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SOCIAL MEDIA BY PROVIDERS AND PATIENTS IN HEALTHCARE

ABSTRACT

Introduction: Social media platforms such as Facebook, YouTube, and Twitter have been used in various industries to create direct-to-consumer interactive opportunities. 74% of the US population were social media active users. Around 40% of adults gather their health information from Facebook, a free social networking site, which has been available on various devices and can help many organizations advertise their services as well as communicate with their patients. Social networks had a powerful influence in making health decisions because it could be used as a means to spread either positive or negative health information.

Purpose of study: The purpose of this study was to examine the uses of social media, specifically Facebook, in healthcare and how it would impact the healthcare settings.

Methodology: A qualitative literature review complemented with a semi-structured interview. The research was approved by Marshall IRB. Five electronic databases were used which yielded a total of 568 sources. The sources were reviewed, and 32 sources were included in the written research. Of these, 11 sources were used in the results section.

Results: 72% of psoriasis patients in a questionnaire search for disease-related information on Facebook to help with coping and another study reported over 50% of patients benefited from Facebook from social support and exchanging advice. Another study reported 88% of hospitals have a Facebook page as 85% agreed Facebook is an effective educational tool for healthcare. Hospitals with higher performance ratings reported more Facebook use compared to lower performance hospitals. 73% of participants in a study stated increased their knowledge regarding their disease improving their health literacy.
Discussion/Conclusion: The research demonstrated that social media has been used in the healthcare industry in several ways. Providers could communicate, educate, and advertise their practices while patients are able to do self-research to better understand diagnoses, learn about treatments, share experiences, show and receive support from others, and this overall improves health literacy.

Keywords: communication, Facebook, healthcare, health information, health literacy, social media

INTRODUCTION

Social media has included websites and other online tools that have allowed users to get, create, and share contents by interacting with others about the topic of common interests. Social media platforms such as Facebook, YouTube, and Twitter have been used in various industries to create direct-to-consumer interactive opportunities (Roberts, Callahan, & O’Leary, 2017). In 2021, there were 298.8 million internet users in the United States and 74% were active social media users (Kemp, 2021) and approximately 70% of Americans accessed social media sites as their daily routine (Pew Research Center, 2022). About 53% of US adults used social media sites as a source for news and information and the importance of social media sites have become a major part in everyday routine as 39% of them said the information on social media sites had helped them understand the current events better and easier (Shearer & Mitchell, 2021).

Social media has enabled interactions, knowledge sharing, and discussion among providers regardless of their time, space, and location which could eventually lead to professional performance improvement (Rolls, Hansen, Jackson, & Elliott, 2016). Not only could patients do self-research to better understand diagnoses and how to better take care of themselves, but health care professionals were also able to network through online communities
where they had access to updated articles/research and discuss patient issues with other medical experts (Ventola, 2014). Healthcare professionals have played a crucial role in getting the medically accurate information out to the public as well as monitored and clarified the misinformation posted online (Herrera-Peco, et al., 2021).

Healthy People 2030 has redefined the term ‘health literacy’ to emphasize people’s ability to use health information and to make well-informed decisions while incorporating a public health perspective and the acknowledgement that organizations were to have a responsibility to address health literacy (Centers for Disease Control and Prevention [CDC], 2022). According to Househ (2013), searching for health information online has become one of the most popular online activities among all internet users. It has been easier and more effective for healthcare institutions to use social media to combat misinformation online as it could be done in a timely manner and cost-effective (Chen & Wang, 2021). Moreover, patients and physicians were able to form forums to share their treatment and experience with diseases, showed support to others, connected with other patients who have suffered from similar illnesses which could care for patients beyond what the individual institution such as hospitals and local clinics could. This practice has been beneficial especially to patients with chronic diseases, cancer, rare diseases, and depression (Househ, 2013).

Around 40% of adults gather their health information from Facebook (Moorhead, et al., 2013), which is a free social networking site, has been available on various devices and can help many organizations advertise their services (Adzharuddin & Ramly, 2015). As most healthcare companies have Facebook pages (Pentescu, et al., 2015), Moorhead et al noticed Facebook and Blogs tied for the most common platform studied. It has been important to be active on these networking platforms as 42% of consumers found health-related reviews of treatments and
physicians by use of social media according to a survey by PricewaterhouseCoopers’ Health Research Institute (Singh, et al., 2016). Facebook and YouTube have been the most widely-used social media platforms across all demographics (Pew Research Center, 2022). Hospitals used Facebook not only to widely disseminate information clear and timely about awards, staff, new practices but they also utilized it for real-time customer service support, patient recruitment and retention as well as raising donations (Richter, Muhlestein, & Wilks, 2014).

Social media has been viewed as an important and cost-effective communication platform to promote health literacy and to keep up with the fast pace of today’s medical progress and technological advancement (Park, Rodgers, & Stemmle, 2013). The Facebook pages may also be used to find promotional services by organizations as well as health awareness content (Adzharuddin & Ramly, 2015). Healthcare information has been constantly changing as new clinical practice guideline recommendations have been updated regularly. Healthcare institutions used social media platforms for customer service, community outreach, patient education, public relations, and crisis communications (Eckler, Worsowicz, & Rayburn, 2010) while others used the opportunities to network with other physicians and get or send referrals (Richter et al., 2014).

Social networks had a powerful influence in making health decisions because it could be used as a means to spread either positive or negative health information (Fernández-Luque & Bau, 2015). A survey of 1,040 young adults reported 80% would share health information on social networks with 90% trusting health information found on social networks (Weaver, et al., 2012). A study showed that attitudes and intentions of adolescents and young adults were more likely to change if social media platforms were integrated within health education interventions (Roberts et al., 2017) which would be beneficial to health campaigns to promote healthier
lifestyle or other health preventions (Eckler, Worsowicz, & Rayburn, 2010). Social media by health care professionals creates an opportunity to share information and market their practices, debate health care policy and practice issues, promote health behaviors, develop professional networking to improve health outcomes and increase awareness to motivate patients, and manage online reputation (Singh, et al., 2016). The purpose of this study was to examine the uses of Facebook in healthcare and how it would impact the healthcare settings.

**METHODOLOGY**

The primary hypothesis was that with the use of social media growing, many providers and patients could improve upon health literacy, increase knowledge, and network through social media platforms as well as communicate between providers and patients on various aspects.

The methodology for this study included qualitative literature review complemented with a semi-structured interview with an expert in social media within the healthcare industry who has worked as the social media manager for a dermatology office and medical aesthetics spa as well as another expert who has worked with social media platforms for various healthcare organizations within the marketing industry (see Appendix: Questions asked in the semi-structured interview). The research was approved by IRB and the informed consents were obtained from the interviewees. The interviews were done face-to-face and were tape recorded and transcribed. Only relevant answers were used to support the information found in the literature review to provide a contextualized and more comprehensive overview of social media utilization in the healthcare industry. The research was developed following a systematic search approach published by Bramer, de Jonge, Rethlefsen, Mast, & Kleijnen (2018) to develop a search strategy, identify the inclusion and exclusion criteria, assess the relevance and validity of the articles, and interpret the data relevant to this study. In order to explore the utilization of
social media in the healthcare settings, it is important to recognize the potentials, opportunities, and/or drawbacks that social media could provide to the healthcare industry. The conceptual framework was developed as a guideline in data categorization in this research (see Figure 1). The literature review was conducted in three stages included: 1) literature identification and collection 2) establishment of inclusion criteria and validation and 3) data interpretation and analysis.

Step 1: Literature Identification and Collection

Electronic databases including EBSCOhost, PubMed, ProQuest, Marshall Summon, and Google Scholar were used to obtain scholarly and peer-reviewed articles. The critical search terms for this research included ‘social media’ OR ‘Facebook’ AND ‘healthcare’ AND ‘health literacy’ OR ‘healthcare information’ AND ‘communication’ OR ‘health knowledge’ OR ‘public health’. Other reputable websites such as the Centers for Disease Control and Prevention (CDC) and Pew Research Center were also used as an information source. The search yielded (N=568) relevant articles and after screening through the abstract to assess the relevance to this research, (N=538) articles were excluded as they did not meet the inclusion criteria. Articles that discussed the utilization of social media with a meaningful purpose in healthcare 30 were included in this research. The additional two (N=2) references from the website were also used. The total of (N=32) references were subject to full-text review and were used in the analysis. (N=20) citations were used in the introduction and (N=1) citation was used in the methodology while only (N=11) references were used in the result section (See Figure 2).

Step 2: Establishment of Inclusion criteria and validation
All journals and articles published before 2010 were excluded from the references in an attempt to stay current in research. The search was limited to the articles and websites published in the English language. M.H. and J.S. conducted the literature search and the sources were validated by A.C. who confirmed that references met the research inclusion criteria.

*Step 3: Data interpretation and analysis*

The data were analyzed and categorized in different sections. The findings were reported in the result section in three subcategories: impact of social media for patients, impact of social media for provider’s, and impact of social media on health literacy.

**RESULTS**

*Impact of Social Media for Patients*

Out of 145 surveys from patients with asthma, Facebook had been one of the most used electronic media with 23.2% showing interest in receiving asthma information through Facebook. With that being said, weekly use of Facebook was associated significantly with interest in receiving information and communicating with a doctor through Facebook (Baptist, et al., 2011). 72% of participants in a questionnaire regarding Facebook use and their psoriasis reported they had searched for disease-related information on Facebook as it helps with coping (Schuster, et al., 2020). One study reported that slightly over half of patients who participated in the study benefited from Facebook by social support and exchanging advice (Antheunis, et al., 2013). Patients are also able to view feedback and ratings on hospitals and health systems before making decisions on where to seek care (Glover, et al., 2015). With Facebook groups as an option for support groups of specific diseases, one study focusing on Facebook groups for
diabetes, two-thirds of posts shared diabetes management strategies, over 13% of posts provided feedback to users like answering questions or providing requested information, almost 29% provided emotional support, and 27% promoted products (Greene, et al., 2011).

Impact of Social Media for Provider’s

Out of the 1503 healthcare practitioners who completed the survey for Pizzuti et al 2020, 85% agreed Facebook could be an effective educational tool within the healthcare industry. 43% of the respondents had already been using Facebook for educational purposes. However, 70% of respondents believed social media use at work could become a distraction (Pizzuti, et al., 2020). A different study reported 88% of hospitals have a Facebook page and having a social media presence benefits the healthcare organization when patients are searching for providers (Glover, et al., 2015). More providers should participate in sharing credible information as 60% of one group of individuals with psoriasis reported unreliable information on Facebook groups (Schuster, et al., 2020). Professionals benefit from the use of social media by communicating with colleagues and marketing their practice. To be specific, LinkedIn was reported by 71% of healthcare professionals in this aspect as well as 51% using Twitter (Antheunis, et al., 2013). Facebook reported more use from hospitals performing better than the national average on 30-day readmissions compared to lower-performing hospitals. With that being said, patient satisfaction on Facebook correlates with hospital quality (Glover, et al., 2015).

Impact of Social Media on Health Literacy

Facebook provided an insight in health behavior of the hard-to-reach population especially in young adults (Smith et al., 2021) who have integrated social media into their daily routines; therefore, utilizing Facebook could reach these population more easily and would have
an important influence on their health behavior (Park et al., 2016). Facebook allowed posting visual and video contents that were tailored to fit the target audience preferences and interest which would enhance communication effectiveness to young people (Park et al., 2016; Smith et al., 2021). When sharing information on Facebook pages, informative posts are more useful for patients compared to advertisement-related posts (Abedin, et al., 2017). A study on health literacy of patients with diabetes mellitus (DM) in China showed that accessibility to the internet was one of the main factors influencing health literacy (Zhao et al., 2021). 73.3 percent of the 1,563 participants stated that they obtained valuable information about their disease on the internet and internet access was a protective factor for health literacy ($P < 0.001$). Another study on adolescent oral health literacy showed that participants who received oral health educational messages on Facebook ($P = 0.02$) and YouTube ($P = 0.005$) had higher health literacy scores using the REALD-30 scores as shown in Table 1 (Tse et al., 2015).

**DISCUSSION**

The aim of this study was to analyze the uses of Facebook in healthcare and its impacts on the healthcare industry. The benefits and challenges were analyzed along with the literature reviews and relative studies. The hypothesis was that the use of social media among providers and patients could improve patients' health literacy, increase knowledge, and networking. The results of the literature review suggested that the use of Facebook in the healthcare setting was beneficial to business as it enabled almost real-time two-way communication between providers, patients, and prospective patients. It also helped patients to achieve better understanding of their disease, treatment, procedures, and products which could lead to higher health literacy. However, the result did not support the hypothesis that utilization of social media in physicians’ networking.
Both social media experts from the semi-structured interviews use Facebook for their healthcare work and agreed their social media platforms are used to communicate with patients while providing education content. Both experts agreed the biggest impact of social media use for their practices were the increase of patients due to social media presence and reputation from ratings/reviews while the biggest impact for patients would be the education content to answer common questions. This improves health literacy for patients as they increase their knowledge on diseases, treatments, procedures, products, and more. Patients are able to use social media to comment on specific posts to ask questions, which increases social media presence when communication goes both ways with patients able to receive answers to their questions. Also, using Facebook Ads is a successful marketing technique to target new patients as many incoming patients write social media as how they found out about the practice.

There were some limitations with the research conducted. Although there were several sources and references available, there were only a limited number of references that could be used in the research due to limited access. Due to the constantly changing nature of social media, articles from 2010 could have already been outdated; as a result, this research required more recent data which was not available to the researchers. Assessing health literacy and obtaining statistical data were challenging as there were very few studies on this topic and most of which were pilot studies which had a smaller sample size.

Implications of the study show that there are various benefits of using Facebook in the healthcare industry. The benefits do not limit to the providers but also extend to the patients and the success of business. Social media has shown its potential as the sources for helpful health information which can lead to informed decision making and improve health literacy among targeted populations. This information could be used in further studies on this topic.
CONCLUSION

In conclusion, social media has been important and a cost-effective communication platform to improve health literacy, promote services, and spread health awareness content. As most healthcare organizations have Facebook pages, 40% of adults gather their health information from Facebook. Patients are able to do self-research to better understand diagnoses, learn about treatments, share experiences, show and receive support from others, and this overall improves health literacy. However, it is important for providers to share medically accurate information to the public as misinformation is posted online. A different study reported 88% of hospitals have a Facebook page and having a social media presence benefits the healthcare organization when patients are searching for providers. Social media by healthcare providers creates an opportunity to share information and market their practices, debate health care policy and practice issues, promote health behaviors, develop professional networking to improve health outcomes and increase awareness to motivate patients, and manage online reputation.
REFERENCES


Weaver, B., Lindsay, B., & Gitelman, B. (2012). Communication technology and social media: opportunities and implications for healthcare systems. *Online journal of issues in nursing, 17*(3),

Table 1: Table showed a data extraction from the literature review of two studies on health literacy among adolescents.

<table>
<thead>
<tr>
<th>Author, Year, Country</th>
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<td>Pre test</td>
<td>Post test</td>
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<td>29.5 ± 3.4</td>
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</tbody>
</table>
Appendix 1

Questions asked in semi-structured interview

1. Do you use social media in your practice? If yes, which platform(s) do you use? Why?
2. How do you use [that/those] social media platform(s) in your practice? Why?
3. Do patients interact with the social media account(s)? If so, in what ways may they participate? Why?
4. How has the use of social media impacted your practice? Why?
5. What are the significant advantages and disadvantages in using social media in your practice? Why?
6. Does using social media give you a sense of connection to your patients? Do you think patients may feel more connected? Why?
7. Do you use social media to network with other providers? How can networking with other providers benefit your practice? Why?
8. How much are you involved in maintaining the social media account of your practice? Why?
9. Who else has access to the social media account? What are their responsibilities in maintaining the account? Why?
10. In your opinion, what is the most beneficial part of social media use within the healthcare industry? Why?
Figure 1: Conceptual framework showed the utilization of social media in healthcare settings adapted from Anshari & Almunawar (2012).
Figure 2: Overview of literature evaluation adapted from Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009)