Analysis Of Social Media Marketing Activities and Brand Image On Brand Loyalty With Brand Reliability as a Mediating Variable: Study Of Physiotherapy Unit RSO Siaga Raya

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Abstract.Background: Brand loyalty reflects patients' tendency to continue using a hospital's services and recommend them to others. However, the decline in physiotherapy patient visits since the COVID-19 pandemic has affected hospital revenue, while brand image and digital marketing via Instagram are still underutilized. Most previous studies have addressed brand loyalty in general, while specific studies on physiotherapy units are still rare. Although many studies show that SMMA and brand image affect loyalty through brand trust, research specifically examining the role of brand reliability as a dimension of trust in healthcare services is still limited.Objective: This study fills this gap by examining the influence of SMMA, brand image, and brand reliability on brand loyalty in the context of physiotherapy services at Siaga Raya Orthopedic Hospital.Methods: This research uses quantitative methods with a purposive sampling technique on 120 respondents. Data analysis was conducted using Structural Equation Modeling (SEM) with the Partial Least Square (PLS) method. The study develops the SOR (Stimulus-Organism-Response) theoretical framework.Results: SMMA has a significant effect on brand loyalty both directly and through the mediation of brand reliability. In contrast, brand image requires brand reliability mediation to influence loyalty. Brand reliability proved to be an essential element in building patient loyalty.Implications: Hospitals need to design marketing strategies through social media and brand image that are not only attractive but also reflect service reliability to establish long-term relationships with patients.

Keywords: Brand image, Brand reliability, Brand loyalty, Social media marketing activities.

Abstrak.Latar Belakang: Loyalitas merek mencerminkan kecenderungan pasien untuk terus menggunakan layanan rumah sakit dan merekomendasikannya kepada orang lain. Namun, penurunan kunjungan pasien fisioterapi sejak pandemi COVID-19 telah mempengaruhi pendapatan rumah sakit, sementara citra merek dan pemasaran digital melalui Instagram masih kurang dimanfaatkan. Sebagian besar studi sebelumnya membahas loyalitas merek secara umum, sementara studi spesifik mengenai unit fisioterapi masih jarang. Meskipun banyak studi menunjukkan bahwa SMMA dan citra merek mempengaruhi loyalitas melalui kepercayaan merek, penelitian yang mengkaji peran keandalan merek sebagai dimensi kepercayaan dalam konteks layanan kesehatan masih terbatas. Tujuan: Penelitian ini mengisi kekosongan dengan mengkaji pengaruh SMMA, citra merek, dan keandalan merek terhadap loyalitas merek dalam konteks layanan fisioterapi di Rumah Sakit Ortopedi Siaga Raya. Metode: Penelitian ini menggunakan metode kuantitatif dengan teknik purposive sampling pada 120 responden, analisis data menggunakan Structural Equation Modeling (SEM) dengan metode Partial Least Square (PLS). Penelitian ini mengembangkan kerangka teori SOR (Stimulus-Organism-Response). Hasil: SMMA berpengaruh signifikan terhadap loyalitas merek, baik secara langsung maupun melalui mediasi keandalan merek. Sebaliknya, citra merek memerlukan mediasi keandalan merek untuk mempengaruhi loyalitas. Keandalan merek terbukti menjadi elemen penting dalam membangun loyalitas pasien. Implikasi: Rumah sakit perlu merancang strategi pemasaran melalui media sosial dan citra merek yang tidak hanya menarik, tetapi juga mencerminkan keandalan layanan untuk membangun hubungan jangka panjang dengan pasien.

Kata kunci: Aktivitas pemasaran media social, Citra merek, Keandalan merek, Loyalitas merek

1. INTRODUCTION

RS Orthopedi Siaga Raya (RSOSR) is known as a leading hospital in orthopedics, including its physiotherapy services. However, the COVID-19 pandemic caused a drastic decline in physiotherapy visits, with the number of visits in 2020 dropping 25.8% compared to

2019. Despite a gradual recovery, the number of visits remained volatile, falling by 3.09% in 2024. This indicates other factors outside of the pandemic are influencing loyalty. Maintaining loyalty is a key strategy for service sustainability, as loyal patients tend to make repeat visits and contribute to word- of-mouth (WOM) marketing. Reichheld and Sasser (1990) assert that retaining existing customers is 5-7 times cheaper than acquiring them. Therefore, in addition to attracting new patients, hospitals need to increase brand loyalty through effective marketing strategies so as to build long-term relationships with patients.One of them is social media marketing, strengthening brand image and reliability.

Brand loyalty, as defined by Oliver (1999), is a consumer's deep commitment to continue using a brand. Brand loyalty is not only important for increasing visits, but also for building long-term relationships that are more profitable in business terms. Dick and Basu (1994) emphasize that loyal consumers not only have a positive impact through spreading word-of-mouth (WOM), but are also more resistant to competitors' efforts to attract them. This is not only reflected in repeat purchase behavior, but also involves emotional attachment and trust. From the preliminary survey, it was found that 40% of patients did not agree that they would return to use physiotherapy services.

This shows that patients do not have a high commitment to become loyal customers. This brand trust includes brand reliability, which is the extent to which consumers believe that a brand can be relied upon to provide quality and consistent products or services (Morgan & Hunt, 1994). Previous research has examined the relationship between brand trust and consumer loyalty in general. However, research that specifically examines the role of brand reliability in the context of health services, particularly physiotherapy services, is still very limited. , the researcher decided to make brand reliability one of the main focuses in this study. Indonesia has high internet penetration, with 66.5% of the population being active social media users (Data Report al, 2024). With the high adoption of digital technology in Indonesia, social media has great potential to reach consumers and increase brand loyalty. The number of active social media users in Indonesia in January 2024 is equivalent to approximately 49.9% of the total population. Based on data from *we are social.com* that of all social media platforms in the world, Instagram is the most popular social media, with a user share of (16.5%), followed by WhatsApp (16.1%) and Facebook (12.8%). This is the impetus for researchers to choose Instagram among other social media and this is in line with the main social media used by RSOSR in digital marketing activities, namely Instagram.

RSOSR faces limitations in the number of Instagram followers and content produced compared to competitors. High turnover of marketing staff and lack of variety in promotions

are some of the inhibiting factors. This suggests the need for a more innovative and relevant marketing strategy to increase RSOSR's visibility in the digital world. A digital marketing strategy through Instagram enables hospital to effectively disseminate information, promotions, and build interactions with patients. In addition to SMMA instagram, the *brand image* of a hospital also plays an important role in shaping patient perceptions and attitudes

Therefore, customer actions and attitudes towards a brand tend to depend on the brand image. A brand is the unique identity of a product or service that distinguishes it from others (Kotler and Keller, 2007). Siaga Raya Orthopedic Hospital has a strong brand image as a specialized orthopedic hospital. However, the brand image of physiotherapy services seems to be less highlighted. Seen from the few Google Reviews related to physiotherapy (13 out of 610 reviews), this could be an indication of less than optimal brand image management for this service. Although the hospital has a strong brand image in orthopedics, the brand image gap in physiotherapy services still exists. This could be an opportunity to increase trust and loyalty through more strategic brand image promotion and management.

This research focuses on the influence of social media marketing activities on patient loyalty, with Instagram as the main platform. The analysis was conducted to understand how social media can help increase physiotherapy patient visits and strengthen RSOSR's brand image. The results are expected to provide strategic guidance in the development of digital marketing in the healthcare sector.

2. LITERATURE REVIEW

Brand Loyalty

Chaudhuri & Holbrook (2001) divide brand loyalty into two main components sourced from Aaker 199, namely: *Behavioral Loyalty*: This refers to the actual actions of consumers in repurchasing products or services of the same brand repeatedly and *Attitudinal Loyalty*: This relates to consumers' feelings and purchase intentions towards the brand. The theoretical framework in this study consists of *Brand Loyalty* variables adopting 3 dimensions from Dandis et al. (Which is sourced from Ong et al., 2015, Dick and Basu, 1994; Jacoby and Chestnut, 1978; Day, 1969), namely: *Repurchase Intention, Willingness to Pay More, Words of Mouth.*

Brand Reliability

According to Morgan and Hunt's (1994) *commitment-trust* theory, trust is a key variable in developing a sustainable desire to maintain a long-term relationship with a brand. And defined as the belief that exchange partners are reliable *(reliability)* and have integrity *(integrity). Brand reliability* variable which adopts the theory of Delgado & Munuera (2001) which is measured by 3 indicators; product consistency, reliable performance and the brand's ability to keep promises.

SMMA

According to Tuten & Solomon (2017), social media is a communication-based digital tool that allows individuals and organizations to share, create, and interact with digital content, and engage in *real-time* conversations. Instagram is an app-based social media platform that allows users to share photos, videos, and other visual content. Launched in 2010, Instagram has grown to become one of the largest platforms to interact globally, with features such as Stories, Reels, IGTV, and Instagram Live to share real-time moments and promote businesses. The Instagram Shopping and Instagram Ads features make it an essential tool for businesses and influencers to increase visibility and customer engagement.

Social Media Marketing Activities (SMMA) have five main dimensions that have been identified by several experts, which include *interaction, entertainment, trendiness, customization, and word-of-mouth*, (Kim and Ko, 2012). Entertainment provides a fun and entertaining experience through content such as videos, photos, games, and contests. Customization enables services that are tailored to user preferences. Interaction strengthens customers' knowledge of the brand through profile and content-based discussions. Trendiness maintains brand relevance by providing up-to-date information. eWOM (electronic Word of Mouth) influences perceptions and purchasing decisions through consumer reviews and experiences shared online.

Brand Image

According to Aaker (1991), image refers to the general perceptions developed based on the memories consumers have about the quality of products or services they have consumed. In the dimension, Crompton (1979) proposed that a hospital's image consists of the total beliefs, ideas and impressions that patients have of a particular hospital. Through strategic marketing activities, a hospital's brand image can be used to help improve its competitive position. Thus, a good hospital brand image helps strengthen patients' intentions in choosing a hospital (Kotler

et al., 2008). The brand image variable adopts Kotler & Keller's (2016) theory of hospital brand image as measured by 3 dimensions of *strengths*, *uniqueness*, and *favorability*.

Hypothesis Development

Sohaib & Han's (2023) study on fashion consumers in China revealed that Similar results were also found by Ebrahim (2019) in the telecommunications industry, and Ibrahim et al. (2021) in the context of coffee shops, where interactions through social media strengthen brand trust and support loyalty, including through increased repeat visit intentions. Related research in the health sector, such as that conducted by Anjani et al. (2022) at ABC Hospital Jakarta and Mulyawati et al. (2020) in Permata Keluarga Hospital, confirmed that brand image directly and affects loyalty through patient trust. Brand reliability, as a key dimension of trust, plays an important role in ensuring consistency and meeting customer expectations, thereby enhancing the brand's relationship with customers.

Based on these findings, a hypothesis is proposed.

H$_1$ Instagram SMMA and *Brand* Image simultaneously affect loyalty with brand *reliability* as a mediating variable.

Although "*brand reliability*" is not always explicitly mentioned in research, many studies show the relationship between SMMA and brand trust, of which brand reliability is one dimension.

Research by Sohaib (2023) in the fashion industry and Haudi et al. (2022) on small and medium enterprises, for example, showed that SMMA has a positive and significant influence on brand trust. Research by Ibrahim et al. (2021) on coffee shops on Facebook also confirmed the positive and significant relationship between SMMA and brand trust, strengthening the relevance of SMMA in building brand reliability. On the basis of the above theory and research the researcher hypothesizes:

H2 SMMA Instagram affects brand reliability.

According to Kim and Chao (2019), brand image has a significant influence on brand trust, especially in the early stages of brand formation. Brand image helps create a sense of trust among consumers, which becomes the foundation of a stronger relationship between consumers and brands. Research by H. Song et al. (2019) in the food and beverage industry also shows that positive perceptions of brand image strengthen consumer confidence that the brand is reliable and meets expectations. In health services, research by Mulyawati et al. (2020) and Anjani et al. (2022) support similar findings, showing that brand image has a positive and

significant influence on patient trust. This trust includes brand reliability, namely the brand's ability to consistently fulfill promises and consumer needs. On the basis of the theory and research above, the researcher makes a hypothesis:

H3 Brand image affects brand reliability

Research by Sohaib et al. (2023) shows that brand trust significantly contributes to *purchase loyalty and attitudinal loyalty,* while Ajina (2019) proves the positive effect of trust on customer loyalty in Indonesia. private hospitals. Similar studies were also conducted in various industries, such as fashion (Sohaib et al., 2023), telecommunications (Ebrahim, 2019), food and drink (H. Song et al., 2019), and online games (Zhao Xuanze et al., 2024), all of which showed a positive and significant relationship between brand trust and brand loyalty. In the context of healthcare, Ajina (2019) and Mulyawati et al. (2020) also found that brand trust has a positive influence on customer loyalty in hospitals. These findings underscore the importance of trust as a foundation in building long-term relationships between consumers and brands.However, some previous research tend to explore overall brand trust without delving into dimensions such as brand reliability. In fact, brand reliability is a key component of brand trust. brand trust which refers to the brand's ability to consistently fulfill the needs and promises that have been delivered to consumers. Research on brand reliability as a stand-alone variable is still very limited.

Based on this argument, a hypothesis is proposed:

H4 Reliability brand (brand reliability effects brand loyalty.

Research shows that Social Media Marketing Activities (SMMA) have a positive influence on brand loyalty in various industries, such as coffee shop consumers (Ibrahim et al., 2021), fashion brands (Sohaib & Han, 2023), and health services, including hospital outpatients (Heskiano & Syah, 2020) and Jakarta lasik clinics (Ramadhan et al., 2020). However, Abdulla H. Fetais' study (2022) on luxury fashion brands showed different results, where SMMA had no direct effect on brand loyalty. This difference in results is an interesting challenge for further research in different contexts. Based on these findings, the researcher proposes a hypothesis: H5 Social Media Marketing Activities (SMMA) Instagram affects brand loyalty.
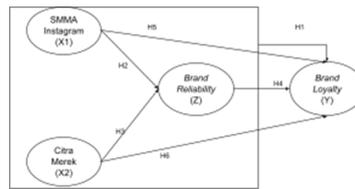
Figure 1. Research conceptual framework

Research Objectives

Based on the problems and literature review that have been described, the effect of SMMA, brand image and brand reliability as mediators on brand loyalty will be investigated.

3. METHODOLOGY

This research will be conducted at the Siaga Raya Orthopedic Hospital in December 2024 using a quantitative approach to measure and analyze the relationship between variables. The research design is a cross-sectional study with data collection through a questionnaire which is processed using SEM-PLS statistical analysis through the Smart PLS version 4 application. The sampling technique used was purposive sampling.

Inclusion criteria:

- Outpatient physiotherapy patients who have visited in the past 1 year.
- Aged ≥18 years old.
- Follow the hospital's Instagram.
- Willing to complete the questionnaire. Exclusion criteria:
- Hospital employees who are outpatient physiotherapy patients.
- Inpatient physiotherapy patients.
- Patients who were not willing to complete the questionnaire.

The number of samples in this study follows the opinion of Hair, Black, Babin, & Anderson (2018), namely the provisions for determining the sample size to be 5-10 times the number of indicators used to measure a variable. Thus, the sample size in this study was 24 question items multiplied by 5 parameters, resulting in a sample size of 120 samples. The analysis tool using SEM with the number of samples above is sufficient.

A four-point Likert scale was used to prevent neutral answer bias. The following is the distribution of respondent characteristics.

4. RESULTS AND DISCUSSION

A total of 120 respondents who have passed the research criteria with the following profile:

Table 1 Distribution of Respondent Characteri

	Bekasi	7	5.8
	Outside Jabodetabek	1	0.8
Total		120	100
Knowing the Service			
6.	Official website of Siaga Raya Orthopedic Hospital	14	11.7
	Offline advertising (flyers, banners, etc.)	1	0.8
	Instagram	8	6.3
	Facebook	2	1.7
	Youtube	1	0.8
	Recommendation from family/friends	68	56.7
	Referral from a	19	15.8
	More	7	5.8
	Total	120	100

Validity And Reliability Test

Validity and reliability tests were carried out at the beginning of the study in December 2024 by distributing questionnaires to 30 respondents of Physiotherapy outpatients of Siaga Raya Orthopedic Hospital. The validity test uses Corrected Item Total Correlation with a product moment correlation approach, where the item is declared valid if r- count> r-table (0.349 for n = 30). The results show all variable indicators (brand loyalty, brand reliability, SMMA, and brand image) r-count>r-table values. The reliability test uses Cronbach's Alpha, and all variables have a value> 0.60. So that the research instrument is declared valid and reliable for further research.

Three Box Method Analysis

Based on the Three Box Method analysis, the Social Media Marketing Activities (SMMA) variable shows a high average index. This reflects the respondents' positive perception of the Instagram marketing activities of Siaga Raya Orthopedic Hospital. The *Customization* dimension has the highest index, shows that content Instagram was perceived as relevant and appropriate to respondents' health needs, while Trendiness ranked second.

While the indicator "sharing information from Instagram" had a high index, "reposting content" showed lower interest, signaling an opportunity to increase direct engagement on social media.

In the *Brand Loyalty* variable, the average index is also in the high category. The *Words of Mouth* dimension has the highest index, indicating patients' enthusiasm in recommending services to others. *Repurchase Intention* ranks second, reflecting patient loyalty to return to using the service. However, the *Willingness to Pay More* dimension has a medium index, indicating that the cost factor is still a major consideration even though patients appreciate the quality of service.

The Three Box Method analysis shows that Brand Reliability is in the high category, with "physiotherapy services at Siaga Raya Orthopedic Hospital are reliable" as the highest index. This reflects patient confidence in the quality of services provided. However, the lowest index is in "service consistency*,"* which indicates that there is a lack of service uniformity or inconsistent service standards. In the Brand Image variable, the index is also in the high category. The highest indicator is the skill of physiotherapy personnel, which is an important element in shaping positive patient perceptions.

Table 2 Research Variable Assessment Matrix with Three Box Method Analysis

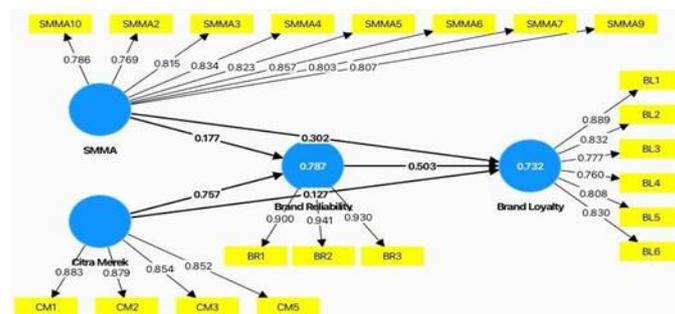| No.	Variable s	Variable Index Category			Behavior
		Low (30-60)	Medium (61-90)	High (91-120)	
1	*Brand Loyalty*			✓	Loyal
2	SMMA			✓	*Positive engagement*
3	Brand Image			✓	Good reputation
4	*Brand Reliabili ty*			✓	Reliable

Figure 2 Outer Model Results

The *Favorable* dimension shows that emotional satisfaction plays a significant role in building a good image of the hospital, while visual aspects such as logos have a smaller role. Overall, the four research variables show a high index, reflecting the strength of Siaga Raya

Orthopedic Hospital in building patient loyalty, brand image, service reliability, and social media marketing effectiveness.

Measurement Model Test Results (Outer Model) Convergent Validity

The initial validity test using convergent validity shows that three indicators have a loading factor value below 0.7, namely SMMA 1 (0.694), SMMA 8 (0.616), and CM 4 (0,615). In accordance with Hair et al. (2021), the indicator was removed to improve construct validity. After removal, all outer loading values reached above 0.7, and the Average Variance Extracted (AVE) test results showed values above 0.5, confirming good construct validity.

Discriminant Validity

Discriminant validity was tested with Fornell- Larcker and cross-loading. The results showed that the cross-loading value of each construct was greater than the other values, and the square root of AVE exceeded the correlation between latent variables, meeting the criteria for discriminant validity.

Reliability

Reliability tests with Cronbach's alpha and Composite Reliability show that all constructs are reliable with values above 0.7, as recommended by Hair et al. (2021).

Table 3 Fornell-Larcker

	Brand Loyalty	Brand Reliability	Image Brand	SMMA
Brand Loyalty	0,817			
Brand Reliability	0,822	0,924		
Brand Image	0,772	0,877	0,867	
SMMA	0,734	0,690	0,677	0,812

In conclusion, all indicators and constructs meet convergent validity, discriminant validity, and reliability, so the model is declared suitable for further analysis.

Table 4 Construct Reliability Test Results

	onbach's alpha	Composite eliability (rho_a)	Composite eliability (rho_c)
Brand Loyalty	0,901	0,907	0,923
Brand Reliability	0,914	0,917	0,946

Brand Image	0,890	0,891	0,924
SMMA	0,926	0,929	0,939

Structural Model Test Results (Inner Model)

The structural model test showed that the research model met the validity and reliability criteria with an adequate fit. Based on the collinearity test, most indicators have Variance Inflation Factor (VIF) values below 3.3, which is the general limit to avoid multicollinearity. Although some variables, have VIF values slightly above 3.3 but still below 5.0, these values are still acceptable.

The coefficient of determination (R²) shows good results, where the Brand Reliability variable has an R² of 0.787 and the Brand Loyalty variable has an R² of 0.732. This shows that Brand Reliability is influenced by SMMA and Brand Image with a combined contribution of 78.7%, while Brand Loyalty is influenced by Brand Reliability, SMMA, and Brand Image with a combined contribution of 73.2%.

Table 5 Test Results of the Coefficient of Determination

	R-square	R-square adjusted
Brand Loyalty	0,732	0,726
Brand Reliability	0,787	0,783

The model's predictive ability (Q²) is also very good, with Q² values of 0.777 for Brand Reliability and 0.665 for Brand Loyalty, which confirms the significant contribution of SMMA and Brand Image to the endogenous variables. Goodness of Fit of the model was evaluated through the SRMR value of 0.082, which although slightly above the ideal threshold (<0.080), is still within the acceptable tolerance limit (≤0.10). In addition, the Normed Fit Index (NFI) showed a value close to 1, indicating a good fit of the model to the actual data. Overall, the model showed good fit, validity, reliability, and excellent predictive ability to explain the relationship between variables.

Table 6 Construct Reliability Test Results

	Q²predict
Brand Loyalty	0,665
Brand Reliability	0,777

Table 7 Model *Goodness of Fit*

	Saturated Model	Estimated Model
SRMR	0,082	0,082
NFI	0,729	0,729

Hypothesis Test Results

The picture above shows the *Brand Loyalty* (Y) Equation= 0.302X1+ 0.127X2+ 0.503Z can be interpreted as follows:

SMMA (X1): The coefficient of 0.302 indicates that each 1 unit increase in SMMA will increase Brand Loyalty by 30.2%, assuming other factors (Brand Image and *Brand Reliability*) remain constant.
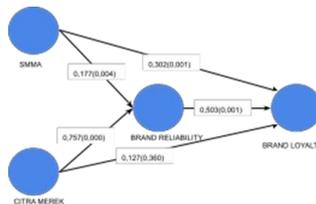

Figure 3 Structural Model Results (Inner Model)

- Brand Image (X2): The coefficient of 0.127 means that every 1 unit increase in Brand Image will increase Brand Loyalty by 12.7%, assuming other factors remain constant.

- Brand Reliability (Z): The coefficient of 0.503 indicates that every 1 unit increase in *Brand Reliability* will increase *Brand Loyalty* by 50.3%, assuming other factors remain constant.

Overall, Brand Reliability has the greatest influence on Brand Loyalty compared to SMMA and Brand Image. *Brand Reliability* Equation (Z) = 0.177X1 + 0.757X2 is interpreted as follows:

- SMMA (X1): The coefficient of 0.177 indicates that each 1 unit increase in SMMA will increase Brand Reliability by 17.7%, assuming that Brand Image is fixed.

- Brand Image (X2): The coefficient of 0.757 indicates that each 1 unit increase in Brand Image will increase *Brand Reliability* by 75.7%, assuming that SMMA remains.

Table 8 Hypothesis Test of Direct Effect

	Original sample (O)	P values	Results
Brand Reliability -> Brand Loyalty (H4)	0,503	0,001	Accepted
Brand Image -> Brand Loyalty (H6)	0,127	0,360	Rejected
Brand Image -> Brand Reliability (H3)	0,757	0,000	Accepted
SMMA -> Brand Loyalty (H5)	0,302	0,001	Accepted
SMMA -> Brand Reliability (H2)	0,177	0,004	Accepted

Based on the analysis, the mediating effect of *Brand Reliability* on the relationship between SMMA and *Brand Loyalty* shows a significant indirect effect, with a T-statistic of 2.384 (>1.96) and a P-value of

0.017 (<0.05). The mediating effect was calculated as

22.76%, indicating that 22.76% of the effect of SMMA on Brand Loyalty is mediated by *Brand Reliability*. The total effect of SMMA on Brand Loyalty is 0.391, with a greater direct effect, so the mediation *of Brand Reliability* is partial mediation.

Meanwhile, the relationship between Brand Image and Brand *Loyalty* shows that the direct effect of Brand Image on Brand *Loyalty* is not significant. However, the indirect effect through *Brand Reliability* is significant, so this relationship is *fully* mediated. The total effect of Brand Image on Brand Loyalty is 0.507, with the full contribution of *Brand Reliability* as a mediator. This underscores the importance of Brand *Reliability* in strengthening the impact of Brand Image on customer loyalty.

Table 9 Indirect Effect Test Results

	Original sample (O)	P values
Brand Image -> Brand Reliability -> Brand Loyalty	0,381	0,002
SMMA -> Brand Reliability -> Brand Loyalty	0,089	0,017

Simultaneous test through the F / Innova Test obtained a value of F = 84.807 (greater than the F table 2.68) with a significance (Sig.)

= 0.000, which means that the SMMA, Brand Image, and *Brand Reliability* variables simultaneously have a significant influence on *Brand Loyalty.* With these results, can be used to analyze the results of this study. It is concluded that hypothesis one in the model is accepted, and *Brand Reliability* plays an important role in mediating the relationship between independent variables and brand loyalty.

The results showed that Social Media Marketing Activities (SMMA) have a direct and significant influence on *Brand Loyalty* (β= 0.302, p= 0.001). Marketing strategies through Instagram, such as interesting content, consistent interaction, entertainment aspects, contemporary and testimonials from patients are proven to increase patient loyalty to the physiotherapy services of Siaga Raya Orthopedic Hospital. This finding supports the theory of Laroche et al. (2013) and Ibrahim's research (2021), which state that SMMA strengthens

customer relationships and increases brand loyalty. These results are also in line with research by Ebrahim (2019) and Sohaib (2023) in other sectors, which show that social media-based marketing strategies have a significant impact on *Brand Loyalty*.

The Instagram platform is utilized to present informative content such as patient testimonials, service promotions, and health campaigns, thus creating a personal connection with customers. addition, SMMA also has an indirect influence on Brand Loyalty by strengthening *Brand Reliability*, which reflects the hospital's ability to provide consistent and trustworthy services, according to Delgado & Munuera's (2001) theory.

Brand Image, on the other hand, has no direct influence on Brand Loyalty, but its influence is fully mediated by *Brand Reliability*. Thus, the hypothesis that there is a direct relationship between the two is rejected, which indicates that although brand image is strong, patient loyalty is more dependent on other factors. This finding contradicts the theory of Li et al. (2021) and the research of Mabkhot et al. (2017) which states that brand image contributes directly to brand loyalty. Conversely, this result is more consistent with the research of Mulyawati et al. (2020) who found that brand image is not enough to drive loyalty in the absence of intermediary factors.

The results showed that Brand Reliability has influence significant on Brand Loyalty ($\beta = 0.503$, p= 0.001), which means that the higher the perceived brand reliability, the greater the customer loyalty.

The high path coefficient indicates that Brand Reliability has a significant impact substantial on patient loyalty, increasing their likelihood of returning to use physiotherapy services in the. This finding is in line with the theory of Chaudhuri & Holbrook (2001) which states that *Brand Trust* and *Brand Reliability*contribute to the formation of loyalty. Loyalty customer loyalty as well as supporting Wibisono's research (2023) which found that Brand Reliability has a positive effect on Brand Loyalty. To maximize the impact of *Brand Reliability* on loyalty, hospitals need to maintain consistency services, improve transparent communication, and highlight commitment to service quality to strengthen patient trust and maintain long-term loyalty.

Hypothesis testing results show that brand image has a direct and significant influence on *Brand Reliability,* reflecting a very strong relationship. The more positive the brand image perceived by customers, the higher their trust in brand reliability. This result supports the theory of Lien et al. (2015) that brand image plays an important role in building consumer trust. This finding is in line with research by Song H (2018) on coffee shops, Mulyawati et al. (2020) on MCU services, and Anjani et al. (2022) in an internal medicine polyclinic, all of which show

that brand image has a significant effect on customer trust, which includes brand reliability.

The results also show that SMMA has a direct and significant influence on *Brand Reliability*. This is in line with Ibrahim's (2021) research on Coffee Shop Facebook Pages and Ebrahim (2019) in the telecommunications industry which found that SMMA significantly affects *Brand Trust*. *Brand Reliability,* as a key dimension of *Brand* Trust, can be strengthened through effective social media activities. To increase the influence of SMMA on Brand Reliability, social media marketing strategies should be focused on presentation content the engaging, active interaction with the audience, and consistent communication. Messages on Instagram need to reflect real brand value and quality in the patient experience, such as highlighting the hospital's achievements, competence of medical personnel, and excellent facilities. This approach helps build trust and strengthen the perception of brand reliability in the eyes of customers, especially in the context of physiotherapy services.

CONCLUSIONS AND IMPLICATIONS

SMMA Instagram and brand image together have a significant effect on customer loyalty to physiotherapy services at Siaga Raya Orthopedic Hospital. This customer loyalty is achieved through the mediating role of brand reliability. This means that both marketing activities on social media and a strong brand image will increase customer perceptions of the reliability of hospital services. It is this brand reliability that ultimately encourages customers to continue to choose the hospital's services, recommend it to others, and even be willing to pay more. The results of this study indicate that to increase customer loyalty, it is not enough to build a good brand image, but also needs to be supported by effective social media marketing activities and consistent in providing high quality services.

Based on the results of the study, there are several areas that hospitals need to improve to optimize social media marketing and increase patient loyalty. First, there needs to be greater efforts to encourage active engagement of followers on social media and improve consistency in providing high-quality services. Second, to maximize the impact of SMMA on *Brand Loyalty*, it is recommended that hospitals further optimize communication strategies in social media, highlighting the added value of services. This approach not only increases loyalty but also encourages patients to value service quality more, including in the aspect of willingness to pay more. Third, although brand image does not directly affect loyalty, strengthening brand image, especially on the aspect of service uniqueness, is very important. need to more emphasize its advantages compared to competitors. Finally, given the different demographics of social media users, hospitals need to adjust their marketing strategies accordingly. Platforms

such as Facebook and WhatsApp can be more effective alternatives reaching older age groups, while Instagram can be used to target younger segments. Thus, an integrated marketing strategy tailored to patient characteristics will be more effective in improving brand image and patient loyalty.

LIMITATIONS AND SUGGESTIONS

The limitations of this study are that first, this study uses a cross-sectional design that only describes the relationship between variables at one specific time, so it cannot see the dynamics of changes in relationships over time. Future research suggestions can use a longitudinal design. Second, the quantitative approach used provides strong statistical results, but does not explore the deep reasons behind the relationship between variables. Future research could combine quantitative and qualitative approaches for richer data. Third, the focus on the Instagram platform has limitations in reaching physiotherapy patient groups who are mostly over 45 years old. Future research is recommended to explore other digital platforms that are more relevant to patient demographics to increase marketing effectiveness. Fourth, this study has limitations in the number of samples of only 120 respondents, future research is recommended to use a larger sample and expand the object of research to other industries outside the hospital sector to gain a broader perspective.

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