The Impact of Marketing Mix (7Ps) on Customer Satisfaction in the Healthcare Sector:
A Study of Demographic and Professional Correlations

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ABSTRACT

The service sector plays a crucial role in contributing to a nation's GDP, with the healthcare sector experiencing rapid economic growth. Customer satisfaction in healthcare centers is essential and expected to remain a priority. To enhance satisfaction, implementing marketing mix strategies across sectors is vital. This study explores the 7Ps' impact on customer satisfaction, considering gender and age factors. Using quantitative techniques and a questionnaire, correlations between satisfaction and variables like the 7Ps, gender, and age were examined. Significant factors identified include process, promotion, place, product, and people. Logistic regression revealed that people and process significantly influence satisfaction. The study underscores process as the primary factor in marketing strategies, offering a key element to improve service and satisfaction. Future research should expand by segmenting the 7Ps based on gender and age groups. These findings provide valuable insights for tailoring healthcare services to better meet diverse patient needs.

KEYWORDS

Healthcare Services, 7Ps, Customer Satisfaction, Segmentation, Marketing, Services Marketing

INTRODUCTION

Background

In the healthcare industry, the quality of healthcare products and services holds greater significance for buyers than any other products, which greatly impacts a company's success (Nurittamont, 2021). Quality acts as a valuable proxy for evaluating the effectiveness of medical facilities among practitioners.

Customer satisfaction should be a top priority in the strategic objectives of healthcare organizations aiming for long-term success (Day & Wensley, 1988; Lied & Kazandjian, 1999). The performance of healthcare facilities depends on the effectiveness of their marketing mix strategies and the interactions between staff and customers to satisfy clientele (Siripipatthanakul & Chana, 2021). Therefore, medical centers need to employ marketing components to achieve successful growth (Ravangard et al., 2020).

Traditionally, marketing mix strategies consisted of the "4Ps": price, product, place, and promotion. Later on, Booms and Bitner (1981) expanded the components from 4Ps to "7Ps" by incorporating people, physical evidence, and processes (Ahmad et al., 2013). Then, marketing mix strategies encompassed 7Ps: product, pricing, promotion, place, people, physical evidence, and process (Bhalerao & Deshmukh, 2017).

To earn clients' trust and ensure long-term survival, organizations must prioritize service quality and provide reliable facilities, exceptional service personnel, and a positive service-oriented attitude, among other factors (Chang et al., 2006). The most crucial elements influencing customer satisfaction are the interpersonal relationships and interactions between customers and doctors (Cleary & McNeil, 1988). For researchers, analyzing staff quality in a medical center involves considering communication with customers, customer age, medical care, and treatment provided (Ferreira et al., 2023).

Problem Statement

Customer satisfaction in medical centers is affected positively by the perception of customers about service quality (Malik, 2012). Dissatisfaction arises when there is a gap between client perceptions and expectations. Prior research has explored the impact of the 7Ps and medical staff on customers' satisfaction. Additionally, Chang et al. (2006) identified four factors that influence customer satisfaction including medical staff, nursing staff, service staff, and space and facilities. Thus, this study aimed to improve the assessment by evaluating the association between the 7Ps of marketing mix and medical center personnel to provide a more precise analysis.

Research Objectives

The two main objectives of the research were evaluating a stage of the customers' satisfaction and key marketing strategies for targeting certain demographic factors. To achieve these objectives, the study followed several steps:

1. Identified the correlation between overall satisfaction and different variables including medical center staff, 7Ps of the marketing mix, and demographic factors of customers.
2. Evaluated the significance of each marketing mix factor.
3. Explored the influence of the significant Ps on customer satisfaction.
4. Identified the most effective marketing tactics for targeting customers on the basis of various age, gender identity, income, education, and ethnicity segments.
5. Attempted to understand which marketing mix factors and medical center staff members are most crucial in enhancing customer satisfaction.

LITERATURE REVIEW

Customer satisfaction is crucial for healthcare performance (Talias, 2018; Zanzeh, 2023). Zanzeh (2023) observed that factors like administration, customers' interaction with the doctor, staff's attitude, and hospital environment affected customer satisfaction. Prior research has highlighted the importance of timely access to care with regard to service provisions such as appointment scheduling, waiting times, and specialty care referrals with regard to customer satisfaction (Mustikasari et al., 2021).

Describing the importance of the marketing mix, Abedi and Abedini (2016) employed the analytic hierarchy process in defining the most attractive techniques of the marketing mix that relate to customer choices. The marketing mix factors involving product, price, place, promotion, process, personnel, and physical building (7Ps) are also anticipated to be significant in predicting customers' satisfaction with healthcare centers (Chana, 2021; Mutia et al., 2022).

Recent studies have delved into how marketing mix factors influence customer satisfaction. Salsabila et al. (2023) studied qualitative aspects in terms of customer satisfaction on Type 2 Diabetes customers in Hajj General Hospital, Makassar. Tarihoran et al. (2020) similarly categorized and discussed the 7P marketing mix as a tool that enhances customer revisits whereas Mutia et al. (2022) explored the application of the 7P marketing mix in hospitals. These works provide information on improving satisfaction and loyalty in healthcare institutions.

Furthermore, several variables have also been asserted to significantly influence customer satisfaction, including the quality of care, communication between customers and healthcare providers, waiting times for treatments and appointments, and the behavior and competence of staff members (Ravangard et al., 2020; Zanzeh, 2023). Moreover, demographic factors may also play a vital role in evaluating the impact of adapting any strategy within an organization (Ghabban et al., 2024). These factors may also mediate the impact of the 7Ps on customer satisfaction (Chana, 2021). Customers' gender identity, age group, income, education, or level of professionalism may dictate the consideration and level of expectations that would determine the impact of the set of 7P factors on their satisfaction with the existing healthcare services.

Literature Gap

By examining the existing literature, it can be shown that there are several gaps that remain to be addressed. In particular, the literature exposes the significance of extending the investigation into the moderation impact on this relationship of common demographic variables like gender identity, age, income, education, ethnicity, and professionalism. Additionally, studies should examine the combined effects of the marketing mix on patient satisfaction in various healthcare settings. Understanding these differences can inform targeted strategies to enhance patient satisfaction and improve medical outcomes.

METHODOLOGY

This section covers the research, hypotheses, and data analysis methods. Since the present study was questionnaire-based, it is pertinent to provide an overview of the method used in the research.

Data Collection

In data collection, the simple random sampling technique was used, and a survey was conducted through a questionnaire. In the study the data of a total of 9,135 participants across varying age groups, gender identities, income, education, and ethnic backgrounds were selected randomly from among the visitors of a specific medical center for three consecutive months.

The sample size needed to estimate a population proportion with a desired margin of error and a given degree of confidence was determined using the formula, as shown.

$$Sample\ Size\ =\ \frac{\frac{z^2 \times p(1-p)}{e^2}}{1 + \frac{z^2 \times p(1-p)}{e^2 N}}$$

where N = population size, e = error margin, and z = z-score.

While a confidence level of 95% and error margin of 7% are used and, from the formula, the sample size is 193.

Research Design

To assess the customers' satisfaction level, the primary survey was conducted through a questionnaire designed with three parts, that is, demographic information, questions related to the marketing mix (7Ps) strategies, and questions about the behavior of staff and the services provided

by them, and sent to three arbitrators specialized in the field, and their opinions were taken. The questionnaire for this research is provided in Appendix A.

To assess the significance and association between the 7Ps of the marketing mix, gender identity, age group, staff behavior, and customer satisfaction, several hypotheses were developed:

H_1: There is a correlation between overall satisfaction and each factor of the 7Ps.
H_2: There is a correlation between overall satisfaction and the gender identity of the customer.
H_3: There is a correlation between overall satisfaction and the age of the customer.
H_4: There is a correlation between overall satisfaction and the income of the customer.
H_5: There is a correlation between overall satisfaction and the education of the customer.
H_6: There is a correlation between overall satisfaction and the ethnicity of the customer.
H_7: There is a correlation between overall satisfaction and the staff of the medical center.
H_8: There is a significant relationship between customer satisfaction and the 7Ps based on customer demographic factors.
H_9: There is a significant relationship between customer satisfaction and significant Ps.
H_{10}: There is a significant relationship between significant Ps and demographic factors, and the staff of the healthcare center.

Data Analysis

The study employed reliability analysis, graphical analysis, and statistical analytical methods to examine the data and test the hypotheses. Basically, graphical analysis was applied to extract patterns and trends, followed by statistical analysis to come up with additional analysis of the data.

These analyses were performed using IBM Statistical Product and Service Solutions software. It is an efficient statistical tool that helps in conducting reliability tests, parametric and non-parametric analysis, and use of graphical representation of the results.

Graphical Method

The study used descriptive statistics to present data in both tabular and graphical formats. Tables effectively display large data sets, while graphs help to identify trends. Bar charts are used to illustrate grouped data, making it easy to compare different groups. This approach enhances understanding of distributions and correlations among observed values, clarifying the study's outcomes.

Reliability Analysis

Confirmatory Factor Analysis. Confirmatory factor analysis (CFA) assesses the effectiveness of measurement models by defining the components and their association. In this study, it adjusts for measurement error while estimating connections with multiple dependents with maximum likelihood estimation, drawing on the seminal work of Joreskog and Sorbom (1976). CFA yields the list factor loadings representing the link between observable variables and their latent constructs, with elevated loadings signifying a robust correlation.

Cronbach's Alpha. Cronbach's alpha measures a scale's internal reliability, ranging from 0 to 1, and a higher value of alpha exhibits greater reliability (Xiao, 2003). In this study it assesses the level of internal consistency of the items in a scale. Therefore, it is necessary to note that it is a measure of reliability rather than a statistical hypothesis test (Cortina, 1993). This measures the extent of variation in terms of the extent to which objects in a set co-vary with one another, as shown.

$$\alpha = \frac{N\bar{c}}{\bar{v} + (N-1)\bar{c}}$$

where N = number of items, $\bar{c}$ = average covariance between pair of items, and $\bar{v}$ = average variance.

Average Inter-Item Correlation. The study assessed internal consistency using the average inter-item correlation, which evaluates whether the questionnaire produced consistent results. This involves calculating and averaging correlations between item pairs. A range of 0.15 to 0.50 is acceptable, while values above 0.50 indicate redundancy.

Statistical Method

The statistical methods employed include independent sample t-test, logistic regression, and multiple linear regression. First, correlation between each of the 7Ps with overall customer satisfaction and demographic factors was evaluated. Then, an independent sample t-test was employed to determine the significant Ps that influence customer satisfaction. After that, logistics regression was applied to evaluate the impact of significant Ps and their interaction with customer demographics on satisfaction. Further, multiple linear regression analyzed the impact of age, gender identity, income, education, ethnicity, and professionalism on significant Ps. This analysis helps to divide the sample into segments according to their level of satisfaction.

Independent Sample T-Test. This analysis aims to determine whether the population means and variances of two independent groups are statistically different (Ghabban, 2024). The comparison of means is performed using a t-test, while Levene's test evaluates the variances between the groups. The null hypothesis is discarded if the p-value is less than the significance level, which is typically 0.05.

Logistic Regression. Logistic regression models the probability of outcomes for a specific dependent variable. In this study, it is used to analyze the association between customer satisfaction and the significant Ps individually. The logistic model estimates the probability of an event occurring through log odds as a linear combination of multiple independent variables. It has only two outcomes, that is, yes or no. Mathematically,

$$\textbf{Logistic Regression} = \textbf{P(Y = 1)} = \frac{e^{\beta o + \beta 1x1 + \beta 2x2.....}}{1 - e^{\beta o + \beta 1x1 + \beta 2x2.....}}$$

OR

$$p = \frac{e^z}{1 - e^z}$$

Multiple Linear Regression. This is a statistical method used to evaluate the association between a dependent variable and different explanatory variables. This research uses multiple linear regression to evaluate the influence of significant Ps with interaction in terms of gender identity and age on customer satisfaction. Mathematically,

$$y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \ldots + \beta_n X_n + \varepsilon_i$$

where y = dependent variable (Customer Satisfaction), β_0 = intercept, β_1 = the coefficient corresponding to X_1, β_n = the coefficient corresponding to X_n, and ε = error term.

Before multiple linear regression is applied, there are certain assumptions that need to be tested with the view of getting valid results. These assumptions include:

1. Homogeneity of variance (homoscedasticity)
2. Normality
3. Multicollinearity

These assumptions allow for the verification of the reliability of the multiple linear regression analysis, the accuracy of the estimated coefficients, and the prediction of the model.

RESULTS AND DISCUSSION

CFA

The CFA results in Appendix B show factor loadings. High loadings indicate how strongly each question relates to a particular factor and is crucial in customer satisfaction with a medical center.

Specifically, Questions 11, 13, and 18 pertain to the process factor, indicating activities flow. Questions 19, 21, and 17 fall under the people factor, highlighting the influence of staff interactions on customer satisfaction. Questions 1 and 9 relate to the promotion factor and pertain to payment facilities and marketing campaigns. The product factor consists of Questions 16 and 10 and cover updated equipment and availability of medical products. Questions 14 and 15 are grouped under the physical evidence factor, which focuses on the physical space. Question 5 relates to price factor, indicating the proximity of the center. Question 8 falls under the price factor. Finally, Questions 24 and 25 pertain to the professionalism factor, capturing how professionalism of the staff contributes to customer satisfaction.

The CFA findings show several important factors that determine customer satisfaction in a medical center.

Graphical Method

The total number of responses collected for this research is 193, categorized by gender identity. Analysis of the results indicates that 54% of the respondents identified as male, while 46% identified as female, reflecting a higher proportion of male respondents in the data set.

Moreover, the data are further categorized according to their ages and it is seen that 71/193 of the responses are from people ages 36-50 while the second major age group in the data is 25-35, with about 70 of the responses received from them, whereas 33 responses were collected from people between ages 18-24 and 19 responses from people whose age is above 50. Moreover, the responses of the research involve 27% of the population from below a $20,000 category of income while 41% belongs to the income range of $20,000 to $50,000. Also, the remaining 32% of the population represents the income category of more than $50,000. Furthermore, the collected data demonstrate that 33% of the total population have no formal education, while 18% have almost a high school diploma, 24% of them hold a bachelor's degree, and 25% of them have earned a master's degree or higher. Additionally, the data are further categorized into ethnic groups, which depicts that 52% of the population are Arab and 48% of the population are non-Arab.
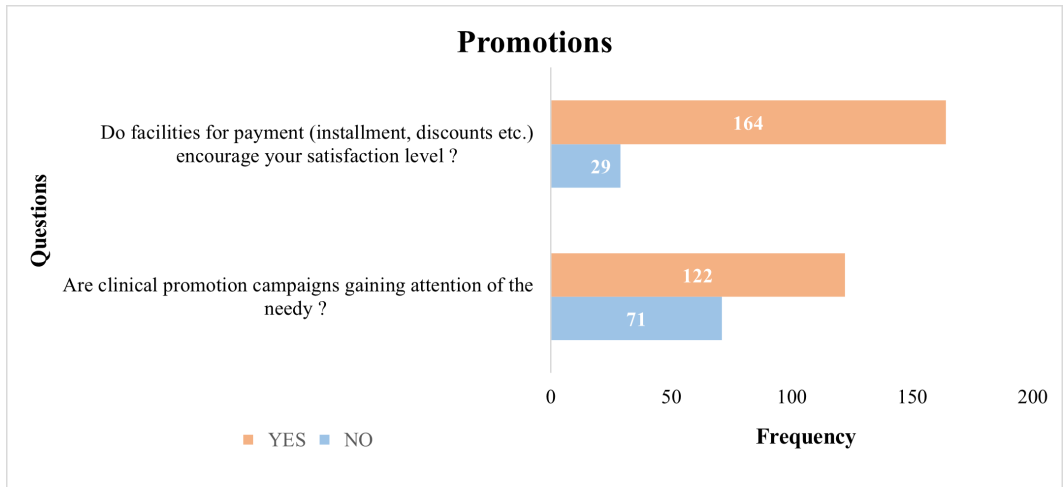
Marketing Mix

Marketing mix refers to the combination of strategies known as 7Ps that a firm considers developing a marketing strategy: people, promotion, price, product, place, process, and physical evidence. Proper management of these elements boosts customers' satisfaction levels and builds up a good market image.

Promotion

Promotion is a key element of the 7Ps that helps medical centers create goodwill and attract customers, enhancing visibility and brand positioning. This research included two questions assessing the impact of promotional strategies on customer satisfaction. However, the findings suggest that promotion alone does not significantly impact customer satisfaction compared to payment facilities like discounts, as shown in Figure 1.

Figure 1. Promotion

Promotions

Questions / Frequency

Do facilities for payment (installment, discounts etc.) encourage your satisfaction level ? — YES 164, NO 29

Are clinical promotion campaigns gaining attention of the needy ? — YES 122, NO 71

YES ■ NO

Place

The place element of the 7Ps framework refers to where goods or services are sold and how they are presented to customers, including factors like the establishment's appearance, location convenience, and amenities that enhance the customer experience. From responses, the convenience of medical centers is key in customer choice. Medical centers should invest in the place strategy to enhance customer satisfaction, particularly by selecting easily accessible locations, as shown in Figure 2.

Figure 2. Place

Place: Nearness affects the satisfaction level

Frequency / Categories

Disagree 79, Agree 114
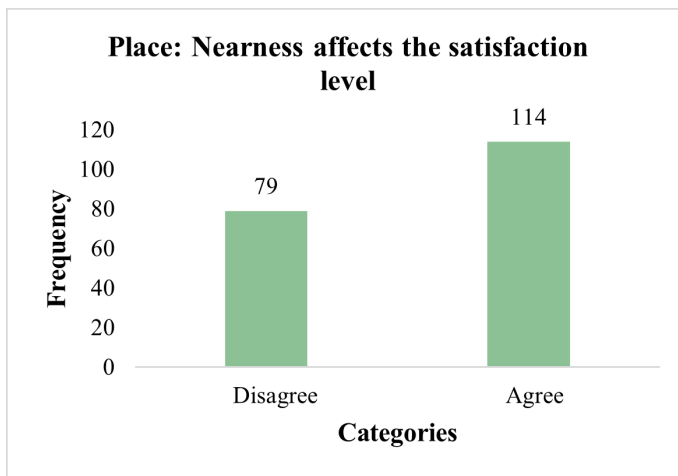
Price

Price is an essential element of the 7Ps framework, representing what customers pay for goods and services, including service rates and drug prices. This study examines quality-based pricing and finds that most respondents (131 out of 193) disagree that treatment quality depends on price. Medical centers should prioritize high treatment quality and adopt a customer-centric pricing approach to

build a positive reputation, provide the best possible treatment, and differentiate themselves from competitors, as shown in Figure 3.

Figure 3. Price

Product

Products in medical centers include services, treatments, and facilities. Over 80% of respondents consider product quality vital for customer satisfaction, emphasizing the need for effective treatments, high-quality laboratory services, medications, and modern equipment to enhance competitiveness, as shown in Figure 4.

Figure 4. Product

Figure 4. Product
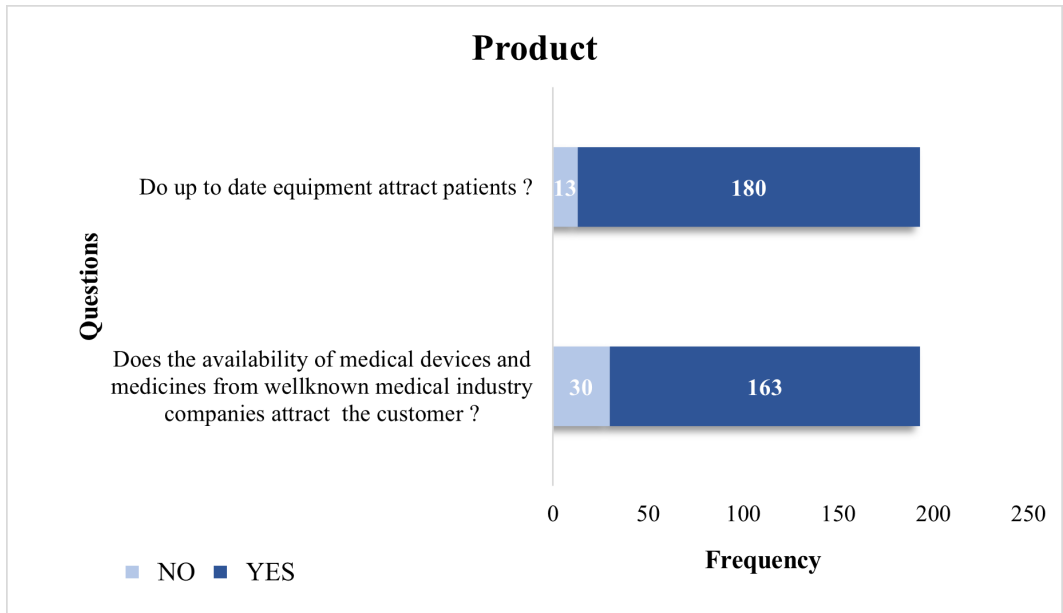
People

In healthcare, the category of people includes all service delivery personnel. This includes nurses, doctors, cleaning staff, administrative staff, and others. Data show that staff behavior and doctor availability significantly impact customer satisfaction. Therefore, to improve satisfaction, medical centers should ensure equitable treatment and train staff to provide fair service while ensuring skilled doctors are consistently available, as shown in Figure 5.

Figure 5. People

Figure 5. People
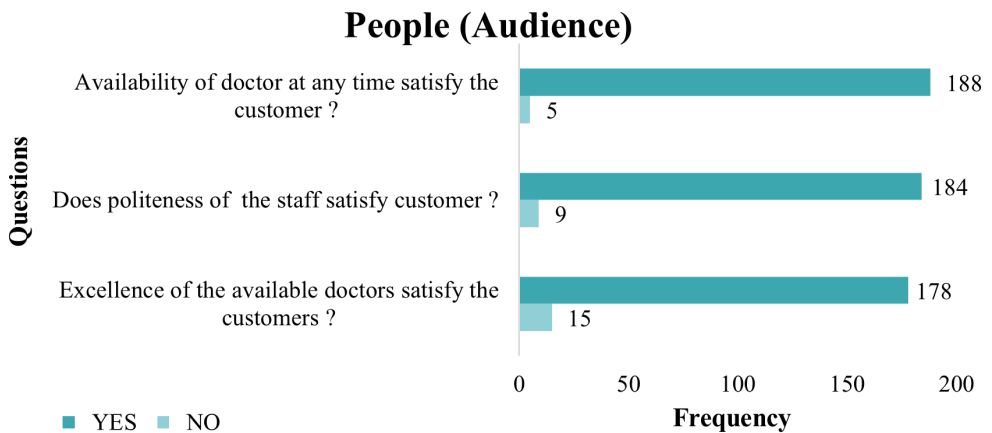
Physical Evidence

Physical evidence includes elements that influence a customer's choice of services, such as equipment and atmosphere. This study examines the impact of interior decoration and cleanliness on customer satisfaction. Findings show that 185 out of 193 respondents believe interior decoration positively affects satisfaction, while 189 recognize cleanliness as crucial.
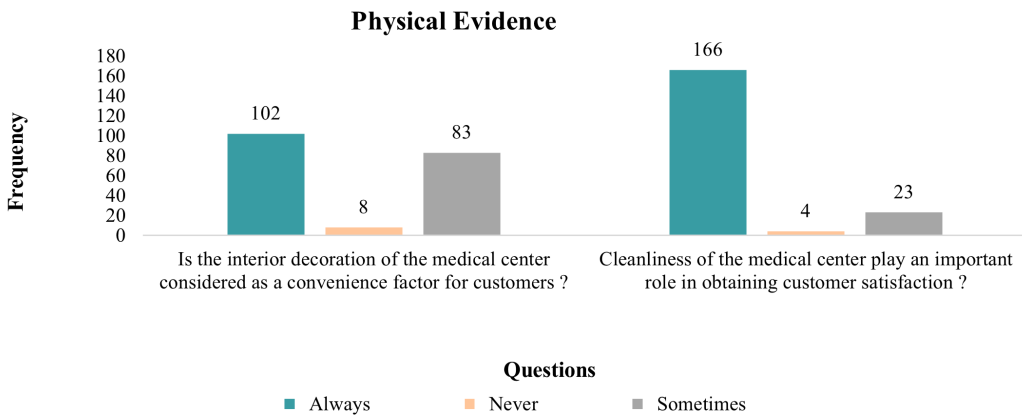
To enhance satisfaction of customers, it is crucial for medical centers to invest in physical evidence, including maintaining a clean environment and ensuring attractive interior decorations, which ultimately lead to a successful and competitive healthcare organization, as shown in Figure 6.

Figure 6. Physical evidence

Process

Process refers to the series of activities that interact to deliver a service. In a medical center, process indicators include the accuracy and speed of service delivery. These findings highlight the importance of efficient process management in improving customer satisfaction within healthcare settings, as shown in Figures 7 and 8.

Figure 7. Process 1
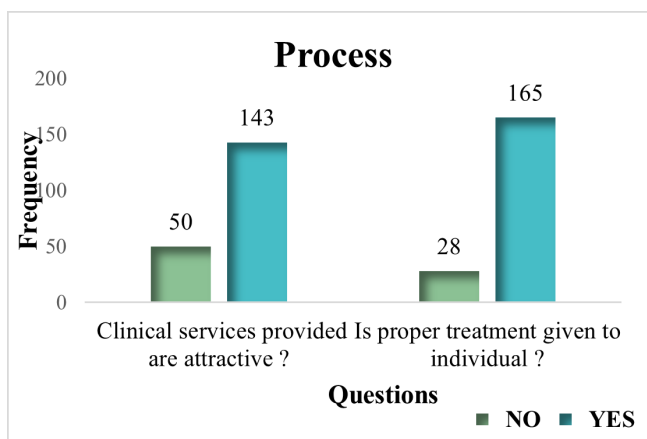
Figure 8. Process 2
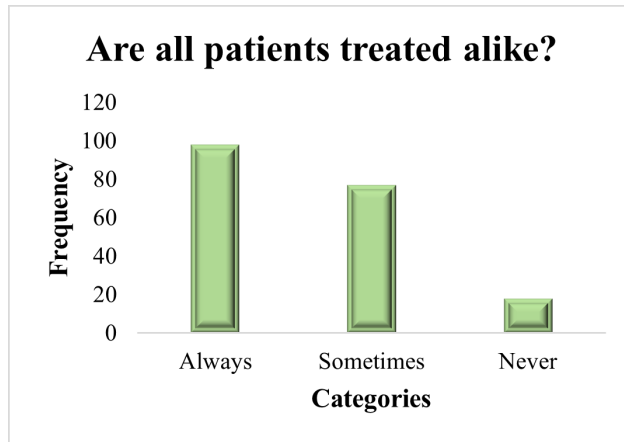
Analyzing the marketing mix strategies shows each element of the 7Ps framework is vital for customer satisfaction. Additionally, medical center reputation, staff behavior, and facility appearance enhance satisfaction significantly. Optimizing these aspects can improve customer satisfaction and strengthen the market reputation of the healthcare industry.

CUSTOMER SATISFACTION AND STAFF IN HEALTHCARE CENTERS

Customer satisfaction is a pivotal factor for an organization's profitability and reputation. The survey reveals that 72% of respondents are satisfied with hospital services. To ensure customer satisfaction, healthcare centers need to implement effective marketing mix strategies taking into consideration the 7Ps framework.

Additionally, the analysis shows that professional staff within medical centers significantly influence customer satisfaction. Therefore, by prioritizing customer satisfaction and investing in the progress of the medical staff, healthcare centers can foster an effective and satisfying experience for their customers, as shown in Figure 9.

Figure 9. Professionalism in hospitals
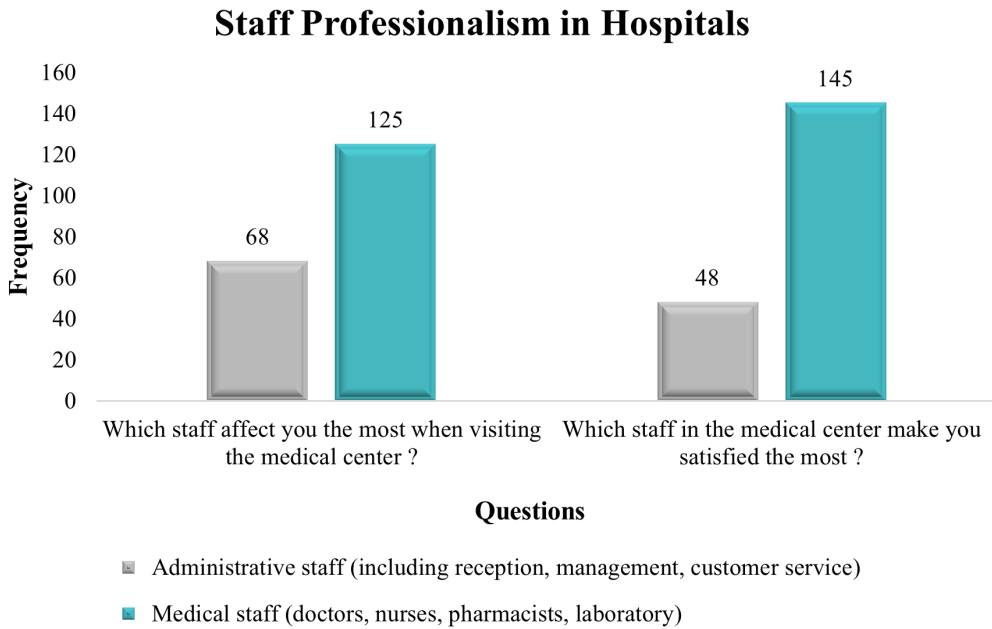
Reliability Analysis

Cronbach's Alpha

The coefficient yields a value of 0.636 for 16 items, which indicates a relatively high degree of internal consistency and reliability among the questions in the survey. Also, it suggests that the individual questions are nearly associated and stable, contributing to the robustness of the findings, as shown in Table 1.

Table 1. Reliability statistics results

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	Number of Items
0.636	0.656	16

Average Inter-Item Correlation

The results in Table 2 depict that the items are not correlated, as the average inter-item correlation is found to be 0.106, which reveals that the questions in a questionnaire are not able to produce consistent and appropriate results.

Table 2. Average inter-item correlation summary

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	Number of Items
Inter-Item Correlations	0.106	-0.186	0.580	0.766	-3.116	0.023	16

Correlation Analysis

The correlation analysis aims to determine whether an association exists between two variables and to identify the nature of that relationship, whether it is positive, negative, or moderate. To conduct this analysis, several hypotheses were formulated regarding various variables that are expected to correlate with customer satisfaction. The hypotheses and their corresponding results are outlined.

H_1: There is a correlation between overall satisfaction and each factor of the 7Ps.

This research examines the relationship between customer satisfaction and marketing mix strategies, as shown in Table 3. Notably, the process factor has the highest correlation with customer satisfaction. Overall, there is a significant association between customer satisfaction and the factors of people, promotion, process, and product. So, H_1 is not rejected for 4Ps and rejected for physical evidence, place and price.

H_2: There is a correlation between overall satisfaction and the gender identity of the customer.
H_3: There is a correlation between overall satisfaction and the age of the customer.
H_4: There is a correlation between overall satisfaction and the income of the customer.
H_5: There is a correlation between overall satisfaction and the education of the customer.
H_6: There is a correlation between overall satisfaction and the ethnicity of the customer.
H_7: There is a correlation between overall satisfaction and the staff of the medical center.

Following the analysis of marketing mix strategies, correlations between overall satisfaction and 7Ps, customer demographics, such as gender identity, age, income, education, ethnicity, and medical staff were calculated, as shown in Tables 3, 4 and 5. The results reveal no significant correlation between gender identity, income, education, ethnicity, and professionalism with customer satisfaction. However, customer satisfaction is significantly negative correlated with age of customer as the increase in age leads to decline in customer satisfaction. Therefore, in conclusion, H_3 is not rejected while H_2, H_4, H_5, H_6 and H_7 are rejected.

Table 3. Correlation between overall satisfaction and 7Ps

		Customer Satisfaction	Promotion	Place	Price	Product	Physical Evidence	People (Audience)	Process
Customer Satisfaction		1	.363**	.138	.033	.205**	.034	.430**	.661**
	p-value		.000	.055	.646	.004	.636	.000	.000
Promotion		.363**	1	.100	.020	.301**	-.052	.208**	.399**
	p-value	.000		.165	.787	.000	.475	.004	.000
Place		.138	.100	1	-.037	-.033	-.028	.112	.039
	p-value	.055	.165		.613	.645	.695	.121	.586
Price		.033	.020	-.037	1	.106	-.164*	-.018	.048
	p-value	.646	.787	.613		.144	.022	.808	.508
Product		.205**	.301**	-.033	.106	1	.037	.230**	.306**
	p-value	.004	.000	.645	.144		.607	.001	.000
Physical Evidence		.034	-.052	-.028	-.164*	.037	1	.076	.058
	p-value	.636	.475	.695	.022	.607		.292	.425

Table 3. Continued

		Customer Satisfaction	Promotion	Place	Price	Product	Physical Evidence	People (Audience)	Process
People (Audience)		.430**	.208**	.112	-.018	.230**	.076	1	.400**
	p-value	.000	.004	.121	.808	.001	.292		.000
Process		.661**	.399**	.039	.048	.306**	.058	.400**	1
	p-value	.000	.000	.586	.508	.000	.425	.000	

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

Table 4. Correlation between overall satisfaction and demographic factors of customers

		Customer Satisfaction	Patient Gender Identity	Age	Income	Education	Ethnicity
Customer Satisfaction		1	0.009	-.226**	0.018	-0.011	-0.047
	p-value		0.904	0.002	0.803	0.882	0.519
Patient Gender Identity		0.009	1	-.173*	0.101	0.096	-0.133
	p-value	0.904		0.016	0.162	0.182	0.065
Age		-.226**	-.173*	1	0.039	0.138	0.11
	p-value	0.002	0.016		0.592	0.055	0.127
Income		0.018	0.101	0.039	1	.542**	0.016
	p-value	0.803	0.162	0.592		0	0.825
Education		-0.011	0.096	0.138	.542**	1	0.061
	p-value	0.882	0.182	0.055	0		0.402
Ethnicity		-0.047	-0.133	0.11	0.016	0.061	1
	p-value	0.519	0.065	0.127	0.825	0.402	

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

Table 5. Correlation between overall satisfaction and staff of hospitals

		Customer Satisfaction	Professionalism in Hospitals
Customer Satisfaction		1	0.105
	p-value		0.147
Professionalism in Hospitals		0.105	1
	p-value	0.147	

Statistical Analysis

Independent Sample T-Test

For testing the significance of the 7Ps, this study uses a t-test for which the hypotheses are mentioned:

H_0: The means for the two populations are equivalent.
H_1: Instead of being equal, the means for the two populations are not.

The results reveal that the means of female and male customer responses differ significantly for most strategies, with p-values less than 0.05. So, H_0 is rejected, indicating statistical evidence that the averages of the two populations are not equal. On the other hand, among the 7Ps, five factors are statistically significant-physical evidence, people, and process-as shown in Appendix C. These factors are similar to the study of Ahmad et al. (2013).

Moreover, from the analysis of responses, price is the most important factor determined, which attracts customers while visiting the medical center. After that, place ranks second with an average of 1.40. On the other hand, the 7Ps of marketing mix have been categorized on the basis of gender identity, which depicts the average of their response in favor of the same factor, that is, price. Further, the sequence of these factors on the basis of the responses are elaborated in Figures 10 and 11.
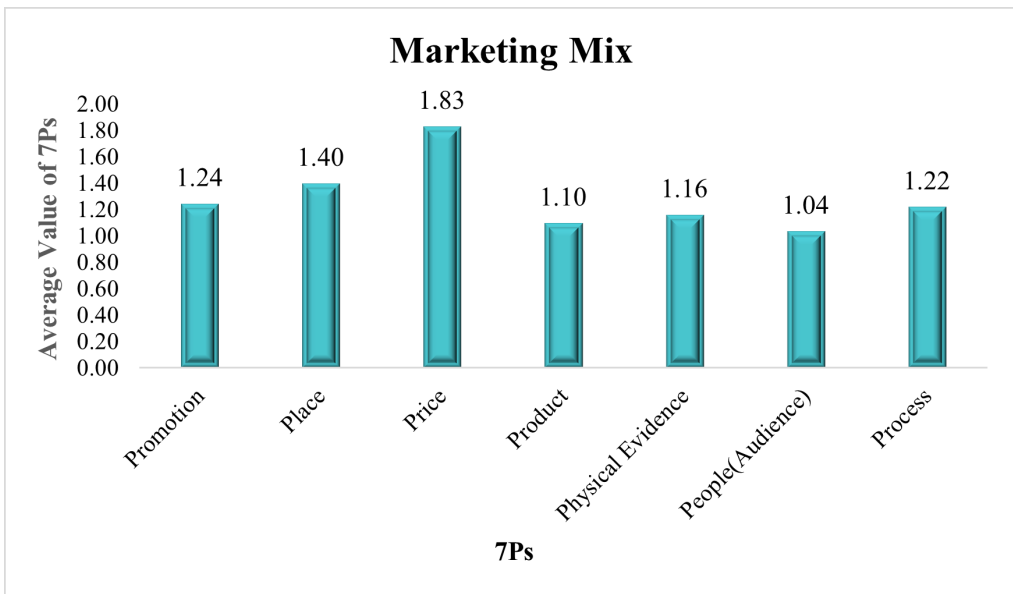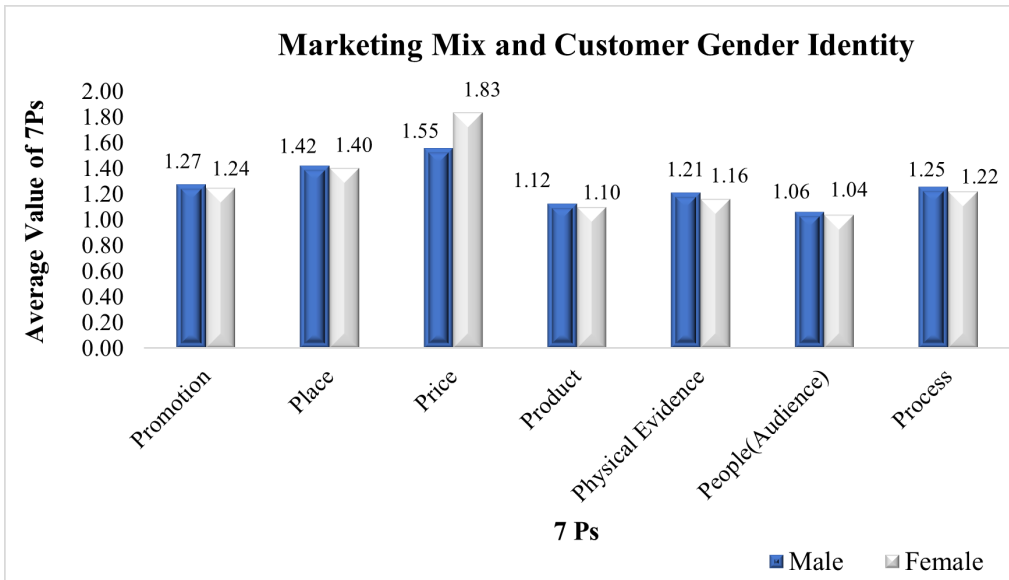
Figure 10. Marketing mix factors

Figure 11. Marketing mix with customer gender identity

These two analyses are used to rank the factors of the 7Ps in general (according to responses) and according to the significance level. Table 6 summarizes the results of these analyses.

Table 6. Ranking of 7Ps

Marketing Mix Strategy	In General	Significance Level
1	Price	Process
2	Place	People
3	Promotion	Promotion
4	Process	Product
5	Physical evidence	Place
6	Product	Price
7	People	Physical Evidence

Logistic Regression

In this context, logistic regression assesses the association between significant Ps and overall satisfaction determined. For this, the hypothesis set is mentioned:

H_8: There is a significant relationship between customer satisfaction and the 7Ps based on the customer demographic factors including age, gender identity, income, education, and ethnicity.

The results in Table 7 depict the impact of interaction in terms of the 7Ps with demographic factors, such as age, gender identity, income, education, and ethnicity, on customer satisfaction. The outcomes reveal that several 7P elements significantly influence satisfaction of customers with

varying effects of different demographic groups. As analyzed, promotion is the most critical driver, which shows a strong positive impact for gender identity and income factors and inverse impact for education and age. However, Product demonstrates positive relation with age and education groups and, inversely, relation with gender identity, while process shows substantial positive effects for age groups and negative effects for gender identity. Moreover, interaction in terms of place with education positively affects customer satisfaction and negatively affects the income group. Furthermore, price is inversely related to education, reflecting price sensitivity in medical centers. Among different demographic factors, ethnicity shows a significant impact through people interactions. These results emphasize the crucial role of tailoring marketing strategies to demographic preferences to enhance customer satisfaction.

Further, omnibus test of model coefficients confirm the overall model's significance with $p<0.05$, and Hosmer and Lemeshow depict that the model is well fitted (p-value>0.05). Additionally, Nagelkerke R Square value is 71% indicating that the model can interpret a significant portion of variance in the criterion variable.

$$
\begin{aligned}
Customer\ Satisfaction =\ &= \beta_0 + \beta_1 Promotions*Gender\ Identity + \beta_2 Place*Gender\ Identity + \\
&\beta_3 Price*Gender\ Identity + \beta_4 Product*Gender\ Identity + \beta_5 Physical\ Evidence*Gender\ Identity + \\
&\beta_6 People*Gender\ Identity + \beta_7 Process*Gender\ Identity + \beta_8 Promotions*Age + \\
&\beta_9 Place*Age + \beta_{10} Price*Age + \beta_{11} Product*Age + \beta_{12} Physical\ Evidence*Age + \\
&\beta_{13} People*Age + \beta_{14} Process*Age + \beta_{15} Promotions*Income + \beta_{16} Place*Income + \\
&\beta_{17} Price*Income + \beta_{18} Product*Income + \beta_{19} Physical\ Evidence*Income + \beta_{20} People*Income + \\
&\beta_{21} Process*Income + \beta_{22} Promotions*Education + \beta_{23} Place*Education + \beta_{24} Price*Education + \\
&\beta_{25} Product*Education + \beta_{26} Physical\ Evidence*Education + \beta_{27} People*Education + \\
&\beta_{28} Process*Education + \beta_{29} Promotions*Ethnicity + \beta_{30} Place*Ethnicity + \beta_{31} Price*Ethnicity + \\
&\beta_{32} Product*Ethnicity + \beta_{33} Physical\ Evidence*Ethnicity + \beta_{34} People*Ethnicity + \\
&\beta_{35} Process*Ethnicity + \varepsilon_i
\end{aligned}
$$

Table 7. Relation between customer satisfaction and 7Ps with demographic factors

Model	β	S.E.	Wald	Sig.	Exp(β)
7Ps * Customer Gender Identity					
Promotion	3.071	1.592	3.72	0.054**	21.567
Place	0.33	0.898	0.135	0.714	1.39
Price	0.09	0.883	0.01	0.919	1.094
Product	-6.286	2.432	6.681	0.01*	0.002
Physical Evidence	3.995	2.061	3.756	0.053**	54.312
People	4.224	2.335	3.272	0.07**	68.335
Process	-4.353	2.061	4.46	0.035*	0.013
7Ps * Age					
Promotion	-2.296	1.181	3.78	0.052**	0.101
Place	-0.317	0.517	0.375	0.54	0.729

Table 7. Continued

Model	β	S.E.	Wald	Sig.	Exp(β)
Price	-0.544	0.553	0.966	0.326	0.58
Product	2.515	1.152	4.766	0.029*	12.373
Physical Evidence	-1.455	1.286	1.279	0.258	0.233
People	-3.479	1.834	3.597	0.058**	0.031
Process	5.233	1.572	11.084	0.001*	187.444
7Ps * Income					
Promotion	8.577	3.004	8.152	0.004*	5306.965
Place	-4.73	1.962	5.811	0.016*	0.009
Price	2.675	2.064	1.68	0.195	14.514
Product	0.025	2.676	0	0.993	1.025
Physical Evidence	-1.256	2.268	0.307	0.58	0.285
People	-3.543	3.139	1.274	0.259	0.029
Process	-1.386	4.661	0.088	0.766	0.25
7Ps * Education					
Promotion	-4.785	1.971	5.895	0.015*	0.008
Place	2.613	1.248	4.383	0.036*	13.636
Price	-3.14	1.547	4.123	0.042*	0.043
Product	5.398	2.113	6.527	0.011*	221.048
Physical Evidence	1.238	1.717	0.52	0.471	3.45
People	-1.215	1.915	0.402	0.526	0.297
Process	0.51	2.687	0.036	0.849	1.666
7Ps * Ethnicity					
Promotion	-2.722	2.4	1.286	0.257	0.066
Place	0.825	1.483	0.31	0.578	2.283
Price	-0.965	2.013	0.23	0.632	0.381
Product	-3.601	3.391	1.128	0.288	0.027
Physical	-4.495	2.965	2.298	0.13	0.011
People	7.693	4.127	3.476	0.062**	2193.833

Table 7. Continued

Model	β	S.E.	Wald	Sig.	Exp(β)
Process	4.227	4.755	0.79	0.374	68.543
Constant	-5.72	2.138	7.156	0.007*	0.003

Dependent Variable: Customer Satisfaction
Omnibus Tests of Model Coefficients
Model: Chi-Square = 131.098 Sig. = 0.000
Model Summary
-2 Log likelihood = 97.706
Cox & Snell R Square = 0.493
Nagelkerke R Square = 0.71
Hosmer and Lemeshow Goodness of Fit Test
Chi-Square = 3.501 Sig. = 0.899*Note*. S.E. = XX; Sig. = XX; Exp = XX.
* and ** indicate the level of significance at 5% and 10% respectively.

H_9: There is a significant relationship between customer satisfaction and the significant Ps.

Table 8 depicts a positive relation between customer satisfaction and significant Ps. Single unit increase in promotion, place, people and process leads to 1.578, 8.577, and 6.566 units' increase in customer satisfaction. The odds of customers choosing healthcare centers that invest in people and process are 5,310.060 and 710.458 times higher than other strategies, respectively. So, H_6 is not rejected for any Ps except for product.

Further, omnibus test of model coefficients confirm the overall model's significance with p<0.05, and Hosmer and Lemeshow determined that the model is well fitted (p-value>0.05). Additionally, Nagelkerke R Square value is 64.2% indicating that the model can interpret a significant portion of variance in the criterion variable.

$$Customer\ Satisfaction\ =\ \beta_0 + \beta_1\ Promotion + \beta_2\ Place + \beta_3\ Product + \beta_4\ People + \beta_5\ Process + \varepsilon_i$$

Table 8. Relation between customer satisfaction and significant Ps

Model	β	S.E.	Wald	Sig.	Exp(β)
Promotion	1.578	0.787	4.026	0.045*	4.847
Place	1.001	0.515	3.771	0.052**	2.720
Product	-0.423	1.092	0.150	0.698	0.655
People	8.577	2.542	11.387	0.001*	5310.060

Table 8. Continued

Model	β	S.E.	Wald	Sig.	Exp(β)
Process	6.566	1.140	33.149	0.000*	710.458
Constant	-21.319	3.677	33.621	0.000*	0.000

Dependent Variable: Customer Satisfaction
Omnibus Tests of Model Coefficients
Model: Chi-Square = 113.979 Sig. = 0.000
Model Summary
-2 Log likelihood = 114.826
Cox & Snell R Square = 0.446
Nagelkerke R Square = 0.642
Hosmer and Lemeshow Goodness of Fit Test
Chi-Square = 5.781 Sig. = 0.672
Note. S.E. = XX; Sig. = XX; Exp = XX.
* and ** indicate the level of significance at 5% and 10% respectively.

Multiple Linear Regression

The impact of customer gender identity, age, and professional staff on each of the significant factors of marketing mix is analyzed and includes promotion, place, process, product, and people. The hypothesis that is designed to perform this analysis is shown:

H_{10}: There is a significant relationship between the significant Ps and the age, gender identity, income, education, ethnicity, and staff of the healthcare center.

The findings shown in Table 9 depict that there is no term that can influence promotion significantly, as no term has a p-value less than 0.05 except the constant term. By combining these demographic factors, it is determined that 2.3% of the variance of customer responses for promotion is explained by these variables.

$$Promotion = \beta_0 + \beta_1\,Patient\,Gender\,Identity + \beta_2\,Age + \beta_3\,Income + \beta_4\,Education + \beta_5\,Ethnicity + \beta_6\,Professionalism\,in\,Hospitals + \varepsilon_i$$

Table 9. Relationship between promotion and gender identity, age, income, education, ethnicity, and staff

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.193	0.158		7.534	0
Patient Gender Identity	-0.038	0.048	-0.059	-0.785	0.434
Age	-0.029	0.027	-0.08	-1.062	0.29
Professionalism in Hospitals	0.06	0.065	0.068	0.93	0.353
Income	0.041	0.036	0.099	1.145	0.254

Table 9. Continued

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Education	-0.005	0.024	-0.02	-0.227	0.82
Ethnicity	0.027	0.047	0.042	0.575	0.566

Dependent Variable: Promotion
Model Summary
R Square = 0.023
Adjusted R Square = -0.009
Durbin-Watson = 2.006
Note. Std. = XX; Sig. = XX; B = XX; t = XX.
* and ** indicate the level of significance at 5% and 10% respectively.

As presented in Table 10, none of the terms exhibits a p-value less than 0.05 except the constant term, so no term significantly influences the place. When considering the combined effects of demographic factors, 3.4% of the variance in customer responses regarding place is explained by these variables.

$$Place = \beta_0 + \beta_1 Patient\ Gender\ Identity + \beta_2 Age + \beta_3 Income + \beta_4 Education + \beta_5 Ethnicity + \beta_6 Professionalism\ in\ Hospitals + \varepsilon_i$$

Table 10. Relationship between place and gender identity, age, income, education, ethnicity, and staff

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.128	0.243		4.638	0
Patient Gender Identity	-0.035	0.073	-0.035	-0.474	0.636
Age	0.007	0.042	0.013	0.168	0.867
Professionalism in Hospitals	0.03	0.1	0.022	0.297	0.767
Income	0.083	0.055	0.129	1.501	0.135
Education	0.028	0.036	0.067	0.761	0.447
Ethnicity	0.027	0.072	0.027	0.372	0.71

Dependent Variable: Place
Model Summary
R Square = 0.034
Adjusted R Square = 0.002
Durbin-Watson = 1.508
Note. Std. = XX; Sig. = XX; B = XX; t = XX.
* and ** indicate the level of significance at 5% and 10% respectively.

The results in Table 11 depict that variations in customer age are shown to be associated with a 0.045 unit decrease in the product value, also suggesting that 3.7% of the variability in customer responses related to the people factor can be explained by these variables.

$$Product \ = \ \beta_0 + \beta_1 Patient \ Gender \ Identity + \beta_2 Age + \beta_3 Income + \beta_4 Education + \beta_5 Ethnicity + \beta_6 Professionalism \ in \ Hospitals + \varepsilon_i$$

Table 11. Relationship between product and gender identity, age, and staff

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.246	0.125		9.975	0
Patient Gender Identity	-0.039	0.038	-0.077	-1.041	0.299
Age	-0.045	0.021	-0.156	-2.094	0.038*
Professionalism in Hospitals	0.041	0.051	0.058	0.796	0.427
Income	-0.034	0.028	-0.102	-1.192	0.235
Education	0.017	0.019	0.08	0.917	0.36
Ethnicity	0.003	0.037	0.006	0.082	0.935

Dependent Variable: Product
Model Summary
R Square = 0.037
Adjusted R Square = 0.006
Durbin-Watson = 1.923
Note. Std. = XX; Sig. = XX; B = XX; t = XX.
* and ** indicate the level of significance at 5% and 10% respectively.

The findings of Table 12 reveal that no factor has a significant influence on the process. When considering the combined effects of demographic factors and professional staff, 3.1% of the variability in customer responses regarding the process can be explained by these variables.

$$Process \ = \ \beta_0 + \beta_1 Patient \ Gender \ Identity + \beta_2 Age + \beta_3 Income + \beta_4 Education + \beta_5 Ethnicity + \beta_6 Professionalism \ in \ Hospitals + \varepsilon_i$$

Table 12. Relationship between process and gender identity, age, and staff

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.35	0.139		9.697	0
Patient Gender Identity	-0.043	0.042	-0.077	-1.03	0.304
Age	-0.035	0.024	-0.109	-1.454	0.148
Professionalism in Hospitals	0.072	0.057	0.092	1.261	0.209
Income	-0.031	0.032	-0.086	-0.997	0.32

Table 12. Continued

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Education	0.011	0.021	0.046	0.522	0.602
Ethnicity	-0.015	0.041	-0.026	-0.356	0.722

Dependent Variable: Process
Model Summary
R Square = 0.031
Adjusted R Square = 0.000
Durbin-Watson = 2.176
Note. Std. = XX; Sig. = XX; B = XX; t = XX.
* and ** indicate the level of significance at 5% and 10% respectively.

The results of Table 13 indicate that changes in customer age are associated with a decrease of 0.028 units in the people value. When considering the combined effects of gender identity, age, and professional staff, these variables suggest that 0.4% of the variability in customer responses related to the people factor can be explained by these variables.

$$People = \beta_0 + \beta_1 Patient\ Gender\ Identity + \beta_2 Age + \beta_3 Income + \beta_4 Education + \beta_5 Ethnicity + \beta_6 Professionalism\ in\ Hospitals + \varepsilon_i$$

Table 13. Relationship between people and gender identity, age, and staff

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	1.14	0.076		14.998	0
Patient Gender Identity	-0.03	0.023	-0.098	-1.32	0.188
Age	-0.027	0.013	-0.154	-2.061	0.041*
Professionalism in Hospitals	0.014	0.031	0.033	0.448	0.655
Income	0.009	0.017	0.043	0.497	0.62
Education	-0.009	0.011	-0.067	-0.763	0.447
Ethnicity	0.001	0.023	0.003	0.042	0.967

Dependent Variable: People
Model Summary
R Square = 0.035
Adjusted R Square = 0.004
Durbin-Watson = 2.089
Note. Std. = XX; Sig. = XX; B = XX; t = XX.

This study analyzed how the 7Ps influence the satisfaction of customers within a particular medical center. The analysis highlights that out of all the variables, process is the most dominant factor, in line with Chana et al. (2021). Other key factors are promotion, place, product, and people. Regarding gender identity, four factors are also deemed important by the participants: promotion, physical evidence, and process. The interaction with the gender identity, age, and staff variables reinforces the

significance of product and people variables. Thus, the analysis of these elements should enable the managers to work out efficient strategic patterns and improve the level of customer satisfaction.

LIMITATIONS AND DELIMITATIONS RESEARCH

Limitations

This study has several limitations that have to be taken into consideration while drawing attention to the outcomes. First, the participants' sample was relatively limited, which may affect the external validity of the findings. Second, the research work was carried out during a relatively short span of time, being the first quarter of the year 2023. This relatively short period of work may have limited the quality of subsequent research. Finally, it included an exclusive context and setting, which can reduce the external validity of the results and the studies' suggestions for other contexts or domains.

Delimitations

The research participants only comprise customers who had been offered medical services from a particular hospital in the western region of Saudi Arabia. Second, it only relies on the survey questionnaire. It only analyzed the effect of the 7P factors: product, price, place, promotion, people, process, or physical evidence. It only examined the association between marketing mix factors and customer satisfaction across three demographic variables: gender identity, age group, income, education, ethnicity, and professionalism, and did not include other variables such as marital status or occupation.

CONCLUSION

In healthcare marketing, there are numerous factors that influence customers' choices when selecting healthcare centers. To ensure a smooth adaptation of the business model, managers should implement an effective marketing mix strategy, which is crucial for service organizations to achieve success and provide the highest level of customer satisfaction.

This study specifically examines the impact of the 7Ps on customer satisfaction. The findings reveal that the most significant factor is the process, which aligns with research conducted by Chana et al. (2021). The other important elements are promotion, place, product, and people. Therefore, managers should prioritize improving their process, focusing on their people, and enhancing the place and work on promotion campaigns to attract and satisfy a larger number of customers.

Additionally, the significant marketing mix elements are also tested in relation to demographic factors such as age, gender identity, income, education, and ethnicity with the 7Ps, promotion, product, place, and process identified as crucial elements to enhance customer satisfaction. To conduct a more comprehensive analysis, interaction terms between the significant marketing mix elements and gender identity, age, income, education, ethnicity, and staff are tested. The results indicate that product and people are vital elements in the marketing strategy. Consequently, managers and decision makers should incorporate these significant factors to design effective and productive strategies that provide the best possible services to customers and clients.

Recommendations

Future study should utilize a larger sample size to obtain more effective, generalized, and reliable results. Also, the research should incorporate customer knowledge management, which significantly influences satisfaction (Phayaphrom et al., 2021). Moreover, enhancing the questionnaire with additional factors such as demographics, psychographics, lifestyles, values, and attitudes can help to design more effective and customized marketing mix strategies.

Furthermore, extending the research to different sectors beyond healthcare would provide a more comprehensive understanding of how the 7Ps influence customer satisfaction. Finally, future study should examine the effects of uncertainties like the Coronavirus Disease 2019 pandemic on medical centers and identify how medical centers respond to and recover from such crises by improving their preparedness and effectiveness.

CONFLICTS OF INTEREST

FUNDING STATEMENT

PROCESS DATES

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REFERENCES

Abedi, G., & Abedini, E. (2016). Prioritizing of marketing mix elements effects on customers' tendency to the hospital using analytic hierarchy process. *International Journal of Healthcare Management*, *10*(1), 34–41. DOI: 10.1080/20479700.2016.1231435

Ahmad, A. M., Al-Qarni, A. A., Alsharqi, O. Z., Qalai, D. A., & Kadi, N. (2013). The impact of marketing mix strategy on hospitals performance measured by customer satisfaction: An empirical investigation on Jeddah private sector hospital senior managers perspective. *International Journal of Marketing Studies*, *5*(6). Advance online publication. DOI: 10.5539/ijms.v5n6p210

Bhalerao, V. R., & Deshmukh, A. (2017). Characterization and services marketing mix for healthcare industry: A critical review. *KRSCMS Journal of Management*, *7*(7). Advance online publication. DOI: 10.21319/krscms/2017/126316

Booms, B. H., & Bitner, M. J. (1981). Marketing strategies and organization structures for service firms. In Donnelly, J. H., & George, W. R. (Eds.), *Marketing of services* (pp. 47–51).

Chana, P., Siripipatthanakul, S., Nurittamont, W., & Phayaphrom, B. (2021). Effect of the service marketing mix (7Ps) on patient satisfaction for clinic services in Thailand. *International Journal of Business, Marketing, and Communication*, *1*(2), 1–12.

Chang, C. S., Weng, H. C., Chang, H. H., & Hsu, T. H. (2006). Customer satisfaction in medical service encounters: A comparison between obstetrics and gynecology customers and general medical customers. *The Journal of Nursing Research*, *14*(1), 9–23. DOI: 10.1097/01.JNR.0000387558.19071.57 PMID: 16547902

Cleary, P. D., & McNeil, B. J. (1988). Customer satisfaction as an indicator of quality care. *Inquiry: a Journal of Medical Care Organization, Provision and Financing*, *25*(1), 25–36. PMID: 2966123

Cortina, J. M. (1993). What is coefficient alpha? An examination of theory and applications. *The Journal of Applied Psychology*, *78*(1), 98–104. DOI: 10.1037/0021-9010.78.1.98

Day, G. S., & Wensley, R. (1988). Assessing advantage: A framework for diagnosing competitive superiority. *Journal of Marketing*, *52*(2), 1–20. DOI: 10.1177/002224298805200201

Ferreira, D. C., Vieira, I., Pedro, M. I., Caldas, P., & Varela, M. (2023). Customer satisfaction with healthcare services and the techniques used for its assessment: A systematic literature review and a bibliometric analysis. *Health Care*, *11*(5), 639. DOI: 10.3390/healthcare11050639 PMID: 36900644

Ghabban, M. (2024). Investigating organizational culture and employee engagement in a Saudi Arabian medical center. *International Journal of Reliable and Quality E-Healthcare*, *13*(1), 1–27. DOI: 10.4018/IJRQEH.352419

Ghabban, M., Alsughayyir, Y., Marzouq, A., & Khalid, M. (2024). Strategic adaptations and long-term organizational change in technology companies post-pandemic: An analysis of remote work implementation and its implications. *International Journal of Scientific Research*, *3*(5), 245–279. DOI: 10.59992/IJSR.2024.v3n5p9

Joreskog, K. G., & Sorbom, D. (1982). Recent developments in structural equation modeling. *JMR, Journal of Marketing Research*, *19*(4), 404–416. DOI: 10.1177/002224378201900402

Lied, T. R., & Kazandjian, V. A. (1999). Performance: A multi-disciplinary and conceptual model. *Journal of Evaluation in Clinical Practice*, *5*(4), 393–400. DOI: 10.1046/j.1365-2753.1999.00210.x PMID: 10579703

Malik, S. U. (2012). Customer satisfaction, perceived service quality and mediating role of perceived value. *International Journal of Marketing Studies*, *4*(1). Advance online publication. DOI: 10.5539/ijms.v4n1p68

Mustikasari, A., Krisnawati, M., & Sutrisno, E. (2021). Customer experience and repurchase intention in multi-channel: Customer satisfaction as mediating variable. *The Journal of Industrial Distribution & Business*, *12*(3), 7–19. DOI: 10.13106/JIDB.2021.VOL12.NO3.7

Mutia, M., & Pujianto, P. (2022). Application of the 7p mix marketing on customer satisfaction at hospitals. *Malahayati Nursing Journal*, *4*(9), 2270–2281. DOI: 10.33024/mnj.v4i9.6941

Nurittamont, W. (2021). Enhancing the factors influence on purchasing decision of endowment insurance: Case of testing mediate and moderate variables. *Journal of Management Information and Decision Sciences*, *24*(7), 1–11.

Phayaphrom, B., Wong, A., & Bhandar, M. (2021). The SME survival model for the technology transformation era. *Journal of Management Information and Decision Sciences*, *24*(7), 1–8.

Ravangard, R., Khodadad, A., & Bastani, P. (2020). How marketing mix (7Ps) affect the customers' selection of a hospital: Experience of a low-income country. *The Journal of the Egyptian Public Health Association*, *95*(1), 25. Advance online publication. DOI: 10.1186/s42506-020-00052-z PMID: 32990885

Salsabila, S. S., Indar, I., Darmawansyah, D., Razak, A., Manyullei, S., Saleh, L. M., & Mallongi, A. (2023). Analysis of the influence of the marketing mix on the satisfaction of customers with Type 2 diabetes: Miletus installation at Hajj General Hospital, Makassar. *Pharmacognosy Journal*, *15*(3), 395–399. DOI: 10.5530/pj.2023.15.90

Siripipatthanakul, S., & Chana, P. (2021, Jul). Service marketing mix (7Ps) and customer satisfaction in clinics. *International Journal of Trend in Scientific Research and Development*. https://www.ijtsrd.com/papers/ijtsrd43944.pdf

Srinivas, S., Jesus, A. O., Turzo, E., Marchiano, D., Sehdev, H. M., & Ludmir, J. (2013). Patient satisfaction with the laborist model of care in a large urban hospital. *Patient Preference and Adherence*, *7*, 217–222. DOI: 10.2147/PPA.S41969 PMID: 23662049

Talias, M. A. (2018). Assessment of customers' satisfaction with care provided in public and private hospitals of the Republic of Cyprus: A comparative study. *International Journal of Caring Sciences*, *11*(1), 125.

Tarihoran, U., Girsang, E. R., Nasution, S. L., & Ginting, C. N. (2020). Marketing mix 7P application to increase customer re-visits. *Proceedings of the International Conference on Health Informatics, Medical, Biological Engineering, and Pharmaceutical*. DOI: 10.5220/0010287400730079

Xiao, L. (2023). Using coefficient alpha in large-scale surveys with Likert scales and non-normal distributions. *AERA*, *2023*. Advance online publication. DOI: 10.3102/IP.23.2011658

Zanzeh, H. A. (2023). Factors influencing patient satisfaction in healthcare: A systematic literature review. DOI: 10.4018/978-1-6684-7630-7.ch013

APPENDIX A

Table 14.

Q1	Are clinical promotion campaigns gaining attention of the needy? (Ravangard et al., 2020)
Q2	Is reputation (the word-of-mouth) a major factor in attracting customers to be regular customers? (Ravangard et al., 2020)
Q3	Are special concessions rates for specific categories of people getting good response from customers? (Ravangard et al., 2020)
Q4	Does the appearance (decoration, paint, etc.) of the medical center matter? (Ravangard et al., 2020)
Q5	Does proximity affect the satisfaction level? (Srinivas et al., 2013)
Q6	Do you prefer to visit a medical center that has parking? (Ravangard et al., 2020)
Q7	Are the prices for medical examination, treatment, and diagnosis affordable compared with other centers? (Srinivas et al., 2013)
Q8	Do you believe that the treatment quality depends on the price? (Srinivas et al., 2013)
Q9	Do facilities for payment (installment, discounts, etc.) encourage your satisfaction level? (Srinivas et al., 2013)
Q10	Does the availability of medical devices and medicines from well-known medical industry companies attract the customer? (Srinivas et al., 2013)
Q11	Are clinical services provided attractive? (Srinivas et al., 2013)
Q12	Do the availability and high-quality of laboratory and radiology facilities increase the number of customers? (Ravangard et al., 2020)
Q13	Is proper treatment given to individuals? (Srinivas et al., 2013)
Q14	Is the interior decoration of the medical center considered a convenience factor for customers? (Srinivas et al., 2013)
Q15	Does the cleanliness of the medical center play an important role in obtaining customer satisfaction? (Channa & Siripipatthanakul, 2021)
Q16	Does up-to-date equipment attract customers? (Srinivas et al., 2013)
Q17	Does the excellence of the available doctors satisfy the customers? (Srinivas et al., 2013)
Q18	Are all customers treated alike? (Srinivas et al., 2013)
Q19	Does the politeness of the staff satisfy customers? (Srinivas et al., 2013)
Q20	Does timely treatment encourage customers to visit the medical center? (Srinivas et al., 2013)
Q21	Does the availability of a doctor at any time satisfy the customers? (Ahmad et al., 2013)
Q22	Does a simple and fast billing process satisfy the customers? (Srinivas et al., 2013)
Q23	Are you satisfied with your visits to the medical center? (Ahmad et al., 2013)
Q24	Which staff affects you the most when visiting the medical center? (Ravangard et al., 2020)
Q25	Which staff in the medical center makes you the most satisfied? (Ravangard et al., 2020)

Note. Q = XX.

APPENDIX B

Table 15.

	1	2	3	4	5	6	7	8	9
11. Are the provided clinical services attractive?	.796								
Customer Satisfaction	.753								
13. Is proper treatment given to individual?	.693								
18. Are all customers treated alike?	.539								
19. Do reliability and politeness of the staff and nurses satisfy customers?		.703							
21. Does availability of doctors at any time satisfy the customers?		.684							
17. Does excellence of available doctors satisfy the customers?		.683							
9. Do facilities for payment (installment, discounts, etc.) encourage your satisfaction level?			.717						
1. Are clinical promotion campaigns gaining attention of the needy?			.654						
16. Does up to date equipment attract customers?				.681					
10. Does the availability of medical devices and medicines from well-known medical industry companies attract the customers?				.677					
14. Is the interior decoration of the medical center considered as a convenience factor for customers?					.804				
15. Cleanliness of the medical center play an important role in obtaining customer satisfaction?					.740				
25. Which staff in the medical center make you satisfied the most?						.742			
24. Which staff affect you the most when visiting the medical center?						.706			
6. Do you prefer to visit a medical center that has parking?							.740		
5. Does proximity affect the satisfaction level?								-.543	
8. Do you believe that treatment quality depends on the price?									.836

APPENDIX C

Table 16.

		Levene's Test for Equality of Variances		T-Test for Equality of Means			
		F	Sig.	t	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Promotions	Equal variances assumed	2.386	.124	-5.385	.000	-.25739	.04780
	Equal variances not assumed			-5.342	.000	-.25739	.04818
Place	Equal variances assumed	3.888	.050	-1.931	.055	-.15161	.07850
	Equal variances not assumed			-1.896	.061	-.15161	.07996
Price	Equal variances assumed	.920	.339	-.460	.646	-.03464	.07523
	Equal variances not assumed			-.465	.643	-.03464	.07442
Product	Equal variances assumed	22.927	.000	-2.888	.004	-.11531	.03992
	Equal variances not assumed			-2.478	.015	-.11531	.04653
Physical Evidence	Equal variances assumed	1.055	.306	-.474	.636	-.01685	.03554
	Equal variances not assumed			-.445	.658	-.01685	.03791
People	Equal variances assumed	166.569	.000	-6.580	.000	-.14723	.02237
	Equal variances not assumed			-4.214	.000	-.14723	.03494
Process	Equal variances assumed	72.727	.000	-12.171	.000	-.41360	.03398
	Equal variances not assumed			-9.114	.000	-.41360	.04538