



## Customer Satisfaction with Community Pharmacy Services and Its Determinant in Indonesia: A Cross-sectional Survey

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### ABSTRACT

**Background:** Assessing customer satisfaction and its determinants are important for evaluating the quality of pharmaceutical services and identifying areas for improvement.

**Objectives:** This study aims to evaluate the level of customer satisfaction and identify key factors associated with it.

**Methods:** A cross-sectional study was conducted in 10 pharmacies located in Yogyakarta, Surakarta, and Magelang cities, involving a total of 1,200 customers. Data was collected using a validated patient satisfaction questionnaire from previous study and analyzed using SPSS 20 software. It was interviewed questionnaire that consists of three domains: sociodemographic characteristics, patient satisfaction, and opinions on service improvement in the community pharmacies. The inclusion criteria were customer who received services at community pharmacies between July and August 2021. Customers who were sick and unable to participate in an interview were eliminated from the study.

**Results:** The average overall satisfaction score obtained was 3.46 (SD  $\pm 0.34$ ). The average customer satisfaction scores were as follows: facilities ( $3.92 \pm 0.45$ ), waiting time ( $3.76 \pm 0.59$ ), medicine stocks ( $3.54 \pm 0.61$ ), staff availability ( $3.25 \pm 0.53$ ), and counseling hours ( $3.18 \pm 0.54$ ).

**Conclusion:** Overall, customers are quite satisfied with the community pharmacy services. There is a relationship between age, residence, education level, type of medicine, payment method, and experience in using pharmacy with customer satisfaction level. Community pharmacists should prioritize improving service quality by focusing on enhancing customer counseling and pharmacists' skills in communication.

**Keywords:** community pharmacy; customer satisfaction; pharmaceutical services; service quality

### INTRODUCTION

Customer satisfaction is influenced by the provider's ability to meet or exceed their expectations. Customers are delighted when their expectations are fulfilled, and they are excited when their expectations are surpassed. Satisfied customers tend to be more loyal, make frequent purchases, exhibit less sensitivity to price changes, and speak positively about the business. The quality of service provided plays a crucial role in determining customer satisfaction as it affects all aspects involved in understanding customer needs and fulfilling them collaboratively.<sup>1</sup> Positive emotions have an impact on patient loyalty. Furthermore, good feelings, pleasure, and trust all play a part in fully mediating the situation. Satisfaction acts as a mediator between pharmaceutical services and trust while trust moderates the relationship between patient loyalty and overall satisfaction with these services. Additionally, pharmaceutical services indirectly influence patient loyalty.<sup>2</sup>

Patient satisfaction is influenced by various factors, including the services provided by the pharmacy. Age, education, frequency of visits, self-perceived health state, and pharmacist general knowledge were found to strongly impact patient satisfaction.<sup>3</sup> Interpersonal skills in terms of courtesy and respect from healthcare professionals and communication, explanation, and information skills have proven to be more important and have a clear impact on help satisfaction than other technical skills.<sup>4</sup> It is important to consider demographic variables when evaluating satisfaction statistics for different populations in pharmacies<sup>5</sup>. As community pharmacy services continue to evolve over time, it is necessary to update parameters related to patient satisfaction.<sup>3</sup>

Evaluating patient satisfaction is crucial for improving the quality of care and understanding patient's needs, expectations, preferences, and opinions.<sup>6</sup> Conducting satisfaction surveys can help assess the gaps between patient expectations and perceptions of pharmacy services.<sup>7</sup> Patient satisfaction surveys have assisted organizational leaders or decision-makers in incorporating patient opinions into the system. This is an essential step in fostering a culture in which patient/customer satisfaction is seen as a critical strategic aim for providing better pharmaceutical care facilities.<sup>8</sup>

In 2020, similar studies in Yogyakarta, Indonesia showed a high level of patient satisfaction with community pharmacies even though there were several aspects that needed to be improved.<sup>9</sup> There were areas such as communication effectiveness, professionalism, and treatment management where satisfaction levels were lower. This highlights the importance for pharmacists to fully utilize their expertise and knowledge to deliver optimal service to patient. Previous studies primarily examined pharmacy communication, professionalism, and therapy management, without thoroughly exploring aspect to improve overall customer satisfaction.<sup>9</sup> This study aims to investigate customer satisfaction by adding customer point of view on the availability, price, location and access while also assessing customer opinions and overall satisfaction about the pharmacy services as part of efforts to enhance pharmacy services with a bigger area coverage and bigger samples. The study of customer satisfaction and the determinant of satisfaction is very important for evaluating pharmaceutical services and considering the required improvement solutions.

## METHODS

### Study Design

Observational research with cross-sectional approach was performed to assess customer satisfaction with community pharmacy services, especially in Central Java and Yogyakarta Special Region (*Daerah Istimewa Yogyakarta*, DIY) province, in Indonesia. This research is conducted from July to August 2021 in community pharmacies located in Magelang, Surakarta, and Yogyakarta cities. Data is taken from respondents who are considered to meet the inclusion criteria and want to fill out the questionnaire.

### Population and Samples

The population of the study was all customer who come to the pharmacies in Magelang, Surakarta, and Yogyakarta cities. There was a total of 96 pharmacies in these areas and 5 pharmacies from each city which represent the rural and urban areas were selected. From a total of 15 pharmacies used as samples, 80 respondents were taken from each pharmacy. The inclusion criteria were customers who received services at the selected pharmacies between July and August 2021. Customers who were sick, mentally ill, visited the pharmacy on behalf of others and unable or refused to give consent were eliminated from the study.

### Study Instruments

The questionnaire used in this study was adopted from patient satisfaction questionnaire from previous study.<sup>10,11</sup> It was translated into Indonesian for interview purposes and then back-translated into English to maintain consistency. Content validity of the questionnaire has been conducted by experts in pharmacy practices and has been piloted on 20 non-sample respondents. It was interviewed questionnaire that consists of three parts: sociodemographic characteristics (7 items), customer satisfaction (6 items), and opinions on service improvement in the community pharmacies (5 items). The questionnaire was assessed using a 5-point Likert scale.<sup>12</sup> Point 5: very satisfied, point 4: relatively satisfied, point 3: quite satisfied, point 2: relatively dissatisfied, and point 1: very dissatisfied.

### Data Collection

Data collection was carried out using non-probability accidental sampling. Respondents who are considered to meet the inclusion criteria will be explained about the research and offered to take part in this research. Respondents who agree to join were used as samples in this study. The total sample obtained from the three cities was 1200 respondents.

### Data analysis

The data collected using the 5-point Likert scale is then averaged for each respondent. Satisfaction classification is based on the average data that has been determined. If the average score is below the mean score, the respondents are considered dissatisfied (low level of satisfaction); if it is higher, the respondents are classified as satisfied with the services at community pharmacies (high level of satisfaction). Data were analyzed using SPSS 2.0 in the form of mean and standard deviation. Ordinal logistic regression is used to determine the relationship between the sociodemographic characteristics and level satisfaction. AOR (Adjusted Odd Ratio) and 95 percent CI (Confidence Interval) were used to describe the strength of the relationship. If the AOR is  $>1$ , respondents in this category are more likely to be highly satisfied compared to the reference and if the AOR is  $<1$ , respondents in this category are less likely to be highly satisfied compared to the reference. For CI, if it does not include 1, the result is statistically significant, signaling a likely true effect while if it includes 1, the result is not statistically significant, implying we can't be sure of an effect.<sup>13,14</sup>

## RESULTS AND DISCUSSION

### Characteristics of Respondents

A total of 1,200 questionnaires have been completed by respondents. No respondents were excluded from this study. Several sociodemographic variables were taken into account in this study including age, gender, residence education level, type of medicine used, payment method, and experience using the pharmacy. Some studies include additional factors such as first language, income, type of disease, nationality, and occupation.<sup>15-19</sup> Based on the data in Table I, it was found that a large portion of customers who visited the pharmacy were aged  $<30$  years (385; 32.08%), with females outnumbering males at 688 to 512 (57.33%). A significant number of participants (745; 62.08%) resided in rural areas. In terms of education level, respondents were asked about the last level of education they had completed. It was observed that the majority (532; 44.33%) have completed their high school education and there are no respondents lower than junior high school graduates. The most commonly sought type of medication was self-medication (542; 45.17%), and the majority of customers (73.25%) paid out of pocket for their medications. Furthermore, more than half of the participants (745; 62.08%) were visiting the pharmacy for the first time.

### Customer Satisfaction with Pharmacy Services

Table II presents customer satisfaction scores for pharmacy services, including drug availability, competitive pricing, patient counseling, communication with pharmacists, location and access. Overall satisfaction with the service and suggestions for improvement are also included. Based on six service domains above, the average customer satisfaction score was 3.21 (SD  $\pm$  0.46). This indicates that customers generally reported a quite high level of satisfaction with the services provided at community pharmacies. The previous study from Yogyakarta, Indonesia also found that most customers were satisfied with the services provided, particularly in terms of medication usage instructions given by pharmacists and the professional relationship established with them.<sup>9</sup> A similar result also shown by study from Bandung, Indonesia, where the respondents were generally very satisfied with the services provided by the community pharmacies. The results indicated high levels of satisfaction across various dimensions of pharmacy service, including reliability, assurance, tangibles, empathy, and responsiveness. The study revealed that the pharmacies were meeting or exceeding patient expectations in most areas assessed.<sup>20</sup> In comparison to studies conducted in Punjab, Pakistan and the Kingdom of Saudi Arabia, the overall customer satisfaction rating in our study was relatively higher. These findings suggest that patients in Riyadh, Saudi Arabia are generally satisfied with ambulatory care pharmacy services.<sup>18,19</sup> However, the overall customer satisfaction score is lower compared to similar studies conducted in the United Arab Emirates and community pharmacies in Yogyakarta, Indonesia.<sup>9,16</sup>

This study shows that the highest average satisfaction lies in location and access domain (3.56 (SD  $\pm$  0.21)) while the lowest lies in customer counseling (3.05 (SD  $\pm$  0.42)). This could be because this study was conducted in city areas where the number of pharmacies in each city is quite large so that people tend to find it

**Table I. Sociodemographic characteristics of customers in community pharmacies (N=1,200)**

<b>Variable</b>	<b>Category</b>	<b>N</b>	<b>%</b>
<b>Age</b>	<30	385	32.1
	31-40	295	24.6
	41-50	284	23.7
	>50	236	19.7
<b>Gender</b>	Male	512	42.7
	Female	688	57.3
<b>Residence</b>	Rural	745	62.1
	Urban	455	37.9
<b>Education level</b>	Junior high school	512	42.7
	Senior high school	532	44.3
	University	156	13.0
<b>Type of medicine</b>	Self-medication	542	45.2
	New prescription	365	30.4
	Refill prescription	293	24.4
<b>Payment method</b>	Out of pocket	879	73.3
	Paid by insurance	321	26.8
<b>Experience in using the pharmacy</b>	First visit	745	62.1
	Routine visit	455	37.9

easy to reach these pharmacies.<sup>21,22</sup> In a study conducted by Khalaf Ahmad et al,<sup>23</sup> it was found that accessibility got the highest score and had a significant positive correlation in influencing patient satisfaction.<sup>23</sup> The location and easy access to the pharmacy are the main factors for customers to be able to transact and get services at the pharmacy. The easier it is for the customer to access the pharmacy, the higher the level of customer satisfaction.<sup>24</sup> On the other side, prioritizing patient care, counseling, and home pharmacy services is essential for effective clinical pharmacy practice. However, in some cases in Indonesia, conflicts between managerial and clinical duties often lead to this responsibility being disregarded or forgotten. Lack of time have been reported as a barrier in fully engaging with patients for these services.<sup>25</sup> Patient counseling is commonly used as a domain to measure customer satisfaction. Another study that assessed patient satisfaction with pharmaceutical services in public hospitals in Eastern Ethiopia also found that the counseling domain was the domain with the most patient satisfaction scores in the study.<sup>26</sup> Medication counseling is an important part of pharmaceutical treatment because it ensures that drugs are used safely and effectively and that therapeutic results are maximized. The satisfaction of patients with medication counseling services might be one of the most important indicators of pharmacy service quality.<sup>27</sup>

Assessment of customer satisfaction with medicine availability was 3.46/5.00 (SD ± 0.34) in which customers were quite satisfied with drug availability at community pharmacists. The unavailability of drugs causes patient dissatisfaction.<sup>28,29</sup> The availability of drugs is an important factor in customer satisfaction because customers who come to the pharmacy want to get drugs for medication. Competitive prices are also the domain of customer satisfaction assessment 3.25/5.00 (SD ± 0.32) because some customers want to get the desired quality medicine at the desired price. For some customers, pricing was a significant factor for evaluation. Affordable prices at pharmacies enhance customer satisfaction. Thus, every effort should be undertaken to ensure that customers remain loyal to the pharmacy even amidst price fluctuations.<sup>30</sup> Pharmacist communication skills are one of the important domains to support customer satisfaction 3.13/5.00 (SD ± 0.25), especially in accommodating medical problems. Research conducted in the United Arab Emirates on pharmaceutical services showed that respondents were satisfied with their time with pharmacists because they were very helpful (31.5%). Furthermore, participants used terms such as experienced, trustworthy, and confident to characterize their pharmacists; these attributes were mentioned by 27.7%, 22.9%, and 17% of respondents respectively.<sup>31</sup> Patients will feel comfortable and helped if the pharmacist has good communication skills. Effective communication skill is important for pharmacists to convey and advise related to patient treatment so that productive communication is formed and improves social relations between patients and pharmacists. In contrast, poor communication skills can lead to misunderstandings that make patient dissatisfied.<sup>32</sup> The findings suggesting that there is a need for pharmacies to invest in training programs that enhance pharmacists'

communication and patient interaction skills. Improving their ability to engage in meaningful consultations could lead to greater patient satisfaction.

### Customers' Opinions on Improving the Services

In addition to customer satisfaction, Table II also represents opinions on what services need to be improved. The most frequently mentioned areas for improvement by customers are facility improvements at the pharmacy resulting in 3.92 (SD  $\pm$  0.45). Facilities support the comfort of customers in getting treatment services. Another opinion 3.76 (SD  $\pm$  0.59) agrees to reduce service waiting time. The longer waiting time for services can raise customers' doubts about their abilities and reduce the level of customer trust. The previous study, which was to determine patient satisfaction and perception of care, found that 77% of patient assessed that a good waiting time of about ten minutes allows for the highest patient satisfaction.<sup>33</sup> Other services that need to be improved are the increase in medicine stocks, adding the number of staff, and adding counseling hours. The demand for more medicine stocks could reflect a need for better patient education on medication availability and alternatives. This could involve developing educational materials or sessions to discuss common medication issues and outline what patients can do if their medication is not in stock. The need for increased staff, as indicated by the patients, suggests that pharmacies may need to revisit staffing levels and consider additional hires, more efficient task delegation, or investing in training existing staff to handle multiple roles efficiently. The desire for more counseling hours means pharmacies should consider extending their service hours specifically for patient counseling, possibly offering dedicated timeslots or booking systems for patients needing in-depth consultations. By evaluating these domains, the pharmacist could identify which service domains need attention as they will significantly contribute towards enhancing service quality while simultaneously ensuring higher levels of customer satisfaction.

### Determinant of satisfaction with pharmacy services in community pharmacy

Based on Table III, it shows that there is a significant relationship between the variables of age, residence, education level, type of medicine, payment method, and experience in using the pharmacy with the level of customer satisfaction. In a study that aimed to find factors related to patient satisfaction, it was found that age, education, and frequency of visits were significantly related factors.<sup>3</sup> But in this study, there is no relationship between gender and customer satisfaction with pharmacy services as indicated by the CI value crossing 1. Several similar studies have found the same thing that there is no relationship between gender and the level of patient satisfaction.<sup>34,35</sup>

The group of customers older than 50 years was 1.2 times (AOR = 1.2; 95% CI = 1.1-2.1) more likely to be satisfied than those under 30 years. Previous research has shown that older customers tend to be more content with pharmaceutical services.<sup>36</sup> Soeiro et al<sup>36</sup> found a rise in average satisfaction scores as the age group increased. However, our results are in contrast to earlier research that indicated increasing age was significantly associated with lower level of customer satisfaction. Older individuals are at greater risk and have higher care expectations to address their medication needs because they tend to have more chronic illnesses than younger people.<sup>37</sup>

A significant relationship was shown in the residence variable where customers living in urban areas were 40% less likely to feel satisfied than people living in rural areas (AOR = 0.6, 95%; CI = 0.2-0.8). Similar research also states that people in the rural areas are more satisfied with pharmacy services.<sup>26</sup> Rural areas have limited access to primary medical care facilities. Besides, rural areas also have a limited information due to a lack of health literacy.<sup>38</sup> Compared to urban, rural clients are more likely to seek help and talk to a pharmacist for a longer period. Due to this, rural require more pharmacy services than well-educated urbanites. In addition, the location of community pharmacies in rural areas can be another factor for the higher satisfaction of rural communities.<sup>39</sup>

This study shows that education level also affects customer satisfaction significantly. Several studies have also found that education level is a significant factor.<sup>3,6,34,40</sup> Customers with the university level of education were less likely to be satisfied than customers with education levels below (AOR = 0.7; 95% CI = 0.5-0.9), which was in accordance with the finding of the previous study.<sup>3</sup> Customers with no formal education had a high level of satisfaction due to their lack of knowledge about typical pharmacy services. A higher level of education typically results in increased awareness and attentiveness among patients.<sup>19,41</sup>

A relationship was also found in the type of medicine with customer satisfaction where customers with refill prescriptions were two times more satisfied than self-medication and new prescriptions (AOR = 2; 95% CI = 1.5-3.1). Similarly, customers who visited routinely had 1.9 times greater satisfaction than the

**Table II. Customer satisfaction toward pharmacy service and opinion on improving the service (N=1,200)**

Services domain	Mean	SD
<b>Customer satisfaction</b>		
Medicine availability	3.46	0.34
Competitive price	3.25	0.32
Patient counseling	3.05	0.42
Pharmacists' skills in communication	3.13	0.25
Location and access	3.56	0.21
Overall satisfaction	3.21	0.45
<b>Customers' opinions on improving the service</b>		
Reduce waiting time	3.76	0.59
Increase medicine stocks	3.54	0.61
Add the number of staff	3.25	0.53
Add counseling hours	3.18	0.54
Improve facilities	3.92	0.45

**Table III. Determinant of satisfaction with pharmacy services in community pharmacy (N=1,200)**

Variable	Category	Level of satisfaction		AOR*	95% CI
		High (%)	Low (%)		
<b>Age</b>	<30	143 (25.91)	242 (37.35)	1	
	31-40	121 (21.92)	174 (26.85)	0.8	0.8-1.3
	41-50	132 (23.91)	152 (23.46)	0.9	0.7-1.2
	>50	156 (28.26)	80 (12.35)	1.2	1.1-2.1*
<b>Gender</b>	Male	321 (60.11)	191 (29.48)	1	
	Female	213 (39.89)	475 (73.30)	0.8	0.6-1.1
<b>Residence</b>	Rural	435 (77.82)	310 (47.84)	1	
	Urban	124 (22.18)	331 (51.08)	0.6	0.2-0.8*
<b>Education level</b>	Junior high school	342 (61.18)	170 (26.23)	1	
	Senior high school	352 (62.97)	180 (27.78)	0.9	0.7-1.1
	University	57 (10.20)	99 (15.28)	0.7	0.5-0.9*
<b>Type of medicine</b>	Self-medication	143 (31.43)	399 (53.56)	1	
	New prescription	123 (27.03)	242 (32.48)	0.9	0.8-1.3
	Refill prescription	189 (41.54)	104 (13.96)	2	1.5-3.1*
<b>Payment method</b>	Out of pocket	229 (49.78)	650 (87.84)	1	
	Paid by insurance	231 (50.22)	90 (12.16)	3	1.8-5.2*
<b>Experience in using the pharmacy</b>	First visit	253 (48.84)	492 (72.14)	1	
	Routine visit	265 (51.16)	190 (27.86)	1.9	1.4-2.3*

AOR : Adjusted odds ratio; \*Significant relationship

first visit (AOR = 1.9; 95% CI = 1.4-2.3). A higher number of pharmacy visits was found to be linked with increased patient satisfaction.<sup>3</sup> An analysis of customer feedback on pharmacy services revealed a positive correlation between the frequency of counseling and monitoring and overall satisfaction.<sup>3</sup>

Payment methods paid for by insurance are also three times more likely to be satisfied than out-of-pocket (AOR = 3; 95% CI = 1.8-5.2). Previous results also indicate that patient satisfaction may have been heavily influenced by health insurance status and its coverage.<sup>42,43</sup> Limited health financing may lead to high out-of-pocket healthcare expenses for patient, restricting access to care and indirectly impacting people's health and productivity. Although most patients expressed contentment with their insurance coverage, a majority also believed that insurance should cover a greater portion of medication costs.<sup>44</sup>

Finally, patients who visited routinely had 1.9 times greater satisfaction than the first visit (AOR = 1.9; 95% CI = 1.4-2.3). This aligns with prior studies, which found that patients who had made multiple visits to the pharmacy in the last three months tended to believe they were in better health and possessed a more accurate general understanding of pharmacists, leading to higher average satisfaction scores.<sup>3</sup>

Our study presented some limitations. First, the form of a community pharmacy that has a doctor's practice service makes customer satisfaction also influenced by the results of doctor's services. Second, this study did not collect data on customer admission information, so the relationship between household finances and customer satisfaction could not be determined.

### CONCLUSIONS

This study examining customer contentment with pharmaceutical services at community pharmacies in Yogyakarta, Surakarta, and Magelang found that overall, customers expressed a high level of satisfaction. The research revealed a correlation between customer sociodemographic factors and satisfaction levels, with the exception of gender. Moreover, improvements in customer counseling and pharmacists' skills in communication are necessary for community pharmacies to enhance their satisfaction.

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### CONFLICT OF INTEREST

None to declare.

### STATEMENT OF ETHICS

This study protocol was approved by Universitas Gadjah Mada Medical and Health Research Ethics Committee with approval number KE/FK/11422/EC/2021.

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