Research Article

Navigating Healthcare's Digital Transformation: How Service Reliability and Digital Content Strategy Drive Patient Loyalty Through Trust

Ikhsan Febriansyah[1*], Munawar[2], Endang Ruswanti[3]

[1] Universitas Esa Unggul, Indonesia; Email: ikhsan_sps_fkui@student.esaunggul.ac.id
[2] Universitas Esa Unggul, Indonesia; Email: munawar@esaunggul.ac.id
[3] Universitas Esa Unggul, Indonesia; Emaill: endang_ruswanti@esaunggul.ac.id

* Corresponding Author : Ikhsan Febriansyah

Abstract: The digitalization of healthcare had prompted health institutions to adopt digital content marketing as an innovative strategy for service promotion and patient loyalty development, while preserving service reliability as a crucial loyalty factor. Recent empirical research had revealed inconsistent findings about the non-linear relationships among these variables, which necessitated additional investigation incorporating trust as a mediating factor. This research sought to provide empirical validation of how trust mediated the relationship between service reliability, digital content marketing, and patient loyalty within hospital settings. The study employed a cross-sectional methodology using purposive sampling with 119 outpatients from Hermina Kemayoran Hospital in Jakarta. The analytical approach utilized the three box method for descriptive analysis and Partial Least Square-Structural Equation Modeling (PLS-SEM) via Smart-PLS 4 for inferential analysis. Results demonstrated that both digital content marketing and service reliability influenced patient loyalty indirectly through trust mediation, though digital content marketing's indirect influence was considerably weaker than its direct impact. The research determined that trust served as a partial mediator in how digital content marketing and service reliability affected patient loyalty development in hospital environments.

Keywords: digital content marketing, patient loyalty**,** service reliability, trust.

1. Introduction

The hospital industry in Indonesia has shown significant development, with 2,636 hospitals in 2023, and the majority (58.6%) are owned by the private sector (Ministry of Health of Indonesia, 2023). This rapid growth has driven intense competition to attract and retain patient loyalty. The patient's loyalty plays a vital role in the effectiveness of the hospital's operations, which is greatly affected by the full quality of the services. Aspects such as timeliness, accuracy of medical records, and consistency of service as part of service reliability are principal parameters in assessing the quality of healthcare services (Parasuraman et al., 2018). In line with technological development, marketing strategies have changed, with digital content marketing emerging as an innovative promotional method (Pulizzi, 2021) that can increase patient awareness and play a critical role in influencing patient decisions, thereby contributing to better healthcare delivery. (Mathur, 2024).

Previous studies have shown a positive effect of several key variables on patient loyalty in hospitals, including service quality (Al-Omari, et al., 2022; Dam, SM., 2021) and digital marketing (Nasti, 2024; Basu, 2023). However, other studies have shown that digital content marketing is not fully correlated with patient loyalty (Chandra, 2023), and service reliability is not consistently related to patient loyalty when mediated by satisfaction (Utami & Hasyim,

2018) but on the contrary these two things are related if mediated by trust (Sertan, 2023; Liu, S et al, 2021). Given these research gaps, this study seeks to examine how digital content marketing and service dependability affect patient loyalty by fostering trust among hospital patients. This research was carried out at Hermina Kemayoran Hospital, a Type B hospital in Jakarta that faces complex challenges related to declining outpatient loyalty, against the backdrop of digital transformation in healthcare services and increasingly competitive hospital market dynamics. Although hospital management has developed a digital marketing strategy to increase patient engagement, these efforts have not fully achieved the expected results in increasing the number of repeat visits from existing patients to the polyclinic as an indicator of patient loyalty.

An initial survey revealed a critical problem. Five out of ten patients showed unconcern in the hospital's digital marketing content, indicating a communication gap and misalignment between patient expectations and the developed strategy. Furthermore, there were significant patient complaints regarding services at the polyclinic, as indicated by 49 negative reviews on Google Reviews related to polyclinic services from January to May 2024.

The declining number of visits could influence patient loyalty and the hospital's reputation. The complexity of this problem requires in-depth research to identify the root causes, understand patient perceptions, and formulate comprehensive strategies that can improve service quality and patient experience in today's digital era.

This study's distinctiveness comes from its thorough integration of digital content marketing factors, which are highly influential in the marketing field today, combined with service reliability as a factor in increasing patient loyalty in hospital, by positioning trust as a mediating variable. Therefore, The purpose of this study is to investigate how patient loyalty is impacted by digital content marketing and service dependability via trust mechanisms, which are expected to provide theoretical and practical contributions to health service strategy development.

2. Literature Review

Patient loyalty is described as both an emotional and behavioral attachment to a hospital, reflected in repeated visits, resistance to competitor promotions, cross-service purchases, and willingness to recommend the hospital to others. The underlying theory used to explain patient loyalty is the Commitment-Trust Theory by Morgan and Hunt, which emphasizes the critical role of trust and commitment in establishing long-term relationships between patients and healthcare providers.

The variable of digital content marketing (DCM) is defined as a strategy focused on creating and distributing high-value online content to attract and retain target audiences. The supporting theory is the Customer Value Theory by Pulizzi, which highlights that content providing consistent value can foster consumer engagement and trust. The DCM dimensions used in this study are based on Karr (2016), which include reader cognition, sharing motivation, persuasion, decision-making, and relevance to the reader's daily life.

Service reliability, as a component of service quality, is defined as a hospital's ability to deliver accurate, consistent, and timely services. The main theory applied is the SERVQUAL Model by Parasuraman et al. (1988), which positions reliability as one of the five core dimensions of service quality. In this study, the dimensions of service reliability include work consistency, timeliness, accuracy, promise fulfillment, and administrative precision.

Patient trust is defined as the willingness of patients to rely on the hospital even in situations involving risk. This definition is based on Xie et al. (2017), which includes the cognitive, affective, and conative components of trust. The theoretical foundation is the Social Exchange Theory by Blau, which explains that trust is built through fair and mutually beneficial social interactions. The dimensions of trust used in this research follow Mayer et al. (2020): ability, benevolence, and integrity.

3. Proposed Method

The purpose of this study is to analyze the influence of digital content marketing and service reliability on patient loyalty, with trust as a mediating variable. Specifically, the research aims to examine how content-driven digital engagement and reliable healthcare services contribute to building patient trust and subsequently foster long-term loyalty. The study is motivated by existing research gaps and inconsistencies in the relationship between digital content strategies, service quality, and patient loyalty in hospital settings, particularly in Indonesia. Hermina Kemayoran Hospital in Jakarta was selected as the research site due to its active implementation of digital marketing strategies and ongoing challenges in increasing patient return visits.

This research adopts a quantitative, cross-sectional study design. Data were collected through structured questionnaires distributed to outpatients in the executive clinic of Hermina Kemayoran Hospital. The variables measured include digital content marketing, service reliability, trust, and patient loyalty, using validated instruments based on previous literature. Structural Equation Modeling (SEM) with Partial Least Squares (PLS) was employed for data analysis, enabling the assessment of both direct and indirect relationships among the variables. The study focuses on testing the mediating role of trust, aiming to provide theoretical insights and practical strategies for hospitals to enhance patient retention through improved digital engagement and reliable service delive
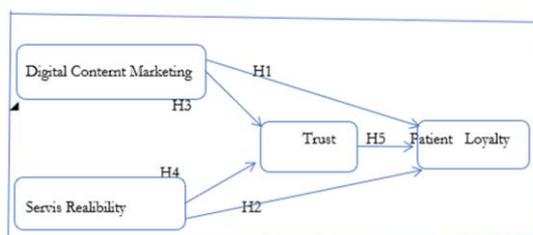

Figure 1. Conceptual Framework

4. Results and Discussion

Tabel 1 Demographic Data

Category	Total	Percentage	Total
Respondents Based on Gender			
Men	34	28,3%	119
Women	85	71,7%	
Respondents by Age			
18-25 years old	13	10,9%	
26-35 years old	51	42,8%	
36-45 years old	40	33,6%	119
46-55 years	8	6,72%	
56-65 years	5	4,20%	
>65 years old	2	1,68%	
Respondents Based on Last Education			
No graduated primary/not School	0	0%	
Completed primary school	5	4,2%	
Completed junior high school	3	2,5%	
Completed high school	25	20,8%	119
Diploma	14	11,7%	
Bachelor	63	53,3%	
Master's Degree	9	7,5%	
Respondents by Occupation			
Student	2	1,7%	
Labourer/Worker/Farmer	0	0%	
Trader/Self-employed	22	18,3%	
Civil Servant	6	5%	119
Private Employee	51	43,3%	
TNI/POLRI	1	0,8%	
More	38	31,7%	
Respondents Based on Reasons for Seeking Hospital Treatment			
Doctor Referral	20	16,7%	
Referral to other hospitals	8	6,7%	119
Self-will	91	77,5%	

source: primary data recapitulation,2024

The analysis of the table above shows that, based on gender, the majority of respondents were female (71.7%), with the largest age group being 26–35 years old (42.5%). In terms of education level, most respondents held a bachelor's degree (53.3%), and the most common occupation was private-sector employee (43.3%). The majority of respondents reported a monthly income ranging from IDR 5,000,001 to 10,000,000, and most patients sought treatment based on their own initiative.

Table 2 Hypothesis Test Result

Direct Effect	Path Coefficient	p-value	t-statistic	conclusion
H1. Digital Content Marketing → Trust	0.345	0,000	4,187	Hypothesis accepted
H2. Service Reliability → Trust	0.518	0,000	6,213	Hypothesis accepted
H3. Trust → Patient Loyalty	0.315	0.005	2,778	Hypothesis accepted
H4. Digital Content Marketing → Patient Loyalty	0.327	0,000	3,840	Hypothesis accepted
H5. Service Reliability → Patient Loyalty	0.284	0.003	2,976	Hypothesis accepted
Mediation effect				
H6. Digital Content Marketing →Trust → Patient Loyalty	0,109	0,031	2,157	Hypothesis accepted
Service Reliability → Trust → Patient Loyalty	0,163	0,008	2,663	

The hypothesis testing results show that all five hypotheses (H1–H5) are accepted. Digital content marketing has a significant positive effect opatient trust (H1), with a moderate structural impact ($f^2 = 0.175$), while service reliability also significantly influences trust (H2) with a strong effect ($f^2 = 0.395$). Trust significantly affects patient loyalty (H3), though the structural impact is relatively low ($f^2 = 0.119$). Additionally, digital content marketing (H4) and service reliability (H5) both significantly contribute to increasing patient loyalty, with moderate ($f^2 = 0.160$) and low ($f^2 = 0.102$) structural effects, respectively. Overall, the findings highlight that improvements in digital marketing and reliable services can enhance trust, which in turn strengthens patient loyalty.

The mediation tests show that trust significantly mediates the links between both digital-content marketing and service reliability with patient loyalty ($p < 0.05$; $t > 1.96$ in each case). Comparing direct and mediated paths, digital-content marketing still exerts a strong direct positive effect on patient loyalty ($\beta = 0.327$), while the indirect effect via trust is smaller ($\beta = 0.109$). Thus, trust enhances loyalty, but the primary impact of digital-content marketing on patient loyalty remains direct and more substantial.

5. Comparison

The study reveals that digital content marketing significantly influences patient trust, as shown by a strong t-statistic (4.187), a p-value <0.05, and a path coefficient of 0.345. This implies that improvements in digital content marketing can increase patient trust by 34.5%. In healthcare, digital content plays a crucial role in building trust through informative, non-promotional content that demonstrates hospital expertise and patient-centered values. Research by Bassam (2024), Muharam et al. (2024), and Peltier et al. (2020) support this, highlighting that engaging, educational content fosters patient engagement and trust across various settings.

Service reliability also has a significant effect on patient trust, with a path coefficient of 0.518, indicating a 51.8% impact. Trust increases when patients receive consistently reliable services, including accurate diagnoses, timely treatments, and efficient administrative processes. Competent, empathetic staff contribute further to positive patient perceptions. This aligns with findings by Asnawi et al. (2019), Fatima et al. (2018), and Ibrahim et al. (2024), which emphasize the role of reliable service delivery in fostering patient trust and loyalty.

The study further shows that trust mediates the relationship between both digital content marketing and service reliability with patient loyalty. Trust partially mediates the impact of digital content marketing on loyalty (path coefficient 0.109; t-statistic 2.157) and the impact of service reliability on loyalty (path coefficient 0.163), with the latter having a stronger indirect effect. This suggests that trust plays a vital role in enhancing patient loyalty, although the independent variables also have significant direct effects.

Path analysis reveals that digital content marketing directly affects patient loyalty (0.327), more than its indirect effect through trust (0.109). Service reliability has a balanced direct (0.284) and indirect effect (0.163) on loyalty. Based on the Variance Accounted For (VAF), trust partially mediates both relationships, supporting a dual pathway strategy: improving digital content marketing and service reliability can directly enhance patient loyalty, while also boosting trust as a reinforcing mechanism.

6. Conclusions

The findings of this study highlight the significant role of digital content marketing and service reliability in influencing patient loyalty, with trust serving as a partial mediator in both relationships. Digital content marketing demonstrates a stronger direct impact on patient loyalty, whereas service reliability exhibits a more balanced effect through both direct and indirect pathways. The mediation analysis further emphasizes that trust contributes significantly to strengthening patient loyalty, particularly in service reliability, where its influence is more pronounced. This suggests that while healthcare providers can enhance patient loyalty through direct improvements in digital content marketing and service reliability, fostering trust among patients is equally important. By increasing transparency, ensuring consistent service quality, and engaging in trustworthy digital communication, healthcare institutions can further solidify patient relationships. Therefore, a comprehensive strategy that integrates effective digital marketing, reliable healthcare services, and trust-building initiatives will be most effective in sustaining and enhancing patient loyalty in the long term.

This study has several limitations that need to be considered. First, the study only involved respondents from the hospital's outpatient unit, so it does not include the perspectives of patients from other units who may have different experiences. Second, this study was conducted in one type B private hospital, so the results cannot be generalized to hospitals of different types. Third, the research method used was quantitative with a closed questionnaire, which limited in-depth analysis of the reasons behind patient loyalty, especially regarding service reliability and digital content marketing. Therefore, further research is recommended to expand the scope of the sample, consider different types of hospitals, and use qualitative research methods to gain a deeper understanding.

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