

The Influence of Social Media Communication and Service Quality on Patient Loyalty with Patient Trust as a Mediating Variable in Eye Health Services in Surabaya

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ABSTRACT

The digital transformation of healthcare services has shifted the determinants of patient loyalty from solely clinical outcomes to relational dimensions and digital communication. Despite the growing use of social media in healthcare, studies that simultaneously integrate social media communication and service quality on patient loyalty, mediated by trust, particularly in eye healthcare services, are still limited. To analyze the direct and indirect effects of social media communication and service quality on patient loyalty through the mediation of patient trust in eye healthcare services in Surabaya. A quantitative cross-sectional survey was conducted with 100 randomly selected eye clinic patients. Data were collected using a Likert-scale questionnaire and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS. Measurement and structural model evaluations were conducted, along with mediation testing using bootstrapping. Social media communication and service quality significantly influenced patient trust. The direct effect on patient loyalty was also significant for social media communication, service quality, and patient trust. Patient trust partially mediated the relationship between social media communication and loyalty (indirect effect) and the relationship between service quality and loyalty (indirect effect). The model explained 52.1% of the variance in patient trust and 61.2% of the variance in patient loyalty, with satisfactory predictive relevance. Social media communication serves not only as an informational tool but also as a relational channel for building trust in ophthalmology services. Service quality remains the primary foundation of trust and loyalty. Managers need to integrate digital communication strategies with service excellence, leveraging patient trust as a key mechanism for maintaining long-term loyalty.

Keywords: Social Media Communication, Service Quality, Patient Trust, Patient Loyalty, Healthcare Marketing.

INTRODUCTION

The transformation of healthcare services in the digital era is characterized not only by increasing demands for clinical quality but also by changes in how patients obtain information, form perceptions, and establish relationships with providers. In this context, patient loyalty has become a strategic issue because it is related to the sustainability of long-term relationships, intention to reuse services, and tendency to recommend providers to others. In the hospital sector, service quality is a crucial determinant of satisfaction and loyalty because patients evaluate not only the outcome of services but also the overall interaction experience they receive during the care process (Meesala & Paul, 2018)).

The development of digital technology has also transformed the landscape of health communication. Social media no longer functions solely as a promotional channel but has become a space for information exchange, social support, learning, and relationship building between patients and healthcare institutions. Lin and Kishore (2021) explain that social media-mediated healthcare services can be understood through social media affordances, which enable social interaction, community co-creation, and social support, ultimately related to patient behavior and health outcomes. Thus, social media communication in healthcare can be positioned as part of the patient experience, potentially influencing their assessment of the healthcare institution (Lin & Kishore, 2021).

From a patient perspective, social media is increasingly used to seek health information, find providers,

obtain peer support, and build a better understanding of conditions and treatment options. Farsi et al. (2022) showed that patients use social media for various health purposes, but its effectiveness is strongly influenced by the credibility of the source and the quality of the information accessed. This finding is important because in healthcare, the quality of communication is not only assessed by the amount of information provided but also by its ability to reduce uncertainty and increase patient confidence in the provider (Farsi et al., 2022).

Several studies have shown that the use of social media in healthcare practice can provide tangible benefits to patient engagement and experience. Dhar et al. (2018) found that integrating social media into clinical practice positively impacted patient engagement and satisfaction. These findings indicate that appropriately managed digital communication can strengthen healthcare institutions' relationships with patients. However, in the context of healthcare, which is fraught with risk and uncertainty, the influence of social media communication on patient loyalty may not be entirely direct, but rather through specific psychological mechanisms, particularly patient trust (Dhar et al., 2018).

On the other hand, service quality remains the primary foundation for building patient loyalty. Meesala and Paul (2018) emphasized that, in the hospital context, service quality has a significant relationship with patient satisfaction and loyalty. Similarly, Nguyen et al. (2021) demonstrated that service quality influences patient satisfaction, perceived value, and loyalty in healthcare. These findings reinforce the idea that patient loyalty is not the result of a single factor, but rather the accumulation of perceptions of the quality of service received (Nguyen et al., 2021).

However, the context of eye health services has characteristics that make the issue of patient loyalty more specific to this field. Eye health services are closely related to the need for accurate diagnosis, clear information, continuity of care, and patient confidence in the competence of medical personnel and institutions. Almulhim and AlMulhim (2024) note that research on patient loyalty in the context of ophthalmology is still limited, despite the fact that factors related to service practices have a significant relationship with patient satisfaction and loyalty. This suggests that eye health services constitute a relevant context for developing a more comprehensive model of patient loyalty (Almulhim & AlMulhim, 2024).

A major issue in the literature is that previous studies tend to emphasize the relationship between service quality, satisfaction, and patient loyalty, while the role of social media communication as a relational factor has not been directly integrated into patient loyalty models. Lin and Kishore (2021) focused on a conceptual model of social media in health outcomes, while Farsi et al. (2022) highlighted patients' social media usage behavior. Dhar et al. (2018) demonstrated the impact of social media on engagement and satisfaction but did not specifically examine patient loyalty (Dhar et al., 2018). In contrast, Nguyen et al. (2021) and Meesala and Paul (2018) positioned service quality as the primary determinant of loyalty rather than social media communication. Meanwhile, Almulhim and AlMulhim (2024) examined the context of ophthalmology services but used satisfaction as a mediator rather than patient trust.

Thus, there is a research gap indicating that the relationship between social media communication, service quality, and patient loyalty has not been fully understood within a single integrated model, particularly by incorporating patient trust as a mediating variable. In the healthcare context, loyalty is shaped not only by the service experience but also by patients' beliefs in the credibility, integrity, and reliability of the service provider. Therefore, patient trust is an important variable suspected of explaining how social media communication and service quality translate into patient loyalty.

The urgency of this research is further strengthened in the context of Surabaya, a major city with high levels of healthcare competition and the increasing adoption of digital technology. Eye health services in Surabaya are required not only to provide high-quality services but also to effectively manage social media communications to build relationships and trust with patients. Without trust, digital communications have the potential to become merely a one-way promotional tool, while without high-quality services, long-term patient loyalty is difficult to maintain.

Based on the above description, this study aims to analyze the influence of social media communication and service quality on patient loyalty in eye health services in Surabaya and examine the mediating role of patient trust in this relationship. This study is expected to provide a theoretical contribution by integrating the perspectives of social media communication and service quality into a model of patient loyalty through the mechanism of trust. Furthermore, this study is expected to provide practical contributions to eye health service managers in designing more effective communication strategies and improving service quality.

LITERATURE REVIEW

Social Media Communication

Social media communication in the context of healthcare refers to the use of digital platforms by healthcare institutions to convey information, interact with patients, and build relationships. Lin and Kishore

(2021) explain that social media in healthcare has affordance characteristics that enable social interaction, information exchange, community formation, and social support, which influence patient behavior and health outcomes. Thus, social media is not simply a one-way communication channel but an interactive space that enables active engagement (Lin & Kishore, 2021).

Farsi et al. (2022) added that patients use social media to seek health information, find providers, share experiences and obtain emotional support. However, this use is heavily influenced by the credibility of the source and quality of the information. In other words, the effectiveness of social media communication in healthcare depends on the extent to which institutions can provide clear, accurate, responsive, and trustworthy information (Farsi et al., 2022).

In comparison, Lin and Kishore (2021) emphasized the conceptual and structural aspects of social media in the digital health ecosystem, while Farsi et al. (2022) focused more on patients' social media usage behavior. These two perspectives complement each other, explaining that social media communication has the potential to influence patients' perceptions of healthcare services (Lin & Kishore, 2021)(Farsi et al., 2022).

Quality of Service

Service quality in healthcare is a patient's perception of the level of excellence of the service received compared to their expectations. Dagger et al. (2007) developed a hierarchical model of healthcare quality that encompasses technical and functional dimensions, which together shape patients' assessments of service quality. This perspective is important because healthcare is judged not only by clinical outcomes but also by the accompanying service experience (Dagger et al., 2007).

Meesala and Paul (2018) emphasized that hospital service quality is significantly related to patient satisfaction and loyalty. They demonstrated that service quality encompasses more than clinical aspects, including interpersonal interactions, the physical environment, and service process efficiency. Therefore, service quality in this study is understood as a multidimensional construct that reflects the patient's comprehensive experience (Wiratama, A., Mujanah, S., & Fianto, 2025).

A comparison of the two studies shows that Dagger et al. (2007) focused more on developing the concept and scale of healthcare quality, whereas Meesala and Paul (2018) emphasized the managerial and relational consequences of service quality on patient behavior. The combination of the two provides a strong theoretical basis for explaining the position of service quality as a determinant of patient trust and loyalty (Dagger et al., 2007).

Patient Trust

Patient trust is the belief that a healthcare provider possesses competence, integrity, and good intentions in providing care. In their commitment-trust theory, Morgan and Hunt (1994) state that trust is a central element in establishing long-term relationships between organizations and customers. In the healthcare context, this concept is particularly relevant because patients face high levels of uncertainty and must make decisions based on their trust in their providers (Morgan & Hunt, 1994).

Liu et al. (2021) demonstrated that patient trust mediates the relationship between patient satisfaction and loyalty. This finding indicates that loyalty is not always formed directly but rather through a psychological process involving patients' beliefs about the service institution. Furthermore, Shie et al. (2022) found that service quality positively influences patient trust, which, in turn, influences patient loyalty.

Thus, patient trust in this study is positioned as a mediating variable that bridges the influence of social media communication and service quality on loyalty (Xu et al., 2021).

Patient Loyalty

Patient loyalty is a patient's commitment to continue using the same healthcare service and recommending it to others. Meesala and Paul (2018) state that patient loyalty is an important outcome in healthcare because it is related to organizational sustainability and institutional competitiveness. Loyalty is reflected not only in the intention to reuse the service but also in the patient's willingness to maintain a relationship with the provider despite the availability of alternatives.

Nguyen et al. (2021) showed that patient loyalty is influenced by service quality, satisfaction and perceived value. Meanwhile, Shie et al. (2022) added that patient trust is a crucial determinant of loyalty, especially in the context of healthcare services that require high confidence in the competence and reliability of the service providers. Therefore, patient loyalty is understood as the result of a combination of cognitive, affective, and relational factors formed through the patient's experience of receiving services (Shie et al., 2022).

Research Conceptual Framework

This research conceptual framework is built on the research problem and literature review, which indicates that social media communication and the quality of healthcare services are factors that can influence patients' trust and loyalty. Good social media communication can help patients obtain clear, fast, and easy-to-understand information, thereby increasing their positive assessment of the clinic's services. Conversely, good

healthcare service quality builds patient trust. When patients feel confident in the quality of care, their loyalty to the clinic increases.

A research framework that describes the relationship between research variables can be built based on the problems and literature review, as shown in Figure 1.

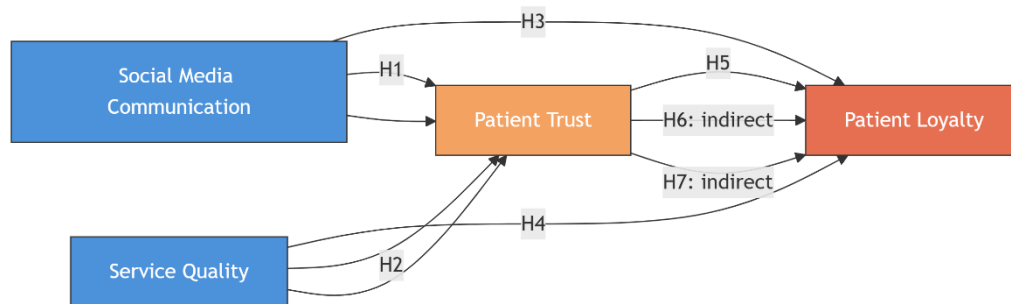


Figure 1. Research Concept Framework

Research Hypothesis

H1: Social media communication has a significant influence on patient trust.

H2: Service quality has a significant effect on patient trust.

H3: Social media communication has a significant influence on patient loyalty.

H4: Service quality has a significant effect on patient loyalty.

H5: Patient trust has a significant influence on patient loyalty.

H6: Patient trust mediates the influence of social media communication on patient loyalty.

H7: Patient trust mediates the influence of service quality on patient loyalty intentions

RESEARCH METHOD

This study used a quantitative approach with a cross-sectional study type to analyze the relationship between social media communication, service quality, patient trust, and patient loyalty at an eye clinic in Surabaya. The study population consisted of 200 patients, with a sample of 100 respondents selected using a random sampling technique. Respondents involved were patients who had used eye clinic services at least once, were over 17 years old, and were willing to complete a complete questionnaire. Data collection was carried out through a questionnaire with a Likert scale to measure respondents' perceptions of the research variables, namely social media communication (X1), service quality (X2), patient trust (Z), and patient loyalty (Y).

Data were analyzed using Structural Equation Modeling-Partial Least Squares (SEM-PLS) with the help of SmartPLS software. The analysis was conducted in two stages: outer model evaluation and inner model evaluation. The outer model evaluation aimed to test the quality of the instrument through convergent validity, discriminant validity, and construct reliability. Meanwhile, the inner model evaluation was used to assess the relationship between latent variables through the coefficient of determination (R^2), path coefficient, effect size (f^2), and predictive relevance (Q^2). Hypothesis testing was conducted using bootstrapping techniques to determine the significance of direct and indirect influences. In this study, patient trust was tested as a mediating variable in the relationship between social media communication and patient loyalty, as well as between service quality and patient loyalty. The study was also conducted with due regard to research ethics, namely maintaining the confidentiality of respondents' identities and ensuring that participation was voluntary for academic purposes.

RESULTS AND DISCUSSIONS

A total of 100 valid responses were analyzed. As shown in Table 1, the sample was predominantly female (58%), with the largest age group being 26–35 years (38%). Most respondents had completed undergraduate education (45%) and were employed in the private sector (41%). Regarding social media usage, 82% used Instagram, 67% used Facebook, and 54% used WhatsApp as primary platforms to follow clinic updates. The average frequency of visiting the clinic's social media page was 2–3 times per week (47%), indicating moderate digital engagement.

Table 1. Respondent Demographics (n = 100).

Characteristic	Category	Frequency	Percentage
Gender	Male	42	42.0%
	Female	58	58.0%
Age (years)	18–25	27	27.0%
	26–35	38	38.0%
	36–45	21	21.0%
	46–55	10	10.0%
	>55	4	4.0%
Education	High School	19	19.0%
	Diploma	21	21.0%
	Undergraduate	45	45.0%
	Postgraduate	15	15.0%
Occupation	Student	14	14.0%
	Private Sector Employee	41	41.0%
	Civil Servant	12	12.0%
	Entrepreneur	20	20.0%
	Other	13	13.0%
Social Media Platforms*	Instagram	82	82.0%
	Facebook	67	67.0%
	WhatsApp	54	54.0%
	TikTok	31	31.0%
	YouTube	28	28.0%
Frequency of visiting	Daily	11	11.0%
clinic's social media	4–5 times/week	23	23.0%
	2–3 times/week	47	47.0%
	Once a week	19	19.0%

The demographic distribution aligns with the typical patient profile of private eye clinics in metropolitan Surabaya, where digitally literate, working-age adults form the core consumer base of the clinic. The high penetration of Instagram and Facebook indicates that visual-centric platforms are pivotal for health information dissemination, consistent with the national digital trends.

The measurement model was assessed using indicator reliability, internal consistency reliability, convergent validity, and discriminant validity.

All item loadings exceeded the threshold of 0.70 (Table 2), ranging from 0.783 (SMC2) to 0.918 (PT1), confirming the reliability of the indicators. The composite reliability (CR) values for all constructs were above 0.80, and Cronbach's alpha ranged from 0.838 to 0.910, establishing strong internal consistency. The average variance extracted (AVE) for each construct surpassed 0.50, supporting the convergent validity. The highest AVE was observed for patient trust (0.782), indicating that the three items captured a large proportion of the construct's variance.

Table 2. Factor Loadings, Reliability, and Convergent Validity

Construct	Item Code	Loading	CR	AVE	Cronbach's α
Social Media Communication	SMC1	0.876	0.893	0.677	0.840
	SMC2	0.783			
	SMC3	0.814			
	SMC4	0.814			
Service Quality	SQ1	0.826	0.910	0.669	0.876
	SQ2	0.808			
	SQ3	0.791			
	SQ4	0.839			
	SQ5	0.824			
Patient Trust	PT1	0.918	0.915	0.782	0.861
	PT2	0.890			
	PT3	0.842			
Patient Loyalty	PL1	0.861	0.891	0.731	0.838
	PL2	0.802			
	PL3	0.899			

Note: CR = Composite Reliability, AVE = Average Variance Extracted

SMC2 ("The clinic's social media provides clear information") showed the lowest loading within its block (0.783) but remained robust. This suggests that while clarity is important, interactivity and responsiveness (SMC1, SMC4) are marginally stronger indicators of effective communication on social media in healthcare.

Discriminant validity was assessed using the Fornell-Larcker criterion and Heterotrait-Monotrait (HTMT) ratio. Table 3 presents the square root of the AVE (diagonal) and inter-construct correlations. The square root of the AVE for each construct exceeded its correlations with the other constructs, satisfying the Fornell-Larcker criterion. For instance, the AVE square root for patient trust (0.884) was larger than its correlation with patient loyalty (0.687).

Table 3. Fornell-Larcker Criterion

Construct	SMC	SQ	PT	PL
Social Media Communication	0.823			
Service Quality	0.524	0.818		
Patient Trust	0.578	0.632	0.884	
Patient Loyalty	0.526	0.554	0.687	0.855

Diagonal (bold): square root of AVE

The HTMT values (Table 4) were all below the conservative threshold of 0.85, confirming discriminant validity. The highest HTMT was between patient trust and patient loyalty (0.793), which is acceptable and conceptually anticipated.

Table 4. Heterotrait-Monotrait (HTMT) Ratio

Construct	SMC	SQ	PT	PL
Social Media Communication	–			
Service Quality	0.617	–		
Patient Trust	0.677	0.725	–	
Patient Loyalty	0.622	0.638	0.793	–

These results provide confidence that each construct captures a distinct phenomenon, which is an essential prerequisite for meaningful structural model testing.

Before examining the path coefficients, collinearity among the predictor constructs was checked; all variance inflation factor (VIF) values were below 3.0, indicating no multicollinearity issues. The structural model estimates are presented in Table 5 and illustrated in Figure 2. All five direct hypotheses were confirmed.

Table 5. Direct Path Coefficients and Hypothesis Testing

Hypothesis	Path	β	t-statistic	p-value	95% CI (BC)	Result
H1	SMC $\rightarrow$ PT	0.324	3.620	<0.001	[0.148, 0.492]	Supported
H2	SQ $\rightarrow$ PT	0.472	5.248	<0.001	[0.292, 0.641]	Supported
H3	SMC $\rightarrow$ PL	0.180	2.373	0.018	[0.031, 0.328]	Supported
H4	SQ $\rightarrow$ PL	0.224	2.591	0.010	[0.055, 0.393]	Supported

Hypothesis	Path	β	t-statistic	p-value	95% CI (BC)	Result
H5	PT $\rightarrow$ PL	0.482	5.757	<0.001	[0.317, 0.642]	Supported

Note: BC = bias-corrected confidence interval; 5,000 bootstrap samples

Social media communication exerted a significant positive effect on patient trust ($\beta=0.324$, $p<0.001$), supporting H1. This finding demonstrates that when eye clinics communicate actively, responsively, and clearly via social media, patients are more likely to develop trust in the clinic's competence and integrity. Service quality showed a stronger effect on trust ($\beta=0.472$, $p<0.001$), confirming H2 and reinforcing the primacy of face-to-face service encounters in trust formation.

All three predictors were significant in terms of loyalty. Patient trust emerged as the strongest direct predictor ($\beta=0.482$, $p<0.001$), followed by service quality ($\beta=0.224$, $p=0.010$) and social media communication ($\beta=0.180$, $p=0.018$), supporting H3, H4, and H5, respectively. The substantial path from trust to loyalty underscores that loyalty in eye care is deeply rooted in relational confidence rather than in transactional satisfaction alone.

The model's explanatory power is presented in Table 6. Patient trust achieved an R^2 of 0.521, indicating that social media communication and service quality jointly explain 52.1% of its variance—a substantial level according to Chin (1998). Patient loyalty recorded an R^2 of 0.612, meaning the three antecedents explain 61.2% of loyalty variance, which is also substantial. Thus, the model demonstrates strong predictive accuracy for both intermediate and final endogenous constructs.

Effect sizes (f^2) gauge the unique contributions of each predictor. Based on Cohen's guidelines, service quality had a large effect on trust ($f^2=0.330$), whereas social media communication had a medium effect ($f^2=0.155$). For loyalty, patient trust exhibited a large effect ($f^2=0.273$), whereas social media communication ($f^2=0.044$) and service quality ($f^2=0.064$) showed small effects. This pattern aligns with the mediation hypothesis, as the direct effects of SMC and SQ on loyalty are relatively modest once trust is accounted for, suggesting that trust carries a substantial portion of their influence.

Table 6. R^2 and f^2 Values

Endogenous Construct	R^2	Predictors	f^2	Effect Size
Patient Trust (PT)	0.521	SMC $\rightarrow$ PT	0.155	Medium
		SQ $\rightarrow$ PT	0.330	Large
Patient Loyalty (PL)	0.612	SMC $\rightarrow$ PL	0.044	Small
		SQ $\rightarrow$ PL	0.064	Small
		PT $\rightarrow$ PL	0.273	Large

Predictive Relevance (Q^2)

Blindfolding with an omission distance of 7 yielded Q^2 values of 0.387 for patient trust and 0.426 for patient loyalty, both exceeding zero, thus confirming the model's predictive relevance. These values imply that the model can accurately predict the indicators of both endogenous constructs, thereby reinforcing its practical utility.

The mediation hypotheses were tested by examining the indirect effects of SMC and SQ on PL through PT using bias-corrected bootstrap confidence intervals. Table 7 presents the results of this analysis.

Table 7. Indirect Effects and Mediation Test

Hypothesis	Indirect Path	β	t-statistic	p-value	95% CI (BC)	Mediation Type
H6	SMC $\rightarrow$ PT $\rightarrow$ PL	0.156	3.176	0.002	[0.061, 0.260]	Partial
H7	SQ $\rightarrow$ PT $\rightarrow$ PL	0.227	4.341	<0.001	[0.130, 0.338]	Partial

Both indirect effects were positive and statistically significant, with confidence intervals excluding the zero. The indirect effect of social media communication on loyalty through patient trust ($\beta=0.156$, $p=0.002$) supports H6, while the indirect effect of service quality ($\beta=0.227$, $p<0.001$) supports H7, indicating that: As the direct paths from SMC and SQ to PL also remained significant, the mediation was partial, meaning that patient trust serves as a complementary mediator rather than a sole mechanism.

The ratio of indirect-to-total effect for SMC on PL was $0.156 / (0.180+0.156) = 0.464$, indicating that 46.4% of the total effect of social media communication on PL was transmitted through trust. For service quality, the proportion mediated was $0.227 / (0.224+0.227) = 0.503$, meaning that trust accounts for just over half of the influence of service quality on loyalty. These findings highlight that while both exogenous constructs exert direct effects on loyalty, their impact is substantially amplified through the trust-building process.

To further validate the stability of the findings, a multi-group analysis (MGA) was conducted across gender (male vs. female) and age groups (<35 years vs. ≥ 35 years). No significant differences in path coefficients were found (all $p > 0.05$), indicating that the hypothesized relationships were consistent across demographic segments. This stability reinforces the generalizability of the model to the studied population.

Discussion

This study aimed to integrate social media communication and service quality into a unified loyalty model, examining patient trust as a mediating mechanism in eye healthcare. The findings confirm that both digital communication and traditional service quality significantly nurture patient trust, which in turn strongly predicts loyalty, partially mediating the effects of exogenous variables (Maulaningrum et al., 2025).

The significant effect of social media communication on patient trust (H1) aligns with Lin and Kishore's (2021) conceptualization of social media affordances. When eye clinics share accurate information, promptly respond to inquiries, and demonstrate interactive presence, patients perceive transparency and competence, which reduces uncertainty and builds trust. Notably, the medium effect size ($f^2=0.155$) suggests that while social media communication alone is not the strongest trust driver, it is a substantive builder, especially in an era where patients increasingly validate healthcare providers online before making decisions. This finding extends Farsi et al. (2022) by demonstrating that beyond information seeking, active institutional communication can cultivate a trust bond, a dimension previously dominated by face-to-face clinical encounters (Lin & Kishore, 2021).

Service quality exhibited a robust direct effect on patient trust (H2, $\beta=0.472$, $f^2=0.330$), reinforcing decades of services marketing literature in healthcare (Dagger et al., 2007; Meesala & Paul, 2018). In eye care, where treatment often involves invasive procedures and long-term follow-up, patients heavily weigh the reliability, empathy, and technical competence of the staff. High service quality signals the clinic's capability and benevolence, directly cultivating trust. This result is consistent with Shie et al. (2022), who found service quality to be a pivotal predictor of trust among chronic disease patients. The magnitude difference between SMC and SQ on trust suggests that while digital communication acts as a trust supplement, the core of patient trust still resides in tangible, interpersonal service delivery (Shie et al., 2022).

The direct effects on patient loyalty revealed an interesting pattern. Patient trust emerged as the most powerful predictor ($\beta=0.482$, H5), surpassing both SMC and SQ scores. This finding underscores that in medical services laden with information asymmetry and perceived risk, trust acts as a psychological contract that binds patients to the provider. Patients who trust their ophthalmologists and clinics are not only satisfied but also willing to commit to long-term relationships and actively advocate for the service, consistent with Morgan and Hunt's (1994) commitment-trust theory. The direct effects of SMC ($\beta=0.180$) and SQ ($\beta=0.224$) on loyalty, while smaller, were still significant, indicating that beyond trust, these factors contributed additional unique variance. For instance, convenient and engaging social media may directly enhance loyalty by keeping

the clinic top-of-mind and facilitating appointment booking, whereas perceived service excellence might create a direct emotional attachment (Liu et al., 2021).

Crucially, the mediation analysis revealed that patient trust partially mediates the impacts of both SMC and SQ on loyalty (H6, H7). The indirect effect of SMC via trust ($\beta=0.156$) means that social media communication's influence on loyalty is not merely informational; it is channeled through the trust it engenders. This finding fills a gap identified in the literature, where previous studies on social media in healthcare stopped at engagement or satisfaction (Dhar et al., 2018), without linking digital communication to attitudinal loyalty through trust. The partial mediation implies that eye clinics can reap loyalty benefits from social media both directly (e.g., through reminders and community building) and indirectly by strengthening the trust relationship. Similarly, the mediated pathway from service quality ($\beta=0.227$) confirms that trust is the pivotal mechanism through which service excellence translates into enduring loyalty, consistent with Liu et al. (2021) and Shie et al. (2022). The fact that service quality's indirect effect (50.3% of total) is larger than SMC's (46.4%) suggests that the trust-loyalty conversion is more efficient for face-to-face service than for digital touchpoints, likely because clinical interactions are more emotionally charged and personal (Liu et al., 2021).

The model's substantial explanatory power ($R^2_{PT}=0.521$, $R^2_{PL}=0.612$) demonstrates that integrating social media communication, service quality, and trust provides a comprehensive framework for understanding the loyalty of patients to eye care. Compared to Almulhim and AlMulhim (2024), who explained loyalty through practice-related factors and satisfaction in ophthalmology, the current model achieves a higher explained variance by incorporating trust as a mediator, indicating that trust is a more proximal and robust driver than satisfaction in specialty care (Linassari et al., 2025).

This study contributes to the healthcare service marketing literature in several ways. First, it extends the nomological network of patient loyalty by simultaneously examining digital and traditional relational antecedents, a perspective that is rarely adopted in healthcare settings. Prior work has treated social media as a separate domain (Lin & Kishore, 2021) or focused exclusively on service quality (Meesala & Paul, 2018). By integrating both, this study shows that digital communication and service quality are complementary rather than substitutive forces in building patient trust and loyalty.

Second, this study positions patient trust as a central mediating mechanism, corroborating and extending commitment-trust theory (Morgan & Hunt, 1994) into the digital healthcare age. The finding that trust partially mediates both relationships enriches the understanding of how institutional actions—whether in-person or online—are internalized by patients. This addresses the conceptual gap where earlier models positioned satisfaction as the primary mediator (Nguyen et al., 2021; Almulhim & AlMulhim, 2024), whereas trust, with its deeper cognitive and affective roots, may better explain loyalty in high-risk, high-involvement services such as ophthalmology (Higashi et al., 2026).

Third, this study offers a contextual contribution by empirically testing the model in an Indonesian metropolitan eye care setting, an emerging economy where digital health engagement is rapidly growing, but trust in healthcare institutions can be fragile. The robustness of the findings across demographic groups suggests a degree of universal applicability of the trust-based loyalty mechanism, while the domain-specific insight can inform future comparative studies across medical specialties (Nguyen et al., 2021).

For healthcare administrators and ophthalmology clinic managers, these findings translate into actionable strategies. First, the significant direct and indirect effects of service quality urge clinics to continuously invest in clinical excellence and patient-centered care. Regular training in communication skills, empathy, and service recovery, alongside facility upgrades and reduced waiting times, directly bolsters patient trust and loyalty. Because service quality also works indirectly through trust, clinics should explicitly communicate their quality standards and patient safety records, transforming service attributes into trust signals.

Second, social media communication must be elevated from a promotional tool to a strategic trust-building platform. Managers should develop content that emphasizes transparency, —such as behind-the-scenes clinic processes, staff credentials, patient testimonials (with consent), and real-time Q&A sessions. Responsiveness to comments and messages, as captured by the SMC items, is crucial; delayed or generic responses can erode trust. The medium effect of SMC on trust indicates that even if digital interactions are less visceral than in-clinic visits, a consistent and credible online presence can significantly tip the scales for patients choosing between clinics.

Third, leveraging the mediation pathway suggests an integrated patient journey design. For instance, a patient's first encounter might be through social media (building initial trust), followed by a high-quality clinical visit (reinforcing trust), post-visit digital follow-up (sustaining trust), and loyalty expressed through online reviews and referrals. Thus, the synergy between online and offline touchpoints, anchored by trust, can create a loyalty loop. Managers should periodically measure trust using short surveys and track how changes

in SMC or SQ affect trust scores, allowing data-driven adjustments.

Fourth, given the high proportion of Instagram and Facebook users, clinics should invest in visually engaging educational content about eye health, treatments, and preventive care, which not only informs but also signals expertise and care, building what Morgan and Hunt (1994) termed “benevolence”-based trust.

Despite these contributions, this study has some limitations. The cross-sectional design limits causal inference; longitudinal research is needed to confirm the temporal sequence of trust formation and loyalty behaviors. Although adequate for PLS-SEM, the sample was drawn from four clinics in Surabaya, potentially limiting generalizability to other regions or public hospital settings. Future studies should replicate the model in broader geographic areas and diverse healthcare segments, including public primary care and teleophthalmology services.

The measurement of social media communication relied on perceived self-reported items; future research could incorporate objective metrics (e.g., response time, frequency of posts, engagement rates) to capture the construct more behaviorally. Moreover, while trust was conceptualized as a unidimensional construct, future work could distinguish between cognitive and affective trust and examine whether SMC primarily builds cognitive trust through information quality, while SQ builds affective trust through interpersonal care. Additional mediators, such as patient engagement and perceived value, could be integrated to uncover more nuanced pathways.

Finally, the study did not differentiate between types of social media platforms. Given that Instagram (visual) and WhatsApp (private messaging) may have different affordances, future research could examine platform-specific effects. Despite these limitations, the study provides a solid empirical foundation for understanding how digital and service excellence synergistically build patient loyalty in eye care.

CONCLUSION

This study demonstrates that in Surabaya’s competitive eye healthcare market, patient loyalty is driven by a combination of high-quality service delivery and strategic social media communication, both channeled substantially through patient trust. Service quality remains a strong direct antecedent of trust, while social media communication serves as a meaningful, complementary trust-builder. Patient trust partially mediates the impact of both antecedents on loyalty, with over 50% of the effect of service quality and 46% of the effect of social media communication transmitted via trust. The explanatory model achieved strong predictive power, underscoring the centrality of trust as a relational mechanism. Eye clinic managers should invest in service excellence and authentic, responsive digital engagement to synergistically cultivate patient trust, ultimately securing long-term loyalty and positive word-of-mouth. The findings encourage a paradigm shift from transactional digital health communication to trust-centered relationship management. Future longitudinal and multi-platform studies are recommended to further unravel the dynamic trust-loyalty process in diverse healthcare settings.

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