

Factors Influencing Consumer Decisions in Choosing Circumcision Service Providers in Malang City: The 7Ps Marketing Mix Approach

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ABSTRACT

The circumcision service industry in Malang City has grown rapidly, with a 46.84% increase in clinics over five years, intensifying competition among providers. Consumer decision-making in elective healthcare services such as circumcision involves factors beyond medical considerations. This study examines the factors influencing consumer choices of circumcision clinics using the 7Ps marketing mix framework. A quantitative approach was employed, distributing questionnaires to 195 parents who used circumcision services for children under 12 during 2023–2024 in Malang. Using purposive sampling, the data were analyzed through Partial Least Squares–Structural Equation Modeling (PLS-SEM) to assess construct validity and variable relationships. Results show that only four marketing mix elements significantly influenced decisions: price, process, product, and people. Meanwhile, place, promotion, and physical evidence were not significant. This suggests consumers prioritize fair pricing, service quality, efficient procedures, and professional staff over clinic location, advertising, or interior design. The study's novelty lies in focusing specifically on specialized circumcision clinics within Malang City, a category previously understudied despite its economic relevance. Limitations include a narrow geographic focus and a quantitative design, which may overlook emotional or subjective factors. Future research should expand geographically and incorporate qualitative or mixed methods for deeper insight into consumer motivations.

KEYWORDS *circumcision, consumer decisions, healthcare services, marketing mix, service quality.*



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INTRODUCTION

Circumcision is a surgical procedure often performed both for its medical benefits and for religious and cultural reasons. In Africa, circumcision is widely practiced and has been shown to reduce the incidence of human immunodeficiency virus (HIV) infection and sexually transmitted infections (Lawal & Olapade-Olaopa, 2017). Circumcision can also decrease the incidence of urinary tract infections in infants (Eisenberg et al., 2018). In Indonesia, circumcision is one of the most performed medical procedures due to the country's large population and majority Muslim demographic (Morris et al., 2016). Additionally, many non-Muslims in Indonesia also undergo circumcision because they are highly aware of its medical benefits (Bangun & Berutu, 2020).

According to the Central Statistics Agency (BPS), the number of boys aged 0–14 years in Indonesia in 2022 reached 33,901,971. The most common age for circumcision in Indonesia is between 5 and 12 years (Widjajanto et al., 2024). The large population combined with the high number of circumcision procedures represents a significant business opportunity, particularly for circumcision service providers (Brook, 2016; Ensor, Davies, Rai, & Ward, 2019; Tchuente et al., 2016). This expanding market corresponds with an increase in the number of clinics in Malang City. According to BPS data, over the past five years, the number of clinics in Malang City has increased by 46.84%, reaching 116 clinics in 2023. Furthermore, the lucrative business opportunities for circumcision services have led to the emergence of

many specialized health service facilities (Diomande, 2019; Gomez, Loar, & Kramer, 2018). Some large circumcision clinic chains include dr. Mahdian with 49 branches throughout Indonesia, Safubot with 63 branches in various cities, and several others. Consequently, each clinic must develop effective strategies to seize existing opportunities and compete successfully (Naamati-Schneider, 2024).

To develop marketing strategies for healthcare services, a thorough understanding of consumer behavior in the health service context is essential. Chatterjee & Kulkarni (2021) note that consumer behavior in healthcare differs significantly from other industries. In Malang City, the proliferation of circumcision clinics offering various modern methods and additional services has intensified market competition. Consumers evaluate not only medical aspects but also multiple factors including price affordability, service location accessibility, promotional information, facility infrastructure, and overall service experience. Therefore, the 7Ps marketing mix model is a relevant framework for analyzing these factors because it comprehensively covers aspects essential to service industries (Kwok et al., 2020).

Research on consumer decisions in selecting specialized health services, such as circumcision clinics, remains limited, particularly within the Indonesian context. Despite the widespread practice of circumcision and the substantial economic scale of this sector, academic research has predominantly focused on general healthcare facilities like hospitals and primary care clinics, leaving a critical gap in understanding consumer behavior specific to elective pediatric procedures. In fact, circumcision clinics have unique service characteristics in terms of target patients, service processes, and marketing strategies. Therefore, this research is important to fill that gap and provide deeper insight into consumer behavior within circumcision services, which have not been widely studied scientifically. The focus on Malang City is justified by several contextual factors: (1) rapid healthcare infrastructure development with a 46.84% increase in clinics over five years; (2) its demographic profile as a mid-sized urban center with diverse socioeconomic strata, making it representative of similar Indonesian cities; (3) the presence of both traditional and modern circumcision service providers, enabling comparative analysis; and (4) access to a sufficient sample size of consumers who have utilized these services.

The novelty of this research is threefold: First, it addresses a previously unexplored service category—specialized circumcision clinics—within healthcare marketing literature, which has predominantly examined hospitals and general medical practices. Second, it applies the comprehensive 7Ps marketing mix framework to pediatric elective procedures, where parental decision-making involves unique considerations of trust, safety, and cultural factors that are not typically encountered in adult healthcare choices. Third, it provides empirical evidence from Malang City's rapidly expanding healthcare market, offering insights into consumer behavior within Indonesia's emerging middle-class healthcare economy. This study's focus on a culturally sensitive medical procedure in a specific urban Indonesian context represents a distinct contribution to both healthcare marketing and consumer behavior literature.

Previous studies of consumer behavior in health services often focused on hospitals, general medical clinics, and family doctor practices. Salim (2017) investigated factors influencing consumers' choice of public hospitals and found that physical evidence and good administrative services affect the decision to select healthcare providers, while price and the

quality of doctors do not significantly influence this choice. This insight can help develop hospital strategies by prioritizing improvement areas. Cordina & Greenberg (2020) demonstrated how information transparency influences consumer behavior in healthcare service selection.

Regarding the 7Ps Marketing Mix approach, Ruliyandari & Hazerika (2023) examined factors influencing hospital selection and found that promotion, process, and physical evidence affect hospital choice, while product, price, place, and people do not. Meanwhile, Ravangard et al. (2020) show that in countries with low public income, physical evidence is the most influential factor, and promotion least influences health service selection. Despite these contributions, a major gap remains: existing studies mostly examine general healthcare facilities serving patients with existing conditions rather than elective specialized services where consumers actively select providers for planned procedures. Furthermore, inconsistent findings across studies—where different marketing mix elements show varying significance—indicate that context-specific factors including service type, cultural setting, and demographics play crucial roles that require further targeted investigation. Given the varied outcomes of prior research, this study strengthens variable validity by applying the Structural Equation Modeling–Partial Least Squares (SEM-PLS) method and aims to identify the most significant variables.

This research intends to fill these gaps by investigating the specific factors influencing consumer decision-making in choosing specialized circumcision clinics—a healthcare category characterized by elective decisions, child-focused care, cultural significance beyond medical factors, and parental proxy decision-making rather than direct patient choice. The study’s variables follow the 7P marketing mix model: product, price, promotion, place, people, process, and physical evidence. The findings will enhance understanding of consumer behavior in this sector, enabling specialized circumcision clinics to develop effective and efficient marketing strategies.

METHOD

This study employed a quantitative approach using Structural Equation Modeling–Partial Least Squares (SEM-PLS). This methodology was selected for its ability to test hypothesized relationships among multiple variables simultaneously and to measure the relative importance of different marketing mix elements. SEM-PLS was chosen for its advantages in handling complex models, robustness to non-normal data common in behavioral research, and capacity to accommodate both formative and reflective measurement models (Henseler et al., 2015). Data were collected through surveys, allowing for efficient gathering of large amounts of information via questionnaires.

The population consisted of parents of children who had used circumcision services in Malang City. Because exact population figures were unavailable, purposive sampling was employed to select participants meeting specific criteria. The sample included parents who had used specialized circumcision clinics for children under 12 years old during 2023–2024. Criteria for inclusion were: (1) parents or guardians as the decision-makers who actively chose the circumcision provider; (2) services accessed within the recent timeframe to ensure recall accuracy; (3) use of specialized clinics rather than general hospitals or informal providers; and (4) children’s age aligned with the typical circumcision age range in Indonesia (Widjajanto et

al., 2024). This approach ensured that the sample reflected the study's focus. A total of 195 respondents participated, consistent with recommended sample sizes for SEM analyses (Hair et al., 2021).

Limitations of purposive sampling included potential selection bias, limited generalizability to other healthcare settings, temporal bias related to the study period, and self-selection bias favoring more digitally literate or engaged respondents. These issues were mitigated using multiple indicators per construct and rigorous validity testing.

The research data was obtained through the distribution of questionnaires to the research sample. This questionnaire is compiled based on the variables mentioned earlier. Data is collected in several stages:

- a. Preparation Stage: Create a questionnaire and conduct pilot trials to test the validity and reliability of the instrument.
- b. Key Data Collection Stage: Distribute a questionnaire to selected respondents through an online survey using a Google Form form.
- c. Data Processing Stage: Collecting and checking the completeness of the questionnaire fills, then entering the data into statistical software for analysis.

The data analysis in this study used the Structural Equation Modeling – Partial Least Squares (SEM-PLS) approach using the SmartPLS 3.0 lunat device. This method was chosen because it is flexible, corresponds to the direct relationship between latent variables, and does not require normal distribution assumptions. In addition, SEM-PLS is also able to test the validity of constructs and estimate the influence between variables simultaneously. In this study, the analysis was carried out through two stages, the first was the outer model test to assess the validity and reliability of the construct, which was shown by the outer loading values, Average Variance Extracted (AVE), Composite Reliability, and Cronbach's Alpha. Meanwhile, the validity of the discriminant was tested using the HTMT ratio.

Next, test the inner model to see the influence of each element of the marketing mix on the decision to choose consumers. The significance test was carried out using the bootstrapping method to obtain t-statistical and p-value values as the basis for hypothesis testing. The bootstrapping procedure employed 5,000 resamples to ensure stability of estimates and accurate calculation of standard errors for path coefficients. Statistical significance was evaluated at the 0.05 alpha level, with path coefficients interpreted for both magnitude (effect size) and direction (positive or negative influence).

RESULT AND DISCUSSION

SEM-PLS Analysis Results

The existing construct was analyzed to look at the outer loading indicators to evaluate the convergent validity of each indicator. From the results of data processing using Smart PLS 3.0, most of the indicators have an outer loading value of > 0.7 , indicating that most of the indicators are valid. However, there are four indicators with values below the threshold, namely X3.1 (Product) of 0.162, X4.1 (Place) of -0.035, X5.3 (Physical Evidence) of 0.517, and X6.2 (Process) of 0.635 which will then be deleted because they do not meet the validity criteria.

Table 1. Outer Loading Indicator

| Indicator | Construct | Outer Loading |
|------------------|--------------------|----------------------|
| X1.1 | Promotion | 0.823 |
| X1.2 | Promotion | 0.810 |
| X1.3 | Promotion | 0.823 |
| X1.4 | Promotion | 0.826 |
| X1.5 | Promotion | 0.718 |
| X2.1 | Physical Evidence | 0.874 |
| X2.2 | Physical Evidence | 0.775 |
| X2.3 | Physical Evidence | 0.778 |
| X2.4 | Physical Evidence | 0.781 |
| X2.5 | Physical Evidence | 0.873 |
| X3.1 | Product | 0.162 |
| X3.2 | Product | 0.949 |
| X3.3 | Product | 0.899 |
| X3.4 | Product | 0.973 |
| X3.5 | Product | 0.921 |
| X4.1 | Place | -0.035 |
| X4.2 | Place | 0.893 |
| X4.3 | Place | 0.920 |
| X4.4 | Place | 0.818 |
| X4.5 | Place | 0.829 |
| X5.1 | Price | 0.954 |
| X5.2 | Price | 0.956 |
| X5.3 | Price | 0.517 |
| X5.4 | Price | 0.976 |
| X5.5 | Price | 0.964 |
| X6.1 | Process | 0.782 |
| X6.2 | Process | 0.635 |
| X6.3 | Process | 0.798 |
| X6.4 | Process | 0.836 |
| X6.5 | Process | 0.828 |
| X7.1 | People | 0.952 |
| X7.2 | People | 0.936 |
| X7.3 | People | 0.949 |
| X7.4 | People | 0.945 |
| X7.5 | People | 0.954 |
| Y1 | Selection Decision | 0.736 |
| Y2 | Selection Decision | 0.764 |
| Y3 | Selection Decision | 0.702 |
| Y4 | Selection Decision | 0.750 |

In this study, a discriminant validity test was carried out using the Heterotrait-Monotrait Ratio (HTMT) approach. This approach states that the HTMT value between constructs should be less than 0.9 (Henseler et al., 2015). From the results of the analysis in this study, the HTMT value between all constructs is below 0.9 so that each construct is considered different from each other and meets the discriminant validity test.

The results of the analysis of the construct reliability test can be seen from the value of Cronbach's Alpha and Composite Reliability (CR) where all constructs have a value above 0.7 and an Average Variance Extracted (AVE) value above 0.5. The reliability test shows that the

construct used has met the reliability and validity tests so that it is suitable for use in future structural models.

After all constructs in the model are declared valid and reliable, the analysis is continued at the structural model stage (inner model) to determine the influence of each variable with the 7Ps marketing mix approach on consumer decisions in choosing circumcision services. This model was analyzed using the Partial Least Squares-Structural Equation Modeling (PLS-SEM) method with a bootstrapping approach.

From the results of the bootstrapping analysis, the R-Squared value was obtained as 0.639 in the selection decision construct which shows that 63.9% of the variation in consumer decisions in choosing a circumcision service provider can be explained by the variables in the 7Ps marketing mix. This shows that the model used has a strong explanatory power

The bootstrapping process was carried out using the final model that had been adjusted to remove three indicators that had previously been declared invalid, namely X3.1 (Product), X4.1 (Place), and X5.3 (Price), using 5000 resampling. This stage aims to test the relationship between the free variable and the bound variable, namely the choice decision.

Table 2. Bootstrapping Results

| Construct | Original Sample (O) | T Statistics | P Values | Significance |
|-------------------|---------------------|--------------|----------|---------------|
| People | 0.118 | 2.270 | 0.023 | Significant |
| Physical Evidence | -0.086 | 1.925 | 0.054 | Insignificant |
| Place | 0.019 | 0.356 | 0.722 | Insignificant |
| Price | 0.618 | 16.951 | 0.000 | Significant |
| Process | 0.156 | 3.443 | 0.001 | Significant |
| Product | 0.138 | 2.906 | 0.004 | Significant |
| Promotion | -0.055 | 1.132 | 0.258 | Insignificant |

The results of the analysis showed that the most dominant construct was the Price variable with a coefficient value of 0.618 and $p < 0.05$. In addition, the Process, Product, and People variables also showed a significant influence on the decision to choose. The variables Physical Evidence, Place, and Promotion had a $p > 0.05$ indicating that the three variables did not have a significant effect on the decision to choose.

Discussion

The results of the analysis on the construct show that not all elements in the 7Ps marketing mix have a significant effect on consumers' decisions in choosing circumcision services. Of the seven constructs proposed, there are four constructs that have a significant influence, namely Price, Process, Product, and People. The other three constructs, namely Place, Promotion, and Physical evidence, did not have a significant influence on the decision to choose.

The Price variable is the most dominant factor in influencing the decision to choose a circumcision service provider with a coefficient value of 0.617 and a high level of significance, namely a p-value of 0.000. This result is in accordance with the profile of the respondents, the majority of whom come from the middle class economically, so that cost rationality is a crucial factor in decision-making. In the era of technological advancement and social media,

consumers can now easily compare rates between service providers and choose the one that suits their economic capabilities without neglecting the quality of service. These findings are in line with previous research by Nengsih et al. (2024) which showed that prices have a significant influence on consumer decisions in the field of delivery services. Although in different research contexts, prices have an important role in influencing consumer choice decisions in the service sector, including health services, especially circumcision measures.

The Process variable also statistically showed a significant influence on the decision to choose with a coefficient of 0.156 and a p-value of 0.001. In the context of services at special circumcision clinics, the speed of response of officers in responding to questions in online and offline media is very important both before and after the action. Questions asked before circumcision procedures that are responded to completely and quickly will be able to influence potential consumers to choose the clinic. Questions after an action, especially those that are of a complaint nature in the healthcare business, must be well managed so that patients feel satisfied, which will further affect the decision to choose. Circumcision-only clinics are mostly elective care services so scheduling and queuing management must run well. These results support previous research by (Ghabban, 2025) which showed that process elements have an important impact on customer satisfaction in the healthcare sector, especially in creating efficient, convenient, and standardized services.

The Product variable showed a significant influence on the decision to choose with a coefficient of 0.138 and a p-value of 0.004. This shows that core attributes in circumcision services such as modern safer methods and the large choice of methods so that they can be adapted to the patient's condition are important considerations for consumers. The product of the service is also not limited to the circumcision procedure alone, but the quality of the consultation is provided and additional services or gimmicks are also an important consideration because most of the patients in the circumcision clinic are children. These findings support previous research that showed that products have a significant effect on customer loyalty, confirming that the core quality of service products remains one of the main focuses of consumers in choosing a service (Nengsih et al., 2024).

The People variable also showed a significant influence with a coefficient of 0.118 and a p-value of 0.023. Professionalism, competence, attention and friendliness are important components in shaping positive consumer perceptions. In health services, especially circumcision measures that prioritize trust, direct interaction with health workers and staff at the clinic greatly affects the confidence and comfort of customers. The fact that the majority of decision-makers in this study were women (71.28%) reinforces the importance of interpersonal aspects. Mothers as the main decision-makers tend to pay great attention to comfort, empathy, and trust in medical personnel before handing over their children to undergo medical procedures. These findings support previous research conducted by Ghabban (2025) which stated that health workers and staff who are professional and communicative have an important role in building positive perceptions in the context of health services

The other three variables, namely Place, Promotion, and Physical evidence in this study, did not show a significant influence on the decision to choose circumcision services. On the Place variable, the findings of this study indicate that consumers tend to have less problems with the location of the clinic as long as the services offered are in accordance with expectations. This can be explained by changes in consumer behavior patterns in today's digital

era. The characteristics of consumers are mostly productive age who tend to use online consultation services to make it easier to interact with medical personnel so that it does not take time and effort to have to visit the clinic frequently. Patients can communicate using existing social media with easier interaction through photos and video calls.

These results are in line with research conducted by Cynthia et al., (2022) which states that location does not have a significant effect on purchasing decisions, so innovation from circumcision service providers is needed to develop its other advantages. Location is no longer the main factor in purchasing decisions in the digital age, especially if the product's primary value is service quality and reputation. This is relevant to the condition of the number of circumcision clinics in Malang City, which is increasingly numerous and evenly distributed, so that the choice of location is not the focus of consumer consideration.

The Promotion variable in this study did not have a significant effect on the decision to choose, indicating that even though the promotion has been carried out, consumers still rely more on information from personal experience or recommendations from family and friends than on general promotional materials. This is because healthcare, especially circumcision procedures involving children, requires a high level of trust, so consumers rely more on recommendations from close people, previous patient reviews, and the reputation of service providers than on visual promotional materials or attractive price quotes. In the context of healthcare, consumers are usually more cautious and selective in their search for information so conventional promotions may not be strong enough to form confidence. Promotions that are too aggressive can even cause negative perceptions, because they are considered to ignore the ethical and security aspects of the service. These findings support previous research conducted by Ravangard et al., (2020) which showed that Promotion was the weakest variable in determining the decision to choose health services. Consumers are more responsive to experiential information and real results. Health service providers, especially circumcision clinics, must have strategies and innovations in terms of more effective promotions so that they can convince and increase consumer trust.

The Physical Evidence variable in this study did not have a significant effect on the decision to choose. Although in many physical environment studies such as interior design, the comfort of other facilities' waiting rooms can influence the perception of service, the results of this study show that in the context of circumcision clinics, consumers prioritize the competence of medical personnel and the results of actions over the physical attributes of the clinic. This shows that the facilities and physical environment conditions at the circumcision clinic are not the main factors in determining the election decision. In addition, in the local context, many circumcision clinics in Malang City already have decent standard physical facilities so that the minimum standard of comfort seems to have been considered adequate in general in various clinics, so it is not enough to create differentiation in the minds of consumers. This study is different from the results shown by (Ravangard et al., 2020) which show that physical evidence is the main factor in determining health service selection decisions. Differences in context and culture may be the difference between these two studies.

In the context of elective and general health services such as circumcision, the decision-making process tends to be low involvement–high trust, where consumers rely more on the factor of trust in service providers and interpersonal recommendations rather than evaluating information sourced from promotions or visual aspects of the clinic. The insignificance of these

three variables illustrates that in the context of a collective culture such as in Indonesia, consumer decisions in healthcare are more influenced by social and emotional elements than by formal marketing elements that are visual and geographical.

CONCLUSION

This study found that in the specialized *circumcision* clinic market of Malang City, consumer decisions were mainly influenced by four key elements of the 7Ps marketing mix: Price, Process, Product, and People. Price reflected the cost-conscious nature of consumers, while Process, Product, and People emphasized the importance of service efficiency, medical quality, and professional, empathetic staff. Conversely, Place, Promotion, and Physical Evidence were not significant, suggesting that parents prioritize trust and core service attributes over location, advertising, or facility appearance for this elective pediatric procedure. This decision-making appears to be based on high trust and low involvement, relying more on perceived competence and recommendations than traditional marketing. Future research should expand geographically and methodologically by conducting multi-city or national studies to examine whether these factors remain consistent across Indonesia's diverse regions. Additionally, adopting a mixed-methods approach would deepen understanding of emotional and psychological influences, such as trust, emotional safety, and social networks, providing richer insights for clinics seeking to strengthen client relationships and loyalty.

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