

The Role of Digital Marketing Strategy and Information Quality in Shaping Consumer Satisfaction in Digital Healthcare Services

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ABSTRACT

This study examines the influence of digital marketing strategy and information quality on consumer satisfaction in digital healthcare services. The increasing adoption of digital technologies has transformed healthcare consumer behavior, making effective digital communication and high-quality information essential determinants of satisfaction. However, limited studies have simultaneously investigated the effects of digital marketing strategy and information quality on consumer satisfaction within healthcare service contexts. This research employed a quantitative descriptive approach using a survey method. Data were collected through questionnaires distributed to 390 consumers who had used Medisinfo2U healthcare services in Medan, Indonesia. The data were analyzed using multiple linear regression, supported by validity, reliability, and classical assumption tests. The findings indicate that digital marketing strategy has a positive and significant effect on consumer satisfaction. Information quality also demonstrates a positive and significant influence and emerges as the dominant factor affecting satisfaction. Simultaneously, digital marketing strategy and information quality significantly influence consumer satisfaction, explaining 44.8% of the variance in the dependent variable. These results suggest that consumers value accurate, relevant, and accessible healthcare information, while interactive and well-targeted digital marketing activities enhance their service experience. The study contributes to the literature by providing empirical evidence regarding the partial and simultaneous effects of digital marketing strategy and information quality in healthcare services. Practically, the findings offer insights for healthcare providers to improve digital communication effectiveness and information quality to enhance consumer satisfaction.

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1. Introduction

Digital technologies and Internet use reshape healthcare consumer behavior, engagement, and decision-making (Bujnowska-Fedak & Węgierek, 2020; Puspitasari & Firdauzy, 2019; Zoghلامي & Rached, 2022). Patients are now demanding medical services that can be accessed digitally, not only through face-to-face but also through platforms that provide information, consultation, and

patient service management. Previous studies have consistently demonstrated that information quality contributes to consumer satisfaction in e-health, online healthcare services, and digital service environments (Ghasemaghaei & Hassanein, 2015; Necula et al., 2018). Likewise, digital marketing activities, including educational content, interactivity, and personalized communication, have been found to influence customer experiences and satisfaction across various digital platforms (Ali et al., 2022). Furthermore, information relevance, security, and credibility have been recognized as important determinants of customer satisfaction and recommendation behavior in digital contexts (Fine et al., 2017).

Despite these findings, several important gaps remain. First, empirical evidence regarding the direct influence of digital marketing strategies on consumer satisfaction in healthcare services remains limited, as prior studies have predominantly emphasized information quality and service quality factors (Berezan et al., 2017; Rashid & Rasheed, 2024). Second, existing studies generally examine digital marketing strategy and information quality separately, while limited attention has been given to their simultaneous influence on consumer satisfaction in healthcare settings (Santoso, 2021). Third, previous research has largely been conducted within e-commerce or specific online healthcare contexts, limiting the generalizability of findings across broader healthcare service environments (Srivastava & Raina, 2022). Consequently, it remains unclear whether digital marketing strategies and information quality independently or jointly exert stronger effects on consumer satisfaction in healthcare services.

Healthcare consumers depend on effective digital communication when evaluating healthcare services. They also require accurate and trustworthy information for decision-making (Goetzinger et al., 2007). Information quality influences satisfaction across e-health and digital service settings (Liao et al., 2010). Meanwhile, digital marketing activities shape customer experiences and satisfaction in digital environments (Wang et al., 2023). However, their relative influence on healthcare consumer satisfaction remains unclear (Tang et al., 2023). Evidence regarding their simultaneous influence remains limited in healthcare contexts (Santoso, 2021). Understanding these relationships can improve healthcare communication and service strategies.

Medisinfo2U is a healthcare service provider offering quick access to health information and online consultations. However, although the number of users had increased, the latest data showed fluctuations and a decrease in consumer satisfaction. Complaints that arise include an unfriendly application interface, non-transparent service fees, and slow responses, which raise doubts about the quality of service. The main problems faced by Medisinfo2U are related to two important aspects, namely digital marketing strategy and information quality. The digital marketing strategies used are often one-way, non-interactive, and less relevant to the needs of the patient segment. Unsegmented promotions as well as less professional visual content lower the credibility of the service. On the other hand, the quality of the information presented is also problematic, such as unverified content, the use of technical language that is difficult to understand, complicated navigation, and the lack of adaptation to local culture. This condition makes consumers doubt the accuracy of the information and reduces their level of satisfaction and loyalty to the service.

Based on this description, the purpose of this study is to determine the influence of digital marketing strategies and information quality, both partially and simultaneously, on consumer satisfaction of healthcare services, Medisinfo2U. The results of the research are expected to make a practical contribution to digital healthcare providers in improving the quality of interactions and content, while strengthening the academic literature on the linkage between digital marketing, information quality, and consumer satisfaction in the era of technological transformation.

2. Methods

This study uses a descriptive quantitative approach with the aim of determining the influence of digital marketing strategies and information quality on consumer satisfaction in Medisinfo2U services. The independent variables in this study were digital marketing strategy (X_1) and information quality (X_2), while the dependent variable was consumer satisfaction (Y). The research hypothesis is implicitly stated, namely that digital marketing strategies and information quality have both partial and simultaneous effects on consumer satisfaction.

Specifically, this study examines the hypotheses of:

H1: Digital marketing strategy positively influences consumer satisfaction of Medisinfo2U.

H2: Information quality positively influences consumer satisfaction of Medisinfo2U.

- H3: Digital marketing strategies and Information quality partially influence consumer satisfaction of Medisinfo2U.
 H4: Digital marketing strategies and information quality simultaneously influence consumer satisfaction on Medisinfo2U.

Consumer satisfaction is a response to the compatibility between expectations and service performance (Sumartini & Tias, 2019). Satisfaction indicators include service quality, reliability, compliance with expectations, and service performance. Digital marketing strategy is defined as a measurable and interactive effort to use digital technology to reach consumers (Sinaga et al., 2022; Tyasari & Patrikha, 2023). Indicators of digital marketing strategy include branding, completeness of information, website functionality, and relevant visual and advertising communications. Information quality is the level of completeness, clarity, and accuracy of information that is able to provide added value in the form of knowledge for users (Nurul Khotimah, 2022). Information quality indicators include trust, convenience, and ease of networking.

The object of the research is consumers who have used Medisinfo2U services in Medan City. The study population consisted of all active Medisinfo2U users, and a sample of 390 respondents was selected determined as many as 390 respondents using the incidental sampling method using the Slovin formula. The data collection technique was carried out through a questionnaire with a Likert scale, which was compiled based on the indicators of research variables. The research instrument was developed through the operational definition of variables, then tested for validity and reliability to ensure consistency and accuracy of the data.

The research model used is multiple linear regression, which allows the analysis of simultaneous and partial influences of independent variables on dependent variables. The collected data were analyzed in several stages. First, a classical assumption test was carried out which included normality, multicollinearity, and heteroscedasticity tests to ensure the feasibility of the regression model. Second, multiple linear regression analysis was carried out to test the influence of independent variables on dependent variables. Third, a t-test (partial) and an F-test (simultaneous) were carried out to determine the significance of the influence of each variable. Finally, the determination coefficient (R^2) is used to see the contribution of independent variables to consumer satisfaction.

3. Results

Data were analyzed using multiple regression analysis with SPSS version 25 based on responses from 390 Medisinfo2U consumers.

Validity Test

Table 1. Validity test

Variable		r_{count}	r_{table}	Criteria	Conclusion
Digital Marketing Strategy	X1.1	0.781	0.3610	$r_{count} > r_{table}$	Valid
	X1.2	0.757	0.3610	$r_{count} > r_{table}$	Valid
	X1.3	0.707	0.3610	$r_{count} > r_{table}$	Valid
	X1.4	0.703	0.3610	$r_{count} > r_{table}$	Valid
	X1.5	0.420	0.3610	$r_{count} > r_{table}$	Valid
	X1.6	0.374	0.3610	$r_{count} > r_{table}$	Valid
	X1.7	0.429	0.3610	$r_{count} > r_{table}$	Valid
	X1.8	0.419	0.3610	$r_{count} > r_{table}$	Valid
	X1.9	0.657	0.3610	$r_{count} > r_{table}$	Valid
	X1.10	0.649	0.3610	$r_{count} > r_{table}$	Valid
	X1.11	0.737	0.3610	$r_{count} > r_{table}$	Valid
	X1.12	0.694	0.3610	$r_{count} > r_{table}$	Valid
Information Quality	X2.1	0.741	0.3610	$r_{count} > r_{table}$	Valid
	X2.2	0.646	0.3610	$r_{count} > r_{table}$	Valid
	X2.3	0.652	0.3610	$r_{count} > r_{table}$	Valid
	X2.4	0.469	0.3610	$r_{count} > r_{table}$	Valid
	X2.5	0.556	0.3610	$r_{count} > r_{table}$	Valid
	X2.6	0.476	0.3610	$r_{count} > r_{table}$	Valid

Consumer Satisfaction	X2.7	0.601	0.3610	$r_{\text{count}} > r_{\text{table}}$	Valid
	X2.8	0.752	0.3610	$r_{\text{count}} > r_{\text{table}}$	Valid
	X2.9	0.591	0.3610	$r_{\text{count}} > r_{\text{table}}$	Valid
	Y1	0.708	0.3610	$r_{\text{count}} > r_{\text{table}}$	Valid
	Y2	0.896	0.3610	$r_{\text{count}} > r_{\text{table}}$	Valid
	Y3	0.375	0.3610	$r_{\text{count}} > r_{\text{table}}$	Valid
	Y4	0.553	0.3610	$r_{\text{count}} > r_{\text{table}}$	Valid
	Y5	0.457	0.3610	$r_{\text{count}} > r_{\text{table}}$	Valid
	Y6	0.392	0.3610	$r_{\text{count}} > r_{\text{table}}$	Valid
	Y7	0.512	0.3610	$r_{\text{count}} > r_{\text{table}}$	Valid
	Y8	0.579	0.3610	$r_{\text{count}} > r_{\text{table}}$	Valid
	Y9	0.428	0.3610	$r_{\text{count}} > r_{\text{table}}$	Valid
	Y10	0.467	0.3610	$r_{\text{count}} > r_{\text{table}}$	Valid
Y11	0.708	0.3610	$r_{\text{count}} > r_{\text{table}}$	Valid	
Y12	0.896	0.3610	$r_{\text{count}} > r_{\text{table}}$	Valid	

The validity test results for the digital marketing strategy variable (X1) show that all item-total correlation coefficients (calculated r-value) exceed the critical r-value of 0.3610. Therefore, all 12 questionnaire items measuring digital marketing strategy are considered valid. Similarly, the validity test results for the information quality variable (X2) indicate that all calculated r-values are greater than the critical r-value of 0.3610. Thus, all 9 questionnaire items measuring information quality are declared valid. For the consumer satisfaction variable (Y), all calculated r-value exceeds the critical r-value of 0.3610. Therefore, all 12 questionnaire items measuring consumer satisfaction are considered valid.

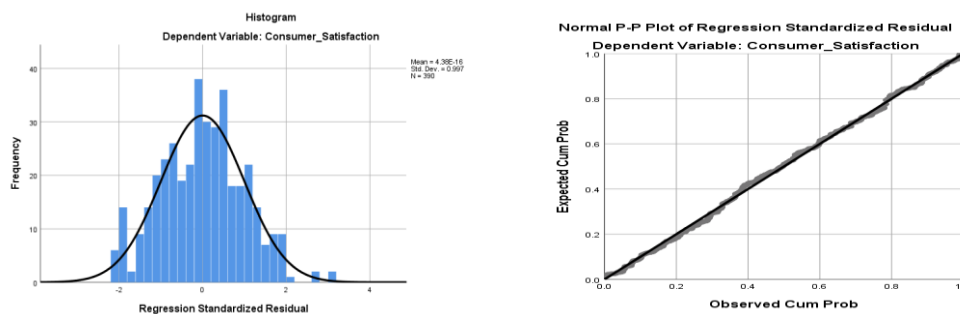
Reliability Test

Table 2. Reliability Test

Variable	Cronbach's Alpha Grades	Reliability Value	Criteria	Conclusion
Digital Marketing Strategy	0.850	0.600	Cronbach's Alpha Grades > Reliability Value	Reliable
Information Quality	0.788	0.600	Cronbach's Alpha Grades > Reliability Value	Reliable
Consumer Satisfaction	0.809	0.600	Cronbach's Alpha Grades > Reliability Value	Reliable

The reliability test results indicate that the Cronbach's Alpha values for digital marketing strategy, information quality, and consumer satisfaction all exceed 0.60, indicating acceptable reliability.

Normality Test



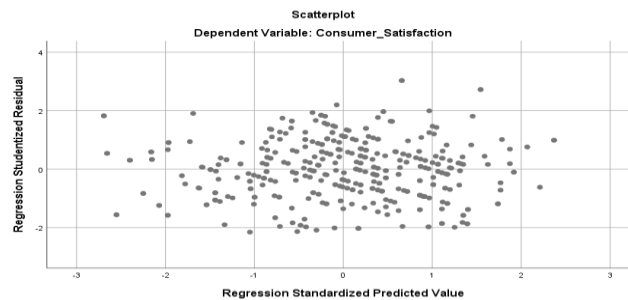
Source: Data processed, 2026

Figure 1. Normality Test Results

The histogram normality test results indicated that the research data was distributed normally, indicated by the direction of the data line that followed the histogram line in the histogram

normality test. In the normal p-p test, the plot also shows that the data points are around the diagonal line and follow the direction of the diagonal line, so the regression model meets the assumption of normality.

Heteroscedasticity Test



Source: Data processed, 2026

Figure 2. Scatterplot

Based on the scatterplot graph presented in Figure 2, it can be seen that the dots are scattered randomly and do not form a clear pattern and spread both above and below zero on the Y axis. This means that there is no heteroscedasticity in the regression model, so the regression model can be used to predict achievement based on inputs from independent variables.

Multicollinearity Test

Table 3. Multicollinearity Test

Variable	Tolerance	VIF
Digital Marketing Strategy (X ₁)	.808	1.237
Information Quality (X ₂)	.808	1.237

Source of Processed Data 2026

Based on the table above, it can be seen that the correlation values for the variables of digital marketing strategy and information quality have a tolerance value of (0.808) > 0.1 and a VIF value (1.237) < 10 so that it can be concluded that the variables of digital marketing strategy and information quality do not have multicollinearity.

Multiple Linear Regression Analysis

The following values of the beta coefficient and the correlation coefficient of the independent variable are presented in Table 4:

Table 4. Multiple Linear Regression Test

Model		Coefficients ^a		
		Unstandarized Coefficients		Standarized Coefficients
		B	Std. Error	Beta
1	(Constant)	11.852	1.742	
	Digital Marketing Strategy	.353	.039	.381
	Information Quality	.515	.053	.408

Source of Processed Data 2026

$$\text{Consumer Satisfaction} = 11.852 + 0.353 \text{ DMS} + 0.515 \text{ IQ} + e$$

Based on this equation, it can be concluded that the constant of 11,852 statistically means that if the digital marketing strategy and information quality have a value of 0, then consumer satisfaction remains at 11,852. The regression coefficient of the digital marketing strategy variable (X₁) of 0.353 shows that every increase in the digital marketing strategy variable of 1 unit, consumer satisfaction will increase by 0.353 units and the coefficient is positive, so it can be concluded that digital marketing strategy has a positive effect on consumer satisfaction. The regression coefficient of the information quality variable (X₂) of 0.515 shows that every increase in the information quality

variable by 1 unit, consumer satisfaction will increase by 0.515 units and the coefficient is positive so that it can be concluded that information quality has a positive effect on consumer satisfaction.

Partial Hypothesis Test (t-test)

Table 5. Test t value

Variabel	t value	Sig
Digital Marketing Strategy (DMS)	9.063	.000
Information Quality (IQ)	9.709	.000

Source of Processed Data 2026

In table 5 above, it can be seen that the digital marketing strategy (X₁) shows that the tcount value (9,063) > critical t-value (1.97) with a significant level (0.000) < 0.05 so that it can be concluded that the digital marketing strategy has a partial and significant positive influence on consumer satisfaction. Meanwhile, the information quality (X₂) shows that the calculated t-value (9,709) > critical t-value (1.97) with a significant level (0.000) < 0.05 so that it can be concluded that information quality has a partial and significant positive influence on consumer satisfaction.

Simultaneous Hypothesis Test (F Test)

Table 6. Test F value

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5101.369	2	2550.684	156.784	.000b
	Residual	6296.005	387	16.269		
	Total	11397.374	389			

Source of Processed Data 2026

In table 6 above, it can be seen that the value of calculated value of F (156,784) > critical value of F (3.00) with a significant level (0.000) < 0.05, so it can be concluded that digital marketing strategy and information quality have a simultaneous effect on consumer satisfaction.

Coefficient of Determination

Table 7. Coefficient of Determination

Model	R	R ²	Adj R ²	Std. Error of the Estimate
1	.669 ^a	.448	.445	4.033

Source of Processed Data 2026

Based on the table above, it shows that the R Square value obtained is 0.448. The results of this test showed that 44.8% of consumer satisfaction was influenced by digital marketing strategy and information quality variables, while the remaining 55.2% was influenced by other variables that were not studied in this study.

4. Discussion

The Influence of Digital Marketing Strategy on Consumer Satisfaction in Medisinfo2u Services

The results of the study show that digital marketing strategies have a positive and significant effect on consumer satisfaction, with a regression coefficient value of 0.353 and a calculated F-value (9.063) > critical F-value (1.97). These findings confirm that the better the implementation of digital marketing strategies, the higher the level of consumer satisfaction. In the context of Medisinfo2U, branding aspects, completeness of information, and professional visual communication are important factors in building consumer trust and comfort.

Previous research has also supported these findings as has been done by Septanti et al. (2025) which shows that digital marketing has a positive effect on consumer satisfaction and loyalty in the e-commerce sector. It indicates that digital marketing and consumer trust have a significant effect

on satisfaction and loyalty. Thus, the results of this study are consistent with the existing literature, but provide novelty because it focuses on local digital health services in Medan.

The Influence of Information Quality on Consumer Satisfaction in Medisinfo2u Services

The quality of information is proven to have a greater influence than the digital marketing strategy, with a regression coefficient of 0.515 and a calculated value of t (9.709) > critical value of t (1.97). This shows that clarity, accuracy, and ease of access to information are the dominant factors in determining consumer satisfaction. Digital healthcare consumers rely heavily on valid and easy-to-understand information to make health-related decisions.

Previous research supports these findings. Pratiwi (2023) found that information quality significantly affects consumer satisfaction on consumer satisfaction in online purchases. It implies that system quality, information quality, and service quality affect consumer satisfaction. Thus, this study strengthens the evidence that information quality is a crucial factor in building consumer satisfaction, especially in the digital healthcare sector.

The Influence of Digital Marketing Strategy and Information Quality on Consumer Satisfaction in Medisinfo2u Services

Simultaneously, digital marketing strategies and information quality have a significant effect on consumer satisfaction, as evidenced by the calculated value of F (156,784) > critical value of F (3.00) and significance of 0.000. The R Square value of 0.448 indicates that these two variables explain 44.8% of the variation in consumer satisfaction, while the rest are influenced by other factors that were not studied.

Previous research has also shown similar results as done by Fauziah & Safitri (2025) found that digital marketing and product variety have a significant positive effect on consumer satisfaction. The results of this study strengthen the existing literature, but make a new contribution by emphasizing the importance of integration between digital marketing strategies and information quality in digital healthcare. The novelty of this research lies in the local context of Medan, where two-way interaction, quick response, and content verification are determining factors for consumer satisfaction.

5. Conclusion

This study examined the influence of digital marketing strategy and information quality on consumer satisfaction in Medisinfo2U healthcare services. The findings indicate that both digital marketing strategy and information quality have positive and significant effects on consumer satisfaction, both partially and simultaneously. Digital marketing strategy contributes to consumer satisfaction by enhancing communication effectiveness, customer engagement, and the overall service experience through relevant and interactive digital activities. Meanwhile, information quality exerts a stronger influence on consumer satisfaction, indicating that consumers place high value on information that is accurate, clear, reliable, and easily accessible when using healthcare services.

The simultaneous analysis demonstrates that digital marketing strategy and information quality jointly contribute to consumer satisfaction, highlighting the importance of integrating effective digital communication with high-quality information delivery. These findings suggest that healthcare providers should not only focus on promotional activities but also ensure the credibility and usefulness of the information provided to consumers. Such integration can strengthen consumer trust, improve service experiences, and enhance satisfaction levels. This study contributes to the existing literature by providing empirical evidence regarding the partial and simultaneous effects of digital marketing strategy and information quality in the healthcare service sector. Practically, the findings offer valuable insights for healthcare organizations in designing more effective digital marketing initiatives and improving information quality to better meet consumer expectations. Future studies are encouraged to include additional variables, such as service quality, trust, perceived value, and user experience, to obtain a more comprehensive understanding of consumer satisfaction in digital healthcare services.

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