ANALYSIS OF CONSUMER PREFERENCES IN CHOOSING PHARMACY IN BOGOR CITY

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ABSTRACT *: The increasing number of pharmacies in Bogor City has led to greater consumer choice of pharmacies. However, with the increasing number of pharmacies, it will increase competition in the pharmacy business, necessitating an understanding of consumer preferences. This study aims to analyze the characteristics of pharmacy consumers, analyze the consumer decision making process in determining pharmacies, analyze consumer preferences for determining pharmacies in Bogor City and provide strategic recommendations for pharmacy businesses. This study was conducted using descriptive analysis method and conjoint analysis with Pairwise Comparison on 200 respondents. The sampling method was non-probability sampling using purposive sampling technique. The type and source of data used in this study was through distributing questionnaires to respondents in Bogor City. This study revealed that the majority of respondents showed good knowledge about drug classification and consumer preferences in choosing a pharmacy in Bogor City preferring pharmacies that sell drugs at low prices, then pharmacies with locations close to their homes and pharmacies that provide complete drug products. Consumer preferences in choosing a pharmacy are influenced by price, location, and product completeness. Recommended strategies for pharmacy business owners in Bogor City by increasing the completeness of drug types, analyzing consumer consumption patterns based on drug sales data in a certain period, providing excellent customer oriented services and strategic location selection.*

KEYWORDS - *Conjoint analysis, Consumer behavior, Consumer preferences, Pharmacy*

I. INTRODUCTION

The growth of the health sector in Indonesia, particularly the number of pharmacies, has shown a significant increase in recent years. In Bogor City, the number of pharmacies increased from 165 in 2022 to 189 in 2023 (DHO, 2024). This increase reflects the government's efforts to improve access to health services for the community. With so many pharmacies to choose from, consumers now have more alternatives in obtaining medicine, but this has also led to increased competition between pharmacies.

Consumers are faced with a wide array of choices, which demands a deeper understanding of the factors that influence their decision to choose a pharmacy. In this context, it is important to analyze consumer characteristics and their decision-making process. According to Gul et al. (2023), marketing strategies based on knowledge of consumer preferences are indispensable for facing competition in the healthcare sector.

Previous research shows that price and location are the main attributes that influence purchasing decisions at pharmacies. Adi and Wicaksono (2019) found that consumers tend to choose pharmacies that offer affordable prices and are located close to where they live. In addition, Shaharuddin et al. (2015) emphasized the importance of product completeness as one of the main considerations for consumers in choosing a pharmacy. However, although there are a number of studies examining consumer preferences, most of them were conducted in different regions. There is no research that specifically examines consumer preferences in Bogor City. Therefore, thisresearch expected to fill the void and provide new insights into the dynamics of consumer preferences in this area.

The theory of consumer behavior is the main foundation in this study. This theory explains how individuals and groups make decisions based on various factors, including cultural, social, personal, and psychological (Kotler, 2009). Understanding consumer behavior is key to formulating effective marketing strategies, especially in the competitive healthcare field. Using descriptive analysis and conjoin analysis methods, this study will identify factors that influence consumer preferences in choosing a pharmacy. Data will be collected through questionnaires distributed online to consumers who have purchased non-prescription drugs at pharmacies.

The results of this study are expected to provide better insight into consumer preferences in Bogor City. By understanding these preferences, pharmacy businesses can formulate more appropriate strategies to improve their competitiveness in a competitive market. The recommendations resulting from this research will include ways to improve the attractiveness of the pharmacy based on the analysis of consumer characteristics and

preferences. Each of the objectives of this research will be answered in the conclusion, which will provide a clear overview of the results achieved.

This research not only aims to provide practical benefits for pharmacy business actors, but also to enrich academic understanding of consumer behavior in the context of health services. It is hoped that this research can be used as a reference for further research that wants to dig deeper into consumer preferences in the health sector, especially in choosing a pharmacy.

II. LITERATURE REVIEW

2.1 Consumer Behavior

Consumer behavior includes various actions and decisions taken by individuals or groups when choosing, buying, using, and evaluating products or services. According to Kotler and Keller (2009), this behavior is influenced by cultural, social, personal, and psychological factors. In the context of pharmacy, understanding consumer behavior is very important, because factors such as trust in the pharmacy, previous experience, and recommendations from close people can influence purchasing decisions. For example, consumers who have received good service at a pharmacy are more likely to return and recommend it to others.

2.2 Consumer Decision Making Process

The consumer decision-making process consists of five stages: problem recognition, information search, evaluation of alternatives, purchase decision, and post-purchase behavior (Kotler, 2009). At the problem recognition stage, consumers realize the need to buy medicine, for example when experiencing symptoms of illness. Next, they search for information about available pharmacies, considering factors such as location and price. At the alternative evaluation stage, consumers compare several pharmacies based on attributes they consider important, such as product completeness and service quality. Understanding this process helps pharmacy owners to adjust marketing strategies and improve customer satisfaction, which can ultimately influence consumer loyalty.

2.3 Consumer Preferences

Consumer preference refers to an individual's preference or choice of a particular product or service. According to Solomon (2009), these preferences are influenced by previous experience, knowledge, and availability of information. In the context of pharmacies, preferences may include drug brands, prices, and pharmacy locations. Consumers who preferpharmacies with more affordable prices or complete products will be more likely to make purchases at these places. Previous research suggests that an understanding of consumer preferences can assist pharmacies in designing more suitable offerings and increase their appeal in a competitive market.

2.4 Consumer Preference Attributes

Consumer preference attributes are characteristics or features of products or services that consumers consider when making decisions. In this study, relevant attributes include product quality, price, and pharmacy location. According to Malhotra (2017), the selected attributes must be significant in influencing consumer choice. For example, consumers may prefer pharmacies that provide complete medicines at competitive prices and locations that are easily accessible. By analyzing these attributes, pharmacies can identify key factors that influence consumer decisions and formulate more effective marketing strategies to meet customer needs and expectations.

2.5 Relationship between variables

In this study, there are several variables analyzed, namely product, price, and location. The relationship between these variables can be explained as follows:
Products: The availability and completeness of products at the pharmacy influence consumer decisions. Consumers tend to choose pharmacies that offer various types of medicines they need.Price: Drug prices are an important factor in decision-making. Research shows that consumers prefer pharmacies that offer lower prices, reflecting a preference to get more value from their purchases.Location: The proximity of the pharmacy location to where consumers live also plays a big role. Consumers are more likely to visit pharmacies that are easy to reach, thus influencing their purchasing decisions.

III. CONCEPTUAL FAMEWORK

Based on the data, Bogor City shows significant growth in health facilities, especially in the number of pharmacies. This increase in the number of pharmacies has led to increasingly fierce competition between pharmacies. One of them is Apotek XYZ, which is located in the heart of Bogor City. Currently, Apotek XYZ is facing a major challenge as it is experiencing a decline in the number of customer transactions from 2022 to 2024. This decline has a direct impact on the pharmacy's revenue, so an effective strategy is needed to maintain and improve its competitiveness. In facing this competition, pharmacy business owners need to deeply understand what consumers want. Consumers have their own criteria and preferences in making decisions when choosing a pharmacy. Therefore, analyzing consumer preferences is an important step to take. This study aims

to analyze consumer characteristics and the purchasing decision-making process using descriptive analysis methods.

Furthermore, this research will identify relevant attributes based on considerations from previous studies. The attributes to be studied include product, price, and location of the pharmacy. Each attribute will be further analyzed to determine specific levels, which reflect consumer preferences. The use of conjoin analysis in this study will allow researchers to identify the combination of attributes that consumers are most interested in when choosing a pharmacy. The results of all the analyses conducted will hopefully provide a better insight into consumers' decision-making process and their preferences in choosing a pharmacy in Bogor City. These findings will form the basis for pharmacy businesses to formulate more appropriate marketing strategies. By understanding consumer preferences, Apotek XYZ can optimize their offerings, improve service quality, and ultimately improve their revenue amidst increasingly fierce competition. This research is expected to make a significant contribution to the development of pharmacy marketing strategies in urban areas.
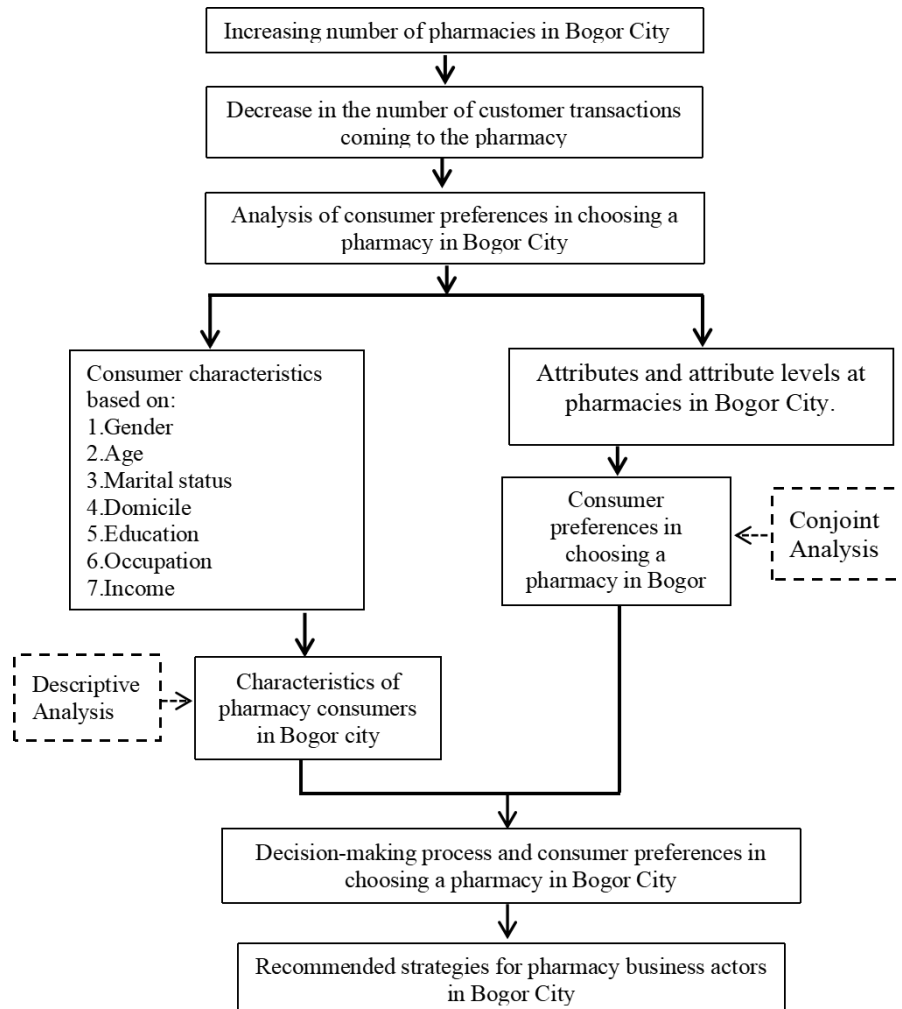
Figure 1. Conceptual framework of thinking about consumer preference analysis in choosing a pharmacy in Bogor city.

IV.   METHOD

4.1 Research Design

This research design uses a quantitative approach with a survey method. This study aims to analyze consumer preferences in choosing a pharmacy in Bogor City. In this study, a questionnaire was used as a data collection tool, which was designed to identify consumer characteristics, decision-making processes, and preferences related to pharmacy attributes such as product, price, and location. This research design allows for an in-depth analysis of the factors that influence consumer decisions.

4.2 Sampling

The sampling method used in this research is non-probability sampling with purposive sampling technique. This technique was chosen because the researcher deliberately determined certain criteria for

selecting respondents. Respondents involved in this study were individuals who had purchased medicine without a prescription at pharmacies in Bogor City. The targeted number of respondents is 200 people, which is considered sufficient to provide good representation of the population.

4.3 Measurement

To minimize the number of stimuli that must be evaluated by respondents, restrictions are applied to the number of attribute levels used. The process of determining attributes and attribute levels in this study refers to literature theory and previous research relevant to the context of this study. The results of the literature review of selected attributes can be seen in Table 1.

Table 1. Literature review results

No.	Source	Research Title	Preferred Attributes
1	Adi and (2019)	Factors Affecting Drug Purchasing Decisions at Pharmacies	Product, price, location
2	Dysyandi *et al.* (2019)	Marketing Mix on the Concept of Modern Pharmacy and its Marketing Strategy	Product, price, location
3	Pribadi *et al.* (2020)	Pharmacy Selection Preferences and Purchasing Over-the- Counter Drugs with a customer Segmentation Approach: A Case Study in Magelang	Product, price, location
4	Shaharuddin *et al.* (2015)	*Assessing Consumer Preferences Using the Community of Pharmaceutical Evaluation Questionnaire: A Pilot Survey in a Malaysian City*	Product, price, location

From the results of the literature review related to consumer preference attributes, this research will use attributes and attribute levels that have been identified as important factors in influencing consumer purchasing decisions. The selected attributes include product, price, and location, each of which has a specific level relevant to the context of pharmacy selection.

Table 2. Description of attributes and attribute levels

No.	Attributes	Attribute level	Description
1	Products	1	medicine
		2	Medicine is always in stock
2	Price	1	Cheap drug prices
		2	Expensive medicine price is not a problem
3	Location	1	Location near residence
		2	Location far from residence

The attributes selected in this study that will be evaluated by respondents are product, price and location attributes. Through the evaluation of these three attributes (product, price, and location) this study aims to provide deeper insight into consumer preferences in choosing a pharmacy. The results of this analysis are expected to provide strategic recommendations for pharmacy business actors in designing offerings that are more in line with consumer needs and expectations.

4.4 Data Collection

Data collection was conducted online using WhatsApp and Google Form applications. The questionnaire was distributed to respondents in Bogor City who met the research criteria. The data collection process was conducted from December 2024 to January 2025. Researchers ensured that all respondents understood the purpose of the research and provided honest and objective answers.

4.5 Data Analysis

The data that has been collected will be analyzed using descriptive analysis and conjoin analysis. Descriptive analysis is used to describe the characteristics of respondents and survey results in general. In addition, conjoin analysis with the Pairwise Comparison method will be used to identify the combination of

attributes that consumers are most interested in choosing a pharmacy. The results of this analysis are expected to provide useful insights for pharmacy business actors to formulate the right marketing strategy.

V. FINDING

5.1 Characteristics of pharmacy consumers

To 200 respondents who filled out the questionnaire were given questions regarding knowledge about the types of drug classes sold at pharmacies. From the research results in Table 3 obtained, 79% of respondents knew about the types of drug groups and 21% of respondents did not know.

Table 3. Percentage of knowledge about the types of drug classes sold at the pharmacy

Answer	Respondents	Percentage (%)
Yes	158	79
No	42	21

Table 4 shows the level of understanding and knowledge among respondents. For the question about the types of drug classes that must be purchased with a doctor's prescription, 176 respondents answered correctly, while 24 respondents answered incorrectly, with a percentage of correct answers of 88%. On the question of the types of drugs that can be purchased without a doctor's prescription, 195 respondents answered correctly and only 5 respondents answered incorrectly, with a percentage of correct answers of 97.5%. Next, the question about the class of hard logo drugs showed 191 respondents answered correctly and 9 respondents answered incorrectly, with a percentage of correct answers of 95.5%. For questions about the free logo class, 179 respondents answered correctly and 21 respondents answered incorrectly, with a percentage of correct answers of 89.5%. Furthermore, for questions about the limited free logo drug class, 181 respondents answered correctly and 19 respondents answered incorrectly, with a percentage of correct answers of 90.5%. Based on the results of respondents' answers to questions about the types of drug classes, overall the answers show that respondents have good understanding and knowledge. This can be seen from the results of the average correct answer from the overall question about the type of drug class is 92.2% .

Table 4. Percentage of respondents' answers to questions about the type of drug group

Question	Correct Answer	Wrong Answer	Percentage (%) Correct Answer
Classes of drugs purchased must be prescribed by a doctor	176	24	88
Classes of drugs that can be purchased without a prescription	195	5	97,5
Hard logo drug class	191	9	95,5
Drug class over-the-counter logo	179	21	89,5
Restricted over-the-counter logo drug class	181	19	90,5
Average correct answer			**92,2**

Furthermore, from the research results in Table 5, the results show the brand of medicine that is the main choice of respondents in overcoming the disease. In the question about the brand of medicine to treat fever in children, the Tempra Syrup brand of medicine was the top choice of respondents with a percentage of 53%, Sanmol Syrup by 34.5%, Proris Syrup by 6%, Bodrexin Syrup by 4% and other brands by 2.5%. In the question about drug brands to treat headache pain, the drug brand Panadol Extra was the most preferred choice of respondents, with a percentage of 50.5%, Paramex by 17%, Bodrex by 15%, Os.kadon by 8.5% and other brands by 9%.

Table 5. Respondents' preferred brand of medicine

Disease	Brand of medicine	Number of respondents	Percentage(%)
Fever	Tempra Syrup	106	53
	Sanmol Syrup	69	34,5
	Proris Syrup	12	6
	Bodrexin Syrup	8	4
	More	5	2,5

Headache	Panadol Extra	101	50,5
	Paramex	34	17
	Bodrex	30	15
	Oskadon	17	8,5
	More	18	9
Diarrhea	Diapet	67	33,5
	New Diatabs	64	32
	Neo Entrostop	43	21,5
	Diagit	7	3,5
	more	19	9,5
Heartburn	Promag	68	34
	Polysilane	63	31,5
	Mylanta	42	21
	Plantacid Forte	10	5

Next to the question about the brand of medicine to treat diarrhea that is good according to respondents, the Diapet brand of medicine was the most preferred choice with a percentage of 33.5%. Followed by New Diatabs at 32%, Neo Entrostop at 21.5%, Diagit at 3.5% and other brands at 9.5%. Then on the question of drug brands to deal with stomach pain during heartburn, the Promag drug brand was the most chosen by respondents, with a percentage of 34%, Polysilane at 31.5%, Mylanta at 21%, Plantacid Forte at 5%, and other brands at 8.5%.Understanding consumer knowledge of a product or service is important for management or business owners. Because consumer knowledge will affect purchasing decisions. When consumers have more knowledge, they will be better at making decisions, more efficient and more precise in processing information (Sumarwan 2015).

The profile of respondents in this study provides a comprehensive overview of the analysis of the demographic characteristics of pharmacy consumers in Bogor City. Because demographics will describe the characteristics of a population (Sumarwan 2015). Buyer decisions are also influenced by personal characteristics, which have a direct impact on consumer behavior (Kotler 2009). So that management or business owners can determine the right segmentation and target market. The demographic characteristics of respondents collected in this study are gender, age, marital status, domicile, education, occupation and income.

From the research results in Table 6, the characteristics of pharmacy consumers were obtained, based on gender, the number of female respondents reached 109 people (54.5%) of the total respondents, while male respondents totaled 91 people (45.5%). That women in the family, especially their role as mothers, are also referred to as family caretakers. Women are considered more effective in managing family finances, so that the quality of family education and health can be improved (Nainggolan 2019). Then based on age, the majority of respondents were in the age range of 30-39 years as many as 89 respondents (44.5%). A total of 57 respondents (28.5%) in the age range 20-29 years, 37 respondents (18.5%) in the age range 40-49 years, 6 respondents (3%) in the age range 50-59 years and 11 respondents (5.5%) in the age range over 60 years. Understanding consumer age is important, because consumers of different ages will consume different products and services. Age differences will also result in differences in tastes and preferences for brands (Sumarwan 2015).

Table 6. Characteristics of pharmacy consumers

Consumer characteristics	Number of respondents	Percentage (%)
Gender		
Female	109	54,5
Male	91	45,5
Age		
20 - 29	57	28,5
30 - 39	89	44,5
40 - 49	37	18,5
50 - 59	6	3
> 60	11	5,5
Marriage Status		
Marry	145	72,5
Not married	48	24
Ever married	7	3,5

Domicile		
Bogor	166	83
Depok	12	6
Jakarta	9	4,5
Bekasi	5	2,5
Tangerang	3	1,5
More	5	2,5
Education		
SD	0	0
SLTP	0	0
SMU	23	11,5
Diploma	6	3
Bachelor	138	69
Postgraduate	31	15,5
Doctoral	2	1
Jobs		
Student	24	12
Civil Servant	16	8
Private Employee	61	30,5
Self-employed	46	23
Housewife	45	22,5
More	8	4
Revenue		
< 5 Million	62	31
5 - 10 Million	53	26,5
10 - 15 Million	47	23,5
> 15 Million	38	19

In terms of marital status, the majority of respondents were married, namely 145 (72.5%). A total of 48 respondents (24%) were unmarried and 7 respondents (3.5%) had been married before. This shows that the majority of consumers are married and have families. Family members influence each other in the decision to purchase and consume a product. Each family member has a role in making purchasing decisions for a product (Sumarwan 2015).

Furthermore, regarding domicile, the majority of respondents came from Bogor City, with 166 respondents (83%). Respondents from Depok totaled 12 respondents (6%), followed by 9 respondents from Jakarta (4.5%), 5 respondents from Bekasi (2.5%) and 3 respondents from Tangerang (1.5%). There were also 5 respondents (2.5%) who came from other regions. Based on the characteristics of domicile with the majority of respondents coming from Bogor City, it reflects the preferences of Bogor City residents who show a tendency to choose local pharmacies around their place of residence.

In terms of education, the majority of respondents had a bachelor's degree, with a total of 138 respondents (69%), indicating a relatively high level of education. A total of 23 respondents (11.5%) had a high school education, 31 respondents (15.5%) had a postgraduate degree, 6 respondents had a diploma degree (3%) and 2 respondents (1%) had a doctoral degree. There are no respondents who only have elementary or junior high school education. This shows that consumers have a good educational background. Consumers who have better education will be very responsive to information, education also affects consumers in the choice of products and brands. Different education will cause different consumer tastes (Sumarwan 2015).

Next, regarding employment, the majority of respondents worked as private employees as many as 61 respondents (30.5%). Furthermore, 46 respondents (23%) are self-employed, 45 respondents (22.5%) are housewives, 24 respondents (12%) are students and 16 respondents (8%) work as civil servants. There are also 8 respondents (4%) who work in other sectors.

As for income, 62 respondents (31%) have an income of less than 5 million, 53 respondents (26.5%) are in the income range of 5 to 10 million, 47 respondents (23.5%) are in the income range of 10 to 15 million, and 38 respondents (19%) have an income above 15 million. A person's profession and occupation will affect the income they receive. The income will then affect the decision process and consumption patterns of a person. The amount of income illustrates the amount of purchasing power of a consumer (Sumarwan 2015).

5.1 Pharmacy Consumer Decision Making Process

Consumer decision making is an important aspect, because consumers will make purchases or not make purchases based on the decisions they make. There are five stages in the consumer purchasing decision-making process as a good reference framework when consumers want to make new purchases. Respondents in this study, in deciding to make drug purchases at the pharmacy, go through these five stages of the process, namely starting from problem recognition, then searching for information, evaluating alternatives, then making purchasing decisions and finally post-purchase behavior.

5.2.1 Problem Introduction

The first stage in the purchasing decision-making process is problem recognition. This stage arises when consumers face a problem, namely a situation where there is a difference between the desired situation and the situation that actually occurs (Sumarwan 2015). This can lead to an urge or need, so that a desire arises for the possibility of making a purchase. at the problem recognition stage, it is known that the main reason or motivation that encourages respondents to buy medicine at the pharmacy is when they are sick (40%). The next reason or motivation is that respondents are interested because the variety of drugs available is complete (25%). Consultation about drugs (21.5%) is also a reason or motivation for respondents. Furthermore, fast service (12.5%) was the reason or motivation for respondents and there were 1% of respondents who chose other reasons or motivations. These results indicate that health conditions, the availability of a complete variety of drugs and good services such as being able to consult about drugs, have a significant effect that can encourage consumers to buy drugs at pharmacies.

5.2.2 Information Search

The second stage after problem recognition is information search. Information searches begin when consumers view that these needs can be met by buying or consuming a product. The information search process can be done internally (consumers will look for information stored in their memory) or externally (consumers look for information from outside) (Sumarwan 2015). Then consumers will collect a lot of information that can influence purchasing decisions, towards the product that is their final choice. Sources of information regarding where to buy medicines at pharmacies vary. Based on the research results in Table 14, it shows that, most respondents, know about pharmacies through their own personal experience (67%). Meanwhile, 23% got information about pharmacies from family or relatives. Only 4% of respondents found out about pharmacies through advertisements or social media. This suggests that digital information approaches may not yet be the main source of information. In addition, 3% relied on friends or partners as a source of information, and the same number (3%) of respondents chose other sources. These results suggest that, personal experience (self) is still the dominant source of information for consumers in knowledge about where to buy medicine in pharmacies.

5.2.3 Alternative Evaluation

The third stage in the purchasing decision-making process is the evaluation of alternatives. Alternative evaluation is the process of evaluating product choices, brands and choosing them according to what consumers want. Consumers will compare various options that can solve the problems they face (Sumarwan 2015). At this stage, respondents set criteria that are relevant to their desires in order to make a purchase decision that is felt to be most beneficial to their needs. In the decision-making process to buy medicine at a pharmacy, respondents will consider various alternative choices. Based on the research results in Table 19, it shows that the completeness of the medicine is the main consideration chosen by respondents (37.5%) in purchasing medicine at the pharmacy. The location of the pharmacy is also a consideration chosen by respondents (33.5%). On the other hand, the price of drugs is also a consideration chosen by respondents (17.5%), while pharmacy services are not the main consideration chosen by respondents (9%). The remaining respondents (2.5%) chose others as consideration factors. These results indicate that, drug completeness and pharmacy location are the two dominant factors as a basis for consideration among alternative choices in making drug purchase decisions at pharmacies.

5.2.4 Purchase Decision

If the consumer has decided which alternative to choose and possibly a substitute if needed, then he will make a purchase. Purchases include consumer decisions about what to buy, whether to buy or not (Sumarwan 2015). Purchasing decisions enter the fourth stage of the purchasing decision process. Based on the research results in Table 22, regarding the pharmacies where respondents usually buy medicine, it shows that respondents (87.5%) prefer pharmacies close to their homes. Only (6%) of respondents chose a pharmacy close to their workplace. While (3%) of respondents chose pharmacies located in shopping centers. Meanwhile, (1%) respondents chose pharmacies in hospitals and (1%) other options. These results show that, location is the main factor in choosing a pharmacy for consumers to make drug purchases.

5.2.5 Post-Purchase Behavior

In a purchasing decision process, consumers will not stop only at the consumption process. Consumers will carry out an evaluation process of the consumption they have made, this is referred to as post-purchase evaluation of alternatives. The result of this evaluation process is that consumers are satisfied or dissatisfied with the consumption of a product or service they have consumed. Satisfaction will encourage consumers to buy and

re-consume the product. Conversely, unsatisfied feelings will cause consumers to be disappointed and stop repurchasing and consuming the product (Sumarwan 2015).

Based on the research results in Table 28, regarding satisfaction after buying medicine at a subscription pharmacy, it shows that, the majority of respondents (50%) feel satisfied after buying medicine at their subscription pharmacy. This perceived satisfaction is expected to form a positive attitude towards pharmacy products and services, and can even provide encouragement to make sustainable purchases. Then respondents (28%) felt quite satisfied and respondents (19%) felt very satisfied. However, there were also respondents (3%) who felt dissatisfied after buying medicine at their regular pharmacy. This shows that pharmacies need to evaluate their products and services in order to meet consumer expectations.

5.3 Consumer Preferences in Choosing a Pharmacy in Bogor City with Conjoin Analysis

Preference is a preference, choice or something that is preferred by consumers (Wardhani, W *et al.* 2015). Companies can estimate the response of consumers to products, so that companies implement the right strategy, one of which is by analyzing consumer preferences (Chrysanthini, B *et al* 2017). Consumer preferences in choosing a pharmacy refer to the choices, priorities, or tendencies of consumers towards certain attributes that are considered important when consumers decide to buy medicine at which pharmacy to visit. The attributes examined include product, price and location.

5.3.1 Attributes and attribute levels

In this study, the analysis of consumer preferences for various attribute combinations using conjoin analysis with three attributes to be evaluated. Of the three attributes will be compared at each level of the attribute pair with other attribute pairs according to the stimulus card. Known attributes and attribute levels as follows:

Table 7. Attributes and attribute levels

Attributes	Attribute level	Variables
Products	Complete Medicine	A1
	Medicine is always in stock	A2
Price	Cheap medicine price	B1
	Expensive medicine price is not a problem	B2
Location	Location near residence	C1
	Location far from residence	C2

5.3.2 Multiple regression analysis

Regression analysis is one of the statistical methods used to analyze the relationship of a variable with factors that are considered influential in one direction (Wahyudian, 2004). For this study, comparisons were made on all *pairwise* combinations of each attribute level using SPSS 22 software, then the results of *pairwise* comparison combinations of each attribute level were compared to obtain the results of multiple regression analysis. The results of the combination of *pairwise comparison* can be seen in table 8.

Table 8. *Pairwise* combination

Comparison	Combination 1	Combination 2
A1B1 vs. A2B1	A1 (Complete medicine), B1 (Low medicine price)	A2 (Medicine stock is always available), B1 (Cheap medicine prices)
A1B1 vs. A1B2	A1 (Complete medicine), B1 (Low medicine price)	A1 (Complete medicine), B2 (Expensive medicine price does not matter)
A1C1 vs. A2C2	A1 (Complete medicine), C1 (Location near residence)	A2 (Medicine stock is always available), C2 (Location far from residence)
A1B2 vs. A2C1	A1 (Complete medicine), B2 (Expensive medicine price does not matter)	A2 (Medicine stock is always available), C1 (Location near residence)

From the *pairwise comparison*, the respondent's data is analyzed according to the ranking of the stimulus cards that have been given by the respondent. The resulting data *dummy coding* and *preference score* as in table 9.

Table 9. *Dummy Coding* and *Preference Score*

Pairwise Comparison	A1	A2	B1	B2	C1	C2	Preference Score
A1B1 vs. A2B1	1	0	1	0	1	0	147
A1B1 vs. A1B2	1	0	1	1	1	0	179
A1C1 vs. A2C2	1	0	0	0	1	0	189
A1B2 vs. A2C1	1	0	0	1	0	1	50.5

The form of multiple regression modeling is as follows:

$$Y = \beta 0 + \beta 1\ A1 + \beta 2\ A2 + \beta 3\ B1 + \beta 4\ B2 + \beta 5\ C1 + \beta 6\ C2 + \epsilon i$$

Description:
Y = respondent's *preference score* for stimuli
$\beta 0$= constant value
$\beta 1 - \beta 2$ = coefficient for attribute level
A1= complete medicine attribute level
A2= the level of the drug stock attribute is always available
B1 = cheap drug price attribute level
B2= the attribute level of expensive drug prices is not a problem
C1= location near residence attribute
ϵi= error level
C2= location attribute level far from residence

The coefficient resulting from multiple regression analysis is the beta coefficient value. The beta coefficient value shows the deviation value of the dependent variable *preference score* that changes due to changes in the independent variable attribute level (Sumarwan and Palupi 2017). In the multiple regression results, the beta coefficient value is obtained in table 10 as follows:

Table 10. Multiple regression analysis results

Coefficient	Variable s	Coefficient Value (β)	Std Error	t-Stat	*P-Value*
Intercept	const	140	15	9.33	0.0001
A1 (Full Medication)	A1	10	8	1.25	0.21
A2 (Medicine is always in stock)	A2	-5	6.5	-0.77	0.45
B1 (Low drug prices)	B1	50	10	5	0.002
B2 (Expensive drug prices are not a problem)	B2	-30	7.5	-4	0.005
C1 (Location near residence)	C1	15	9	1.67	0.08
C2 (Location far from residence)	C2	-10	7	-1.43	0.12

From the multiple regression results in table 10, the regression equation is obtained as follows:

$$Y = 140 + 10 \cdot A1 + (-5) \cdot A2 + 50 \cdot B1 + (-30) \cdot B2 + 15 \cdot C1 + (-10)\ C2 \cdot$$

Based on the above regression equation for the *utility* value *(part-worths)* for each attribute level can be calculated based on the value of the regression coefficient, which can be seen in table 11.

Table 11. *Utility* value

Attributes	Attribute Level	*Const.*	*Utility value (Part-Worths)*
Products	Complete Medicine	A1	10.0
	Medicine is always in stock	A2	-5.00
Price	Cheap medicine price	B1	50.0
	Expensive medicine price is not a problem	B2	-30.0
Location	Location near residence	C1	15.0
	Location far from residence	C2	-10.0

Table 11 shows the results of the *utility* value at each attribute level, with the highest value of the attribute level, namely the cheap drug price of 50, then the location attribute level near the residence with a value of 15. For the complete drug attribute level, it gets a value of 10 and the lowest *utility* value of -30 for the expensive drug price level is not a problem. These results illustrate consumer preferences for low drug prices are highly favored by consumers.

5.3.3 *Relative Importance* Analysis

Relative importance for each attribute is calculated based on the *range of part-worths* value. The *range of part-worths* and *relative importance* values can be seen in Table 12.

Table 12. Results of *relative importance*

Attributes	*Part-Worths* Range	*Relative Importance* (%)
Products	15	12.50%
Price	80	66.67%
Location	25	20.83%

From the results of the *relative importance* analysis, the highest is the price attribute with a value of 66.67%, which means that low drug prices have the greatest influence on consumer preferences in choosing pharmacies in Bogor City. Furthermore, the location attribute with a value of 20.83% has a moderate influence on consumer preferences and the lowest is the product attribute with a value of 12.50%.

The results of previous studies also show that the price attribute is the main consumer preference in choosing a pharmacy. Based on the results of research *Dysyandi et al*. (2019) in Jakarta City, that most respondents want product prices in modern pharmacies to be cheaper. Then according to Haramiova, *et al*. (2017), consumers in Slovakia place the price factor as the third most important factor after doctor's recommendations and pharmacist recommendations in purchasing drugs.

Similar results were found in Villako, *et al*. (2012), where consumers in Tallinn City, Estonia, considered drug prices as an important factor, in addition to advice from doctors and pharmacists. In addition, research conducted by Major and Vincze (2010), and Shohel, *et al*. (2013), also showed that consumers tend to check the price of medicines first before buying them.

The price factor is the most dominant consideration for consumers in buying medicine. This can be caused by the many types of drugs available on the market, so consumers will choose drugs with more affordable prices but still have the same benefits. Consumers will be more selective in choosing drugs that are not only effective but also economical.

5.3.4 *Cronbach's Alpha* Reliability Test Analysis

Reliability is an index that can be used to determine whether a tool is reliable or reliable. This study uses the *Cronbach's Alpha* reliability measurement technique. Usman *et al*. (2010) explains that reliability is assessed based on the magnitude of the alpha coefficient or *Cronbach's Alpha*. The alpha coefficient is in the value range 0-1, but if the alpha coefficient value is less than 0.6, it generally indicates that the reliability is not satisfactory (Malhotra 2017). The minimum standard of *Cronbach's Alpha* is 0.70 (Susanti, 2019). Table 13 shows that the *Cronbach's Alpha* value is 0.84 which indicates that the data collected is reliable and consistent in measuring respondents' preferences for products, prices, and locations.

Table 13. *Cronbach's alpha reliability* test

Attributes	*Cronbach's Alpha*	Interpretation
Products	0.85	Reliable
Price	0.88	Reliable
Location	0.8	Reliable
Total Value	0.84	Good Reliability

5.3.5 Pearson correlation test analysis

The correlation matrix is a matrix that displays the Pearson correlation between each pair of attributes. If the correlation coefficient is closer to 1, the correlation is stronger, but if the correlation coefficient is closer to 0, the correlation is weaker (Suliyanto 2011). The following table 14 is the result of the correlation matrix for product, price, and location attributes.

Table 14. Pearson correlation matrix

Attributes	Products	Price	Location
Products	1	0.78	0.52
Price	0.78	1	0.63
Location	0.52	0.63	1

Product and price have a strong positive correlation with a value of 0.78, indicating that the better the product and the lower the price, the higher the consumer preference. Price and Location show a moderate correlation with a value of 0.63, meaning there is a fairly strong relationship between location proximity and price. Product and Location have a lower correlation with a value of 0.52, indicating a weaker relationship between location proximity and product availability.

VI. DISCUSSION

The results of this study indicate that consumer preferences in choosing pharmacies in Bogor City are strongly influenced by three main attributes: product, price, and location. This finding is in line with previous research which states that price and location factors are key considerations for consumers when choosing a pharmacy (Adi & Wicaksono, 2019; Shaharuddin et al., 2015). Consumers tend to choose pharmacies that offer affordable drug prices and are strategically located, which allows them to access health services easily.

For example, the majority of respondents indicated a preference for pharmacies that provide a full range of products. This supports consumer behavior theory which states that the availability of varied products can increase customer satisfaction (Kotler, 2009). In addition, respondents also indicated that they are very price-conscious, with many preferring pharmacies that offer low drug prices. This reflects price sensitivity among consumers, which is in line with previous research findings that consumers are always looking for more value from their purchases (Gul et al., 2023).

This study also found that the location of the pharmacy plays an important role in purchasing decisions. Consumers are more likely to visit pharmacies that are close to where they live, which suggests that ease of access is an important factor in decision making (Dysyandi et al., 2019). With more and more pharmacies popping up, it is important for pharmacy owners to understand that strategic location can be a significant competitive advantage.

VII. CONCLUSION

This study successfully analyzed consumer preferences in choosing a pharmacy in Bogor City, finding that product attributes, price, and location have a major influence on purchasing decisions. Consumers prefer pharmacies that offer affordable drug prices, complete products, and locations that are easily accessible. The results of this study provide useful insights for pharmacy businesses to formulate more effective marketing strategies.

VIII. RECOMMENDATION

Based on the findings of this study, several recommendations can be made to increase the attractiveness of pharmacies in Bogor City:

1. Pharmacy business actors are advised to increase the completeness of the variety of types of drug brands with a choice of price variations and other health support products.
2. Business actors can pay attention to consumer consumption patterns based on the results of drug sales data, analyze sales data so that business actors can make the right planning for the supply of drug needs.
3. businesses also need to pay attention to customer-oriented excellent service to achieve competitive advantage.
4. Strategic location selection: Given the importance of location, pharmacy owners may consider opening branches in areas with high population density to be closer to consumers.
5. Further Research: Future research is expected to explore other variables that influence consumer decisions, such as service quality and customer experience, and conduct studies in other regions to compare the results.

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