



Perceptions, Expectations, Reality, and Public Confidence Regarding the Role of Pharmacists in Pharmacy Services in Bandung

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ARTICLE INFO

Submitted : 13-08-2023

Revised : 20-02-2024

Accepted : 29-08-2024

Published : 30-09-2024

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ABSTRACT

Background: The shifting from the old paradigm to the new paradigm with the philosophy of pharmaceutical care demands pharmacists to enhance the quality of pharmaceutical services. However, this role has not been optimally fulfilled, especially in the community setting.

Objectives: This study aimed to identify the perceptions and expectations, the gap between expectations and reality, and public confidence as well as to analyze the relationship between sociodemographic factors and the perceptions, expectations, and public confidence in Bandung City regarding the role of pharmacists in pharmaceutical services.

Methods: A cross-sectional study was conducted using a validated survey instrument with 440 respondents in Bandung, West Java, from March to April 2023. The survey data were analyzed descriptively and through inferential statistics.

Results: The analysis showed that 58.41% of the community had a positive perception, 56.82% had high expectations, the average gap between expectations and reality was 14.04%, and more than 51.36% had a high level of public confidence in pharmacists. Sociodemographic factors influencing perceptions were age and the highest level of education ($p = 0.005$; $p = 0.003$), factors influencing public confidence were age, the highest level of education, residence address according to ID card (KTP), and occupation ($p < 0.001$; $p = 0.034$; $p = 0.001$; $p = 0.001$), and the factor influencing expectations was the residence address according to ID card (KTP) ($p = 0.043$). A correlation was found between the dimensions of perceptions, expectations, and public confidence.

Conclusion: Most participants held a positive perception, had high expectations, and shown high confidence in the pharmacist's position, despite the existence of a disparity between expectations and the actual provision of pharmacy services. The elements of perception, expectations, and confidence are interrelated.

Keywords: expectations; perceptions; pharmacists; public confidence; reality

INTRODUCTION

A pharmacist is a healthcare professional who specializes in the field of medicine and is committed to serving humanity. Every pharmacist must prioritize the well-being of the patient or the broader public as their main focus. As per the Law of the Republic of Indonesia (Undang-Undang Republik Indonesia) No. 36 of 2009, specifically section 108 on Health and Government Regulations of the Republic of Indonesia (Peraturan Pemerintah Republik Indonesia) No. 51 of 2009, pertaining to Pharmaceutical Work, the provision of pharmaceutical practice or services must be conducted by qualified health personnel, specifically pharmacists, who possess the necessary competence and authority as outlined in the relevant laws and regulations.^{1,2} Nevertheless, in Indonesia, not all pharmacists exhibit or deliver pharmaceutical services at their highest level of

effectiveness.^{3,4} Pharmacy services play a significant role in enhancing public health.³ Indonesia has implemented standardization measures on pharmaceutical services in Hospitals, Puskesmas, and Pharmacies to ensure and uphold the quality of pharmacy service. These measures involve the pharmacist as a central character, as outlined in Permenkes No. 72 Year 2016, No. 26 Year 2020, and No. 73 Year 2016. Regarding the level of pharmaceutical services, it encompasses two aspects: the management of pharmacy supplies, medical equipment, and utilized medicinal materials, as well as clinical pharmacy services. The primary objective of pharmaceutical services is to detect, prevent, and address drug-related issues (DRPs), while also ensuring that patients derive maximum benefit from their medication.⁵

In recent years, there has been a rise in public health demands, particularly with the emergence of the Covid-19 pandemic, which necessitates pharmacists to enhance the standard of pharmaceutical services.⁶ These events are providing more evidence for the necessity of broadening the traditional drug-focused paradigm to incorporate a new patient-centered paradigm that aligns with the principles of pharmaceutical care.⁷ An essential prerequisite for achieving successful Pharmaceutical care is the establishment of a strong rapport among the pharmacist, the patient, and the community.⁸ Pharmacists and patients or communities have a mutually dependent relationship, relying on each other for their respective needs. The patient's outcome or appearance will be contingent upon the conduct or deeds of the pharmacist as a healthcare practitioner, and vice versa. To cultivate a favorable image, it is essential for the pharmacist to establish emotional connections, foster trust, facilitate communication, encourage motivation, and engage in social engagement with patients and society. An additional crucial element that contributes to the effectiveness of pharmaceutical services is the comprehension of the needs, perceptions, and expectations of the general public.⁸

The description indicates the necessity of conducting research on understanding public attitudes and expectations regarding the role of the pharmacist in pharmaceutical services. Having a favorable public perception is crucial for establishing a positive image of the pharmacist's profession. Consequently, pharmacists are anticipated to have the opportunity to uphold and enhance the quality of pharmaceutical services. Pharmacists might acquire the unfavorable opinion of society by examining and reassessing their position in the provision of pharmacy services. A survey conducted in Saudi Arabia revealed that 72.8% of the participants acknowledged that pharmacists had supplied them with unambiguous instructions on drug information. Additionally, 70.2% of the respondents expressed trust in the pharmacist's professional opinion about drugs, while 64.8% reported being content with the services rendered by the pharmacist.⁵ A further survey revealed that 52.9% of favorable opinions and 47.1% of unfavorable opinions were created among the populace of Dusun Bandung Hilir about the pharmacy's function in providing pharmaceutical services.⁹ Differences in the distribution of sociodemographics and cultural backgrounds will give rise to varying attitudes and expectations within societies. This research aims to ascertain the public's perceptions, expectations, and confidence regarding the role of pharmacists in pharmaceutical services in the City of Bandung. It also seeks to determine if there is a disparity between societal expectations and reality. Additionally, the study will analyze the relationship between sociodemographic characteristics and the population's perception, expectation, and confidence in this regard.

METHODS

Study design

This study is a cross-sectional analytical survey that combines inferential and descriptive-observational methods.

Population and samples

The research participants were selected from the population residing in Bandung City, with the inclusion criteria being those aged 17 years or older living in Bandung city. The study excludes individuals who are professionals in the field of pharmacy (such as pharmacists or pharmaceutical technical staff), individuals who are currently pursuing an education in pharmacy or are licensed pharmacists, individuals who do not fully complete the questionnaire, and individuals who choose to withdraw their participation in this research. The sample size, calculated using the Slovin formula and accounting for a 10% margin of error, is 400 respondents. Additionally, 10% of this number, which is 40 respondents, is added as a precautionary measure to account for any potential exclusions. Therefore, the total number of respondents is 440. The sample technique employed in this work was non-probability sampling where the researcher deliberately picks individuals for the sample by sharing the questionnaire link via various online platforms and visiting public spaces across Bandung.

Study instruments

The study utilizes primary data sources acquired through the distribution and completion of questionnaires to the community in Bandung. The questionnaires are disseminated via diverse online platforms like Instagram, Line, Whatsapp, Gojek, Grab, Shopee, and Indriver. The questionnaire is disseminated to the general public through both Google Forms and printed copies. Researchers distribute a paper-based questionnaire to target individuals who lack access to Google Form and are challenging to contact through digital forms in public spaces.

We used the following operational definitions (perceptions, expectations, reality, public confidence) to develop this instrument. Perceptions are individualized interpretations of the existence and role of pharmacists in pharmacy services, shaped by personal experiences, knowledge, and beliefs including both positive and negative perceptions. Expectations are defined as anticipations of what pharmacists ought to be able to do and how they should contribute to pharmacy services derived from the national regulation. Reality is the actual state of pharmacist roles and contributions within pharmacy services in Bandung, Indonesia. Public confidence is the level of trust and faith that the public has in the ability of pharmacists to fulfill their roles and meet expectations within pharmacy services.

The initial section of the questionnaire comprises information pertaining to the respondents' identity and sociodemographic characteristics. The second component consists of a questionnaire aimed at determining the public's perceptions (regarding the existence and competence of pharmacists), expectations, and confidence regarding the function of the pharmacist in the pharmaceutical service. This questionnaire is divided into four sections: Existence of pharmacist, competence of pharmacist, expectations towards pharmacist, and public confidence toward pharmacist.

Public's perceptions were measured by perception towards existence and competence of pharmacist. Questions on existence were divided into two categories: the presence of a pharmacist at a hospital or community health center, and the presence of a pharmacist in a pharmacy. This section includes four questions in a Yes/No format, identified by the question codes S1-S4. There is no definitive correctness or incorrectness in this part, allowing respondents to provide replies based on their personal feelings or experiences. Respondents who provided an affirmative response were assigned a rating of 1, while those who responded negatively were given a score of 0. The competence section consisted of 14 questions in the Yes/No format, identified by the question codes K1-K14. The questionnaire in this part is derived from the Decree No. 058/SK/PP.IAI/IV/2011 issued by the Central Committee of the Indonesia Pharmacist Association (IAI), outlines the standards for competence expected of Indonesian pharmacists.¹⁰ Respondents who provided right answers were assigned a rating of 1, while those who gave erroneous responses were assigned a score of 0.

The Expectations and Realities part consists of eight questions, each labeled with question codes E1-E8 and R1-R8. Questions pertaining to expectations and reality are aligned in order for respondents to compare their expectations of the pharmacist's role with the actual experience they perceive when getting pharmacy services. Participants have the option to provide the responses they consider most suitable. The assessment of high and low expectations is based on the mean value of the overall scale selected by the participants when responding to eight questions regarding the public's expectations for the pharmacist's role. The maximum achievable score is thirty-two points. Respondents whose scores are at or above the category average have high expectations, whereas respondents with scores below the category average have low expectations.

The public confidence was assessed by four questions labeled with the P1-P4 question code. Participants have the option to provide the answer they deem most suitable. The answers to expectations, realities, and public confidence are measured on an objective scale ranging from 1 to 4. The scale values are as follows: 1 represents "Very Disagree," 2 represents "Disagree," 3 represents "Agree," and 4 represents "Very Agree."

Positive public perceptions, high expectations and high public confidence can be inferred when over 50% of the respondents exhibit an average score greater than 2.

The validity and reliability of the questionnaire questions have been assessed on a sample of 39 randomly selected respondents, in accordance with the specified inclusion and exclusion criteria. As part of the validation process, we calculated Pearson's correlation coefficient between the score of each question and the total score of questions within the same section. We retained only items with an absolute correlation coefficient greater than 0.304 ($r > 0.304$). The reliability test utilizes Cronbach's Alpha coefficient ($\alpha = 0.6665$ for ability, 0.8288 for expectation, 0.8098 for reality, and 0.4975 for confidence).

Data Analysis

The questionnaire data is examined using univariate and bivariate methods to determine the correlation between two variables in the questionnaire. Univariate analysis results were reported as total numbers and percentages while bivariate analysis was applied through correlation analysis (Cramer's V correlation). The independent variable in this study is a sociodemographic component. The related variable pertains to the opinion and expectations of the residents of Bandung City regarding the role of pharmacists in providing pharmacy services. The Chi-Square and Cramer's V^{11} tests are conducted using Minitab v21.1 software.

RESULTS AND DISCUSSION

Participant characteristics

A total of 440 individuals from the Bandung community participated in this study, with demographic characteristics as outlined in Table I.

The majority of respondents were young individuals, specifically between the ages of 17 and 24, accounting for 72.27% of the total. Furthermore, 63.86% of the respondents identified themselves as students. According to a survey conducted by BPS Kota Bandung¹², the population in Bandung City is predominantly youth, with the lowest proportion being senior individuals. The survey found that the majority of respondents were female, as determined by their gender. The majority of respondents have earned a high school education or a similar level of education, with the last level of education being primary school or an equivalent level. This data aligns with the BPS Kota Bandung¹² statistics, which indicates that the majority of people in Bandung have completed high school or an equivalent degree, while the lowest percentage is comprised of individuals who have not graduated from primary school (5.08%). When examining the respondents of this study from the perspective of their place of residence, it is evident that the majority of them are residents of Bandung City who possess a KTP (identity card) issued by the city. The respondents with income ranging from Rp. 1,000,001 to Rp. 5,000,000 were the highest followed by those with income ranging from Rp. 500,001 to Rp. 1,000,000. The least number of respondents had an income ranging from Rs 10,000,001 to Rp. 15,000,000. This is feasible due to the prevalence of student dependency, whereby the money is derived from a third party (such as a parent or grandfather) and is presumed to be derived from non-permanent employment.

Each data presented is discussed comprehensively in one flow: presenting the data, comparing it with other similar research, and putting forward relevant theories related to the existing data.

Discussion must explore the significance of the results of the study. Adequate discussion or comparison of the current results to the previous similar published articles should be provided to show the positioning of the present research (if available).

Perception of pharmacists' existence as viewed by the residents of Bandung

Perception is contingent upon the attributes of the surrounding environment and the objects inside it, as such, existence serves as a means to discern and comprehend perception.¹³ The majority of respondents, over 85%, indicated that they could differentiate a pharmacist from other pharmaceutical technicians and believed that pharmacists should utilize identity signs (Table II). Curiously, only approximately 70% of individuals are capable of perceiving the existence of a pharmacist. One potential explanation is that most participants perceive that they are not attended to by a pharmacist, but rather by another healthcare professional, such as a pharmacy technician. Aside from the physical presence of pharmacists in healthcare facilities and their readiness to directly serve patients, it is necessary for pharmacies to consistently utilize a unique identification symbol, such as professional attire with the pharmacist's name, to enable the public to easily identify and perceive their presence within the healthcare facility. The findings of this study were lower than two previous studies conducted in Saudi Arabia, which indicated that 70-80% of participants perceived the presence of a pharmacist in the pharmacy.^{14,15}

Perception of pharmacists' competency by the general public

There are a total of fourteen binary questions for the purpose of analyzing perception. The respondents provided responses regarding the pharmacist's competency based on their knowledge, personal experiences, and feelings. The assessment of positive and negative views is derived from the mean sum of accurate scores. The maximum cumulative score is fourteen points. Respondents with scores equal to or above the average are classified as having positive perceptions, whilst respondents with scores below the average are labeled as having

negative perceptions. Figure 1 displays a chart illustrating the replies of the participants to the fourteen questions in the pharmacist's competency section.

Table I. Respondent Demographic Data

Characteristics (n = 440)	N	%
Age (years)		
17 – 24	318	72,27
25 – 34	46	10,45
35 – 44	25	5,68
45 – 54	27	6,14
55 – 64	21	4,77
≥ 65	3	0,68
Sex		
Male	202	45,91
Female	238	54,09
Education		
Elementary school	9	2,05
Junior high school	11	2,50
Senior high school	265	60,23
Diploma (D1/D2/D3/D4)	23	5,23
Bachelor (S1)	121	27,50
Masters (S2)	11	2,50
Domicile based on KTP		
Bandung City	251	57,05
Other than Bandung City	189	42,95
Profession		
Students	281	63,86
Working	130	29,55
Not working	29	6,59
Income (per month)		
Rp0 – Rp500.000	109	24,77
Rp500.001 – Rp1.000.000	75	17,05
Rp1.000.001 – Rp5.000.000	177	40,23
Rp5.000.001 – Rp10.000.000	49	11,14
Rp10.000.001 – Rp15.000.000	13	2,95
> Rp15.000.000	17	3,86

Table II. Respondents' Responses to Questions Related to the Existence of Pharmacists

Questions Related to Existence	n (%)
Able to Distinguish Pharmacists from Pharmacy Technicians	187 (85)
Pharmacists Should Use Identification Marks	418 (95)
Can Feel the Presence of Pharmacists	304 (69,09)

Figure 1 displays two questions with a correct response percentage below 50%. These questions pertain to the right to suggest alternative medication (K8) and the pharmacist's duty to oversee the effectiveness of patient treatment (K6). This occurrence can be attributed to a significant likelihood that the respondents have misconstrued the responsibilities and duties of the pharmacist. Pharmacists have a crucial role in ensuring patient safety, particularly through their prescription review activities.¹⁶ Pharmacists may have the power to suggest other options when there is a shortage of medications, discrepancies in dosage, potential drug and allergy interactions, severe side effects for the patient, and other factors that could affect the patient. Prior confirmation of drug replacement will be provided to the doctor. When a patient desires to purchase a drug that is either free or available at a reduced cost, the authorized pharmacist provides education and guidance to assist the patient in selecting the appropriate medication, ensuring its efficacy and safety. In addition, the pharmaceutical services standard states that pharmacists are responsible for overseeing the effectiveness of patient therapy through

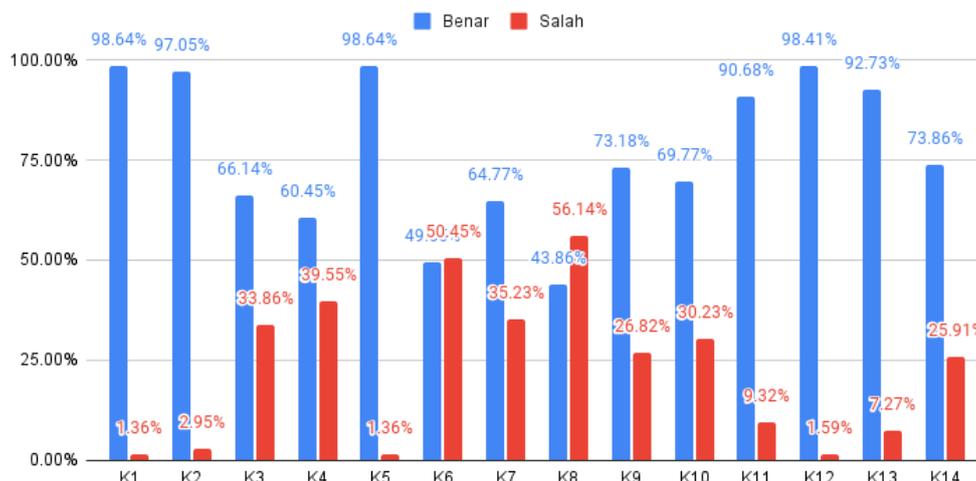


Figure 1. Distribution Chart of Responses to the Pharmacist Competency Section. Details of the questions are provided in the appendix. Blue: Correct; Red: Incorrect.

Drug Therapy Monitoring (PTO), monitoring drug side effects (MESO), providing home pharmacy care, conducting Drug Use Evaluation (EPO), offering counseling, and fostering positive interpersonal relationships with patients.

Correlation between sociodemographic characteristics and perception

The research in Table III revealed a significant correlation between age and perception of the population in Bandung ($p = 0.005$). According to Stephen P. Robins and David Krech in Prasilika, Tiara (2007)¹⁷ study, one of the aspects that affects how we perceive things is our frame of experience, which is shaped by our past experiences. However, the study found that respondents aged 17-24, who were in their younger years, had a stronger inclination towards positive impression compared to older individuals. The influence of reading on an individual's frame of reference, which is a knowledge framework that determines perception, may be a contributing component to this phenomenon.¹⁷ Adolescents and young professionals often possess idealistic and generative qualities that are influenced by their reading materials and surroundings, resulting in a utopian perspective. The results of this study are in direct opposition to earlier research which claimed that age ($p = 0.69$; $p = 0.29$) had no association with society's perceptions.^{8,9}

The educational level significantly affects public perception in Bandung ($p = 0.003$). In summary, Table III demonstrates a direct correlation between a person's level of education and the formation of more favorable opinions. According to Haloho, et.al., perception is influenced by the frame of experience, which is determined by education, in accordance with the theory proposed by Stephen P. Robins and David Krech¹⁷ An individual with a high level of education is more likely to have a broad perspective and a positive outlook. Nevertheless, the findings contradict the study conducted by Jose et al.⁸, which suggests that there is no significant difference in the amount of education in relation to the perceptions established by society ($p = 0.774$).

The statistical analysis indicates that gender does not have a significant impact on public perception in Bandung ($p = 0.121$). This aligns with the previous reports indicating that gender does not exhibit any link with the perception created in society ($p = 0.752$; $p = 0.982$).^{8,9} The KTP location ($p = 0.785$), employment ($p = 0.083$), and average monthly income ($p = 0.696$) do not have any discernible impact on public perception. According to Suprayogi's research,⁹ there is no significant relationship between employment, average monthly income, and public impression ($p = 0.148$; $p = 0.278$).

The public's expectations towards pharmacists and the actual reality

Surprisingly, the respondents' perception of reality did not align with the high expectations (58.62%). This was evident when comparing the scores of the reality-related questions (R1 to R8) in Figure 2, which were lower than the scores of the expectation-related questions. (E1 to E8). The highest disparity (-21.95%) between expectations and reality is observed in situations where the patient needs to communicate with the pharmacist. The subsequent largest disparity is observed in inquiries pertaining to the requirement of self-introduction (-21.38%), the willingness of the Pharmacist to engage in treatment discussions (-14.42%), the necessity of

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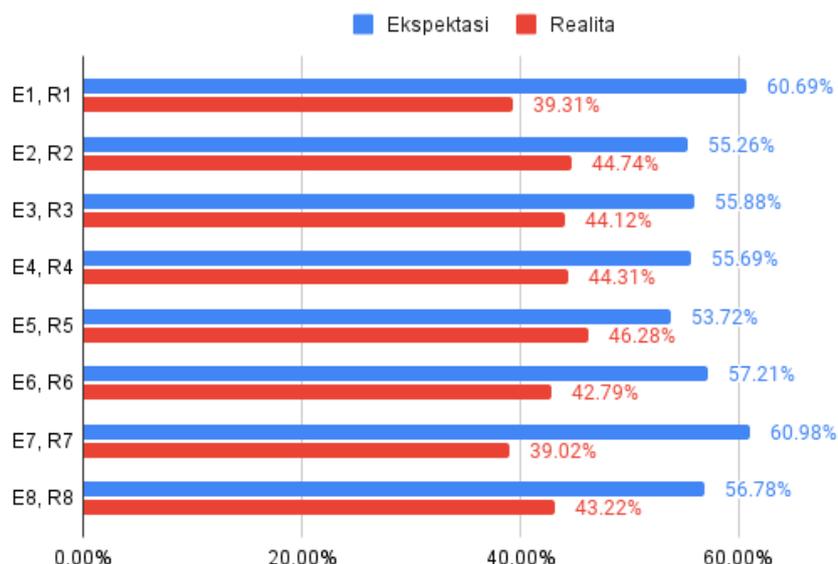


Figure 2. Distribution Chart of Responses to the Expectations and Reality Section Regarding Pharmacists. The detailed codes and questions can be found at the Supplementary. Blue: Expectation; Red: Reality.

Table III. Correlation of Sociodemographic Factors with Public Perception

Characteristics	Cramer's V Correlation	p value	Interpretation
Age	0,195	0,005*	Strong
Sex	0,074	0,121	Weak
Education	0,202	0,003*	Strong
Domicile (KTP)	0,013	0,785	Moderate
Occupation	0,106	0,083	Moderate
Average monthly income	0,083	0,696	Weak

Note: (*) = significant difference (p value < 0,05)

empathy and establishing a positive emotional rapport with the patient (-13.55%), the entitlement to substitute the prescribed treatment (11.76%), the duration of waiting for the preparation of medications and non-medical items (-11.37%), the duty to provide thorough and accurate responses to inquiries (-10.52%), and ultimately, the responsibility to ensure the comprehensiveness and clarity of the drug label (-7.43%).

Correlation between socio-demographic factors and expectations

The analysis results (Table IV) demonstrated the impact of KTP location on the population's expectations in Bandung on the role of pharmacists in pharmaceutical services ($p = 0.043$). Bandung's reputation as a patient referral health center in West Java may explain the expectation for a more robust healthcare infrastructure. Individuals with a positive history of getting pharmaceutical services are more likely to hold elevated expectations for future experiences.¹⁸ Public expectations are shaped not only by personal experience but also by other sources of information. The Internet provides convenient access to urban sources of information. According to the data from BPS Kota Bandung¹², 69.22% of Internet users obtain information.

Furthermore, age, gender, last education, employment, and average monthly income elements do not exert any influence on people's expectations. Contrary to Johnson and Lewis's assertion in Kriskovich, Tanner (2012)¹⁹, which asserts that the demography, gender, culture, and hierarchy present in social societies impact one's expectations, there is a contradiction. In the realm of healthcare, patient expectations can be shaped by various factors such as the patient's comprehension of the disease, cultural heritage, health belief, attitudes, and knowledge levels, as well as other demographic characteristics.²⁰ Regarding the educational aspect, the p -value exceeds 0.05, indicating a lack of statistical significance. However, there is a robust link with expectations. If the distribution of respondents is uniform or the sample size is increased, there is a potential for the analysis results to demonstrate the impact of education on public expectations.

Table IV. Correlation of Sociodemographic Factors with Public Expectations

Characteristics	Cramer's V Correlation	p value	Interpretation
Age	0,1038	0,448	Moderate
Sex	0,0255	0,592	No/Very weak
Education	0,1543	0,063	Strong
Domicile (KTP)	0,0963	0,043*	Weak
Occupation	0,0957	0,133	Weak
Average monthly income	0,0998	0,495	Weak

Note: (*) = significant difference (p value < 0,05)

Table V. Percentage of Scores for Each Aspect of Public Confidence Compared to the Total Score

Public confidence aspects	Percentage of Total Score (%)
P1 = Confidence in the information provided by pharmacists about drugs	27.5
P2 = Confidence in the expertise of pharmacists as healthcare professionals	24.8
P3 = Confidence in the responsibility of pharmacists in patient treatment	24.1
P4 = Confidence in the importance of the role of pharmacists	23.6

Public confidence in pharmacists

According to Ni Luh Putu et al.²¹ trust that can influence public perception. Table V displays the mean aggregation of responses from participants for four questions related to their level of confidence in the pharmacist. This image illustrates that inquiries pertaining to the trustworthiness of drug information provided by pharmacists had the highest mean percentage of cumulative responses (27.5%). This parallels a study conducted by Tjong²², which demonstrated that the highest level of confidence is associated with the provision of information pertaining to medications. The questions pertaining to the pharmacist's secondary duty had the lowest average accumulation percentages of replies, specifically at 23.6%.

While there may not be any notable disparities among aspects, a majority of over 50% of the people in Bandung possesses a strong level of trust in pharmacists. It is desirable for pharmacists to persist in upholding and improving their role in pharmaceutical services. (Table VII).

The correlation between sociodemographic characteristics and public confidence

Table VI demonstrates significant associations between age, level of education, place of residence, profession, and the public's confidence of the pharmacist's position in the pharmaceutical service ($p < 0.001$; $p = 0.034$; $p = 0.001$; $p = 0.001$). The findings are consistent with other research that shown the impact of age-related factors on the level of trust the public has in the information provided by pharmacists.²³ Elena's study (2021) found that the educational criteria did not have any impact on public trust, contradicting previous research. Communities outside of Bandung (based on KTP) generally exhibit a greater average level of confidence than those within Bandung. In the future, researchers should include inquiries regarding the frequency of pharmacy visits at a specific healthcare facility to enhance the conclusiveness of the analysis findings. Additional research indicates that one's employment status does not serve as a distinguishing feature that influences public confidence.²³

Public confidence is unaffected by gender variables and average monthly income. Women exhibit the highest average level of confidence in relation to the gender factor. Communities with an income range of Rp. 10,000.001 – Rp. 15,000,000 exhibit the highest average confidence level in terms of monthly income. The study's findings align with the research conducted by Elena Druica et al.²³, which asserts that public trust is unaffected by an individual's gender and average wealth.

Interdimensional correlation analysis

Table VII indicates that around 58% of participants had a positive preception regarding the role of pharmacists in pharmacy services. Nevertheless, there are still some who maintain a pessimistic viewpoint. The previous study found that 52.9% of the community in Dusun Banung Hilir had a positive perception of the role of the pharmacist.⁹ A study conducted in Sokaraja district revealed that 63.64% of the society held positive

Table VI. Correlation of Sociodemographic Factors with Public Confidence

Characteristics	Cramer's V Correlation	p value	Interpretation
Age	0,2518	0,000*	Very strong
Sex	0,0752	0,115	Weak
Education	0,1657	0,034*	Strong
Domicile (KTP)	0,1646	0,001*	Strong
Occupation	0,1769	0,001*	Strong
Average monthly income	0,0756	0,774	Weak

Note: (*) = significant difference (p value < 0,05)

Table VII. Categories of Public Perceptions, Expectations, and Trust Towards Pharmacists

Aspects	n	%
Positive Perceptions	257	58,41
High Expectations	250	56,82
High confidencei	226	51,36

Table VIII. Correlation Analysis Among Dimensions using Cramer's V Test

Dimension	Perceptions		Expectations		Confidence	
	Cramer's V	p-value	Cramer's V	p-value	Cramer's V	p-value
Perceptions	-	-	0,1394	0,003*	0,2398	<0,001*
Expectations	0,1394	0,003*	-	-	0,1614	0,001*
Confidence	0,2398	<0,001*	0,1614	0,001*	-	-

Note: (*) = significant difference (p value < 0,05)

attitudes regarding the functions of pharmacists.²⁴ Several research have indicated that, on the whole, individuals residing in urban areas tend to possess a more prevalent inclination towards negative perceptions rather than positive ones. A comprehensive analysis revealed that 10 out of the 11 studies examined consistently demonstrated that the general public held a favorable assessment of community pharmacists' endeavors in mitigating and managing cardiovascular diseases²⁵. Additional systematic research have similarly indicated favorable perceptions and attitudes towards community pharmacists²⁶. More than 50% of the respondents exhibited elevated expectations and confidence in the pharmacist.

Third-dimension correlations are established to facilitate the tracking of misunderstandings and discrepancies between community expectations and actual conditions, as experienced by the residents of Bandung, by pharmacists and local government authorities. (Table VIII).

The dimensions of perception and expectation exhibit statistically significant connections with average categories. To our knowledge, limited studies have endeavored to explore the correlation among perceptions, expectations, and public confidence regarding services provided by pharmacists. We have encountered only one study from Saudi Arabia which reported a strong and positive correlation between public perception and attitude ($r = 0.71$, $p < 0.01$).²⁷ These findings align with our own study, which underscores a moderate to strong and statistically significant correlation among these dimensions. Other studies by Miftah Toha²⁸ asserted that an individual's expectations are the erroneous component that influences perception. Furthermore, there exists a robust and statistically significant association between perception and public confidence. This correlation suggests that the higher the public perception of the pharmacist, the greater the public confidence in their abilities.²⁹ This aligns with Tang and Sporrang's assertion that hope influences an individual's confidence in the pharmacy profession.³⁰ By examining the three outcomes of the analysis, the pharmacist can comprehend the importance of trust in addressing misconception.

The strengths and limitations

The research is limited by its failure to address the frequency of visits to healthcare facilities, the geographical distribution of health facilities, and the role of healthcare providers in analyzing public views and expectations.

However, this study is notable for its substantial sample size and unique focus on Bandung City as the primary demographic, which sets it apart from previous studies. Bandung City was selected due to its status as the capital of Java Barat, the hub for patients in West Java. Furthermore, in contrast to prior research that solely examined perception and satisfaction, this study specifically examines the dimensions of perceptions and expectations. This is because public satisfaction with pharmaceutical services cannot be attained without analyzing the disparity between expectations and actuality. To the best of the researchers' knowledge, this study is unique in its integration of elements such as existence, competence, and public confidence to examine society's perceptions.

CONCLUSION

Most participants held a positive perception, had high expectations, and shown high confidence in the pharmacist's position, despite the existence of a disparity between expectations and the actual provision of pharmacy services. The sociodemographic elements that impact perception include age and education level. The factors that affect confidence are age, education level, KTP domicile, and occupation. The characteristics that influence expectations is KTP domicile. The elements of perception, expectations, and confidence are interrelated.

ACKNOWLEDGEMENT

We extend our gratitude to all the respondents for their participation. This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

STATEMENT OF ETHICS

The research has received ethical approval from the Ethics Commission of Bandung Health Polytechnic, Ministry of Health, with the reference number 122/KEPK/EC/II/2023, on 24 February 2023.

REFERENCES

1. Undang-undang (UU) Nomor 36 Tahun 2009 tentang Kesehatan. In. Jakarta2009.
2. Peraturan Pemerintah (PP) Nomor 51 Tahun 2009 tentang Pekerjaan Kefarmasian. In. Jakarta2009.
3. Peran Apoteker Komunitas Dalam Peningkatan Derajat Kesehatan Indonesia. Fakultas Kedokteran dan Ilmu Kesehatan UIN Syarif Hidayatullah; 2015. <https://repository.uinjkt.ac.id/dspace/handle/123456789/52330>.
4. Parera MMW, Kristina SA, Yasin NM. Implementasi Standar Pelayanan Kefarmasian di Apotek Kupang. *JURNAL MANAJEMEN DAN PELAYANAN FARMASI (Journal of Management and Pharmacy Practice)*. 2021;11(3).
5. El-Kholy AA, Abdelaal K, Alqhtani H, Abdel-Wahab BA, Abdel-Latif MMM. Publics' Perceptions of Community Pharmacists and Satisfaction with Pharmacy Services in Al-Madinah City, Saudi Arabia: A Cross Sectional Study. *Medicina*. 2022;58(3).
6. PERAN APOTEKER DALAM PELAYANAN KEFARMASIAN DI MASA PANDEMI COVID-19 [press release]. 2020.
7. Peraturan Menteri Kesehatan Nomor 72 Tahun 2016 tentang Standar Pelayanan Kefarmasian Di Rumah Sakit. In. Jakarta2016.
8. Jose J, Al Shukili MN, Jimmy B. Public's perception and satisfaction on the roles and services provided by pharmacists – Cross sectional survey in Sultanate of Oman. *Saudi Pharmaceutical Journal*. 2015;23(6):635-641.
9. Suprayogi H. *Persepsi Masyarakat Dusun Baning Hilir terhadap Peran Apoteker dalam Pelayanan Kefarmasian*. Yogyakarta: Pharmacy, Universitas Islam Indonesia; 2020.
10. PP-IAI. Surat Keputusan Pengurus Pusat Ikatan Apoteker Indonesia No. 058/SK/PP.IAI/IV/2011 tentang Standar Kompetensi Apoteker Indonesia. In:2011.
11. Akoglu H. User's guide to correlation coefficients. *Turk J Emerg Med*. 2018;18(3):91-93.
12. Data Sensus Kota Bandung. 2023. <https://bandungkota.bps.go.id/subject/12/kependudukan.html#subjekViewTab3>.
13. Ismayanti, Siswoyo M, Wulandari S. PERSEPSI TOKOH MASYARAKAT TERHADAP EKSISTENSI LEMBAGA KEMASYARAKATAN DESA (Studi Kasus di Desa Curug Kecamatan Kandanghaur Kabupaten Indramayu). *Jurnal Ilmiah Publik*. 2017;5(1).

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14. Alghurair SA, Simpson SH, Guirguis LM. What elements of the patient-pharmacist relationship are associated with patient satisfaction? *Patient Prefer Adherence*. 2012;6:663-676.
15. Al-Arifi MN. Patients' perception, views and satisfaction with pharmacists' role as health care provider in community pharmacy setting at Riyadh, Saudi Arabia. *Saudi Pharm J*. 2012;20(4):323-330.
16. Peraturan Menteri Kesehatan Republik Indonesia Nomor 35 Tahun 2014 Tentang Standar Pelayanan Kefarmasian Di Apotek. In: Kesehatan K, ed. Jakarta 2014.
17. Haloho TP. *Studi Persepsi Risiko Keselamatan Berkendara serta Hubungannya dengan Konsep Locus of Control pada Mahasiswa FKM UI yang Mengendarai Motor, Tahun 2007* [Bachelor thesis]. Depok: FKM-UI, Universitas Indonesia; 2007.
18. Zeithaml VA, Berry LL, Parasuraman A. The Behavioral Consequences of Service Quality. *Journal of Marketing*. 1996;60(2).
19. Kriskovich T. How Culture Influences Our Expectations of Others. 2012.
20. Lateef F. Patient expectations and the paradigm shift of care in emergency medicine. *J Emerg Trauma Shock*. 2011;4(2):163-167.
21. Ni Luh Putu Sari W, Ni Wayan E. Peran Kepercayaan dalam Memediasi Persepsi Nilai terhadap Niat Beli Produk Ramah Lingkungan. *E-Jurnal Manajemen Universitas Udayana*. 2015;4(8).
22. Tjong JA. Harapan Dan Kepercayaan Konsumen Apotek Terhadap Peran Apoteker Yang Berada Di Wilayah Surabaya Timur. *Calyptra : Jurnal Ilmiah Mahasiswa Universitas Surabaya*. 2014;2(2).
23. Druică E, Ianole-Călin R, Băicuș C, Dinescu R. Determinants of Satisfaction with Services, and Trust in the Information Received in Community Pharmacies: A Comparative Analysis to Foster Pharmaceutical Care Adoption. *Healthcare*. 2021;9(5).
24. Pratiwi H, Mustikaningtias I, Widyartika FR, Setiawan D, Nasrudin K, Julietta L. Analisis Persepsi Masyarakat Terhadap Peran Apoteker Pada Layanan Kefarmasian Di Apotek Kecamatan Sokaraja, Baturraden, Sumbang, Dan Kedungbanteng. *JPSCR: Journal of Pharmaceutical Science and Clinical Research*. 2020;5(1).
25. Motlohi NF, Wiafe E, Mensah KB, Padayachee N, Petrus R, Bangalee V. A systematic review of the role of community pharmacists in the prevention and control of cardiovascular diseases: the perceptions of patients. *Syst Rev*. 2023;12(1):160.
26. Ababneh BF, Ong SC, Mahmoud F, Alsaloumi L, Hussain R. Attitudes, awareness, and perceptions of general public and pharmacists toward the extended community pharmacy services and drive-thru pharmacy services: a systematic review. *J Pharm Policy Pract*. 2023;16(1):37.
27. Almohammed OA, Alsanea S. Public Perception and Attitude toward Community Pharmacists in Saudi Arabia. *Saudi Journal of Health Systems Research*. 2021;1(2):67-74.
28. Thoha M. *Kepemimpinan Dalam Manajemen*. Jakarta: Raja Grafindo Persada; 2003.
29. Aryani R. Persepsi Pasien tentang Peran Apoteker pada Layanan Kefarmasian di Pusat Kesehatan Masyarakat. *Jurnal Penelitian Kesehatan Suara Forikes*. 2022;13(1):92-97.
30. Tang JTC SS. *The Role of Pharmacists in Asia and Africa - A Comparative Study to the UK and Sweden*: Inst. F. Farmaci, Uppsala Universitet; 2008.