



JOURNAL OF SCIENCE EDUCATION AND RESEARCH (JSER)

Vol. 1 APRIL - MAY, 2025
ISSN ONLINE: 3092-9253



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JOURNAL OF SCIENCE EDUCATION AND RESEARCH (JSER)
VOL.1. APRIL - MAY, 2025

**JOURNAL OF
SCIENCE
EDUCATION AND
RESEARCH
(JSER), 1, APRIL - MAY; 2025**

JOURNAL OF SCIENCE EDUCATION AND RESEARCH (JSER)
VOL.1. APRIL - MAY, 2025

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ISSN Online: 3092-9253

Published in April, 2025.

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Printed in Nigeria in the year 2025 by:



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EDITORIAL

Journal of Science Education and Research (JSER) is a peer-reviewed published Bimonthly. It aimed at advancing knowledge and professionalism in all aspects of educational research, including but not limited to innovations in science education, educational technology, guidance and counselling psychology, childhood studies and early years, curriculum studies, evaluation, vocational training, planning, policy, pedagogy, human kinetics, health education and so on. JSER publish different types of research outputs including monographs, field articles, brief notes, comments on published articles and book reviews.

We are grateful to the contributors and hope that our readers will enjoy reading these contributions.

Prof. Patrick C. Igbojinwaekwu
Editor-in-Chief

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**KNOWLEDGE, ADOPTION AND UTILIZATION OF SOCIAL MEDIA FOR
HEALTHCARE DELIVERY AMONGST HEALTH PRACTITIONERS: A
STUDY OF NURSES IN FMC, ASABA**

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Abstract

This study titled Knowledge, Adoption and Utilization of Social Media for Healthcare Delivery Amongst Health Practitioners: A Study of Nurses in FMC, Asaba, explores the extent to which nurses understand, adopt, and utilize social media for healthcare purposes. The study anchored on the Technology Acceptance Model (TAM) which aimed was to assess the knowledge level of nurses regarding social media use in healthcare, evaluate the extent of its actual utilization, among others. A descriptive cross-sectional design was employed, with a sample of 67 nurses selected through stratified random sampling from the total population of 670 nurses at Federal Medical Centre (FMC), Asaba. Data were gathered using a validated structured questionnaire (KAUSMHDQ). The reliability of the instrument was conducted which yielded a Cronbach's Alpha coefficient of 0.78, indicating good internal consistency and reliability. Data collected were analyzed using SPSS version 26.0, employing both descriptive and inferential statistics. Findings revealed that 88.8% of the nurses demonstrated a high level of knowledge about social media's potential in healthcare communication. However, actual utilization was relatively low, with a mean score of 2.33. This suggest underuse of platforms like Facebook, Instagram, and minimal tele-nursing practices. Furthermore, 76.8% of the respondents indicated that factors such as lack of training, fear of privacy violations, and weak institutional support hinder adoption. The study concluded that while nurses are knowledgeable, systemic and personal barriers limit effective utilization. It was recommended among others that structured digital literacy training, institutional policy support, and proactive management engagement be implemented to promote responsible social media use in nursing practice.

Keywords: Knowledge, Adoption, Utilization, Social Media, Healthcare Delivery,

Introduction

The increasing integration of digital technologies into healthcare has positioned social media as a critical tool for enhancing communication, education, and service delivery among health practitioners. With its ability to disseminate information rapidly and foster real-time engagement, social media is transforming traditional healthcare practices globally (Jane, Hagger, Foster, Ho, and Pal, 2018). Despite its potential, the knowledge, adoption, and utilization of social media for healthcare delivery remain varied across different health settings, influenced by factors such as performance expectancy, effort expectancy, and social influence (Chua, Rezaei, Gu, Oh, and Jambulingam, 2018; Hazzam and Lahrech, 2018). Health professionals' willingness to embrace social media is often shaped by perceived usefulness, cultural contexts, technological ease, and institutional support (Alsaleh, Elliott, Fu, and Thakur, 2019; Humaid and Ibrahim, 2019). The exponential growth of digital technologies and online communication tools has brought about significant changes in healthcare delivery systems worldwide. One of the most transformative of these technologies is social media, which has redefined how healthcare professionals acquire, share, and put into practice health-related knowledge. Health practitioners' knowledge of social media encompasses their awareness of its functions, benefits, limitations, and the ethics surrounding its use in clinical settings. As observed by D'Souza (2017), health professional educators globally recognize the pedagogical and communicative value of social media in disseminating medical knowledge and improving inter-professional collaboration.

The adoption of social media for healthcare delivery, however, extends beyond mere awareness; it involves intentional and structured acceptance of these platforms into professional practices. Several models, particularly the Technology Acceptance Model (TAM), have been widely used to explain factors influencing adoption, including perceived usefulness and ease of use (Scherer, Siddiq, and Tondeur, 2019). Nadri et al. (2018) emphasized that organizational support, perceived benefits, and individual digital readiness significantly affect the willingness of health professionals to integrate digital tools into their practice. Once adopted, the utilization of social media among health practitioners varies across contexts and specialties. Utilization refers to the practical application of social media for patient education, professional networking, health promotion, and evidence dissemination. Dyson (2017) illustrated how platforms like Twitter are used to share evidence-based child health information, while Hart

(2017) observed that many public health professionals use social media for ongoing professional development and public engagement. These challenges underscore the importance of institutional support and policy frameworks to encourage responsible and effective social media use in healthcare.

Statement of the Problem

In recent years, social media has become a transformative tool for enhancing healthcare communication, patient education, and professional collaboration. However, its adoption and use among nurses at Federal Medical Centre (FMC), Asaba, remain limited and underexplored. Despite global endorsements, including the World Health Organization's (WHO) emphasis on digital health technologies for achieving universal health coverage, structured integration of social media tools among frontline healthcare providers, particularly nurses, is still lacking. While initiatives by the Federal Ministry of Health and professional bodies in Nigeria have aimed to promote digital healthcare, these efforts have largely targeted broader healthcare personnel, often overlooking nurses as primary agents of care. Research indicates that adoption patterns of digital tools, including social media, can vary due to factors such as professional culture, infrastructure, and individual readiness. However, at FMC Asaba, there appears to be a gap in targeted training and institutional policies to guide nurses in effectively leveraging social media for patient engagement, health promotion, and professional development. If this gap continues, nurses may miss opportunities to enhance healthcare delivery, limiting timely patient engagement, real-time updates, collaboration, and alignment with WHO's digital health strategy goals.

Objective of the study

In order to fully carry out the study, this study set to examine the knowledge, adoption, and utilization of social media for healthcare delivery among nurses in Federal Medical Centre (FMC), Asaba, while the study set to:

1. assess the level of knowledge of social media for healthcare delivery among nurses in FMC Asaba.
2. investigate the level of utilization of social media for healthcare communication and service delivery.
3. identify institutional or personal factors that influence the adoption and utilization of social media in nursing practice.

Research Question

The following research questions guided the study;

1. What is the level of knowledge of social media for healthcare delivery among nurses in FMC Asaba?
2. To what extent do nurses in FMC Asaba utilize social media for healthcare communication and service delivery?
3. What institutional or personal factors influence the adoption and utilization of social media in nursing practice at FMC Asaba?

Hypotheses

The following hypotheses were tested at 0.05 level of significance.

H₀₁: There is no significant difference in the level of knowledge of social media for healthcare delivery among nurses in FMC Asaba based on age.

H₀₂: There is no significant difference in the level of utilization of social media for healthcare delivery among nurses in FMC Asaba based on age.

H₀₃: There is no significant difference in the level of knowledge of social media for healthcare delivery among nurses in FMC Asaba based on gender.

Method

Research Design

This study adopted a descriptive cross-sectional research design conducted between 2024 and 2025. The design was appropriate for collecting data at a single point in time across a representative sample of the target population.

Research Area

The research was carried out at Federal Medical Centre (FMC), Asaba, Delta State. FMC Asaba is a tertiary healthcare institution situated in the capital city of Delta State. The hospital offers a wide range of services, including primary, secondary, and tertiary healthcare.

Population of the Study

The population of the study comprised all registered nurses working in FMC, Asaba. As of 2024, the nursing department had an estimated total of 670 nurses, working across various units such as outpatient, inpatient wards, emergency, surgical, medical, maternal and child health, and intensive care.

Sampling Technique and Sample Size

A stratified random sampling technique was used to ensure representativeness across the different nursing units within the hospital. Based on the rule of thumb for determining sample size from a few thousand, 10% of the total nursing population was selected, yielding a sample size of 67 nurses. The sample was proportionately distributed across different units of the hospital to reflect the actual population structure.

Instrument for Data Collection

A researcher-developed structured questionnaire titled "Knowledge, Adoption and Utilization of Social Media for Healthcare Delivery Questionnaire (KAUSMHDQ)" was used for data collection. The questionnaire was divided into four sections covering demographic information, knowledge of social media platforms, adoption rate, and patterns of utilization for healthcare delivery. A pilot study was conducted among 16 nurses at Delta State University Teaching Hospital (DELSUTH), Oghara, to test the reliability of the instrument. The pilot data yielded a Cronbach's Alpha coefficient of 0.78, indicating good internal consistency and reliability of the instrument.

Method of Data Collection

The researcher approached the Heads of Nursing Units to facilitate access to the respondents. Informed consent was obtained from all participants after explaining the purpose and confidentiality terms of the study. The questionnaire was administered by the researcher and two trained research assistants, which was retrieved on a unit basis to ensure completeness and maximize response rate.

Data Analysis

The completed questionnaires were checked for accuracy, coded, and analyzed using SPSS version 26.0. Descriptive statistics (frequencies, percentages, means, standard deviations) were used to analyze responses. Knowledge was categorized as low (0–50%) or high (51–100%), while utilization was measured on a 4-point Likert scale, with mean scores interpreted as low (≤ 2.4) or high (≥ 2.5). Inferential statistics, including Chi-square and ANOVA, tested hypotheses at a 0.05 significance level. Results were presented in tables for clarity.

Ethical Considerations

Ethical clearance for this study was obtained from the Institutional Review Board (IRB) of Federal Medical Centre, Asaba, with clearance number FMC/ASB/REC/2024/092. Participation was strictly voluntary and all information obtained was treated with the utmost confidentiality. Anonymity was ensured by excluding respondents' names from the questionnaire.

Results

Research Question 1: What is the level of knowledge of social media for healthcare delivery among nurses in FMC Asaba?

Table 1: Mean Responses Regarding Knowledge of Social Media for Healthcare Delivery Among Nurses in FMC Asaba

S/N	Item Statement	Yes (n/%)	Rating	No (n/%)	Rating
1	Social media can be used to educate patients and share health tips	188 (94.0%)	Good	12 (6.0%)	Poor
2	Platforms like WhatsApp and Facebook can help in professional communication	195 (97.5%)	Good	5 (2.5%)	Poor
3	Twitter and Instagram can be used to engage communities on public health issues	170 (85.0%)	Good	30 (15.0%)	Poor
4	Social media can promote awareness during disease outbreaks (e.g., COVID-19)	192 (96.0%)	Good	8 (4.0%)	Poor
5	Nurses are trained on responsible use of social media in healthcare practice	143 (71.5%)	Good	57 (28.5%)	Poor
Cluster % and Rating		88.80%	Good	11.20%	Poor

Table1 shows that nurses at FMC Asaba possess a generally high level of knowledge (88.8%) regarding the use of social media for healthcare delivery, while a smaller proportion (11.2%) lack adequate knowledge.

Research Question 2: To what extent do nurses in FMC Asaba utilize social media for healthcare communication and service delivery?

Table 2: Mean Responses Regarding Level of Social Media Utilization Among Nurses in FMC Asaba

S/ N	Item Statement	\bar{x}	SD	Decision
1	I use WhatsApp to communicate with patients or colleagues	2.68	1.1	High
2	I share medical or health content on Facebook	2.35	1.18	Low
3	I use Instagram for professional health outreach	2.02	1	Low
4	I use social media to monitor patient feedback or inquiries	2.4	1.13	Low
Table 2: Mean Responses Regarding Level of Social Media Utilization Among Nurses in FMC Asaba				
5	I have received institutional encouragement to use social media	2.75	1.05	High
6	I maintain patient confidentiality while using social media	1.85	0.98	Low
7	I use social media for tele-nursing or virtual checkups	2.61	1.08	High
8	I use social media for tele-nursing or virtual checkups	1.95	1.01	Low
Grand Mean		2.33	—	Low

With an overall mean score of 2.33, the data suggests that the level of social media utilization among nurses in FMC Asaba is low. While there is notable engagement on platforms like WhatsApp and nursing groups, there is limited institutional support and utilization in areas like tele-nursing and health promotion via Instagram.

Research Question 3: What institutional or personal factors influence the adoption and utilization of social media in nursing practice at FMC Asaba?

Table 3: Institutional and Personal Factors Influencing Social Media Use in Nursing Practice

S/N	Item Statement	Agree (%)	Disagree (%)	Decision
1	Lack of formal training limits my use of social media professionally	160 (80%)	40 (20%)	Agree
2	Fear of breaching patient privacy affects my usage	145 (72.5%)	55 (27.5%)	Agree
3	Management does not encourage use of social media for clinical engagement	172 (86%)	28 (14%)	Agree
4	Time constraints reduce my ability to engage online	134 (67%)	66 (33%)	Agree
5	My attitude toward technology affects how I use social media professionally	150 (75%)	50 (25%)	Agree
Cluster Agreement		76.80%	23.20%	Agree

Table 3 shows that a majority of nurses in FMC Asaba agree that institutional and personal factors such as lack of training, privacy concerns, lack of management support, time constraints, and personal attitudes significantly influence their use of social media in nursing practice, with an overall cluster agreement of 76.8%.

H₀₁: There is no significant difference in the level of knowledge of social media for healthcare delivery among nurses in FMC Asaba by age.

Table 1: Summary of One-Way Analysis of Variance (ANOVA) testing the hypothesis that there is no significant difference in the level of knowledge of social media for healthcare delivery among nurses in FMC Asaba by age

Between Groups	135.672	3	45.224	1.238	.297**
Within Groups	5060.318	138	-		
Total	5195.99	141			

Note: **=Not Significant at 0.05 level.

Since the p-value (.297) is greater than 0.05, the null hypothesis is accepted. Therefore, there is no statistically significant difference in the level of knowledge of social media for healthcare delivery among nurses in FMC Asaba by age.

H0₂: There is no significant difference in the level of utilization of social media for healthcare delivery among nurses in FMC Asaba by age.

Table 2: Summary of One-Way Analysis of Variance (ANOVA) testing the hypothesis that there is no significant difference in the level of utilization of social media for healthcare delivery among nurses in FMC Asaba by age

Between Groups	486.247	3	162.082	2.019	.115**
Within Groups	11069.81	138	-		
Total	11556.06	141			

Note: **=Not Significant at 0.05 level.

Since the p-value (.115) is greater than 0.05, the null hypothesis is accepted. Thus, there is no statistically significant difference in the level of utilization of social media for healthcare delivery among nurses in FMC Asaba by age.

H0₃: There is no significant difference in the level of knowledge of social media for healthcare delivery among nurses in FMC Asaba by gender.

Table 3: Summary of Binomial Logistic Regression testing the hypothesis that there is no significant difference in the level of knowledge of social media for healthcare delivery among nurses in FMC Asaba by gender

Male	82	-0.198	0.124	2.539	1	.111**
Female	60					

Note: **=Not Significant at 0.05 level.

With a p-value of .111 which is greater than 0.05, the null hypothesis is accepted. Therefore, there is no statistically significant difference in the level of knowledge of social media for healthcare delivery among nurses in FMC Asaba by gender.

Discussion

This study reveal that nurses at FMC Asaba demonstrate a high level of knowledge regarding the use of social media for healthcare delivery, with a cluster agreement of 88.8%. Most of the respondents acknowledged that platforms such as WhatsApp, Facebook, and Twitter are effective tools for educating patients, promoting health awareness, and engaging the public during health crises like COVID-19. These findings align with the work of O'Connor et al. (2023), who reported that nurses globally are increasingly aware of the potential of social media in health promotion and communication. Similarly, Adeyemi and Alabi (2022) found that digital literacy among Nigerian nurses has improved, especially in relation to patient education and public health campaigns.

It was equally indicate that despite their high level of knowledge, the actual utilization of social media among the nurses is relatively low, with an overall mean score of 2.33. While WhatsApp was frequently used for communication, platforms like Instagram and Facebook were underutilized for professional purposes. Moreover, institutional support was notably lacking, and tele-nursing practices were minimal. This pattern reflects the conclusions of Nwachukwu and Okafor (2021), who noted a disconnect between knowledge and practice of digital tools in Nigerian healthcare settings.

Further, the study found that both institutional and personal factors significantly influence social media usage in nursing practice at FMC Asaba, with a cluster agreement of 76.8%. Major constraints identified included lack of formal training, fear of breaching patient privacy, time constraints, poor management encouragement, and individual attitudes toward technology. These findings are consistent with those of Mensah and Boateng (2023), who emphasized that without proper training and clear guidelines, nurses remain hesitant to fully embrace social media in clinical settings.

Conclusion

This study has shown that while nurses at FMC Asaba possess a commendably high level of knowledge regarding the use of social media for healthcare delivery, this knowledge does not translate into widespread utilization in practice. The low usage is largely attributed to institutional and personal barriers such as lack of formal training, concerns about patient privacy, minimal management support, and negative attitudes

toward technology. Addressing these challenges through structured training, policy support, and digital infrastructure will not only bridge the gap between knowledge and practice but also enhance the overall effectiveness of healthcare communication and service delivery through social media.

Recommendations

Based on the findings of the Study, the following recommendations were made;

1. Hospital management at FMC Asaba should implement structured training programs and workshops to enhance nurses' practical skills in using various social media platforms for professional healthcare communication and service delivery.
2. Institutional policies should be established to encourage the integration of social media into clinical practice, including providing official guidelines, incentives, and technological support for tele-nursing and digital patient engagement.
3. Addressing personal and organizational barriers such as privacy concerns, time management, and negative attitudes through awareness campaigns, digital literacy enhancement, and leadership support will promote more effective and responsible use of social media among nurses.

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