



Cultural Approaches in Digital Health Promotion: A Strategic Conceptual Framework

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Abstract

Digital health promotion has become a promising tool for improving public health. However, its success largely depends on the appropriate cultural approach in delivering health messages. This study aims to analyze the effectiveness of cultural approaches in digital health promotion and identify suitable health message adaptation strategies for various social and cultural contexts. Using a qualitative research method with a literature review approach, the findings of this study indicate that cultural approaches play a crucial role in enhancing public engagement with technology-based health programs. Adaptation strategies such as community participation, the use of cultural brokers, narrative-based approaches, and the application of social and behavioral theories have proven effective in aligning health communication with the values and social norms of target populations. Therefore, integrating cultural approaches into digital health promotion is recommended to improve the effectiveness of interventions, particularly in culturally diverse countries such as Indonesia. Additionally, leveraging artificial intelligence and data analytics can serve as a solution for identifying cultural preferences and developing more inclusive and sustainable health communication strategies.

Keywords : Cultural approaches, digital health promotion, health communication, health message adaptation.

1. Introduction

Health promotion in Indonesia has undergone significant development over the past few decades (Handayani & Arianto, 2024). Digital health promotion has emerged as a promising tool to enhance public health and well-being (Koh et al., 2021). However, the success of digital health promotion heavily depends on the understanding and implementation of appropriate cultural approaches (Liao & Bercea, 2021). A cultural approach in digital health promotion considers the diverse values, beliefs, and cultural practices within society, ensuring that health messages are both accepted and understood by all individuals (Naderbagi et al., 2024).

In the era of globalization, the emergence of digital health solutions has revolutionized healthcare worldwide (Cuff, 2023; Mumtaz et al., 2023). Digital technology has become increasingly crucial (Hutagalung, Parapat, Rahmanda, Andila, & Purba, 2024) as a mechanism for delivering health promotion interventions within healthcare settings or community environments (De Santis et al., 2023). This is

largely due to the growing interconnectedness of society through digital technology, which creates new opportunities for health promotion. However, cultural differences across various regions can pose significant challenges to the implementation of digital health promotion. For instance, certain cultural groups may hold differing views on illness, treatment, or gender roles in healthcare.

Beyond these challenges, cultural differences are a key factor shaping variations in individual perceptions of reality (Chen-Xia, Betancor, Rodríguez-Gómez, & Rodríguez-Pérez, 2023), including in the context of digital healthcare services. A culturally driven approach is crucial to ensuring that digital health services are not only responsive to patient needs but also enhance the effectiveness of communication between healthcare providers and patients. A lack of cultural sensitivity in digital health services can hinder patient engagement and reduce the effectiveness of medical interventions. Thus, a cultural approach in digital health promotion must be systematically implemented to accommodate diverse perspectives within society (Anwar et al., 2020). Consequently, effective digital health promotion should incorporate cultural diversity and tailor health messages to align with the specific cultural contexts of target populations.

Despite the growing body of research on digital health promotion, several gaps remain to be addressed. First, studies on the effectiveness of cultural approaches in digital health promotion are still scarce and limited (Naderbagi et al., 2024). Second, research examining how digital health promotion strategies can be adapted across different cultural and social contexts remains insufficient. This study aims to bridge these gaps by analyzing the effectiveness of cultural approaches in digital health promotion. Furthermore, it will explore how digital health promotion strategies can be adapted to various cultural and social contexts, ensuring that health messages are widely accepted and understood.

This study aims to assess the effectiveness of cultural approaches in digital health promotion and identify appropriate health message adaptation strategies for diverse cultural and social contexts. The findings of this study are expected to provide scientific evidence on the effectiveness of such approaches, offer recommendations for policymakers and healthcare practitioners in designing more inclusive health promotion strategies, and enhance public understanding and participation in digital health programs. Additionally, this study seeks to contribute to the development of culturally sensitive digital health models that can be implemented across various healthcare settings, ultimately improving health outcomes on a broader scale.

2. Research Method

This study employs a qualitative research method with a literature review approach to analyze the effectiveness of cultural approaches in digital health

promotion. The data used in this study consist of secondary sources, including scholarly journals, academic books, and relevant research reports. The selection criteria for the literature are based on its relevance to the research topic, the recency of publication (within the last ten years), and the validity and credibility of the sources. The data analysis technique applied is thematic analysis, which facilitates the identification of patterns and key findings across various related studies.

The research process begins with the collection of literature discussing digital health promotion in diverse cultural contexts. Subsequently, the gathered literature is analyzed to identify the cultural approach principles implemented in digital health promotion and the factors influencing its effectiveness. The findings from this analysis are then synthesized to draw conclusions that provide insights into the effectiveness of cultural approaches in digital health promotion.

3. Results and Discussion

3.1 Effectiveness of Cultural Approaches in Digital Health Promotion

The cultural approach in digital health promotion plays a crucial role in enhancing the effectiveness of health message delivery to the public. Based on a literature analysis, cultural adaptation not only has the potential to expand the reach of digital health interventions but also increases user engagement in digital health programs (Nittas, Daniore, Chavez, & Wray, 2024). Various findings indicate that digital health interventions that consider cultural factors are significantly more effective in improving users' understanding and participation compared to universal approaches (Naderbagi et al., 2024).

For instance, a study by Koh et al. (2021) demonstrated that culture influences the extent to which individuals are willing to respond to digital nudges in health promotion. Therefore, it is crucial for public health institutions to engage communities in discussions about norms and ethical boundaries, particularly as the use of digital technology in health promotion continues to increase. It is because Engaging communities allows for the incorporation of their values and concerns, which can lead to more ethically sound practices in technology deployment (Welsh, Román García, Barnett, & Jena, 2024). This is especially relevant considering that cultural differences can shape how societies interpret and respond to health information, whether in the form of educational campaigns or direct interventions through digital applications.

Furthermore, Naderbagi et al. (2024) explain that digital health interventions offer significant potential as direct, cost-effective, and easily accessible solutions to address health challenges at both local and global levels. However, for this potential to be realized, cultural adaptation is essential in enhancing community engagement with these interventions. Implementing cultural adaptation in digital health promotion not only improves the effectiveness of message delivery but also fosters a sense of ownership within the target communities. Consequently, people are more likely to

accept and adopt the recommended health behaviors (Ngigi & Busolo, 2018). When initiating cultural adaptation, decisions regarding the degree of adaptation should consider the objectives of the intervention, the complexity of the content, and the specific implementation context for each community.

Other findings indicate that personalizing health messages based on cultural factors can significantly enhance the effectiveness of communication in digital health promotion (Nguyen, Bol, & King, 2020). Therefore, digital health information designers should strategically consider using personalized information modes or allowing individuals to customize their own informational materials (Nguyen et al., 2020). In practice, this can be implemented through content adaptation features in digital health applications that enable users to select language, communication styles, or approaches that align with their cultural values. With this approach, digital health promotion is not only informative but also more inclusive and responsive to the specific needs of diverse communities.

Thus, these research findings indicate that the effectiveness of digital health promotion can be enhanced through a culturally based approach. Especially in Indonesia, where culturally sensitive communication is essential to bridge the gap between healthcare providers and patients. This involves respecting the nuances of language and cultural norms, empowering patients, and encouraging active participation in their healthcare decisions (Cipta et al., 2024). Therefore, the design of digital health programs must consider the cultural aspects inherent in the target communities, including values, beliefs, languages, and social norms that influence the acceptance and understanding of health messages.

3.2 Health Message Adaptation Strategies in Diverse Cultural Contexts

Health message adaptation strategies are essential for ensuring effective health communication in communities with diverse cultural backgrounds. This approach aims to tailor health messages to align with the values, beliefs, and social practices of a specific community, making the information more accessible and comprehensible to the target audience. Such adaptation also enables more contextualized health information delivery, reduces public resistance to digital health interventions, and enhances participation in technology-based health programs.

Table 2. Health Message Adaptation Strategies in Diverse Cultural Contexts

Strategy	Description
Community Participation	Engages local communities in the design and implementation of health interventions to ensure messages are culturally relevant.
Cultural Sensitivity	Uses frameworks like Communication Anthropology to identify cultural nuances influencing health behaviors for effective message adaptation.
Cultural Grounding	Integrates local knowledge and lived experiences into health message development to enhance authenticity and community trust.

Iterative Feedback Use of Cultural Brokers	Incorporates continuous audience involvement in reviewing and refining health messages to improve acceptance and effectiveness. Relies on trusted community figures to deliver health messages and collect feedback, ensuring greater acceptance of health interventions.
Narrative-Based Approach	Employs real-life experiences from individuals within specific communities to enhance engagement and message relatability.
Social and Behavioral Theory Application	Uses psychological and sociological theories to tailor health messages, ensuring they resonate with the values and behaviors of the target audience.

One of the key components of health message adaptation is community participation, which involves engaging local communities in the design and implementation of health interventions. This approach ensures that the conveyed messages are relevant to the local social and cultural context (Bautista-Gomez, Zuluaga, & Medina-Tabares, 2024). Additionally, cultural sensitivity plays a crucial role in the adaptation process, where frameworks like Communication Anthropology help identify cultural nuances that influence health behaviors, allowing for the development of more effective communication strategies (Gore, Patil, & Pathak, 2024).

The principle of cultural grounding, which argues that health message adaptation should be informed by knowledge of the target population and by cultural insiders, further reinforces the importance of integrating local wisdom and lived experiences in the message development process (Colby et al., 2013). This process is further strengthened by an iterative feedback mechanism, where the target audience is actively involved in reviewing and refining health messages. The Supporting MumS study highlights that direct community engagement in evaluating health messages can significantly improve their relevance and acceptance over time (Spyreli et al., 2024).

In public health emergencies or campaigns requiring rapid information dissemination, health message adaptation strategies can also be implemented more efficiently. One proven method is the use of cultural brokers, individuals trusted within the community to deliver health information and gather feedback from the public (Meekers, Pham, Tran, VanLandingham, & Do, 2023). Moreover, applying social and behavioral theories in tailored message design is crucial to ensure that health campaigns effectively reach their target audiences (Storey, 2022). For example, a narrative-based approach that incorporates real-life experiences from individuals within a specific community can enhance engagement more effectively than purely instructional or generic messaging.

Although health message adaptation strategies offer numerous benefits, challenges remain, particularly in balancing specificity with inclusivity. Messages

that are overly tailored to one cultural group may inadvertently exclude individuals from different cultural backgrounds. Therefore, a flexible, data-driven approach is necessary to adapt communication strategies to a broader population. In the digital context, leveraging artificial intelligence and data analytics can be a solution for identifying diverse cultural preferences and crafting health messages that are both inclusive and effective in reaching specific target groups.

4. Conclusion

The findings of this study indicate that cultural approaches in digital health promotion play a crucial role in enhancing the effectiveness of health message delivery to the public. Cultural adaptation not only expands the reach of digital health interventions but also increases user engagement in technology-based health programs. Various health message adaptation strategies, such as community participation, the use of cultural brokers, narrative-based approaches, and the application of social and behavioral theories, have proven effective in aligning health communication with the values, beliefs, and social norms of target communities. Furthermore, personalizing health messages based on cultural factors can improve public understanding and acceptance of digital health information. Therefore, this study emphasizes that the effectiveness of digital health promotion can be significantly enhanced through culturally based strategies, particularly in countries with high cultural diversity, such as Indonesia.

As a recommendation, digital health program designers should integrate culturally based approaches into content development and communication mechanisms to ensure greater relevance to the needs of target communities. Active community involvement in the design and evaluation of digital health messages is essential for ensuring the effectiveness of interventions. Additionally, leveraging artificial intelligence and data analytics can serve as a solution for identifying diverse cultural preferences and developing more inclusive health communication strategies. To enhance the sustainability of these programs, policies should encourage collaboration between health institutions, academia, and communities in developing culturally sensitive digital health promotion initiatives.

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