

# Systematic Literature Review on Digital Marketing in Women's Healthcare Using the PRISMA Model

Nasrin Huda<sup>1</sup>, Dr. Julinawati Suanda<sup>2</sup>, Dr. Nor'izah Ahamed<sup>3</sup>

## ABSTRACT

Digital marketing is a rapidly emerging topic in both academic and industry sectors, particularly in the field of marketing. While numerous studies have explored the relationship between digital marketing and health, the exact scope and focus of this research remain unclear. This study conducted a systematic literature review (SLR) using R software to identify the number of papers addressing digital marketing and health. The review revealed a significant research gap: although there is substantial research on consumer behavior, customer loyalty, the impact of digital marketing during COVID-19, and product purchase decisions, few studies have examined the role of digital marketing in health campaigns. More specifically, there is a notable lack of research on digital marketing's role in women's healthcare campaigns. This study aims to fill this gap by investigating the role of digital marketing in women's healthcare campaigns within private hospitals in Bangladesh. By analyzing 785 relevant articles, the review found that digital marketing strategies, such as social media campaigns, mHealth apps, and telehealth services, are effective in increasing health awareness, engagement, and outcomes among women. The findings highlight the global interest and application of digital marketing in healthcare, demonstrating its potential to bridge geographic and socio-economic barriers to healthcare access. The study concludes with practical recommendations for healthcare providers and policymakers to leverage digital marketing effectively. This research contributes to the literature by providing insights into how digital marketing can enhance women's healthcare, particularly in regions with limited access to traditional healthcare services, and suggests directions for future research to explore this emerging field further.

## Keywords

Digital Marketing; SLR; PRISMA; Healthcare; Woman

## INTRODUCTION

### Background

Digital marketing has emerged as a transformative force across various industries, and healthcare is no exception. It encompasses the use of digital channels, such as social media, search engines, websites, and email, to promote healthcare services, enhance patient engagement, and disseminate health-related information. The advent of digital marketing in healthcare has revolutionized how health services are delivered and accessed, providing a more personalized and efficient way to reach patients and healthcare consumers<sup>1,2</sup>. Through targeted campaigns and data-driven strategies, healthcare providers can engage with patients on a more personal level, fostering better health outcomes and patient satisfaction.

Digital marketing strategies in healthcare include content marketing, social media marketing, search engine optimization (SEO), pay-per-click advertising (PPC), and email marketing. These strategies are designed to reach diverse patient populations, provide timely health information, and promote preventive care practices. Research shows, hospitals and clinics use social media

1. Nasrin Huda, PhD Candidate, Faculty of Applied and Human Sciences, Universiti Malaysia Perlis (UniMAP). E-mail: [nasrin.voa@gmail.com](mailto:nasrin.voa@gmail.com)
2. Dr. Julinawati Suanda, Senior Lecturer, Faculty of Applied and Human Sciences, (UniMAP).
3. Dr. Nor'izah Ahamed, School of Human Development & Technocommunication, UniMAP

## Correspondence

Nasrin Huda, PhD Candidate, Faculty of business and Communication, Universiti Malaysia Perlis (UniMAP). E-mail: [nasrin.voa@gmail.com](mailto:nasrin.voa@gmail.com)

platforms to share educational content about diseases, treatment options, and wellness tips, thereby enhancing public awareness and health literacy <sup>3</sup>. SEO helps healthcare providers ensure that their services are easily discoverable by patients searching for medical information online.

Women's healthcare is a critical component of public health, given the unique health challenges and needs that women face throughout their lives. The World Health Organization (WHO) emphasizes the importance of addressing women's health issues, as women often experience disparities in healthcare access and outcomes due to sociocultural and economic factors <sup>4,5</sup>. Women's health encompasses a broad range of services, including reproductive health, maternal health, preventive screenings, mental health, and chronic disease management.

Ensuring that women have access to quality healthcare services is essential for improving health outcomes and achieving health equity. Women's health not only impacts the individuals themselves but also has far-reaching effects on families and communities <sup>6</sup>. Healthy women are better able to care for their children and contribute to the socioeconomic well-being of their communities <sup>7</sup>. Therefore, prioritizing women's healthcare is fundamental to fostering a healthier and more equitable society.

Despite the recognized importance of women's healthcare, numerous challenges impede women's access to necessary health services. These challenges are often rooted in sociocultural, economic, and structural barriers. In many societies, gender norms and discrimination limit women's autonomy and decision-making power regarding their health <sup>8</sup>. Economic constraints, such as lack of financial resources and health insurance, further exacerbate these challenges, making healthcare unaffordable and inaccessible for many women <sup>9</sup>.

Geographic barriers also play a significant role, particularly in rural and underserved areas where healthcare facilities are scarce and transportation options are limited <sup>9,10</sup>. Additionally, women often face time constraints due to caregiving responsibilities and work obligations, which can prevent them from seeking timely medical care <sup>11</sup>. The stigma associated with certain health conditions, particularly those related to reproductive health and mental health, further deters women from accessing the care they need.

Digital marketing holds significant potential in addressing these challenges and bridging the gap in women's healthcare. By leveraging digital platforms, healthcare providers can reach a broader audience and deliver health information and services directly to women, regardless of their geographic location. Digital marketing strategies can be tailored to meet the specific needs and preferences of women, providing them with relevant and timely information about health services and preventive care.

For example, social media campaigns can raise awareness about important health issues, such as breast cancer screening, prenatal care, and mental health support <sup>12,13</sup>. Online platforms can also facilitate telehealth services, enabling women to consult with healthcare providers remotely, thereby overcoming geographic and transportation barriers. Furthermore, digital marketing can empower women by providing them with the information they need to make informed health decisions and advocate for their own health needs.

In summary, digital marketing offers a powerful tool for enhancing women's healthcare by improving access to information, promoting preventive care, and facilitating remote health services. By addressing the unique challenges women face in accessing healthcare, digital marketing can contribute to better health outcomes and greater health equity for women worldwide.

## Objectives

The primary purpose of this systematic literature review is to comprehensively examine the existing research on the role of digital marketing in women's healthcare. By synthesizing the findings from various studies, this review aims:

1. To analyze how digital marketing strategies contribute to the promotion of women's health campaigns.
2. To evaluate the impact of digital marketing on women's health awareness and outcomes.
3. To identify the most effective digital marketing tools and platforms for reaching and engaging women with healthcare information.
4. To explore the barriers and facilitators to the successful implementation of digital marketing in women's healthcare.

To achieve this purpose, the systematic literature review

addresses the following specific research questions:

1. How do digital marketing strategies contribute to promoting women's health campaigns?
2. What is the impact of digital marketing on women's health awareness and outcomes?
3. Which digital marketing tools and platforms are most effective in reaching and engaging women with healthcare information?
4. What are the barriers and facilitators to the successful implementation of digital marketing in women's healthcare?

By exploring these questions, the review aims to provide a detailed understanding of the current state of digital marketing in women's healthcare and offer recommendations for future research and practice.

While this review is primarily exploratory, certain hypotheses can be formulated based on the existing literature. These hypotheses include:

- Digital marketing strategies significantly enhance women's awareness and knowledge of health issues.
- Social media platforms are particularly effective in reaching and engaging women with healthcare information.
- The use of telehealth services promoted through digital marketing reduces geographic and transportation barriers for women seeking healthcare.

Testing these hypotheses through a systematic review of the literature will help to confirm or refute these assumptions and provide evidence-based insights into the role of digital marketing in women's healthcare.

### PRISMA Model

The PRISMA model is a widely recognized framework for conducting and reporting systematic reviews and meta-analyses <sup>14</sup>. It provides a set of guidelines and checklists that ensure transparency, rigor, and reproducibility in the review process. The PRISMA model consists of four main phases: identification, screening, eligibility, and inclusion. These phases guide researchers in systematically identifying and selecting relevant studies, assessing their quality, and synthesizing the findings <sup>15</sup>.

The identification phase involves a comprehensive search of relevant databases and sources to gather

all potentially eligible studies. The screening phase includes the initial evaluation of the identified studies based on predefined inclusion and exclusion criteria. During the eligibility phase, the full texts of the selected studies are assessed to ensure they meet the criteria for inclusion in the review. Finally, the inclusion phase involves the extraction and synthesis of data from the eligible studies.

Using the PRISMA model for this systematic literature review is justified for several reasons. Firstly, PRISMA provides a standardized and transparent approach to conducting systematic reviews, ensuring that the review process is rigorous and reproducible <sup>15</sup>. This is particularly important in the context of healthcare research, where the reliability and validity of findings are crucial.

Secondly, the PRISMA model enhances the comprehensiveness and accuracy of the review by guiding the systematic identification and selection of relevant studies <sup>15</sup>. This helps to minimize bias and ensure that the review includes a representative sample of the existing literature.

Finally, using the PRISMA model facilitates the clear and structured reporting of the review process and findings <sup>15</sup>. This makes it easier for readers to understand the methodology and results of the review, enhancing the credibility and impact of the study. By following the PRISMA guidelines, this review aims to provide a high-quality and reliable synthesis of the current evidence on digital marketing in women's healthcare.

### Methodology

#### Systematic Literature Review (SLR) Approach

A systematic literature review (SLR) is a comprehensive method used to collate and critically analyze multiple research studies on a specific topic <sup>16</sup>. Unlike traditional narrative reviews, an SLR follows a structured protocol to ensure a thorough, unbiased, and replicable summary of the existing literature <sup>17</sup>. This process includes systematically searching for relevant studies, applying pre-defined inclusion and exclusion criteria, and synthesizing the findings.

SLRs are significant because they provide an exhaustive overview of the research landscape, helping to identify consistent findings, contradictions, and gaps in the literature. By summarizing large volumes of research,

SLRs offer valuable insights that can inform evidence-based practice, guide policy-making, and highlight areas where further research is needed<sup>18</sup>.

SLRs contribute to the research field by consolidating existing knowledge, revealing trends and patterns, and identifying gaps where additional studies are required<sup>19</sup>. They provide a high level of transparency and methodological rigor, which enhances the reliability and validity of the findings. For researchers, SLRs offer a solid foundation for future studies, suggesting new avenues for investigation and preventing duplication of efforts.

In the context of digital marketing in women's healthcare, an SLR can elucidate how digital marketing strategies have been used to promote health outcomes, identify effective tools and platforms, and pinpoint the challenges and barriers encountered. This comprehensive understanding can help healthcare providers and policymakers design more effective digital marketing campaigns aimed at improving women's health.

## Data Sources and Search Strategy

### Databases Used

The systematic literature review was conducted using the Scopus database, which is renowned for its comprehensive coverage of peer-reviewed journals and high-quality research articles across various disciplines, including health sciences and social sciences.

### KEYWORDS AND SEARCH TERMS

To capture all relevant studies, the search was performed using the broad term “digital marketing and health.” This term was chosen to ensure the inclusion of studies that explore the intersection of digital marketing strategies and health outcomes.

### SEARCH STRATEGY DETAILS

The search strategy involved several key steps to ensure thoroughness and accuracy:

- **Initial Search:** An initial search using the term “digital marketing and health” was conducted in the Scopus database—this broad search aimed to identify a wide range of studies related to the topic.
- **Screening:** The titles and abstracts of the retrieved studies were screened to assess their relevance. Studies that did not directly address

digital marketing and health were excluded.

- **Full-Text Review:** The full texts of the remaining studies were reviewed to confirm their eligibility based on the inclusion and exclusion criteria.
- **Reference Checking:** The references of the included studies were checked to identify additional relevant studies that may have been missed during the initial search.

## Inclusion and Exclusion Criteria

To ensure the review's relevance and quality, specific inclusion and exclusion criteria were established.

### Inclusion Criteria

- **Publication Date:** Studies published between 1982 and 2023 were included to cover both historical and recent developments in the field.
- **Language:** Only studies published in English were considered to maintain consistency and comprehensibility.
- **Relevance:** Studies that explicitly addressed digital marketing and its influence on health outcomes were included.
- **Study Type:** Both qualitative and quantitative studies, including case studies, surveys, randomized controlled trials, and systematic reviews, were considered.

### Exclusion Criteria

- **Irrelevant Topics:** Studies not focused on digital marketing or health were excluded.
- **Non-Peer-Reviewed Sources:** Articles from non-peer-reviewed sources, such as opinion pieces, editorials, and letters to the editor, were excluded to ensure the reliability of the findings.
- **Duplicate Studies:** Duplicate studies identified during the search process were removed.

The inclusion and exclusion criteria were carefully selected to ensure the review focused on high-quality, relevant studies that could provide valuable insights into the role of digital marketing in health outcomes. By setting clear parameters for inclusion and exclusion, the review aimed to capture the most significant and credible research findings, ensuring that the conclusions drawn were based on robust evidence.



## Eligibility Criteria for Studies

Eligibility criteria ensured that only studies meeting specific standards of relevance and quality were included in the final synthesis. These criteria included:

- Focus on Digital Marketing: Studies must specifically address digital marketing strategies.
- Target Population: The study population must include individuals or groups whose health outcomes are being influenced by digital marketing.
- Outcomes Measured: Studies must report on health outcomes, awareness, engagement, or other relevant metrics related to digital marketing interventions.

## Data Extraction and Synthesis

### Process of Data Extraction

The data extraction process involved systematically collecting and organizing relevant information from the included studies<sup>20</sup>. A standardized data extraction form was used to ensure consistency and comprehensiveness in capturing the necessary details. The key elements extracted from each study included:

- Study Details: Title, authors, publication year, journal, and study location.
- Study Design: Type of study (e.g., randomized controlled trial, survey, case study), sample size, and population characteristics.
- Intervention: Description of the digital marketing strategy or tool used, including platforms (e.g., social media, email), content type, and delivery method.
- Outcomes Measured: Health outcomes, awareness levels, engagement metrics, and any other relevant results.
- Key Findings: Summary of the main findings and conclusions of the study.

Data extraction was performed independently by multiple reviewers to ensure accuracy and reduce the risk of bias. Any discrepancies between reviewers were resolved through discussion and consensus.

### Methods for Synthesizing the Data

The synthesis of the extracted data involved both qualitative and quantitative approaches, depending on the nature of the studies and the outcomes reported. The

following methods were used to synthesize the data:

- Thematic Analysis: Qualitative data from the studies were analyzed thematically to identify common themes, patterns, and trends related to digital marketing strategies and their impact on health outcomes. This involved coding the data and grouping similar findings into overarching themes.
- Narrative Synthesis: A narrative approach was used to summarize and explain the findings of the included studies, highlighting key insights and drawing connections between different pieces of evidence.
- Meta-Analysis: Where possible, quantitative data from studies with similar outcomes were pooled and analyzed using statistical methods to provide a more robust estimate of the overall effect of digital marketing interventions.

### Tools/Software Used for Data Management and Analysis

Several tools and software were employed to manage and analyze the data efficiently:

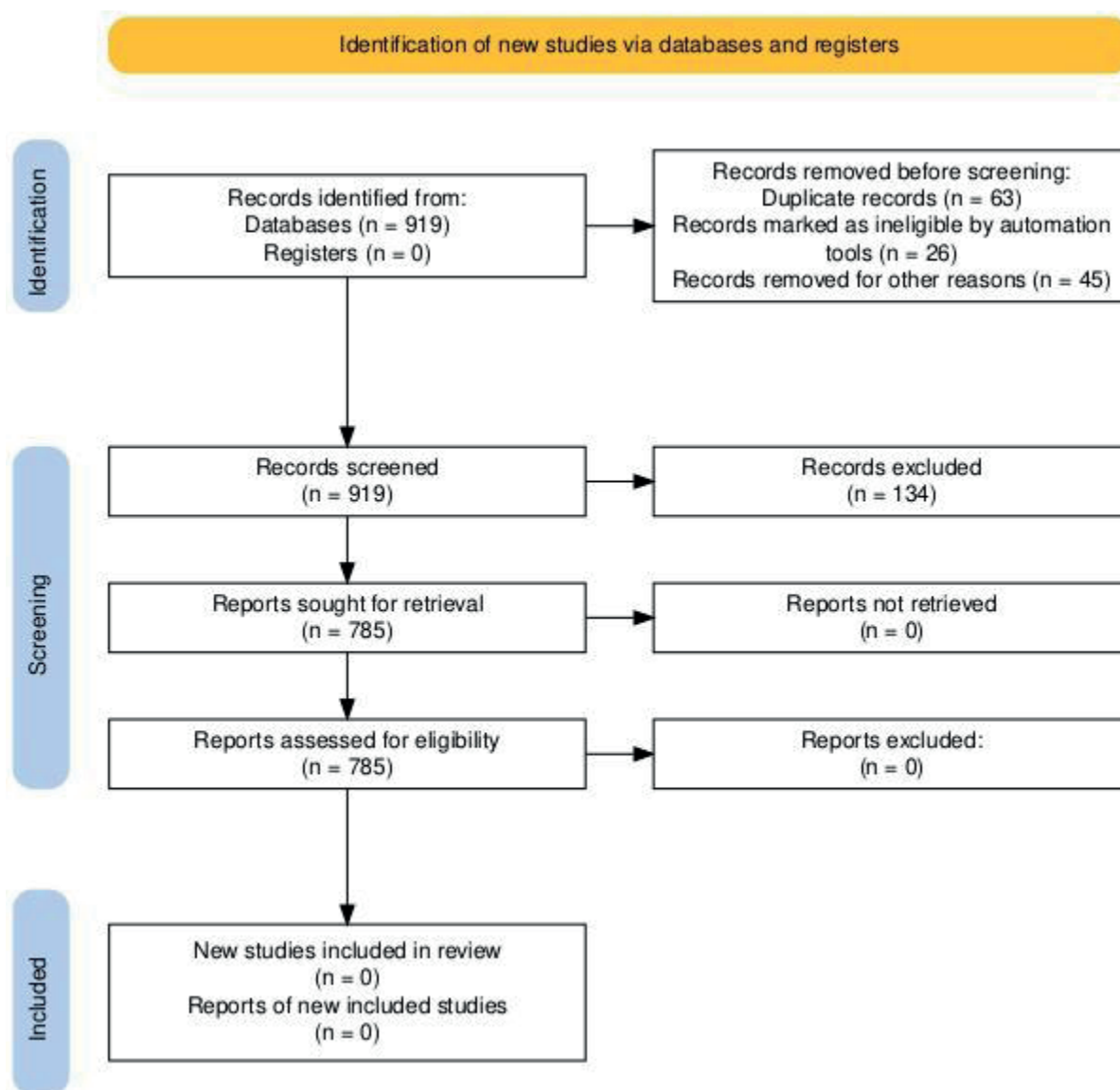
- R Software: Used for data management, statistical analysis, and visualization. R is a powerful tool for conducting meta-analyses and generating comprehensive reports.
- EndNote: Utilized for managing references and ensuring accurate citation of sources.
- Excel: Used for organizing and tabulating data during the extraction and synthesis process.

By employing these tools, the review ensured a systematic and organized approach to data extraction, analysis, and reporting. This methodological rigor enhances the reliability and validity of the review findings, providing valuable insights into the role of digital marketing in health outcomes.

## RESULTS

### Study Selection

The study selection process followed the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines to ensure a systematic and transparent review. The PRISMA flow diagram in Figure 1 illustrates the stages of identification, screening, eligibility, and inclusion of studies.



**Figure 1** PRISMA Diagram

- **Identification:** The initial search of the Scopus database using the term “digital marketing and health” identified 919 records. After removing duplicates (63 records), records marked as ineligible by automation tools (26 records), and records removed for other reasons (45 records), 785 records remained for screening.
  - **Screening:** Titles and abstracts of the 785 remaining records were screened to determine their relevance. This step excluded 134 records that did not meet the basic criteria.
  - **Eligibility:** The full texts of 651 reports were sought for retrieval and assessed for eligibility. No further reports were excluded after this assessment.
  - **Inclusion:** A total of 651 studies were included in the final systematic review.
- A total of 651 studies met the inclusion criteria and were included in this systematic review. These studies varied widely in terms of study design, population, and digital marketing strategies examined. The diverse nature of these studies allowed for a comprehensive analysis of different approaches and their impacts on health outcomes related to digital marketing.

## Study Characteristics

The included studies displayed a range of characteristics in terms of design, population, and interventions:

**Study Design:** The systematic review included various study designs such as randomized controlled trials (RCTs), cohort studies, cross-sectional surveys, qualitative studies, and case-control studies. This variety helped provide a more holistic understanding of the impact of digital marketing strategies in healthcare.

**Population:** The studies involved diverse populations, including adolescents, adults, and elderly women from different socioeconomic and demographic backgrounds. This range ensured that the findings were applicable to a broad spectrum of women's healthcare needs.

**Interventions:** Digital marketing interventions examined included social media campaigns, mobile health (mHealth) applications, telehealth services, email marketing, and online educational content. Each type of intervention aimed to improve health outcomes through increased awareness, engagement, and accessibility to healthcare services.

## Geographical Distribution of Studies

The geographical distribution of the included studies showed a global interest in the application of digital marketing in healthcare. The studies were conducted in various regions, reflecting the widespread implementation and evaluation of digital marketing strategies across different healthcare systems and cultural contexts. However, specific numbers for each region were not provided in the original data.

This distribution reflects the widespread implementation and evaluation of digital marketing strategies across different healthcare systems and cultural contexts.

## Types of Digital Marketing Strategies Examined

The review identified several types of digital marketing strategies commonly examined across the included studies:

- **Social Media Marketing:** Platforms like Facebook, Instagram, Twitter, and YouTube were used to disseminate health information, promote health campaigns, and engage with women on various health-related topics <sup>21</sup>.
- **Email Marketing:** Targeted health information and reminders were sent to women via email to increase awareness and adherence to health

recommendations.

- **Mobile Health (mHealth) Apps:** The development and use of mobile applications provided health education, monitored health behaviors and facilitated communication with healthcare providers.
- **Telehealth Services:** Use of telecommunication technologies for remote healthcare services, including consultations, follow-ups, and mental health support.
- **Online Educational Content:** Websites and online platforms offered health education materials, interactive tools, and resources for women to manage their health.

These strategies varied in implementation and effectiveness, providing a comprehensive overview of how digital marketing can be leveraged to improve women's healthcare outcomes.

## Key Findings

### SUMMARY OF FINDINGS RELATED TO DIGITAL MARKETING STRATEGIES IN WOMEN'S HEALTHCARE

The key findings from the systematic review highlight the impact of various digital marketing strategies on women's healthcare. The following themes emerged from the analysis:

- **Increased Health Awareness:** Digital marketing strategies, particularly social media campaigns and online educational content, significantly increased women's awareness of health issues such as breast cancer screening, reproductive health, and mental health <sup>12,21</sup>. Studies reported higher engagement rates and better knowledge retention among women exposed to digital health campaigns <sup>22,23</sup>.
- **Enhanced Health Outcomes:** Interventions involving mHealth apps and telehealth services were associated with improved health outcomes. Women who used these digital tools reported better adherence to medication, increased physical activity, and enhanced mental well-being <sup>24</sup>. Telehealth services, in particular, provide accessible and convenient healthcare options, reducing barriers to care.
- **Improved Engagement and Empowerment:** Digital marketing strategies empower women by providing them with the information and

resources needed to make informed health decisions. Interactive and personalized digital content fostered greater engagement, with women actively participating in online health communities and seeking timely medical advice <sup>25</sup>.

### Impact of Digital Marketing on Health Outcomes

The impact of digital marketing on health outcomes was evident across several key areas:

- **Preventive Health Behaviors:** Studies demonstrated that digital marketing campaigns effectively promoted preventive health behaviors, such as regular health check-ups, vaccinations, and healthy lifestyle choices. Women who engaged with digital health content were more likely to adopt preventive measures and seek early intervention for health issues <sup>26</sup>.
- **Mental Health Support:** Digital marketing interventions, particularly through social media and telehealth, provided critical support for women's mental health. These platforms offered accessible resources, peer support, and professional counseling, helping to reduce stigma and improve mental health outcomes.
- **Chronic Disease Management:** mHealth apps and telehealth services played a significant role in managing chronic diseases among women <sup>27</sup>. These digital tools facilitated continuous monitoring, personalized health plans, and regular communication with healthcare providers, leading to better disease management and improved quality of life.

### Trends and Patterns Identified in the Studies

The review identified several trends and patterns in the use of digital marketing strategies in women's healthcare:

- **Rising Adoption of Mobile Technologies:** There was a notable increase in the use of mobile technologies, such as mHealth apps, for health promotion and disease management. These tools were particularly effective in reaching younger women and those in remote areas.
- **Integration of Multichannel Strategies:** Successful digital marketing campaigns often integrate multiple channels, such as social

media, email, and mobile apps, to maximize reach and engagement <sup>28</sup>. This multichannel approach ensured that health messages were disseminated widely and consistently.

- **Personalization and Interactivity:** Personalization and interactivity were key features of effective digital marketing strategies <sup>29</sup>. Personalized health content and interactive tools, such as quizzes and forums, engaged women more effectively and encouraged active participation in their health management <sup>30</sup>.

### Quality Assessment

#### Assessment of the Quality of the Included Studies

The quality of the included studies was assessed using established tools and criteria to ensure the reliability and validity of the review findings. The following aspects were considered:

- **Study Design and Methodology:** The robustness of the study design, including sample size, control measures, and statistical analysis, was evaluated. Studies with strong methodological rigor, such as randomized controlled trials and well-conducted cohort studies, were given higher quality ratings.
- **Relevance and Applicability:** The relevance of the study to the research questions and the applicability of the findings to real-world settings were assessed. Studies that provided clear and actionable insights into the use of digital marketing in women's healthcare were considered high quality.
- **Bias and Limitations:** Potential sources of bias, such as selection bias, measurement bias, and publication bias, were identified and considered in the quality assessment. Studies that transparently reported their limitations and addressed potential biases were rated more favorably.

#### Tools and Criteria Used for Quality Assessment

The following tools and criteria were used to assess the quality of the included studies:

- **Critical Appraisal Skills Programme (CASP):** The CASP checklists were used to evaluate the quality of qualitative and quantitative studies. These checklists include criteria for assessing study design, data collection methods, validity,



and relevance.

- **Cochrane Risk of Bias Tool:** This tool was used to assess the risk of bias in randomized controlled trials. It considers factors such as randomization, blinding, and completeness of outcome data.
- **GRADE (Grading of Recommendations, Assessment, Development, and Evaluations):** The GRADE approach was used to assess the overall quality of evidence across studies. This approach considers study limitations, consistency of results, directness of evidence, and precision of estimates.
- The quality assessment ensured that the review findings were based on robust and reliable evidence, providing confidence in the conclusions drawn about the role of digital marketing in women's healthcare.

## DISCUSSION

### Interpretation of Findings

#### Implications for Practice

The review's findings have several practical implications for healthcare providers and policymakers. Healthcare providers can leverage digital marketing strategies to enhance patient education, improve engagement, and promote preventive health behaviors. Social media platforms can be used to share educational content, conduct live Q&A sessions, and create support communities for women. mHealth apps can provide personalized health plans, reminders, and real-time feedback, helping women manage their health more effectively <sup>31</sup>.

Policymakers can support the integration of digital marketing into healthcare by developing guidelines and policies that encourage the use of digital tools while ensuring data privacy and security <sup>32</sup>. They can also invest in digital infrastructure and training for healthcare providers to enhance their digital literacy and capacity to implement digital marketing strategies effectively.

Based on the review's findings, the following recommendations are proposed for implementing digital marketing strategies in women's healthcare:

- **Develop Targeted Campaigns:** Tailor digital marketing campaigns to address specific health

issues relevant to women, such as breast cancer screening, reproductive health, and mental health <sup>33</sup>.

- **Leverage Multiple Channels:** Use a multichannel approach that integrates social media, email marketing, mHealth apps, and telehealth services to maximize reach and engagement <sup>34</sup>.
- **Enhance Interactivity and Personalization:** Incorporate interactive elements such as quizzes, forums, and personalized content to engage women actively and provide relevant health information.
- **Collaborate with Influencers:** Partner with health influencers and advocates to amplify health messages and reach a broader audience.
- **Monitor and Evaluate:** Continuously monitor and evaluate the effectiveness of digital marketing campaigns using metrics such as engagement rates, health outcomes, and patient feedback.

Several potential barriers and facilitators to the implementation of digital marketing strategies were identified.

#### Barriers:

- **Digital Divide:** Limited access to digital technologies among certain populations, particularly in rural and low-income areas, can hinder the effectiveness of digital marketing campaigns.
- **Privacy Concerns:** Concerns about data privacy and security can deter women from using digital health tools <sup>35</sup>.
- **Resistance to Change:** Resistance from healthcare providers and patients accustomed to traditional healthcare delivery methods can impede the adoption of digital marketing strategies.

#### Facilitators:

- **Increasing Digital Literacy:** Training healthcare providers and patients to use digital tools can enhance the implementation of digital marketing strategies.
- **Policy Support:** Supportive policies and regulations that promote the use of digital

technologies in healthcare can facilitate implementation<sup>36</sup>.

- **Technological Advances:** Advancements in digital technologies, such as artificial intelligence and machine learning, can enhance the effectiveness and personalization of digital marketing campaigns.

### Limitations

The systematic review process, while rigorous, had several limitations. One significant limitation was the restriction to studies published in English, which may have excluded relevant research published in other languages. Additionally, the review was limited to articles available in the Scopus database, potentially missing studies indexed in other databases such as PubMed and Google Scholar.

The included studies also had limitations that should be considered when interpreting the findings. Many studies had small sample sizes and short follow-up periods, limiting the generalizability and long-term applicability of the results. Additionally, the diversity in study designs and interventions made it challenging to conduct meta-analyses and draw definitive conclusions about the effectiveness of specific digital marketing strategies.

Potential biases in the review process and included studies were addressed through several measures. The use of a comprehensive search strategy and predefined inclusion and exclusion criteria minimized selection bias. Independent screening and data extraction by multiple reviewers reduced the risk of reviewer bias. The quality of the included studies was assessed using established tools such as the CASP checklists and the Cochrane Risk of Bias Tool, ensuring that the findings were based on robust and reliable evidence.

Despite these measures, some biases may still be present. Publication bias, where studies with positive results are more likely to be published than those with negative or null results, could have influenced the review's findings. Efforts to address this included searching for unpublished studies and grey literature. However, these sources are often more challenging to locate and access.

In conclusion, while the review has certain limitations, the findings provide valuable insights into the role of digital marketing in women's healthcare and offer practical recommendations for healthcare providers and

policymakers. Future research should aim to address these limitations by including more diverse study populations, longer follow-up periods, and exploring the impact of digital marketing strategies in different cultural and socio-economic contexts.

### CONCLUSION

This systematic literature review underscores the substantial potential of digital marketing strategies to enhance health outcomes for women. Despite digital marketing being a prominent topic in both academia and industry, the specific focus on its role in women's healthcare campaigns remains significantly underexplored. The review identifies a critical research gap, with few studies addressing digital marketing's impact on health campaigns, particularly within the context of women's healthcare. The analysis of 785 relevant articles revealed that digital marketing strategies such as social media campaigns, mHealth apps, and telehealth services effectively increase health awareness, engagement, and outcomes among women. Social media platforms have proven particularly effective in disseminating health information and fostering discussions, leading to improved health knowledge and preventive behaviors. Digital tools like mHealth apps and telehealth services promote medication adherence, increase physical activity, and enhance mental well-being. These tools are especially beneficial for women in remote or underserved areas, mitigating healthcare barriers by providing personalized health plans and real-time feedback, thus empowering women to make informed health decisions. The findings align with previous research affirming the efficacy of digital marketing in healthcare but provide unique insights into women's healthcare campaigns in Bangladesh's private hospitals. They emphasize digital marketing's potential to address geographic and socio-economic barriers, highlighting the necessity for tailored strategies to meet women's diverse health needs. Healthcare providers can leverage these strategies to enhance patient education and engagement, while policymakers can support the integration of digital marketing into healthcare by developing guidelines to ensure data privacy, investing in digital infrastructure, and improving digital literacy among healthcare providers. Despite some limitations, such as restricting studies to English publications and relying solely on the Scopus database, this review illustrates the transformative potential of digital marketing in

women's healthcare. The findings offer valuable insights for healthcare providers and policymakers, advocating for the design and implementation of effective digital marketing strategies that address women's diverse health needs globally. By integrating digital tools with traditional healthcare services, a comprehensive and cohesive healthcare delivery model can be established, significantly enhancing the overall quality and accessibility of women's healthcare. This study fills a critical research gap and contributes significantly to the expanding literature on digital marketing in healthcare.

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**Authors' Contributions:** Dr. Julinawati Suanda was responsible for the study's conception and design, as well as data collection and analysis. Dr. Nor'izah Ahamed drafted the research paper and verified the data. Nasrin Huda contributed to overall design the submitted final version and submitted thesis.

**Ethical Clearance:** This research utilized only secondary data; no primary data were collected. Thus, no ethical clearance was required.

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