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ENHANCING COMMUNICATION OF HEALTH INFORMATION TECHNOLOGY AND INNOVATION IN SOUTH EAST NIGERIA

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Abstract

This study explores the patterns and challenges encountered by the media in the communication of health information technology and innovation in South East Nigeria. The research was designed as a descriptive survey with the aim of achieving four distinct objectives. The study encompassed a population of 665 registered journalists in South East Nigeria. To obtain a representative sample, the researchers employed a multi-stage sampling technique, ultimately surveying 230 journalists. Data collection was facilitated through structured questionnaires, and the data was subsequently analyzed using frequency, percentage, mean, and t-test methodologies. Findings indicate low awareness of health information technologies; thus, exposed a significantly low level of awareness among media practitioners regarding available health information technologies in South East Nigeria, highlighting a substantial knowledge gap. The preferred modes of health information dissemination indicate that media practitioners in south east Nigeria favour video, magazines, personal blogs, and organizational websites as their primary means for disseminating health information while challenges in health information communication encompassed a lack of collaboration between health workers and journalists, a scarcity of up-to-date statistics on health information, inadequate medical or health scientific training, limited access to funds, the influence of personal beliefs among journalists, and a lackluster attitude towards work, among others. The recommendations include prioritizing knowledge and understanding of health technologies through active participation in conferences and seminars designed to provide knowledge on best practices for health information technology. Media organizations should allocate sufficient funds to support journalists responsible for covering the health sector.

Keywords: Communication, Health, Information, Innovation, Technology.

Introduction

The contemporary information society is experiencing a profound transformation, driven by technological advancements that are leaving a lasting imprint on health promotion and the overall quality of life. This evolution has seamlessly woven the Internet, Information and

Communication Technology (ICT) into the fabric of healthcare services, extending their advantages not only to health professionals but also to the general public and society at large. In this digital age, technology has given rise to numerous applications, including health portals, electronic health records, telemedicine services, tele-intensive care units, and health information networks. These innovations empower us to identify, diagnose, prevent, monitor, treat diseases, manage our lifestyles, and elevate our well-being. In line with the observations of Nwagwu, Adegunwa, and Soyannwo (2013), Information and Communication Technologies (ICTs) play a pivotal role in facilitating the processing and transmission of information and fostering knowledge exchange among patients, clinicians, and other stakeholders.

The overarching term "Health Information Technology" encompasses the secure exchange of health information among consumers, providers, government agencies, quality assurance bodies, and insurers through computerized systems. These technologies are classified into electronic health records, personal health records, electronic prescribing, privacy and security, as noted by Laal (2013) and Sorkin (2020).In the healthcare sector, a surge of innovations is dedicated to enhancing life expectancy, quality of life, diagnostic and treatment options, and the efficiency and cost-effectiveness of healthcare systems. Information technology has never wielded greater potential to enhance healthcare safety, affordability, and quality. The technology for creating, transmitting, storing, and managing individual health data is evolving rapidly, promising long-term health outcomes accessible without imposing severe financial burdens on individuals (World Health Organization, 2018).

Health communication, as defined by the National Center for Health Statistics (2019), bridges the gap between health and communication, making it an indispensable conduit for enhancing the health of individuals and society at large. Health communication plays a pivotal role in all facets of health promotion, disease prevention, patient-provider interactions, and the development of strategies for individuals to access and utilize health information effectively. It also bolsters adherence to medical prescriptions and personalized treatment plans (Ericsson, 2016). Recognizing the media as a valuable tool for disseminating health information, as emphasized by Kloss (2013), further underscores the significance of effective health communication.

Statement of the Problem

The media plays a pivotal role in shaping public opinion and influencing decision-making processes, with potentially profound consequences for the health of the population. However, there exists a significant issue wherein public health initiatives often struggle to secure substantial media attention. This lack of attention contributes to a broader lack of awareness regarding crucial public health concepts, population health promotion and protection, and effective disease prevention strategies.

Moreover, a notable challenge arises from the limited mutual understanding between media practitioners, medical professionals, and public health authorities. These stakeholders frequently operate with different perspectives, methodologies, and objectives. This lack of mutual understanding and collaboration often leads to the dissemination of inaccurate or incomplete health information and missed opportunities to engage effectively with the public.

The convergence of these challenges underscores the need for a comprehensive study that delves into the effective communication of health information technology and innovation. Addressing these issues is essential to ensure that accurate, relevant, and timely health information reaches the public, ultimately promoting better health outcomes and enhancing the overall well-being of the society.

Objectives of the Study

The study focuses on assessing the awareness, preferences, benefits, and challenges related to communicating health information technologies among media practitioners in the South East region of Nigeria. The specific objectives include:

1. To assess the level of awareness among media practitioners in the South East, Nigeria, regarding available health information technologies.
2. To investigate the preferred mode of disseminating health information among media practitioners in the South East, Nigeria.
3. To determine the perceived benefits of communicating health information technologies in the South East, Nigeria.
4. To identify and analyze the challenges faced by media practitioners when communicating health information technologies in the South East, Nigeria.

Research Questions

The following research questions guided the study:

1. What is the level of awareness among media practitioners of available health information technologies in South East, Nigeria?
2. What are the preferred modes of disseminating health information among media practitioners in South East, Nigeria?
3. What are the perceived benefits of communicating health information technologies in South East, Nigeria?
4. What are the challenges faced by media practitioners when communicating health information technologies in South East, Nigeria?

These objectives provide a clear roadmap for the study and help in gathering comprehensive insights into the current state of health information technology awareness, communication preferences, and the associated benefits and challenges in the South-eastern region of Nigeria.

Literature Review

Conceptualizing Health Information and Its Implications

Health information, encompassing domains such as health information management, health information systems, and health information technology, plays a pivotal role in delivering high-quality healthcare (Sokey, Adjei&Ankrah, 2018). In an era where the demand for accurate, relevant, timely, and unbiased public health information is on the rise, Gupta and Sinha (2010) assert that media outlets have become invaluable channels for disseminating credible health information to the public.

Johnson and Meischke, as cited in Bello and Aghadiuno (2019), highlight two primary sources of health-related information as interpersonal and mass media sources. While the former

includes healthcare professionals, family, friends, and health organizations, the latter comprises television, radio, internet, and print media. Interpersonal sources are preferred for nuanced communication, especially in cases involving complex medical information that necessitates two-way dialogues. On the other hand, mass media outlets have the advantage of reaching a vast audience swiftly and consistently, thus making them instrumental in disseminating health information (Parrott, 2004; Mills & Sullivan in Sokey, Adjei, &Ankrah, 2018).

The Realm of Health Information Technology (HIT)

Health Information Technology (HIT) is an all-encompassing term referring to computer applications that empower medical practitioners in their practice. These applications include electronic prescribing, clinical decision support systems, and computerized input systems for tests and prescriptions (Rouse, 2018). HIT extends its influence beyond individual medical practices, serving as a wide-ranging toolkit for collecting, disseminating, and analyzing health-related data. It contributes to enhancing the overall quality of healthcare while promoting cost savings, increased efficiency, error reduction, and client satisfaction (Rouse, 2018).

HealthIT.gov (2017) defines Health Information Technology as the utilization of computers and computing technologies to collect, store, retrieve, share, and utilize health data for communication and informed decision-making to improve healthcare quality. Examples of HITs are numerous, spanning Electronic Health Records (EHRs), Personal Health Records (PHRs), Electronic Prescribing Software, Master Patient Index (MPI), Patient Portals, Urgent Care Applications, and mechanisms for ensuring privacy and security.

Advancements in Health Information Technologies

Beyond the abovementioned HIT applications, further technological advancements have shaped the landscape of healthcare and health information management. Some notable developments include:

Electronic Lifetime Health Records: These systems aggregate data from diverse sources, including text, voice records, images, and laboratory results, making health information accessible from various locations. This mitigates the duplication of patient records and ensures data availability when and where needed (Anvari, 2007).

Picture Archiving and Communication System (PACS): PACS is instrumental in capturing, storing, and providing seamless access to medical images, such as X-rays, MRI scans, and CT scans, from any location.

Radio Frequency Identification (RFID): Utilizing radio waves and microchips, RFID technology enables wireless tracking of hospital patients and medical equipment, ensuring efficient management and data retrieval.

Computerized Systems for Pharmaceutical Management: These systems effectively track and manage pharmaceuticals and other medical supplies, streamlining inventory management within healthcare facilities.

Benefits of Communicating Health Information Technology

The intersection of health communication and Health Information Technology (HIT) presents numerous benefits with far-reaching implications. These advantages encompass enhanced collaboration among healthcare providers, patient monitoring, health literacy, and the expansion of healthcare provision and utilization. The benefits of HIT are detailed as follows:

Facilitating Collaboration among Healthcare Providers

Traditional health information recorded on paper often remains stagnant on the shelves where it is stored. In contrast, health communication and HIT act as a catalyst for connecting healthcare professionals, streamlining the exchange of vital health information. For instance, in rural healthcare settings, medical practitioners can seek guidance from specialists located elsewhere. Leveraging information technology, patient symptoms, laboratory results, and other relevant data can be transmitted to a specialist, who can then diagnose and coordinate treatment remotely. This system not only enhances patient care but also proves instrumental in saving lives, especially in remote areas (Batra, Ahuja, Sinha, & Gordon, 2012).

Patient Monitoring and E-Compliance

E-compliance, a form of patient monitoring, employs devices to track a patient's adherence to treatment by monitoring it through their fingerprints. This method offers a viable alternative to daily in-person observations of treatment, as is common with Directly Observed Treatment (DOT) for tuberculosis patients. By tracking and monitoring medication adherence through e-compliance, this system mitigates the costs, time, and potential health risks associated with regular patient visits to healthcare facilities. Additionally, it reduces the risk of medication errors. An example is the Auto-Care system, which employs sensors and mobile phones to monitor patients' progress and issues. It can be particularly valuable in tracking the progression and risks associated with conditions like breast cancer (Chigona, et al., 2013).

Health Education, Awareness, and Health Communication

Several health information technologies are dedicated to disseminating timely and accurate information about prevalent health issues. These encompass health-related radio and television jingles, as well as information accessible via mobile phones, including first aid instructions, Medicaid information, and guidance on managing various health conditions. Mobile phone games are employed to educate young individuals about risky behaviours and diseases like HIV/AIDS, harnessing the engagement provided by games to reach this demographic. Moreover, some m-Health programs focus on reducing medical errors by providing accurate information via mobile devices. For instance, Nigeria's National Agency for Food and Drugs Administration and Control (NAFDAC) ensures drug authenticity by enabling consumers to verify the quality of a product through a code on the drug label (Mapesa, 2014).

Improved Healthcare Outcomes and Coordination

Information and Communication Technology (ICT) has revolutionized healthcare systems, enhancing healthcare delivery and improving patient outcomes. It streamlines healthcare processes and offers new opportunities for patient survival. Patients have round-the-clock access to health information, safeguarded by encryption techniques using security codes and passphrases to protect their privacy (Mapesa, 2014).

Effects of Health Information Technology

The impact of health information technology has been studied extensively. It has been observed that HIT can improve care coordination among healthcare team members, enhance provider-patient communication, increase access to health information, and contribute to better adherence to healthy practices, ultimately leading to improved health outcomes (Paget, Salzberg&Scholle, 2014).

Challenges Faced by Media Practitioners in Disseminating Health Information Technology

Disseminating health information technology (HIT) through media practitioners comes with a range of challenges. These challenges encompass both systemic and individual factors that hinder the effective communication of health-related news and information. The obstacles faced by media practitioners in this context include:

Health Officials' Unwillingness to Share Information

One of the primary challenges is the reluctance of health officials to provide health information or engage with journalists. This reluctance may stem from concerns about the potential consequences of disseminating certain information or a lack of understanding of the role of the media in health communication.

Bureaucratic Red Tape

Journalists often face bureaucratic red tape and administrative obstacles when attempting to access relevant health information. This bureaucratic impediment can slow down the reporting process and make it challenging to provide timely and accurate health news.

Meeting Deadlines

Meeting tight deadlines is another substantial challenge faced by media practitioners in the realm of health information. The need to produce news quickly can sometimes compromise the quality and accuracy of the information provided to the public.

Lack of Up-to-Date Statistics

Access to current and accurate statistics is vital for reporting on health issues. Media practitioners frequently encounter difficulties in obtaining the most recent statistics, which can impede their ability to provide timely and relevant health information.

Interpretation Challenges

Statistical interpretation poses a significant hurdle for media practitioners, particularly when dealing with complex health data. Communicating scientific information in a way that is understandable to the public can be a daunting task.

Limited Health Scientific Training

Many media practitioners may lack a background in health or medical sciences. This lack of specialized training can make it challenging to accurately convey complex health information and interpret medical research.

Government Intervention in the Media

In some cases, government intervention in the media presents a substantial challenge. Governments may impose restrictions on the dissemination of certain health-related information or require journalists and media outlets to conceal accurate information. Such censorship can undermine the transparency and accuracy of health reporting.

Social and Cultural Factors

Social and cultural factors also influence the effectiveness of health information dissemination. Individual factors, including age, gender, level of education, and innovativeness, play a role in determining how individuals access and interpret health information. Additionally, cultural practices within a community can influence the reception and impact of health news.

Methodology

This study employed a descriptive survey design to gather information from media practitioners in South East, Nigeria. The primary objective was to assess their awareness of health information technology (HIT), their patterns of HIT communication, and the challenges they encounter in disseminating HIT. The researchers administered questionnaires to collect data from the study participants. The population for this study encompassed all practicing journalists affiliated with various media organizations in the South East region of Nigeria. To identify and access this population, the researchers utilized the Nigerian Union of Journalists (NUJ) membership database, which comprised approximately 665 journalists in South East Nigeria. A multi-stage sampling technique was employed to select the study participants. This method allowed for the systematic inclusion of participants in a structured manner, ensuring representation from various media organizations in the South East.

Summary of Findings

The findings of this study can be summarized as follows:

The level of awareness among media practitioners regarding available health information technologies in South East, Nigeria is relatively low.

Media practitioners in South East, Nigeria prefer video, magazines, personal blogs, and organizational websites as their modes of disseminating health information.

Communicating health information technologies offers numerous benefits, including increased health information awareness in communities, enhanced collaboration among health workers, improved citizens' access to healthcare, streamlined patient record management, increased healthcare delivery efficiency, and heightened awareness of health information quality.

Media practitioners face various challenges when communicating health information technologies, including poor access to the internet, limited collaboration between health workers and journalists, insufficient access to up-to-date health statistics, a lack of medical or health scientific training, inadequate access to funds, personal beliefs of the journalists, and poor work attitudes.

Male and female media practitioners do not significantly differ in their opinions regarding their level of awareness of health information technologies in South East, Nigeria.
Male and female media practitioners hold similar opinions regarding their preferred modes of disseminating health information in South East, Nigeria.

Experienced and less experienced media practitioners do not substantially differ in their opinions regarding the benefits of communicating health information technologies in South East, Nigeria.

Experienced and less experienced media practitioners do not significantly differ in their opinions regarding the challenges hindering the communication of health information technologies in South East, Nigeria.
These findings offer insights into the awareness, communication patterns, and challenges faced by media practitioners when dealing with health information technologies in the South East region of Nigeria.

Discussion of the Findings

Awareness of Available Health Information Technologies

The study's findings indicate that media practitioners in South East, Nigeria have a low level of awareness regarding available health information technologies. This result aligns with previous research that has reported similar low levels of awareness among health practitioners (Sokeiy et al., 2018). It is noteworthy that even health workers, who are expected to have greater expertise in these technologies, exhibit a lack of knowledge about certain aspects of health information technology. This finding underscores the need for enhanced awareness and education among media practitioners and healthcare professionals alike. Additionally, the study revealed that male and female media practitioners did not significantly differ in their level of awareness of health information technologies in South East, Nigeria, suggesting that the awareness gap exists uniformly across gender.

Preferred Modes of Disseminating Health Information

The study found that media practitioners in South East, Nigeria prefer using video, magazines, personal blogs, and organizational websites as their modes of disseminating health information. This preference may stem from the accessibility and popularity of these communication channels among the general public. This differs from other studies that have emphasized traditional print media and interpersonal channels for health information dissemination. The varying preferences highlight the importance of diversifying communication strategies to reach different target audiences effectively.

Benefits of Communicating Health Information Technologies

The study identified several benefits associated with communicating health information technologies. These benefits include increased health information awareness in communities, enhanced collaboration among health workers, improved citizens' access to healthcare, opportunities for effective patient record management, enhanced efficiency in healthcare delivery, and improved quality of health information awareness. These findings align with previous research highlighting the role of health information technology in increasing access to information, promoting shared decision-making, and improving the efficiency of health

systems. Notably, experienced and less experienced media practitioners held similar opinions on the benefits of communicating health information technologies, emphasizing the universal benefits perceived across different levels of experience.

Challenges Faced by Media Practitioners in Communicating Health Information Technologies

The study uncovered several challenges faced by media practitioners when communicating health information technologies. These challenges encompass poor internet access, a lack of collaboration between health workers and journalists, a dearth of up-to-date statistics on health information, a lack of medical or health scientific training, limited access to funds, personal beliefs of journalists, and poor work attitudes. These findings corroborate earlier research, highlighting the difficulties in disseminating health information technology, such as unreliable and inconsistent information, language barriers, high costs, poor connectivity, infrastructure, and the impact of traditional beliefs. Additionally, the study found that experienced and less experienced media practitioners did not differ significantly in their opinions on the challenges hindering the communication of health information technologies, indicating that these challenges are commonly encountered irrespective of experience levels.

Summary

The findings of this study highlight a concerning lack of awareness of health information technology (HIT) among media practitioners in South East, Nigeria. This low awareness is attributed to factors such as poor internet access, limited collaboration between health workers and journalists, a shortage of up-to-date health statistics, inadequate medical or health scientific training, and a scarcity of financial resources, among other challenges. In light of these findings, it is imperative to take proactive measures to enhance the level of awareness of health information and communication technology among media practitioners in South East, Nigeria.

Recommendations

The following recommendations are made based on the study's findings:

Media practitioners should actively engage in continuous professional development by attending conferences, workshops, and seminars focused on enhancing their knowledge of best practices in health information technology. These learning opportunities will empower them to effectively communicate health-related information and technology.

Heads of media organizations should allocate resources and funds to media practitioners responsible for covering health-related topics. Adequate funding will enable these professionals to efficiently communicate health information technology and its implications.

Media practitioners should establish and foster collaborative initiatives with health workers and community leaders. Such partnerships can facilitate the effective dissemination of health information in communities, enhancing public awareness and understanding of health information technology.

Media practitioners should invest in improving their information and communication technology skills. A strong grasp of these technologies will enable them to navigate and

comprehend the operations of various health information technologies, ultimately enhancing their ability to convey accurate and up-to-date information to the public.

Conclusion

In conclusion, the realm of health information and health information technology is vast and continually evolving. These technologies offer numerous benefits to the healthcare industry, including enhanced patient care, efficiency, and security. Therefore, the integration of health communication and information technology offers a multitude of advantages, contributing to more efficient and accessible healthcare and, in turn, better health outcomes for patients. This paves the way for a comprehensive exploration of the implications and utilization of HIT in the South East region of Nigeria, focusing on its potential to enhance public health promotion and patient care. Addressing the awareness gap in health information technology among media practitioners in South East, Nigeria is essential to improve the quality and accuracy of health-related news and information dissemination. By implementing the specified recommendations, media practitioners can play a more influential role in enhancing public understanding and awareness of health information technology, thereby contributing to improved healthcare outcomes in the region.

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