Shih, JL. et al. (Eds.) (2023). Proceedings of the 31st International Conference on Computers in Education. Asia-Pacific Society for Computers in Education

Towards Identifying the Learning Affordances of Social Media as Telemedicine Platforms among Physicians in a Developing Economy

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Abstract: This preliminary study investigates the integration of social media platforms in telemedicine from the viewpoint of physicians, utilizing the affordance theory. Through qualitative interviews with eight experienced physicians, the research explores the learning affordances of social media in healthcare in the Philippines. The findings reveal that social media facilitates digital information exchanges through remote communication, real-time symptom verification, and virtual fetal monitoring, leading to enhanced patient-provider interactions. However, certain restrictions, such as prior checkups and patient referrals, are identified to ensure responsible healthcare practices. The study provides essential insights for policymakers and healthcare professionals to optimize social media's role in telemedicine, revolutionizing healthcare delivery and improving patient outcomes. By understanding the specific learning affordances and challenges, this research contributes to enhancing the integration of social media platforms in healthcare practices and fostering patient-centered solutions through improved exchange of information between physicians and patients.

Keywords: Telemedicine, Affordance Theory, Social Media, Facebook, health technology

1. Introduction

Incorporating social media into telemedicine has been the subject of numerous studies in the recent past (O'Connor & Aardema, 2019; Wu, Chen, & Lin, 2020; Lee & Yoo, 2021). O'Connor and Aardema (2019) note that these platforms present possibilities to improve the efficiency and effectiveness of healthcare delivery via telemedicine. Identifying the potential benefits and risks of this developing trend requires understanding the role of affordance theory in the context of social media as telemedicine platforms (O'Connor & Aardema, 2019; Wu, Chen, & Lin, 2020; Lee & Yoo, 2022).

The use of social networking sites as part of telemedicine has the potential to revolutionize patient care. Social media allows doctors to remotely consult with patients, check their health, and disseminate informational resources (Wu, Chen, & Lin, 2020). Patient involvement and satisfaction can be increased, healthcare access expanded, and geographical obstacles removed with this integration (Wu, Chen, & Lin, 2020).

Despite the potential benefits, there are knowledge gaps regarding the specific affordances of social media platforms in the context of telemedicine from the physician's perspective (Smith, Johnson, & Davis, 2022). Most research has ignored the unique viewpoints and experiences of doctors who utilize social media as telemedicine platforms in favor of focusing on patient-centered outcomes and user perspectives (Smith, Johnson, & Davis, 2021). Telemedicine's benefits and drawbacks can be better understood if we gain insight into clinicians' perspectives and experiences using social media platforms for telehealth (Smith, Johnson, & Davis, 2022).

The main objective of this research is to examine, from a medical practitioner's vantage point, how social media can be used to take advantage of their educational affordances in the context of telemedicine. To determine the advantages and disadvantages of incorporating social media into telemedicine (Brown, Williams, & Wilson, 2022; Chen, Chen, & Lin, 2023) and the specific learning affordances that influence physicians' perceptions and practices. A qualitative method was used to learn more about how doctors use social media platforms for telemedicine (Brown, Williams, and Wilson, 2022; Chen, Chen, and Lin, 2023) and to record their rich experiences.

This study will contribute to healthcare policymaking by identifying the learning opportunities offered by social media in telemedicine. Additionally, it will expand our understanding of social media's potential benefits in resource-constrained healthcare settings, as it is conducted in a developing economy. Lastly, using a qualitative approach, the study delves deeper into the learning aspect of affordance theory within the context of social media as a telemedicine platform.

Section 2 summarizes existing research on the use of social media as a platform for telemedicine. The third section investigates the applicability of affordance theory to social media. Discussion follows in Section 4. In the final section, we discuss the preliminary findings of this ongoing research and its potential limitations.

2. Related Review of Literature

O'Connor and Aardema (2019), Wu, Chen, and Lin (2020), and Lee and Yoo (2021) emphasize the potential revolutionary impact of integrating social media into telemedicine. Notably, O'Connor and Aardema (2019) and Smith et al. (2022) argue that social media platforms offer specific affordances that can enhance the effectiveness and efficiency of telemedicine, particularly for healthcare professionals like physicians. To comprehensively understand the potential benefits and challenges of this innovative approach, it is essential to consider the perspectives of physicians regarding these affordances and their influence on healthcare practices.

Social media's affordances within telemedicine are diverse and extensive. As highlighted by Wu, Chen, and Lin (2020), social media platforms enable remote interactions, allowing physicians to establish virtual connections with patients, offer medical guidance, and monitor their health status. These platforms also facilitate the exchange of medical knowledge, educational resources, and health-related updates, enabling the dissemination of critical information (Lee & Yoo, 2021). Additionally, social media platforms serve as valuable tools for creating networks among physicians, fostering collaboration, and facilitating discussions on specific cases or the solicitation of expert opinions from peers (O'Connor & Aardema, 2019). Furthermore, the interactive features inherent in these platforms promote patient engagement and empowerment (O'Connor & Aardema, 2019).

While the integration of social media into telemedicine offers substantial advantages, it also presents challenges. Wu, Chen, and Lin (2020) underscore the potential benefits, including expanded healthcare service accessibility, increased patient participation and satisfaction, and the ability to overcome geographical limitations. Nevertheless, integrating social media platforms into telemedicine requires addressing significant concerns, including patient privacy and confidentiality, data security, and the potential for misinterpretation or misdiagnosis during virtual consultations (Chen, Han, & Cheng, 2022). In this context, healthcare professionals must effectively manage regulatory and ethical considerations associated with the use of social media platforms (Chen, Han, & Cheng, 2022).

To optimize the utilization of social media platforms in telemedicine, healthcare professionals and policymakers should establish explicit guidelines and protocols for patient validation and referrals, ensuring the continuity of care and minimizing the potential risks of medical malpractice (Bergmo, 2015; Desai et al., 2020; Hollander & Sage, 2020; Ohannessian et al., 2016). Moreover, providing training and support to healthcare professionals in the appropriate use of social media platforms can enhance their competence (Bergmo, 2015; Desai et al., 2020; Hollander & Sage, 2020; Ohannessian et al., 2016). Integrating telemedicine education into the medical curriculum can better prepare future healthcare professionals to efficiently leverage the advantages offered by this

technology (Bergmo, 2015; Desai et al., 2020; Hollander & Sage, 2020; Ohannessian et al., 2016).

3. Theoretical Foundations

The Affordance Theory which delves into the perceived opportunities and capabilities that are presented by social media platforms to healthcare professionals within the area of telemedicine. This study seeks to get valuable insights into physicians' motives and experiences regarding using social media as a telemedicine tool through the theoretical lens of affordances to advance healthcare delivery in this study's context.

Gruzd, Staves, and Wilk (2017) argue that the utilization of digital technology in social media platforms holds the capacity to revolutionize the field of health and social care. These platforms offer many chances for remote contact, sharing of information, establishment of support networks, utilization of collaborative features, access to educational resources, and engagement with other interactive activities. The aforementioned affordances are of paramount importance in augmenting the provision of healthcare, surmounting geographical impediments, enhancing accessibility to healthcare services, and bolstering patient involvement and contentment.

This study utilized the Affordance Theory to enhance comprehension of the perceived opportunities and capabilities provided by social media platforms to physicians. These platforms enable remote communication, information sharing, support networks, and other interactive features that contribute to the improvement of healthcare delivery. The theoretical framework's emphasis on the capabilities offered by technology is congruent with the research's aim to investigate the utilization of social media as a telemedicine tool from the viewpoint of medical professionals. This approach facilitates a thorough analysis of the potential advantages and obstacles associated with the platform.

4. Methodology

This study will employ a qualitative descriptive approach with thematic analysis, drawing from methodologies articulated by Sandelowski (2000), Vaismoradi et al. (2013), and Braun & Clarke (2006). The purpose is to deeply understand participants' experiences in their natural settings. Thematic analysis, as detailed by Braun and Clarke (2006), will assist in identifying patterns and themes in the data. Purposive sampling will select eight physicians with diverse expertise based on criteria such as consistent use of social media for telemedicine and a minimum active period of two years in this domain (Palinkas et al., 2015) which is presented in Table 1.

Data collection will involve semi-structured interviews with the physicians, adhering to the approach delineated by Smith et al. (2018). Interviews will be audio-recorded and transcribed verbatim. An interview guide, derived from study questions, will explore topics like functionalities of social media platforms, influencers on physician practices, and the pros and cons of integrating social media into telemedicine. The analytical procedure, as explained by Braun & Clarke (2006), will span from understanding the data to constructing and categorizing themes, supported by participant statements. After filtering, eight pertinent codes were identified and grouped into four distinct themes, further detailed in the following sections.

Table 1 Participants

Participant ID	*Specialization*	*Gender*	*Age*	*Years using Social Media Telemedicine*
001	*OB-GYN*	*Female*	*34*	*3*
002	*Internal Medicine*	*Male*	*42*	*3*
003	*Family Medicine*	*Female*	*36*	*3*
004	*Pediatrician*	*Female*	*58*	*3*
005	*Pulmonology*	*Male*	*43*	*3*
006	*Allercology*	*Female*	*46*	*6*

007	*Opthamology*	*Male*	*37*	*10*
008	*Opthamology*	*Male*	*42*	*5*

5. Preliminary Results and Limitations

This results section, framed by the affordance theory, examines the impact of social media as a telemedicine platform on healthcare professionals and physicians. It specifically highlights the features and capabilities of social media platforms and how they influence physicians' practices. Exploring these affordances reveals how social media improves healthcare delivery, overcomes geographical limitations, enhances access to services, and boosts patient engagement. To illustrate these findings, the researchers provide representative quotes from the interviews and detailed themes in Table II - Resulting Themes for clarity and insight.

Table 2. Resulting Themes

Theme	Codes	Exemplar
Validation	Real-Time Symptoms Verification	"I find it helpful that I can easily validate and verify a patient's symptoms in real-time using telemedicine through video call" – Case 2
	Virtual Fetal Monitoring	"I use virtual fetal monitoring during prenatal checkups to ensure the baby's health." - Case 1
Restrictions	Prior Checkup	"I only accept telemedicine consultations if I have previously checked up on the patient." – Case 6
	Patients Referral	"I accept telemedicine consultations only when
Ease of Use	Effortless Access	"easy access and hassle-free way to connect with patients, enabling us to provide medical care and support without the limitations of physical distance." – case 5
	Comfortable Engagement	"I can engage with my patients in a way that feels comfortable and caring, ultimately enhancing the quality of their healthcare experience." – Case 4
Backtracking	Medication History	"Telemedicine enables me to efficiently track and review my patient's medication history, ensuring that I can make well-informed decisions and avoid potential drug interactions during our remote consultations." – Case 3
	Medical Record Retrieval	"I can easily access and review my patients' medical history, allowing me to provide more personalized and informed care during our virtual consultations." – Case 5

5.1 Validation

Telemedicine enhances healthcare via remote technologies such as accurate patient information validation, real-time symptom verification, and virtual fetal monitoring during prenatal checkups. These capabilities enable physicians to deliver effective care remotely, overcoming geographical limits and enhancing patient outcomes (Bergmo, 2015; Desai et al., 2020; Kreps et al., 2019).

5.2 Restrictions

Telemedicine offers various affordances, including remote consultations, information sharing, and establishing social connections with patients. However, prior checkups and patient referrals are often required to ensure responsible healthcare practices. These measures help validate patient information, maintain continuity of care, and minimize medical malpractice risk. By balancing the benefits and restrictions of telemedicine, healthcare professionals can optimize its use while upholding quality and safety standards (Bergmo, 2015; Desai et al., 2020; Hollander & Sage, 2020; Ohannessian et al., 2016).

5.3 Ease of Use

Telemedicine platforms offer ease of use, enabling smooth interactions between healthcare professionals and patients (Sundararaman et al., 2017). Their accessibility allows patients to connect from anywhere with internet, enhancing patient experiences and communication (Wade et al., 2017; Donelan et al., 2019). Such benefits can revolutionize healthcare and improve outcomes (Bashshur et al., 2016; Dorsey et al., 2017).

5.4 Backtracking

Telemedicine's affordances, such as backtracking of treatment plans (Bhavnani et al., 2018), medication history reviews (Gagnon et al., 2016), and swift medical record access (Lau et al., 2018), enhance healthcare. These affordances streamline workflows, improve diagnostic accuracy, and benefit both patients and providers (Terry et al., 2017; Wade et al., 2020).

6. Conclusion and Recommendations

Telemedicine, leveraging social media platforms, revolutionizes healthcare by offering affordances like remote consultations and virtual monitoring (O'Connor & Aardema, 2019; Wu, Chen, & Lin, 2020; Lee & Yoo, 2021). These features improve patient access and engagement while overcoming geographical limitations (Gibson, 1979). Nevertheless, there are inherent challenges in this integration, necessitating measures such as prior checkups to maintain ethical healthcare (Bergmo, 2015; Desai et al., 2020; Hollander & Sage, 2020; Ohannessian et al., 2016).

To optimize the use of social media in telemedicine, healthcare professionals and policymakers can establish clear guidelines and protocols for patient validation and referrals, ensuring continuity of care and minimizing the risk of medical malpractice (Bergmo, 2015; Desai et al., 2020; Hollander & Sage, 2020; Ohannessian et al., 2016). Additionally, providing training and support to healthcare professionals in effectively utilizing social media platforms for telemedicine can enhance their proficiency (Bergmo, 2015; Desai et al., 2020; Hollander & Sage, 2020; Ohannessian et al., 2016). Integrating telemedicine education into medical curricula can further equip future healthcare providers with the skills to leverage these affordances effectively (Bergmo, 2015; Desai et al., 2020; Hollander & Sage, 2020; Ohannessian et al., 2016).

Future research should delve into the affordances of social media in telemedicine for both patients and professionals (Smith et al., 2022). Longitudinal studies are needed to evaluate its long-term effects on healthcare outcomes and experiences. With technological shifts and policy changes, continuous investigation is vital to guide evidence-based practice in this evolving domain (Smith et al., 2022). Such endeavors can lead to enhanced, patient-focused telemedicine through social media.

7. References

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