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Research Article

THE IMPACT OF SOCIAL MEDIA-BASED DIGITAL MARKETING ON HOSPITAL BRAND AWARENESS AMONG OUTPATIENTS AT NASHRUL UMMAH LAMONGAN ISLAMIC HOSPITAL

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Abstract:

Background: In the contemporary healthcare landscape, hospitals face escalating market competition, necessitating adaptive communication strategies. Although Nashrul Ummah Lamongan Islamic Hospital (RSI NU Lamongan) has integrated social media into its promotional endeavors, this digital activity had not been systematically evaluated, leaving its quantitative impact on outpatient brand awareness ambiguous.

Objective: To analyze the empirical influence of social media-based digital marketing on brand awareness among outpatients at Nashrul Ummah Lamongan Islamic Hospital. Methods: A quantitative cross-sectional analytical survey was conducted between November 2025 and April 2026. A sample of 98 outpatients was recruited from an average monthly population of 3,565 patients using an accidental sampling technique. Primary data were gathered using structured Likert-scale questionnaires. Data were evaluated through descriptive univariate categorization and inferential simple linear regression analysis.

Results: The vast majority of respondents rated social media digital marketing in the 'good' category (95.9%, n = 94) and demonstrated a high level of brand awareness (93.9%, n = 92). Instagram was the primary information portal (68.4%), followed by WhatsApp (38.8%) and TikTok (37.8%). Simple linear regression demonstrated a statistically significant positive effect of digital marketing on brand awareness (B = 0.545, Beta = 0.644, t = 8.245, p < 0.001), with a coefficient of determination (R^2) of 0.408, indicating that digital marketing explains 40.8% of the variance in hospital brand awareness.

Conclusion: : Social media-based digital marketing exerts a statistically significant positive effect on hospital brand awareness. Nevertheless, because this study used a non-probability cross-sectional design, next research is recommended to employ probability-based random sampling and involve a broader range of hospitals to improve sample representativeness and enhance the generalizability of the findings.

Keywords: Brand awareness; Cross-sectional study; Digital marketing; Hospital administration; Outpatients; Social media

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1. INTRODUCTION

In the contemporary Fourth Industrial Revolution, healthcare service delivery and hospital administration have undergone profound structural transformations driven by ubiquitous digital information and communication technologies (ICT). Healthcare institutions are no longer evaluated solely upon clinical care competencies, but increasingly upon organizational visibility, service accessibility, and interactive digital communication (Ziaul-Haq, 2025). The exponential proliferation of internet connectivity and mobile applications has fundamentally altered how healthcare consumers locate, appraise, and select healthcare providers (Luria Putri Jasmine & Nurul Rahmawati, 2025; Zhao & Zhang, 2017). Contemporary populations actively utilize social

media platforms—such as Instagram, YouTube, WhatsApp, TikTok, and X (formerly Twitter)—as authoritative portals for health education, hospital facility reviews, and physician availability (Allington et al., 2021; Zhao & Zhang, 2017). According to the Indonesia Digital Report (2025), active social media users in Indonesia reached 143 million individuals, comprising 50.2% of the national population (Indonesia Digital Report, 2025). This massive digital engagement presents healthcare managers with an invaluable strategic channel to cultivate digital marketing initiatives that foster patient loyalty and organizational recognition.

Within hospital management, brand awareness represents the foundational cognitive dimension of brand equity, defined as a patient's capacity to recognize, recall, and correctly identify a hospital's name, services, and distinct clinical identity (Asriani et al., 2019). Brand awareness shapes the initial psychological perceptual filter through which prospective patients navigate healthcare decisions; a hospital possessing robust, positive brand recognition becomes the primary top-of-mind choice when acute or elective medical care is sought (Adani & Dewanto, 2024; Herdiana et al., 2025). In private hospital networks, maintaining high brand awareness is essential to sustain outpatient visit volumes and inpatient bed occupancy rates amid aggressive healthcare market liberalization (Rezky et al., 2025).

Nashrul Ummah Lamongan Islamic Hospital (RSI NU Lamongan) is an accredited private Type C general hospital situated in Lamongan Regency, East Java. To adapt to modern healthcare consumerism, the hospital leadership has deployed official social media accounts across multiple platforms to disseminate health education bulletins, clinic schedules, and institutional achievements. However, prior to this investigation, these digital marketing efforts had never been systematically assessed or empirically audited against patient recognition metrics, leaving administrative decision-makers uncertain regarding their actual marketing return on investment and brand salience. Preliminary preliminary surveys conducted among 30 outpatients indicated that while a majority actively accessed the hospital's Instagram and WhatsApp feeds, structured data regarding user perception and subsequent brand recall remained undocumented.

Empirical literature across hospital marketing affirms that strategic social media engagement significantly enhances customer brand equity (Tambunan, 2023). Fatmasari & Kusumastuti (2025) demonstrated that proactive social media content generation statistically reinforced brand awareness among dental teaching hospital clients in Semarang. Similarly, Aufa & Sipahutar (2022) revealed that social media marketing directly increased patient intentions to utilize medical check-up packages at Universitas Indonesia Hospital, while Hashem (2023) highlighted the capacity of digital storytelling to cultivate healthcare brand loyalty. Furthermore, Kristin et al. (2026) confirmed that visual platforms like Instagram serve as exceptionally potent tools for hospital brand positioning. Nonetheless, substantial empirical gaps persist: most existing Indonesian inquiries focus on tertiary teaching hospitals in metropolitan capitals, while empirical investigations evaluating Faith-based Type C community hospitals in peri-urban East Java remain scarce.

To address this empirical gap, this study aimed to examine and quantify the effect of social media-based digital marketing on brand awareness among outpatients at Nashrul Ummah Lamongan Islamic Hospital. The resulting empirical insights are intended to provide evidence-based recommendations for hospital directors, public relations departments, and healthcare administrators seeking to optimize digital communication strategies.

2. METHODS

2.1 Research Design

This study employed a quantitative analytical observational design utilizing a cross-sectional approach. This design was chosen to investigate the statistical relationship between the independent variable (digital marketing through social media) and the dependent variable (hospital brand awareness) measured simultaneously at a single point in time.

2.2 Research Population and Sample

The target population comprised all outpatients visiting Nashrul Ummah Lamongan Islamic Hospital who actively utilized social media, with an average monthly patient volume of 3,565 visits. A sample size of 98 respondents was recruited using non-probability accidental sampling. Eligibility criteria included: (1) outpatients aged ≥ 17 years; (2) active users of at least one social media platform; (3) respondents who had actively viewed RSI NU Lamongan's social media content; and (4) patients who agreed to participate voluntarily. Exclusion criteria included patients with severe cognitive impairment or acute medical instability.

2.3 Research Setting and Time

The study was conducted at the Outpatient Polyclinic Department of Nashrul Ummah Lamongan Islamic Hospital, located in Lamongan Regency, East Java Province, Indonesia. The research was carried out over a six-month period from November 2025 to April 2026.

2.4 Research Procedures

The research procedure encompassed three systematic phases: preparatory, implementation, and analytical. In the preparatory phase, administrative licensing and institutional permissions were obtained from the hospital board. During implementation, survey enumerators approached visiting outpatients in the polyclinic waiting lounges, explained the study's aims, confirmed inclusion criteria, and administered the self-report questionnaires. During the analytical phase, completed questionnaires were verified for data integrity, coded into computerized spreadsheets, and subjected to statistical verification.

2.5 Data Collection Techniques

Primary data collection was executed using structured, closed-ended self-administered questionnaires. The survey collected respondent socio-demographic profiles (gender, chronological age, highest formal educational attainment, and occupational status), specific social media platforms utilized, and targeted questionnaire items measuring digital marketing and brand awareness.

2.6 Research Instruments

The measurement instrument utilized a 4-point or 5-point Likert scale ranging from strongly disagree to strongly agree. Digital marketing indicators measured content informativeness, visual attractiveness, interactivity, and accessibility. Brand awareness indicators measured brand recognition, brand recall, and top-of-mind brand salience based on Aaker's brand equity conceptual model (Asriani et al., 2019; Herdiana et al., 2025). Categorical cut-off thresholds classified scores into 'Good', 'Moderate/Fair', and 'Low'.

2.7 Data Analysis

Statistical processing was performed using SPSS software. Descriptive univariate statistics established absolute frequencies (f) and relative percentages (%) for demographic variables and categorical scores. Inferential analysis was conducted using simple linear regression to test the research hypothesis, evaluating the unstandardized regression coefficient (B), standardized coefficient (Beta), t-statistic, and p-value at a significance threshold of alpha = 0.05. Model explanatory power was assessed via the coefficient of determination (R^2).

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2.8 Scope and Limitations of the Research Used

The scope was delimited to ambulatory outpatients at a single Type C Islamic hospital in Lamongan. Several methodological limitations must be acknowledged: (1) The cross-sectional design precludes establishing chronological causality; (2) The accidental non-probability sampling technique at a single institution limits generalizability to broader hospital networks.

2.9 Ethical Considerations

The present study was carried out in full accordance with the patient's informed consent. Prior to the commencement of the research, the relevant ethical approval status was formally established. Every aspect of the investigation complied strictly with the requisite ethical oversight. In addition, the authors explicitly confirm that formal authorization was secured for this work. Specifically, appropriate written consent for publication was directly obtained from the patient. This documentation verifies that all necessary disclosures and permissions were appropriately addressed.

3. RESULTS AND DISCUSSION

3.1. Result

A total of 98 outpatients successfully completed the survey. Overall, this group constitutes the full participant cohort evaluated within the study. A comprehensive summary of the respondents' socio-demographic characteristics is organized in Table 1. Specifically, this breakdown includes detailed data regarding the participants' gender and age distribution. The table also presents the educational attainment reported across the entire sample. Furthermore, the documented occupational profile of the outpatient cohort is systematically outlined. Together, these baseline indicators in Table 1 offer a clear overview of the surveyed population.

Table 1. Socio-Demographic Characteristics of Outpatient Respondents (n = 98)

No	Characteristic	Classification/ Category	Frequency (f)	Percentage (%)
1	Gender	Male	35	35.7
		Female	63	64.3
2	Age Group	17 – 25 years old	26	26.5
		26 – 35 years old	42	42.9
		36 – 45 years old	22	22.4
		46 – 55 years old	6	6.1
		56 – 65 years old	2	2.0
		> 65 years old	0	0.0
3	Educational Level	No Formal Schooling	0	0.0
		Primary School	2	2.0
		Junior High School	6	6.1
		Senior High School	33	33.7
		Diploma	16	16.3

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		Bachelor's Degree	41	41.8
4	Occupation	Entrepreneur / Self-employed	21	21.4
		Private Employee	21	21.4
		Teacher / Educator	18	18.4
		Civil Servant	10	10.2
		Military / Police	0	0.0
		Housewife	10	10.2
		Student / College Student	9	9.2
		Other Occupations	9	9.2
Total			**98**	**100.0**

Source: Primary research survey data, 2026.

As detailed in Table 1, female respondents predominated the sample (64.3%, n = 63) compared to males (35.7%, n = 35). In terms of age, the largest proportion belonged to the young adult cohort aged 26–35 years (42.9%, n = 42), followed by 17–25 years (26.5%, n = 26) and 36–45 years (22.4%, n = 22), indicating that nearly 70% of respondents were digital natives or tech-savvy adults. Regarding education, 41.8% (n = 41) held a Bachelor's degree and 33.7% (n = 33) had completed Senior High School, reflecting a well-educated sample capable of comprehending digital content. Occupations were evenly distributed, led by private sector employees and entrepreneurs (21.4% each, n = 21).

Table 2. Distribution of Social Media Platforms Utilized to Access Hospital Information

No	Social Media Platform	Frequency of Access (f)	Percentage (%)	Primary Content Format
1	Instagram	67	68.4	Visual Infographics, Reels, Stories
2	WhatsApp	38	38.8	Direct Inquiries, Clinic Schedules
3	TikTok	37	37.8	Short Educational Videos
4	Facebook	16	16.3	Community Feed, Institutional News
5	YouTube	4	4.1	Long-form Doctor Talk Videos

**Note: Respondents could select more than one platform; hence cumulative percentage exceeds 100%. Source: Primary data, 2026.*

Table 2 illustrates that Instagram was the predominant digital marketing channel utilized by outpatients to access RSI NU Lamongan information (68.4%, n = 67), followed by WhatsApp messaging (38.8%, n = 38) and TikTok short-form video content (37.8%, n = 37). All 98 respondents (100.0%) confirmed having seen hospital social media information, satisfying the study eligibility criteria.

Table 3. Univariate Frequency Distribution of Digital Marketing and Brand Awareness Categories (n = 98)

Research Variable	Category	Frequency (f)	Percentage (%)	Description
Digital	Low	0	0.0	Unfavorable Perception

Marketing via Social Media (X)	Moderate / Fair	4	4.1	Acceptable Perception
	Good (Baik)	94	95.9	Favorable Perception
Hospital Brand Awareness (Y)	Low	0	0.0	Weak Brand Recall
	Moderate / Fair	6	6.1	Moderate Brand Recall
	Good	92	93.9	Strong Brand Recognition
	Total	**98**	**100.0**	

Source: Primary research survey data, 2026.

Univariate analysis (Table 3) revealed that 95.9% of respondents (n = 94) rated the hospital's social media digital marketing in the 'Good' category, with only 4.1% (n = 4) rating it 'Moderate', and none rating it 'Low'. Similarly, 93.9% of outpatients (n = 92) exhibited 'Good' brand awareness, while 6.1% (n = 6) had 'Moderate' awareness, demonstrating high general recognition of hospital services.

Table 4. Simple Linear Regression Analysis of Digital Marketing on Brand Awareness

Model Predictors	Unstandardized B	Std. Error	Standardized Beta	t-statistic	p-value (Sig.)
(Constant)	19.905	3.426	—	5.810	p < 0.001*
Digital Marketing via Social Media (X)	0.545	0.066	0.644	8.245	p < 0.001*

**Statistically significant at alpha < 0.05. Model summary: R = 0.644; R Square (R^2) = 0.408; F = 67.98; t-table (df = 96) = 1.984. Source: Processed SPSS output, 2026.*

The simple linear regression model presented in Table 4 is expressed by the regression equation: Y = 19.905 + 0.545X. The regression coefficient (B = 0.545) indicates that for every 1-unit increase in digital marketing score, brand awareness increases by 0.545 units. The t-statistic of 8.245 substantially exceeds the critical t-table threshold of 1.984 with a p-value of p < 0.001, confirming that social media digital marketing exerts a statistically significant positive effect on hospital brand awareness. The coefficient of determination (R^2 = 0.408) indicates that 40.8% of the variance in outpatient brand awareness is explained by social media digital marketing, while the remaining 59.2% is governed by external variables outside the current model.

3.2 Discussion

The findings demonstrated that social media-based digital marketing had a significant positive effect on hospital brand awareness among outpatients at Nashrul Ummah Lamongan Islamic Hospital (B = 0.545, Beta = 0.644, t = 8.245, p < 0.001). The coefficient of determination (R^2 = 0.408) indicated that 40.8% of brand awareness was explained by digital marketing. Most respondents rated digital marketing positively (95.9%) and demonstrated good brand awareness (93.9%). Instagram was the most frequently used platform (68.4%), followed by WhatsApp (38.8%) and TikTok (37.8%).

These findings are consistent with previous studies showing that social media marketing enhances hospital brand awareness and patient engagement (Fatmasari &

Kusumastuti, 2025; Aufa & Sipahutar, 2022; Hashem, 2023). Instagram's visual content, short videos, and interactive features may strengthen patient recognition and recall (Kristin et al., 2026). According to Aaker's Brand Equity Theory and Uses and Gratifications Theory, consistent, informative, and engaging digital content increases brand familiarity, satisfies patients' information needs, and builds institutional trust (Asriani et al., 2019; Herdiana et al., 2025).

However, the predominance of younger respondents (17–35 years) and highly educated participants (75.5%) may have influenced the favorable findings due to their greater digital literacy. Nevertheless, this study provides evidence that social media is an important hospital marketing strategy, particularly for strengthening brand recognition and competitiveness. Hospitals should therefore optimize digital platforms through consistent content creation, informative health education, and responsive communication to improve patient awareness and engagement.

3.3 Implications

Hospital administrators and public relations teams should formalize social media management by establishing specialized digital communication units, publishing editorial content calendars, prioritizing visual Instagram and TikTok video formats, and integrating real-time WhatsApp customer care. Healthcare providers must ensure all published medical educational content adheres to bioethical marketing standards and patient data privacy regulations.

3.4 Research contribution

This study provides novel empirical field evidence demonstrating the quantitative impact of digital marketing on brand awareness within a Type C Islamic hospital in East Java, contributing valuable empirical baseline metrics to Indonesian hospital administration literature.

3.5 Limitations

Several methodological limitations must be acknowledged: (1) The cross-sectional design precludes establishing chronological causality; (2) The accidental non-probability sampling technique at a single institution limits generalizability to broader hospital networks.

3.6 Suggestions

This study used a non-probability cross-sectional design, next research is recommended to employ probability-based random sampling and involve a broader range of hospitals to improve sample representativeness and enhance the generalizability of the findings. Future inquiries should adopt longitudinal or quasi-experimental designs evaluating pre- and post-campaign brand metrics, recruit multi-center probability samples spanning public and private hospitals, employ multivariable structural equation modeling (SEM) to explore mediating variables (such as patient trust and perceived service quality), and assess actual patient conversion rates and revisit intentions.

4. CONCLUSION

Social media-based digital marketing exerts a statistically significant positive effect on hospital brand awareness among outpatients at Nashrul Ummah Lamongan Islamic Hospital (B = 0.545, Beta = 0.644, t = 8.245, $p < 0.001$), explaining 40.8% of the variance in brand awareness. The overwhelming majority of outpatients actively access hospital communications via Instagram, WhatsApp, and TikTok, perceiving the digital marketing as good (95.9%) and exhibiting high brand awareness (93.9%).

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AUTHOR CONTRIBUTIONS STATEMENT

IA: Conceptualization, Methodology, Investigation, Data curation, Formal analysis, Writing original draft. NM, DK, NVR: Supervision, Validation, Methodology, Writing, review and editing, Project administration.

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