (1.147-5.639)	0.016*

Only variables with significant predictors were listed. *: significant

A significant number of participants accessed community pharmacies for minor ailments within the past year, underscoring their role as pivotal healthcare touch points. This prevalence suggests that many participants regarded pharmacies as a reliable and accessible avenue to address non-critical health issues without the immediate need for physician consultation.

Delving into the reasons for pharmacy visits unveiled key trends in health concerns. The fact that 33.8 % of visits were for pain management indicated its prominence as a health challenge. Similarly, 25.3 % sought assistance for flu symptoms, and 17.1 % for digestive concerns. This category likely spans a range from headaches and menstrual discomfort to post-injury pain, underscoring the breadth of pain-related issues that pharmacists encounter. Moreover, it could be indicative of either heightened susceptibility to flu or increased community awareness. Also, it suggested potential dietary or lifestyle patterns in the community. Given that digestive issues can stem from diverse causes such as diet, stress, or infections, it illuminated the necessity for pharmacists to offer holistic guidance alongside over-the-counter remedies.

A significant number (70.3 %) of participants were satisfied with their interactions with community pharmacists for managing minor ailments. Remarkably, 40.5 % expressed complete satisfaction, highlighting the efficacy of community pharmacies in meeting or even exceeding patient expectations. This finding is consistent with the study by Porteous *et al* [9], which also illustrated that patients value services that enhance their understanding of their condition and its management. However, no service is without its challenges. About 15 % of respondents expressed dissatisfaction with their pharmacy experiences. While the reasons remained speculative without additional qualitative data, potential factors, such as prolonged wait times, insufficient medication explanations, and personal biases, have been identified in other studies, such as that of a study [10]. Their review showed that, although a majority were content with pharmacists prescribing across various conditions, concerns lingered about accessing medical records and ensuring staff support for safe prescribing. This brings to light the overarching challenge of establishing systems that safeguard patient well-being without compromising the quality of care.

The satisfaction ratings revealed that over a third of the survey participants gave perfect scores, attesting to their trust in pharmacists. On the

other hand, the 8.2 % who selected mid-range scores, such as 5, spotlighted areas that necessitated improvement and underlined the diverse range of user experiences.

In terms of accessibility, nearly half of the participants attested to the ease of accessing pharmacist-recommended medications, underscoring the convenience offered by community pharmacies. Yet, 16.7 % encountered challenges, potentially due to stock unavailability, prohibitive costs, or geographical constraints. A significant number of respondents (50.2 %) reported a lack of follow-up after their initial visit, while 43.9 % said they were not briefed about potential medication side effects; a potential pitfall for patient safety and medication adherence. As underscored by a study [11], fostering trust between healthcare providers and patients is paramount.

Despite these hurdles, the intent for repeat visits to community pharmacies was notable, with over 80 % of respondents expressing their inclination to return. This loyalty spoke volumes about the unique blend of expertise, accessibility, and personal connection pharmacies offer, which often outweighed isolated negative experiences. Lastly, the time dynamics offered a lens into operational efficiencies and the depth of patient-pharmacist interactions. While a majority (50.4 %) had swift consultations lasting less than 5 minutes, the 11.9 % who engaged for over 15 minutes might indicate intricate consultations or potential wait times.

A considerable number of participants (80.5 %) harboured an expectation of high-quality advice, resonating with findings from the study [12]. Their respondents highly regarded services that enriched their understanding and management of symptoms. Data corroborated this trend, suggesting patients increasingly seek pharmacists for holistic guidance, including clarity and education about their conditions.

A recent study in Malaysia highlighted the public knowledge about how community pharmacists help in managing minor ailments [6]. While Malaysia boasts an informed public with a robust understanding of community pharmacies' role in managing minor ailments, this study provided nuanced insights into this knowledge. Notably, 80.5 % of participants had high expectations of receiving quality advice from pharmacists, reflecting this well-informed perspective. Furthermore, finding that 72.8 % of participants expected pharmacists to draw from dependable, evidence-based sources is consistent with observations from a Malaysian study, which also

highlighted the public's high expectations for quality advice [6].

Yet, a discernible gap emerged between perception and actual practice. Despite lofty expectations for pharmacy services, minorities consistently received advice on minor ailments from community pharmacies. This indicated a potential disparity between what was expected of the service and what was delivered in both contexts.

Previous study illuminated the public's awareness and trust in pharmacists' duties, emphasizing the reliance on credible sources of information. Echoing this trust, 72.8 % of participants anticipated pharmacists would consult trustworthy resources when dispensing advice [13].

A growing public awareness need for pharmacists' specialized training for minor ailments has been identified in another study [14]. This aligns with the finding in this study where 69.5 % of participants acknowledged this specialized training awareness need, suggesting a burgeoning mainstream recognition of pharmacists' distinct roles and expertise.

The importance of post-treatment follow-ups, as highlighted by 74.4 % of respondents, underpinned the principle of continuity of care. This aligns with Boag [15] survey, wherein many participants, satisfied with Minor Ailment Services (MASs), did not deem further healthcare consultations necessary. This emphasizes that continual care, encompassing follow-ups, is integral to positive patient outcomes.

A noteworthy number of participants (81.2 %) harboured expectations regarding pharmacists' professional demeanour, epitomizing the broader ethos of patient-centric care. Frazier *et al*'s study [11] similarly underscored patients' appreciation for respectful interactions, reinforcing that, alongside clinical acumen, interpersonal skills hold significant importance.

Addressing accessibility, a study [16] spotlighted its significance in pharmacy services. This was mirrored with 75.6 % of participants emphasizing the value of pharmacists' availability during amenable hours. This underscored the imperative for adaptability in pharmacy operating times.

Lastly, the inclination towards novel solutions such as tele-pharmacy, expressed by 66.0 % of participants, manifested a contemporary patient

mindset. This inclination, set against the backdrop of a burgeoning trend in digital health solutions, unveils an avenue for pharmacies to evolve and cater to the digital-era patient.

Limitations of this study

Some inherent limitations abound in this study that warrant consideration in interpreting its findings. The use of convenience sampling may have induced a selection bias, as participants were not randomly selected, potentially constraining the broad applicability of results. This challenge was accentuated by the modest sample size of 394 participants, which, although sizable, did not afford a comprehensive snapshot of the entire Jordanian demographic, rendering broad extrapolations difficult. Furthermore, omission in gauging participants' understanding of pharmacy management for minor ailments might skew the findings; perceptions could be intricately linked to foundational knowledge. Lastly, the self-reported design of this survey posed potential biases, such as recall inaccuracies or social desirability effects, underscoring the need for cautious interpretation and pointing towards the value of more expansive, methodologically rigorous research in subsequent studies.

CONCLUSION

Majority of participants turned to community pharmacies for help with minor ailments, such as pain relief, flu symptom management, and digestive concerns. Impressively, a substantial proportion conveyed satisfaction with the services they received, and a notable fraction expressed complete satisfaction. Additionally, many found it straightforward to access medications recommended by pharmacists. Yet, there were evident areas for improvement: about half of the respondents indicated a lack of post-visit follow-ups, and a similar proportion mentioned not being informed about potential medication side effects. On the brighter side, most participants looked forward to returning to pharmacies for future minor ailment advice, which pointed to a strong trust in the service. The study revealed that participants held community pharmacists in high regard, expecting quality advice, trustworthiness, professionalism, and availability. There were clear gender and regional variations in satisfaction, emphasizing the need for diverse and tailored services. In summary, while community pharmacists played a crucial role in managing minor ailments, there was a clear call for enhanced patient education, communication, and personalized care.

DECLARATIONS

Acknowledgement/Funding

None.

Ethical approval

The Research Ethics Committee at the University of Petra approved the study (S/1/8/2023).

Use of Artificial intelligence/Large language models

We also declare that we did not use Generative artificial intelligence (AI) and AI-assisted technologies in writing the manuscript.

Availability of data and materials

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Conflict of interest

No conflict of interest is associated with this work.

Contribution of authors

We declare that this work was done by the author(s) named in this article, and all liabilities pertaining to claims relating to the content of this article will be borne by the authors.

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