

**SOCIAL MEDIA AS A SOURCE OF HEALTH INFORMATION FOR  
STUDENTS AT THE UNIVERSITY OF NAIROBI, KENYA**

**BY**

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**DECLARATION**

This research project is my original work and has not been presented for a degree in any other University

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This research project has been submitted for examination with my approval as University Supervisor

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**PROF. W. ONYANGO-OUMA**

## **DEDICATION**

I dedicate this work to my children, Michael and Amari who have been a source of inspiration throughout the course of my studies and to my loving mother, Margaret Wanjiku Ngotho, who has been and continues to be a great pillar of support in my academic life.

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## **ABBREVIATIONS AND ACRONYMS**

- AAP - American Academy of Pediatrics
- AIDS – Acquired Immunodeficiency Syndrome
- APP – Application
- CAE -College of Architecture and Engineering
- CAK - Communication Authority of Kenya
- CAVS -College of Agriculture and Veterinary Services
- CBPS -College of Biological and Physical Sciences
- CDC – Centre for Disease Control
- CEES -College of Education and External Studies
- CHS -College of Health Sciences
- CHSS -College of Humanities and Social Sciences
- EFA - Exploratory Factor Analysis
- FHI – Family Health International
- GSA - General Services Administration
- HIV – Human Immunodeficiency Virus
- KMO - Kaiser-Mayer-Olkin
- KSHS- Kenya Shillings
- MOH- Ministry of Health
- MUVEs - Multi-User Virtual Environments
- NACOSTI - National Commission for Science, Technology and Innovation
- STI – Sexually Transmitted Infection
- UGT – Uses and Gratification Theory
- USA – United States of America
- WHO – World Health Organization

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## **ABSTRACT**

This study sought to explore social media as a source of health information for students at the University of Nairobi. The study objectives were: to determine the kind of health information the students searched for on social media, establish the perceived benefits and to identify the challenges faced by the students when using social media to obtain health information. The study sample included students aged between 18-34 years conveniently selected from the main campus. A nurse, a doctor and a student counsellor from the University Health Services were purposively selected as key informants.

Uses and Gratification Theory, Technological determinism and Agency theory were used to explain the relationship between variables. Data was collected using survey questionnaires, FGDs and key informant interviews. Qualitative data was presented as per the emerging themes while quantitative data was analyzed using Statistical Package for Social Sciences and presented in percentages, frequencies and tables.

The study established that many students used social media to obtain health-related information with Facebook and WhatsApp being the most widely used platforms. Students searched for health information on disease symptoms, health problems, insights into patients' experiences and second opinions from fellow users of these platforms. Availability, accessibility, affordability, emotional support and less prejudice from fellow social media users were noted as the benefits of utilizing social media. Privacy issues, unreliability of health information gained and information overload were cited as the significant challenges encountered.

In conclusion, as much as social media is a fast and more modern way for students to access health information, online sources should not replace diagnostically correct medical attention from certified health professionals. It is therefore recommended that advocacy, scholarly input and professional engagement into social media be done to make it a more relevant, credible, verifiable and trustworthy source of health information.



## **CHAPTER ONE**

### **BACKGROUND TO THE STUDY**

#### **1.1 Introduction**

Health is one of the most vital segments in any nation's economy. A state with ineffective health policies and systems is destined to experience poor economic growth. This is because the full production potential of its citizens is hampered when they fall ill or succumb to curable illnesses. Serious health problems continue to be experienced in developing countries despite the important role played by the health sector. These include but not limited to insufficient funding for equipping health centers with up-to-date technologies, ineffective health policies that do not fully cater for both short and long-term health needs and insufficient financial apportionment to the health sector. Generally, the majority of the developing countries' citizens are unable to access proper health care services due to scarcity of clinical experts and the overpriced nature of these essential services, which makes them unaffordable to most citizens, including the youth (Mugo and Nzuki, 2014).

The duration between childhood dependence and adulthood independence is what the United Nations refers to as the youth. This category is made up of persons aged between 15 to 24 years. Going by this definition, UNESCO (2015) states that this age limit has constantly increased due to high joblessness levels and rising costs of establishing an autonomous family unit. These unfavorable factors translate to more extended dependency periods for many young people. Most university students in Kenya fall under the category referred to as the youth. According to various Kenyan laws, an individual's age is significant in determining their rights and responsibilities. As per the Kenyan Constitution, youths are defined as people aged between 18 and 34 years. This definition was adopted for this study (National Council for Law Reporting, 2009; National Council for Law Reporting, 2010).

Today's youth have unmatched access to communication technologies and are exceptional consumers of text messaging, gaming and the internet. Of these, social media is the most popular technology amongst the youth (Paul, 2012:199). Youths are creative in using new technologies thus creating tension for parents, teachers, and health care providers. Similarly, digital media have become a vital source of information and occasionally misinformation about health problems (Donnerstein, 2009). The Centre for Health Promotion (2012:8) conceptualizes the current social media environment setting as a center where many youths frequent searching for information on health and well-being for several hours a day throughout the week.

Lenhart et al. (2010) indicate that the youth realise that they can quickly and anonymously access information about their health concerns online. Excellent health-related materials on various issues of concern to the youth, including sexually transmitted diseases and stress reduction are readily available online. Young people with long-term health conditions can also access interactive websites that enable linkages among people with similar conditions and establish supportive networks (Lenhart et al., 2010).

This generation uses social media extensively to bridge the gap in healthcare provision as they can access a myriad of information on different health topics. Social media relates to web-based interactive communications through computers and any device that builds on Web 2.0 technology, including mobile phones. This technology enables the creation and sharing of material generated by the user (Kaplan and Haenlein, 2010:60). It is a widespread mode of communication and engagement for young people. Social media platforms have features that permit the users to create, share, access and edit content within their virtual communities. Research has found the frequent youth engagement on the various social media platforms to be very beneficial. These benefits include establishing social links, enhancing communication, and acquiring technical skills (Wong et al., 2014: 221; Ito et al., 2008).

All the new social media sites have mobile applications, and this has improved opportunities for the youth to obtain information on health issues affecting them and connect with healthcare providers. However, due to their young age, they are vulnerable



and are bound to encounter inaccuracies during these searches. Regulation is required to ensure the information obtained is from reliable online sources, it is correctly interpreted and to ensure that users are not overwhelmed by the information received (O'Keefe and Council on Communication and Media, 2011).

Social media has transformed communication and also enabled information sharing between individuals. This has transformed every aspect of human life by building and bridging relationships across a social, demographic and geographic landscape (Luo & Smith, 2015). Its capability to connect people and cost-effectiveness makes it most preferred in disseminating information and sharing experiences among the users. Social media entails online technologies, practices, and communities from which organizations and individuals shape opinions, generate material, and share insights, perspectives, and experiences with each other. These platforms include blogs, video sharing, social networks, microblogging, photo sharing, video conferencing, instant messaging, and chats. All these technologies are reflected as Web 2.0, which mainly entails material generated by its users, online creation and relational networking (Magro et al., 2009).

Health communication programs aim to increase knowledge and explain issues related to health in a manner that can be understood to improve the health conditions or situation of the target audience. In achieving this, social media provides opportunities because it is highly used by youth to communicate and maintain relationships while staying connected with friends. In linking social media with health communication, effective communication goes beyond passing information but engaging the audience through interventions that empower individuals to make health decisions like prevention, treatment, raising risk perceptions and ending stigma related to diseases.

Lenhart et al. (2010) state that the youth use online searches to get answers regarding many of their health concerns. His study showed that 31% of young online users access information on health, dieting, or physical fitness from the internet. In comparison, 17% of the users seek information on complex subjects to converse with others, mainly reproductive health and drug use (Lenhart et al., 2010). In line with the above information, this study aimed to explore the perceived benefits and challenges of

obtaining health information through social media by university students who fall in this category of youth using anthropological research methods.

## **1.2 Problem Statement**

During puberty, numerous changes occur to the youth, which may confuse them, especially in third world countries where most parents and guardians refrain from discussing health and sexual issues with their children. On the other hand, while an assortment of scientific publications on topics such as puberty exists, it has occurred that there are very few such publications that perceive the issues from the perspective of young people (Fatusi and Hidin, 2010). Health communication, especially from the government and health services, still depends on the out-of-date vertical communication method characteristic in print media materials such as posters, brochures and commercials, which have little influence on the youth. Therefore, young people get alternative sources to access health information, such as family members or friends, as print media proves ineffective for communicating this information to the youth (Thackeray et al., 2012).

Health has become a significant issue among young people, with reproductive health being one of the most critical issues. This has been promoted by the inequitable distribution of health centers, which further widens the gap in access and affordability of health services. The other limitation to good health care is the lack of enough medical personnel to adequately cater to the whole population's health needs (Moraa, 2016).

Youth-related health issues are disproportionately high in developing countries, and the resources are constrained (Fatusi and Hidin, 2010). In the University of Nairobi, the same case applies where the health facility for the students is just one serving over 30,000 students within the main campus. Attending the health facility depends on the time one is free. This means that most students will be looking for treatment simultaneously, making it hard for some students to be attended to. They will then turn to the readily available source for self-diagnosis, which in this case is social media, the internet and their fellow students.

On the other hand, some university students join the university when they are still in their teenage years. During their stay at the university hostels, they have no parents or guardians to guide them on matters related to health. This makes them use the easily accessible tool to empower themselves. In this century, most of them have access to the internet and smartphones; thus, they will most likely use them to get information before even visiting the clinic.

Therefore, the students are more likely to use social networking sites to seek health-related information to fill the youth-friendly health access gap. However, as young people search for health information online, they may face various challenges as their capacity for self-regulation is limited, increasing their susceptibility to peer pressure. Experimenting and traversing social media puts young people potentially at risk for their health. (Young, 2011; Schein et al., 2011; Lenhart, 2009).

As the students shift their focus to social media to source for health information, they tend to overlook the role of medical professionals, which might predispose them to several challenges like misdiagnosis and information overload. The online sources of information could also lack authenticity as information could be aimed at financial benefits or posted by people who lack proper knowledge on the subject matter. This research, therefore, sought to answer the below study questions:

- i. What health information do university students search for on social media?
- ii. What are the perceived benefits of using this source for health information by these students?
- iii. What challenges do these students face when using this source?

## **1.3 Objective of the Study**

### **1.3.1 Overall Objective**

To explore the use of social media as a source of health information by the students in the University of Nairobi.

### **1.3.2 Specific Objectives**

- i. To determine the health information that the students search for on social media.
- ii. To establish the perceived benefits of social media as a source of health information for the students.
- iii. To identify the challenges faced by the students when using social media to source for health information.

### **1.4 Assumptions of the Study**

- i. The students seek health related information that is hard to discuss with others, including reproductive health and drug use from online sources, including social media.
- ii. There are perceived benefits that act as motivating factors for the students to use social media to source health information.
- iii. Students encounter challenges while using social media to source for health information.

### **1.5 Justification of the Study**

The research results and recommendations will provide insight into and add to existing academic knowledge in public health, social, and communication studies. It will also be of great use to other scholars in the health research field. Institutions of learning can utilize the information obtained from this study as they guide and counsel on health matters. It will also significantly guide the institutions in opening communication with the youth and advise them on the risks and precautionary measures they should take when looking up information online, especially from social media. This study will also guide learning institutions to develop proactive educational programs regarding social media use and health. The study results will also promote health and civic education for university students and the youth at large. Additionally, it will also inform intervention

programmes on health targeting adolescents and youth. The study findings will also provide a platform for policymakers at the national and county governments to utilize its results to reinforce the programmes and health implementation strategies targeting adolescents and youth.

The research has addressed the gap that most organizations and communication experts find in using social media in strategic and health communication, explicitly targeting at-risk groups notably, adolescents and the youth. Thus, the knowledge can be used to develop best practices and guidelines for public health programs and the adoption of social media in everyday communication on health issues among adolescents and youth.

## **1.6 Scope and Limitations of the Study**

During data collection, a few problems were encountered. The main problem was incomplete questionnaires. This was addressed by ensuring that the researcher was present during the filling of the questionnaires to guarantee completeness. The second problem was in choosing participants and unwillingness to participate. This was addressed by going through the class representatives who were able to mobilize their classmates to participate. The researcher also explained the intent and purpose of the research. Getting the key informants also posed a challenge as they had a busy schedule. However, this was addressed by ensuring I went through the gatekeepers who referred and introduced me to them.

Given that the study was restricted to students aged 18-34 years studying at the Main Campus, the generalizability of the study findings is limited. Additionally, the cross-sectional study design means that some of the factors and their relationships may not hold over long periods, given the dynamic nature of technology. Furthermore, being an exploratory study, much of the literature review on the topic relates to other countries, and there is limited information on the topic in the Kenyan context. However, given the global nature of social media, the variables and relationships between them still apply to Kenya and the study also provides a basis for further research in the Kenyan context. The study's mixed research methods and context-based approach ensured that the primary data collection methods addressed factors not covered in the literature review.

## 1.7 Definition of Key Terms

**App/application**– A software program that can be downloaded on a portable device or a computer.

**Content consumption** - Consuming content in the online media platforms (reading, using, accessing).

**Cyberbullying** – It is an harassment that takes place over the internet and can be perpetuated through other technologies like cell phones.

**Google** – A search engine used to search information on the internet from different websites. A term also used casually to mean searching for information online. E.g., I googled‘.

**Health information** - Opinions relating to physical, mental or psychological matters of one’s

**Information overload** - Exposure to or provision of too much information or data. Social media interactivity - Interactive media has an output of the user's input in the communication processes.

**Information sourcing** - Looking for information in the online platforms.

**Like** - An online command used to express delight, endorsement or backing of content (for instance, Facebook’s ‘like’ button).

**Mobile devices** are communications instruments with wireless connections and can be carried or moved around like mobile phones, laptops, or tablets.

**Perceived benefits** – the benefits that one is likely to get or might make them use social media

**Profile** - An internet-based personality developed for a social networking platform.

**Social media influencer** - Established online users with credibility in certain issues and access a larger audience with persuasion power.

**Social media**-A collective word describing the numerous internet platforms that allow users to interact with other users, either by creating socially interactive material participating collaboratively or by intentionally utilizing the materials posted. Examples, WhatsApp, Facebook, Twitter and so on.

**Social networking site** – An online platform that enables individuals to develop profiles for interaction and connection with other users (examples include, Snap chat, Instagram and Facebook).

**Web 2.0** - The new creation of the Internet provides for user creation of material and applications characterized by collaboration and participation, often categorized as social media and user-generated content.

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1 Introduction

This chapter reviewed and discussed existing material on the youth sourcing for health material from social media. The literature gave a general overview of the social media concept, how different categories of people utilize it, and the perceived benefits and challenges that result from using these platforms in matters related to health information. Finally, the section describes the theoretical framework guiding this study.

#### 2.2 Social Media

Since the creation and introduction of social media technology, people, industries, firms, universities, and the health sector have transformed how they conduct their business and convey information (Qualman, 2010). According to Social Media Today (2011), Facebook is the world's most preferred social media platform with more than 1 billion users. Twitter, YouTube, Google+, LinkedIn, Instagram, Flickr, and Pinterest are other social networking sites with a large following. This statistic has led to a tremendous upsurge in the usage of portable devices to access these sites.

Boyd and Ellison (2007:211) pa detailed, elaborate description of social media as:

*"Web-based service permits people to create a public or semi-public profile within a connected system, meet several other people with similar characteristics, view and navigate their list of networks and those made by others within the system."*

Webb (2004), as cited by Cooke and Buckley (2007:280,) described the main features of social media to be presence, sharing, individuality, the establishment of relationships, discussions, and character.

Kaplan and Haenlein (2010: 61) identified six categories of social media tools, including content communities, blogs and microblogs, social networking platforms, collaborative



projects, virtual game worlds, and virtual social worlds. Additional social media tools considered include video blogs (vlogs), blogging platforms, email/messages, picture or photo-sharing. Additionally, webcasts or audio blogs, music-sharing, wall posts or updates, content or application sharing, and instant messaging (IM'ing) (Farmer et al., 2009). Social media vary significantly in their features. Apart from profiles, comments, friends, and direct messaging, some enable users to share photos or videos, while others have blogging and instant messaging capabilities (Boyd and Ellison, 2007:212).

The advent of digital technology has increased exposure to all forms of media over the last few decades. When combined with newspapers and televisions, the substantial collection of digital and electronic broadcasting enables immediate communication, gaming and provides quick access to information. The highly portable devices have also enabled media viewing from different places. This factor has developed a climate where access to the digital world is rapid and potentially constant (Korda & Itani, 2013).

The world wide web has always been a good and open-source of scholarly material on numerous subjects. However, the rapid technological developments are changing the distribution of information online and, subsequently, the distribution and availability of health information. Social media usage depicts one of these informational changes. Presently, most internet users spend a lot of time on these platforms (Pew Internet, 2012). These developments have transformed the Internet into a comparatively more involving form of media than alternative mass media, bringing its users closer together (Chou et al., 2009; Uittenhout, 2012:6).

Wilson and Keelan (2009) indicate that field of health is governed by logic, and individuals would wish to people's views and share their personal experiences. As a result of the massive internet adoption, the public can now readily access more information on well-being and health. The Internet is a vital health information source, particularly in illness, unknown symptoms, or diagnosis (Stretcher, 2011: 36). Andreassen et al. (2007) note that online material is mainly used to reassure users and understand health issues before and after a doctor's visit. Apart from fixed websites, users are shifting to more

involving platforms, also described as new media. Hence transforming the Internet from a fixed source of health information to be more interactive.

The primary sources of support and counselling for the youth on health-related issues are their guardians, friends, and relatives. The Internet has also been identified to play an essential role in providing the youth with health and well-being information. Online sources have been categorized as the most popular and preferred sources for youths to get information on health and well-being after friends. A health information project in the United States established that among the 92% of youths who use the Internet, a significant number (71%) search for health information online. In general, there is an upward change in mobile technology as a health material and management source. In Kenya, 40% of its daily internet participants seek health information (Centre for Health Promotion, 2010; Fox, 2011).

Social media is a widespread communication and engagement method among young people, which permits them to create, share, access, and edit content within their virtual communities and virtual networks. People with shared interests such as friends and classmates get numerous opportunities per day to interact courtesy of social media. Furthermore, they allow users to be the creators and viewers of online materials later discussed and tailored to meet target audience specifications before being shared. Routine participation in various social media forms has been proven by research to be beneficial to the youth as it enriches communication, promotes social connection, and improves technical skills (Wong et al. 2014:223; Ito et al., 2008).

When we think of the term social media platforms, what comes to mind is Facebook and Twitter, which are the more commonly, used mainstream social media sites. But as Sorokina (2015) and Hansen et al. (2011) elaborated, all the networks are intertwined and give the example of Facebook, Twitter, YouTube, Flickr, and personal blogs, Instagram, Snap Chat, and LinkedIn some of the popular used social media networks. Social media generally encompasses web 2.0 technologies that include participating, conversation, societies, and connectedness (Coombs 2012). This form of technology is meant for facilitating dialogue and interactions amongst users. This enables them to develop,

comment, and share information between themselves (Scott 2010). Individuals can access information resources through social media, allowing users to exchange views, experiences, experiences, and perceptions (Marken, 2007). Social media permits users to generate information, distribute and share it with people in distant localities (Qualman, 2009).

Society has become reliant on online services, influencing how people and organizations communicate (Wellman & Haythornthwaite, 2002), especially when seeking and consuming information. Significantly, many people use social media to pay bills, purchase goods, book travel, and interact with friends and family. Social media growth has seen the adoption and establishment of public communication, defined as the delivery of information through the Internet and social media use. The advent of the term Web 2.0 explains more profound the concept of social media. O'Reilly (2005) coined this term to describe technologies in social media, pointing at opportunities it presents to users and users' activeness in a communication process.

Many people have participated in social media ecosystems by using various devices, including computers, mobile phones, or tablets, and in multiple ways such as watching videos, reading a blog, text messaging, listening to a podcast, or publishing a post. Kaplan and Haenlein (2010) relate social media to the technological foundations of Web 2.0. It is essential to review what the founders have explained on social media to understand its features specifically in communication practices. As earlier stated, the term is commonly credited to O'Reilly in a conference in 2004 to refer to the second generation of web-based services characterized by interactivity, openness in participation, and collaboration among users (Macnamara & Zerfass, 2012).

Another pioneer of Web 2.0, Peter Merholz, in his blog Peterme.com refers to Web 2.0 through a philosophical approach relating it to its openness, trust, and authenticity (Merholz, 2005:25). Jenkins (2006) in *Convergence Culture* also emphasizes the participatory nature of Web 2.0. Bucy (2004) also emphasizes its interactive nature, about voice and conversation in Web 2.0. Founders and architects of Web 2.0 notably give common characteristics of social media as being participatory, involving dialogue,

collaboration and co-creativity. This characterizes a two-way communication approach among individuals in a networked environment (Macnamara, 2010). The Internet through Web 2.0 opened up collaborative and widened communication, reaching many audiences. This led to online platforms that make users interact and actively participate in communication processes (Cheung & Lee, 2009).

Although social media differs in functionalities and connectivity from one application to another, they also have commonalities, such as they are all initiated, created, and shared through a network. This makes them appropriate for promoting products and services, enhancing relationships, building personalities, issues, and brands (Mangold & Faulds, 2009). Certain elements that make social media more preferred than traditional media (print, radio, and television) are interactivity, cost-effectiveness, and adaptability (Moorhead et al., 2013). Additionally, Korda & Itani (2013) describe social media to have the ability to reach many audiences and give voice to the voiceless. Citizens have various choices provided by many social media platforms to air their views whenever they like and at any given time, unlike in the traditional media, where editors control what goes to the audiences. In the study context, all the definitions and explanations of social media seem not to give a general universal agreed description of the term social media. This is attributed to this media's rapid rise and changes (Kaplan & Haenlein, 2010).

Safko (2009) describes social media as; an assortment of activities, practices, and behaviours among groups of individuals who meet online to share material, knowledge, and perceptions through conversational media. These media can be described as internet-based applications that enable the creation and easy transmission of material in various forms such as words, images, audio, and videos (p.6). The definition above characterizes social media with the ability to enhance two-way communications. Social media enables user influence over the conversation, whereas impact is fundamental to effective communication (Safko, 2009). The ability to share content in social media is related to discussions (Jones & Fox, 2009), whereby users can influence conversations by participating by responding, asking questions, and extending talks to friends who share similar or have common interests. The process of online communication is described as

two-way communication because one can seek an opinion on specific issues (Frey & Rudlof, 2010). Later, the same content can be retrieved by another person and shared again with another person(s), an approach described as a many-to-many approach (Kaplan & Haieinlen, 2010). In addition, the interactive nature, as emphasized by Schein et al. (2010), gives the media an edge because users create meaning by discussing content posted on social media platforms, creating a collective generated user experience. In summary, social media is described in the following perspectives: the social approach that brings about the connectivity of users with each other; as a medium, meaning that content can be created and consumed in a participative manner; and a technology approach where social media is regarded as the collection of tools that enable interactivity and creation of user-generated content.

Society has become reliant on online services, influencing how people and organizations communicate (Wellman & Haythornthwaite, 2002), especially when seeking and consuming information. Significantly, many people use social media to pay bills, purchase goods, book travel, and interact with friends and family. The growth of social media has seen the adoption and establishment of public communication that is defined as the delivery of information to the people through the use of the Internet through social media. The emergence of the term Web 2.0 explains more profound the concept of social media. O'Reilly (2005) coined this term to describe technologies in social media, pointing at opportunities it presents to users and users' activeness in a communication process.

### **2.3 Social Media and Health Communication**

According to Schein et al. (2011), health organizations presently use social media; health organizations presently use social media as an amplification and broadcasting tool to reinforce messages from traditional media such as print media, radio, and television. It has also been used as a completely new means of interacting and co-creating material with target audiences. Organizations have had to adjust their communication strategies to allow collaboration in content creation and integration of the opinions and feedback of their audiences. Invitation of users to collaborate in content creation, rating, ranking, and commenting on communications is believed to involve the creation of highly legitimate

materials, enhancing trust, and reinforcing the relationships between participants and organizations. Unlike traditional media campaigns, social media creates innovative chances to insert and interpolate public health and wellness information in everyday internet discussions Schein et al. (2011:3).

Some public health communicators use social media to disseminate invaluable health promotion information and tools for self-monitoring via mobile devices. This provision increases the reach of individuals who have no access to computers and allows public health communication into everyday health discussions and happenings. Top public health firms' social media integration depicts a prevalent feeling that these tools are becoming progressively vital in reaching the teenagers and youths who are abandoning traditional transmission technologies. The youths and teenagers form a significant percentage of the public, transforming how health experts interact with the public (Schein et al., 2011:3).

Lapointe et al. (2014) state that technology brings about a new dimension in health care, incorporating social media as an essential tool in creating and broadcasting health information. Patients are transforming from passive users of internet materials to content creators through social media and Web 2.0 tools. As Aral et al. (2013) note, social media has features that provide innovative ways to create, disseminate, engage, and consume health information.

Social media currently provide a platform to discuss health problems outside the clinic environment. Patients and their caregivers use these platforms to interact with others experiencing the same condition and share their experiences and knowledge. They use social media technologies to restructure useful health information they come across for others and create platforms for sharing new information and health discussion (Randeree, 2009; Green and Hope, 2010). Social media provides an environment that allows users to share their experiences, ask questions, and obtain real-time responses for patients living with a particular health condition. Social media platforms facilitate the creation of support groups where patients, caregivers discuss their experiences, seek consolation online, and interact with people in similar situations (Randeree, 2009).

Healthcare providers have also adopted these social media tools for information sharing, holding debates on issues related to health care policies and practices, promoting health behavior, engaging with the public, connecting and educating patients, families, students, and colleagues. Their use has the potential to ensure better health outcomes, establish a professional network, ensure individuals are kept abreast with health discoveries and news, motivate patients, and avail health information to the community (Ventola, 2014). Additionally, studies depict that an increasing number of educational institutions emphasize the importance of familiarizing upcoming health practitioners and other personnel that handle health-related matters on the importance of social media adoption. This is because of the efficient method of broadcasting helpful information to clients and patients. Generally, there is an upward tug amongst health practitioners to employ social media as a method to ensure that health information is appropriately disseminated (Green and Hope, 2010).

Research in media has considered the information a communication process involving exchanging information between the sender and receiver (Weiner, 1948; Shannon & Weaver, 1947; Osgood, 1954). Shannon and Weaver (1947) describe the communication process as beginning from the source, and the information then flows through a selected channel as it reaches the receiver. This model was characterized by linear and non-psychological factors, leaving a gap in creating meaning in the communication process that included the human element where source and receiver are referred to as persons who can make meaning (Osgood, 1954). In the era of social media, individuals play a crucial role in transmitting information and creating sense, as information alone cannot benefit the user.

Additionally, social media has a lot of information where users need to put in the cognitive effort in creating and consuming any particular information presented to them (Ariel & Avidar, 2015). It is considered a hierarchical feature where liking or sharing information requires little cognitive effort than writing lengthy posts. Social media platforms are rich in information that is posted by various sources. Experts in HIV and AIDS can give accurate input, clarify any questions that may arise, and encourage the youth to pass on information by sharing what they have received in their networks.

Nieger et al. (2013) have shown little proof of appropriate social media usage in health communication to engage the audience in a meaningful way, such as in conversations. However, Heldman et al. (2013) have pointed out an insufficient investigation on the role of social media in promoting public health communication. Despite many health organizations such as the United States for Disease Control and Prevention (CDC), World Health Organization (WHO), and others establishing their presence on social media.

Communication is viewed as empowering people by providing them with knowledge and information on health issues and solutions. Nancy (2005) gives an account of communication on HIV/AIDS in Kenya by indicating that the approaches used are not proven to be effective in bringing behavior change as they are one-way. They are making the mere audience receivers of the messages without meaningful engagement and participation to influence their behavioral change. Additionally, Nancy (2005) cites that the advent of new technologies (Internet, email access, and other digital communication platforms) will promote participatory communication that will see wider reach and engagement with audiences through health communication campaigns.

Heldman et al. (2013) point out critical characteristics by CDC on the use of social media that make them the most appropriate channels for public health communication which includes HIV/AIDS communication. For example, the Government can use social media to reach the target and various audiences because of the increase of adoption and use by many people seeking health information. In the United States, 80 percent of adults have reported using online platforms to search for health information in 2012, making social media a potential opportunity for channels preferred by many audiences (Heldman et al., 2013). Secondly, social media also provides new spaces, allowing users to share health information, thus providing avenues to test the messages and increasing exposure to the health messages. They also provide links between the source or agents of statements such as public health organizations and the audience. Heldman et al. (2013) have pointed out the insufficient investigations on the role of social media in promoting public health communication. This is despite many health organizations such as the United States for



Disease Control and Prevention (CDC), World Health Organization (WHO), and others who have established presence on social media.

In addition, the characteristic of listening and feedback collection in real-time through social media bringing the capacity to monitor conversations and social media is proven to support investigations and surveillance both in public health and epidemiology (Kemble et al. 2012). The benefits of listening and feedback can allow sources of health communication to understand the need of their audiences by what the audience says on these platforms, realizing information gaps and addressing them, subsequently making health communication effective and meaningful to the audience. Further, social media engagement promotes building and maintaining trust and enhances credibility through two-way communication, enabling interactivity of the source and the receiver of the message. Lastly, when integrated with the traditional health communication channels and tactics or other mass communication methods, social media can work best because many strategies that have been successful for social media have worked best in traditional health communication and mass media (Korda, 2013).

Listening to social media conversations online opens up opportunities for communication strategists by finding out what people are saying and prioritizing their health communication topics. This generally informs the needs of health information when coming up with communication strategies. However, listening should be done under guidelines and best practices to not intrude on people's privacy (Heldman & Weaver, 2013). Social media enables engagement through involving health communication influencers who drive health topics such as HIV and AIDS and enhance mutual relationships with the target users such as youth and young adults. Influencers use social media conversations while maintaining their persistence in messaging (Heldman & Weaver, 2013). An influencer is credible, persistent in convincing people, and can initiate topics that can be easily picked up in online conversations. Lastly, content can be created and shared by users in social media, presenting an opportunity to encourage other users to participate and share stories and develop messages, including ideas. Users can be requested to submit photos related to particular health campaigns and share personal

experiences as the current United States General Services Administration (GSA) does on [www.challenge.gov](http://www.challenge.gov) (GSA, 2018).

Glacier et al. (2010) describe social media as having four major covert strengths: partnerships, participation, enablement, and timeliness. Therefore, by its nature, social media is viewed as participatory. It allows users to interact with one other and establish networks to socialize, share information and significantly attain collective goals and interests. It gives users space to speak and the capacity to publish and transmit information inexpensively. Health communication has not been an exception in the current information revolution that social media has brought (Kreps, 2011) because public engagement in social media presents many opportunities for health communication. Social media is described as offering a medium to be used by various health stakeholders such as the public, patients, and health professionals to reach vast audiences in social marketing campaigns and empower people through health care communication (Thackeray et al., 2008). It is also described as a powerful tool for collaboration among users and offers a wide range of interactions in online conversations (Moorhead et al., 2013).

## **2.4 Social Media and the youth**

Capturing the attention of the youth and adolescents is one of the most significant challenges in providing health care information to this population. Vital information on health and wellness, disease prevention, and management of health conditions is essential for the youths and adolescents who, without proper guidance, are at significant risk of falling into an abyss of unhealthy behavior as they explore their independence. One of the most critical challenges healthcare providers faces is the creation of interventions that influence young people in ways that challenge them to take responsibility for their actions and think about the consequences of their behaviors (Paul, 2012:199).

Centre for Health Promotion (2012) describes the conceptualization of the current situation of the social media environment setting as a center that many youths visit almost daily and spend several hours on these sites, some searching for information on well-being and health. Despite this, there are limited health professionals and insufficient

accurate health information on these easily visible sites, which is of great concern across the health sector. Youth have remarkably accepted social media as the most popular information-sharing technologies available (Centre for Health Promotion (2012: 8).

The ability of social media to create new connections and exchange experiences is attributed to change in the market communication process, whereas traditional strategies on reaching the market are influenced more by consumers (Cooke & Buckely, 2008; Schein et al., 2010). The emerging social media platforms that aim at reaching the youth and educating them on sexual and reproductive health in Kenya are the Health Channel and Africa Alive Kenya (both on Facebook), which additionally informs and generally reports on health issues and stories. Although they are still new in Kenya, the growth is slow, thus raising the need for investigating and understanding the consumption of health communication on social media. Despite being highly used by youth in other areas apart from health communication, such as entertainment (FHI 360 et al., 2011).

Gyimah-Brempong and Kimenyi (2013) stated that health, employment, and political participation are challenges for youth. According to these scholars, these three issues lie at the heart of Africa's economic development and affect the youth in a significant way. Fatusi and Hidin (2010) explain this phenomenon, noting that the present-day youth generation faces adulthood in a dramatically different world from what the previous generations experienced. The new world for the youth has been fundamentally transformed by external factors such as HIV/AIDS, electronic communication, globalization, increasing urbanization, migration, and economic challenges. These changes in the landscape immensely contribute to physical, financial, psychological, and social transition that defines the lives of adolescents and youth as they grow up (Fatusi and Hidin, 2010).

In Kenya, it is approximated that over 16.4 million people used various social media platforms in 2015 with an internet penetration of 64percent (Ogyvil, 2015). A report on population and internet penetration in Kenya indicates a total number of 16.4 million internet subscriptions. The internet users are 26.1 million; 4.3 million users are on Facebook, while 2.1 million users are on Twitter. This number is expected to rise by the

end of 2018 (Wangari, 2015). The factors that contributed to the increase are the massive investment by mobile operators and internet service providers. Communication Authority of Kenya (CAK) attributes the growth to the rising number of youth using mobile data services on social media platforms, including Facebook and Twitter. This brings about the overdependence on smartphones to catch up on day-to-day happenings while engaging in other online activities such as entertainment, information seeking, chatting, and playing online games. According to research by Consumer Insight, in 2014, 87 percent of Youth in Kenya strictly used the Internet for social media accessed through their mobile phones. This made them spend at least \$250 million (Kshs 2.2 billion) annually to purchase data for accessing various social media sites, notably Facebook and Twitter (Mungai and Omondi, 2014).

A study on health and young people was carried out in South Africa between November and 2015. Primary data were collected through focus group discussions with young people and an online survey of young people. Furthermore, key informant interviews were conducted with individuals involved in developing the various health services documented in the review. The study found that young people in urban and rural areas use their mobile Phones regularly for communicating socially, including seeking information on career advice, entertainment, education, research, and health.

Batane (2013) carried out a study to investigate Internet use by young people in Botswana and investigate how young people used the Internet. The study found out that from the 117 colleges that participated in the research, young people used 75% of their Internet time on communication and entertainment. In another book chapter, Batane (2013) explores the effects of social media in influencing the behavior of young people concerning HIV/AIDS through an online discussion forum. The study's findings indicate a significant change in the conduct of participants relating to HIV/AIDS due to the use of the online forum. The study recommends that more efforts be directed to using various technologies that young people have at their disposal in the fight against HIV/AIDS, as this can be very cheap and effective.

A study conducted in St. Augustine University of Tanzania, Mwanza Campus indicated that though there are many restrictions on social media use in Tanzania, it is gaining popularity among the students, with WhatsApp being the most used media followed by Facebook and Instagram is also catching up. Social Media use among these students is mainly for seeking information on various topics as well as for social interactions (Ndeti et al., 2016).

## **2.5 Perceived Benefits of Using Social Media to Search for Health Information**

Increased interaction via social media has resulted in broad worldwide networks capable of transmitting information rapidly. Social media can therefore be used to enhance patient-doctor interactions, create awareness, boost patient motivation, accurate avail information, timely raise health problems, enable the brainstorming and rephrasing of health questions, involve a more significant community, and eventually yield better results across health systems (George et al., 2013). Social media users can intensify the number of posts engagements and are therefore provided with health information that is more accessible, personalized, and widely distributed. They help generate and make health information more readily available as users create and share medical information. For instance, blogs and micro-blogs provide a platform where people can easily access personalized resources that directly focus on their health conditions (Adams, 2010; Eysenbach, 2013:4).

Social media improves reach to populations with limited access to the health information on traditional media, including youth, ethnic minorities, and lower socio-economic groups. They allow material to be provided in other formats other than in writing and can avail this health information in a manner to suit audiences with disabilities. For instance, they can use audio messages for the visually impaired and videos to supplement or replace text when literacy level is low (Adams, 2010; Lariscy et al., 2010:4).

Most social media platforms enable the exchange of ideas between members, and patients can converse amongst themselves and communicate with health professionals. This allows them to participate in health discussions, share health information, and advise each other on health matters such as treatment and medication options. As such, social media, when used to relay health information, can yield meaningful peer, social, and psychological support for the patients and the general public. Social media allows participants to organize discussions between peers in a manner that traditional websites and traditional health communication approaches cannot support (Eysenbach, 2013; Farmer et al., 2009).

Rapid transformation in the communication landscape has seen health communication employ social media platforms for promoting health (Maibach, 2007). This is attributed to the factors such as the opportunities that social media has in reaching larger audiences, convergence, and the decline in the number of audiences in the traditional media (Crastone & Davies, 2009; Lefebvre, 2007; Maibach, 2007). The convergence of social media channels and enhancing targeted communication has also made social media the most preferred communication medium in commercial communication and health communication (Mangold & Faulds, 2009). As explained earlier, social media platforms present many opportunities, primarily through their intrinsic characteristic to enhance engagement and participation with users in the communication process, with customized and accessible information made available to many and diverse audiences at any given time (Neuhauser & Kreps, 2003). Several authors have pointed out the cost-effectiveness of social media use, reaching many audiences compared to the high cost of traditional media marketing (Frick, 2006; Nuhauser & Kreps, 2003).

## **2.6 Challenges of Sourcing for Health Information from Social Media**

Social media is a preferred means of health information acquisition because of its potential for concealment and anonymity for users who are less likely to engage in face-to-face communication and those that want to avoid stigma (Berg, 2011). However, personal privacy and confidentiality are primary concerns when using social media, especially concerning health. Once a user inputs personal information, uploads an image

or video on the Internet, they lose control of its distribution. Issues of privacy and confidentiality also arise when the user gives out too much information that could pose a public security risk (Das and Sahoo, 2011:2).

According to Henry-Reid et al. (2010), the youth use social media because they can be anonymous; it is easier to disclose personal details in a virtual world, connect at home, and be accessible. However, in social networking, there is a slight difference between public and private life. Furthermore, most youths are not mindful of privacy settings on social media platforms. Most use default settings, making it easy to access identifiable information like full names, location and medical information. Social networking sites pose a significant threat to individual privacy (Das &Sahoo, 2011:2).

Another challenge inherent in social media platforms is the lack of credibility of information sources. Credibility pertains to the believability or validity of the source. Some individuals intentionally post false material out of mischief or to achieve their agendas. It isn't easy to authenticate people posting behind privacy walls, thus increasing anonymity associated with social media or those posting information for personal benefits. Additionally, since social media users have developed unique vocabularies, slang and abbreviations, a need arises to create or adopt a traditional semantic-based methodology to analyze and interpret the content. Thus, the reliability of some of the health-related social media posts is suspect (Larkin, 2014).

The vast amounts of content accessible on these sites and the likelihood for imprecisions in health information shared on social media sites pose significant challenges when authenticating health information (Adams, 2010). Additionally, social media present a large percentage of the challenges characterized by high-volume, high-velocity and high-variety data assets. Social media is a noisy source of material with a lot of garbage (Larkin, 2014; Adams, 2010).

Inaccuracies in health information found on social media pose another challenge. Social media offers both accurate and inaccurate information in almost equal measure. Therefore, while health information can be beneficial, it can also be harmful. Providing information via social media is effective only if the users understand it and use it

responsibly. Trustworthiness of information is essentially linked to the source of information (Berg, 2011). Electronic aggression refers to any form of harassment and bullying that occurs online through emails, chat rooms, instant messaging and websites that include blogs or text messaging. Youth can use electronic media into humiliating, harass, or threaten their peers.

Reliability and quality of the information in social media are also cited in various publications, mainly when health communication content is generated and modified without proper check by the health experts (Moorhead et al., 2013). This leads to potential risk as comments that are not factual, misleading and negative can be picked up by other social media users and restructure a conversation to a different level that is not intended, which will eventually mislead the audiences (Anderson et al., 2013).

Although social media presents many opportunities and benefits for health communication, several challenges include internet connectivity, knowledge, and learning attitudes. For example, data internet penetration in Kenya, as reported in 2015, was below 70 per cent (Wangari, 2015), meaning that the other 30 percent cannot benefit from the interventions that utilize social media for health communication. Also, the cost of equipment such as smartphones is another challenge cited for hindering access to social media platforms (Seybert, 2011).

## **2.7 Social Media and Medical Anthropology**

Medical anthropology is an interdisciplinary subfield of anthropology. A long history of research on environmental health-related issues, especially those about human health within environments of risk, consequences of environmental degradation, and how patterns of development and globalization impact environmental and subsequently human health (Nichter,2018).

Medical anthropology operates as a focal area within anthropology that draws on all five of the discipline's significant subfields: Biological, cultural, and linguistic anthropology, archaeology, and applied or engaged anthropology. Medical anthropologists study health and illness as biosocial states of being in the life worlds of different populations. They are



attentive to links and flows between macro and microenvironments and pay close attention to the distribution. Here we look at (maldistribution) of diseases and resources promoting health. They are invested in several lines of research, of which five are highlighted. The first is the biocultural examination of health and illness across the life course given changing social, material and environmental conditions that affect biological processes. The second is studying how cultural values and social institutions, socio-economic processes, and power relations inform how illness and risk of illness are experienced, represented, and responded to by different groups and (ethno) medical systems. The third is an examination of health care provision and the exclusion of disease surveillance and control as a means of understanding the politics of responsibility locally, nationally and globally. The fourth involves the critical assessment of interventions developed in the name of health and development and the ways they have been implemented, monitored, and evaluated (Foster and Anderson, 2016).

The fifth line of research is attentive to the production of health knowledge, how health problems are framed ( and whom), and how framing problems and groups in particular ways serve as characters for characters about and solving problems in particular ways.

Environmental health is a central concern for medical anthropologists who view this field broadly using several theoretical lenses. One lens is political ecology which focuses on political and economic factors and how they change ecological conditions that affect relationships between humans and other species that cohabit common landscapes, environmental practices and policy, and representation of environments. In terms of scale, medical anthropologists frequently analyze biosocial phenomena on a continuum extending from the local to the global to document how social and economic relations play out in space and time. A medical approach to environmental health begins with how human beings populate and move within and between environments. It considers how their presence affects and is affected by eco-social conditions within these environments and how these conditions are shaped by local, regional and global factors that span religion and cosmology, science and technology, economics and politics. This perspective expands the framing of the environment beyond that of a discrete physical space in which humans

reside to nested and overlapping environments that synergistically affect each other in the context of rapid globalization (Young, & Rees, 2017).

Local communities and economies are increasingly subject to pressures and opportunities associated with emerging global markets, changing consumption patterns, and expanding transportation and communication networks. Local environments are modified, manipulated and affected by regional and global processes such as changing agricultural patterns and practices, industrial development and resource extraction, demographic trends associated with transitions from rural to urban economies, and the movement of goods, humans and microorganisms. The environment is not simply where people live, but where they are positioned given local ties, individual and community identity and emergent global ecological flows and social networks (Singer et al., 2019).

## **2.8 Theoretical Framework**

### **2.8.1 Uses and Gratification Theory**

The Uses and Gratification theory (UGT) is the most popular theory used in media research (Roy, 2009). The theory was based on the assumption that people choose media and material to meet their individual needs or wants (Katz et al., 1974). Through the psychological communication approach, UGT further explains the relationship between an individual's motives for choosing media and social and psychological attributes. The early development of UGT focused on traditional media (Radio, Television, and Newspapers), and other scholars applied it in films and books (Ivan et al., 2014). However, UGT has been used in numerous studies because of the interactive nature of social media (Ruggiero, 2000). According to Kayahara & Wellman (2007), the analysis of social media using UGT identified two gratifications in the media process and content. In the process of gratification, they described performance issues on the online activities on social media platforms. In content gratification, they related these gratifications with attaining the behavior after interacting with the information. In addition, the internet era has made UGT gain significance, which is attributed to the development and adoption of social media.

In this study, the theory explains the cognitive aspect, which entails increasing information and comprehension of whose satisfaction strengthens knowledge and understanding for oneself. Health information-seeking motives are more specific, and they include seeking information about the accuracy of a diagnosis, reasons for recommending a treatment, explanation and knowledge of the illness, adverse effects, options for treatment and lifestyle facts including diet and nutrition as well as prevention and management, problem-solving, information sharing and emotions management (Sen, 2008; Chung and Kim, 2007). According to Scherer (2010), the most discussed motivations tend to be information seeking, entertainment or diversion and interpersonal needs. Therefore, the uses and gratification theory will enable the researcher to comprehend how the youth acquire health information by manipulating social media.

The process by which people choose social media as a source of health information is principally guided by needs to be fulfilled, including privacy, anonymity, social support, and information gathering, among others listed above. Due to the different goals that they want to achieve, the students become active users of social media, which might eventually lead to unintended benefits other than just sourcing for health information. This property is dependent on the motivation, the kind of health information gathered, the pros and cons, leading to the utilization or non-utilization of social media to obtain health information.

University students have internet access and thus a higher likelihood to source health information from the internet. Through social media, they can educate themselves and search for self-sufficient health information. Additionally, they use social media as a communication tool to connect with their peers and provide information to be shared with others. This property is referred to as the communicatory utility. This theory will also help explain the convenience utility giving insights into why a student chooses one social media over the other (Whiting and Williams, 2010).

### **2.8.2 Technological determinism theory**

This theory assumes that a society's technology determines the development of its social structure and cultural values. The item is believed to have originated from Thorstein

Veblen (1857-1929), an American sociologist and economist. Karl Marx, the German philosopher and economist was the first to elaborate on this theory stating that changes, especially in productive technology, are the primary influence on human social relations and organizational structure and that social concerns and cultural practices ultimately revolve around the technological and economic base of a given society. Technological determinism, therefore, seeks to show that technical developments, media, or technology as a whole are the key drivers in history and social change (Brette, 2003).

In this study, this theory has been used to explain why students have moved from the old media to the new media searching for health information. With the advent of the internet and social media platforms, more information is accessible at just a click of a button. Smart gadgets have also been developed over time, and it's evident in how new communication gadgets keep coming up. Everyone wants to have the latest technology as it is more advanced than the previous technology. In essence, the evolution of technology has changed the way the students communicate and interact with each other and the health practitioners in health matters. In my opinion, the hierarchy of the resort has been altered so that the first point of the resort is social media, the internet, then the rest follow.

### **2.8.3 Agency Theory**

Agency theory was launched in economics by Jensen and Meckling in 1976. It has involved integrating different fields and islands, including sociological and organizational integrative approaches (Bowie and Freeman, 2012; Shapiro, 2005). The building block of agency theory is a particular social interaction in a relationship, viewed as a contract under which one person, the principal(s), engages another person (the agent) to perform some service on their behalf, which involves delegating some decision-making authority to the agent (Jensen and Meckling 1976:308). This delegation of duties allows irrational agents to dodge and behave opportunistically at the expense of principals.

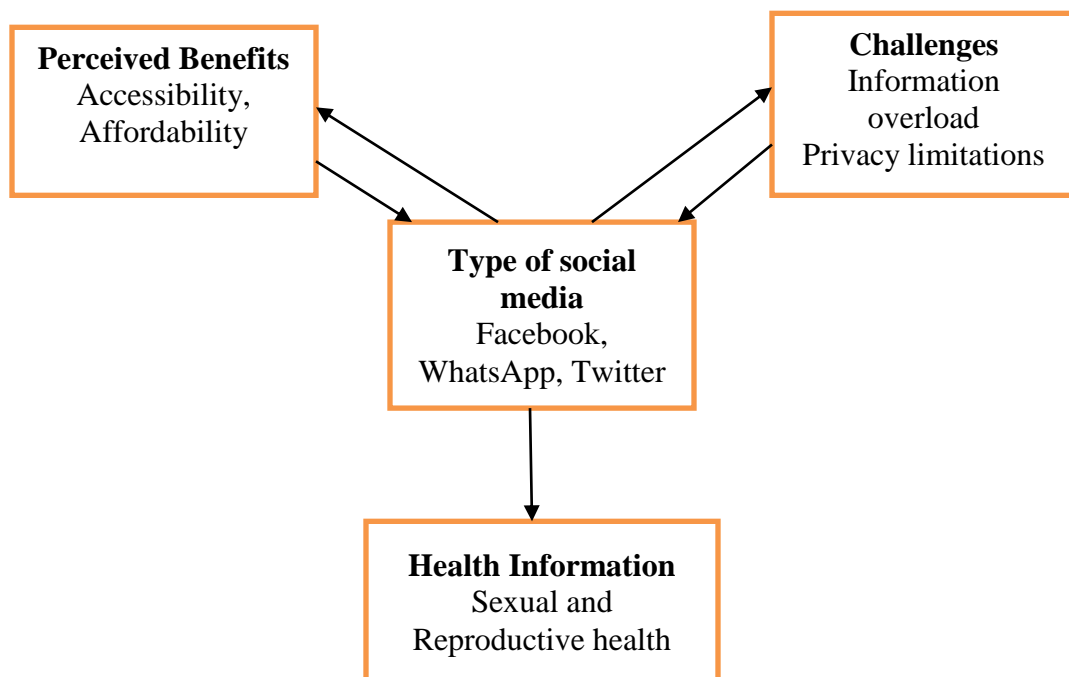
It has made contributions in the social sciences to show how human-machine interaction affects every day social life, including the mental structures of the human agents. As the machines become more complex in their application and behaviour-like properties,

whether they are deemed 'intelligent' or not, they must be considered in everyday life of the human social life. Anker (2015) explains that Forbes-Pitt (2011), in her book Assumption of Agency Theory, states that, it is not what these machines can do that make them influence the social relations, but how their in-built behaviours influence the perceptions held by humans about them.

This theory is relevant in this study because it shows how the students interacting with machines, including smartphones and computers, has influenced their health-seeking behavior. The gadgets used to access social media act as the agents through which health information is disseminated to students. Most health practitioners have also come up with blogs and apps that give health information on their behalf. The social structure has thus been affected due to the advent of technology. One does not need to have a one-on-one physical interaction with a health practitioner to get treatment. On the other hand, the folk sector of the health system has been demoted to second place because the students seek information online before engaging their peers and the people around them.

## 2.9 Conceptual Framework

Figure 2.1: Conceptual Framework: Source: Field Data (2017)



## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

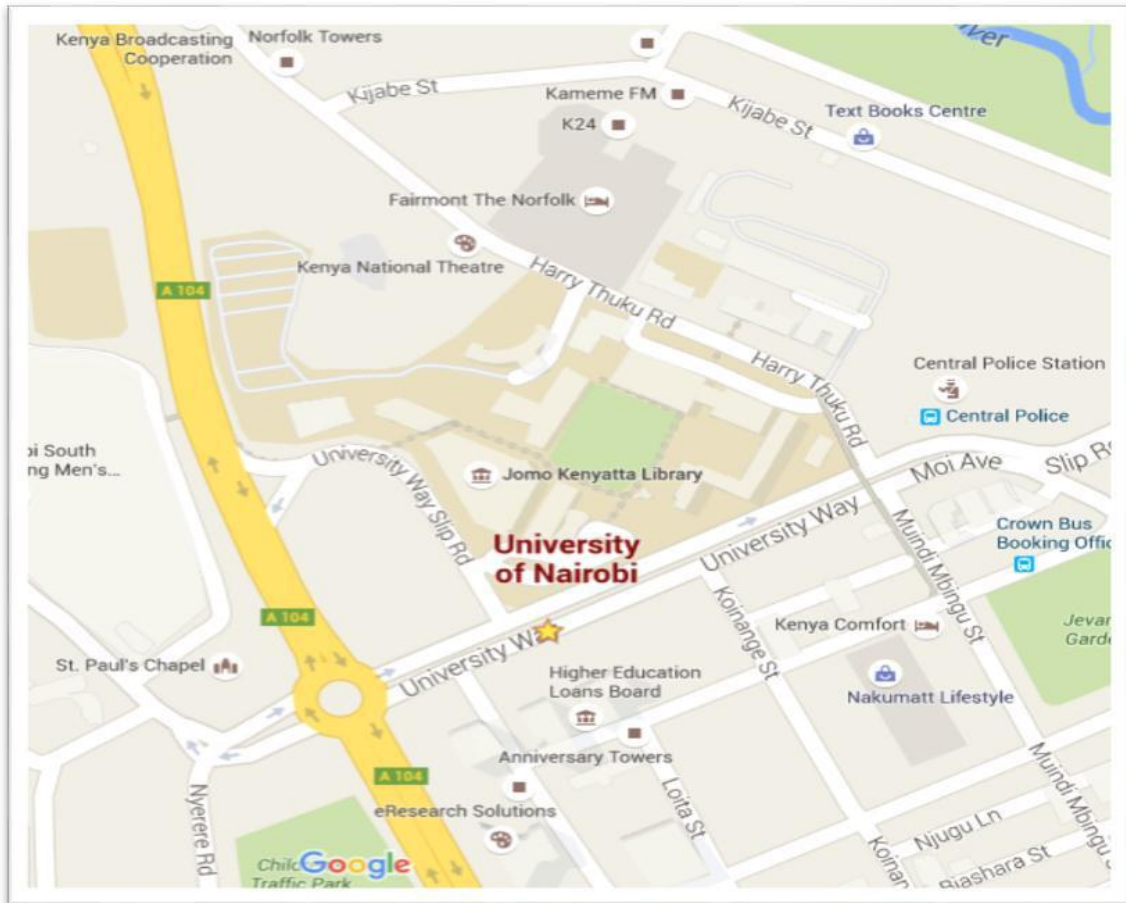
#### **3.1 Introduction**

This chapter details the research site, study design, study population, sample size and sampling procedure, data collection methods, and data analysis. The chapter also discusses the ethical consideration that guided the study.

#### **3.2 Research Site**

This study was conducted at the University of Nairobi's main Campus (Map 3.1). The university is a corporate body established under the Universities Act 2012 of the laws of Kenya and the University of Nairobi Charter. It is the pioneer institution of higher education in Kenya, and it is located in the capital city of the republic, Nairobi City County, along the University Way. It offers certificate, diploma, undergraduate, and post-graduate courses. It has six campuses located within Nairobi City County, namely; the College of Humanities and Social Sciences (CHSS), College of Architecture and Engineering (CAE), College of Biological and Physical Sciences (CBPS), College of Agriculture and Veterinary Services (CAVS), College of Education and External Studies (CEES) and College of Health Sciences (CHS). Some of the landmarks found on the Main Campus include the University of Nairobi towers with state-of-the-art theatre halls and lecture facilities.

Additionally, the historical Jomo Kenyatta Memorial Library complex, restaurants, halls of residence, health facilities, and a mobile clinic, among other amenities that serve the staff and university students in emergency cases. It also hosts the central administration offices of the University of Nairobi. The total undergraduate student population as of May 2016 stood at 53,272 students, and this population is made up of both self-sponsored and government-sponsored students (University of Nairobi, 2016).



**Figure 3.1: A map of the University of Nairobi Main Campus (Source: Google Map, 2018)**

### **3.3 Research Design**

The research used a descriptive cross-sectional design with a mixed-method approach that included quantitative and qualitative methods in data collection. The design was adopted since the data was being collected purely for academic purposes, and thus there was limited time. Data were collected in two stages. The first stage entailed administering questionnaires to the target population. The second stage involved conducting focused group discussions (FGDs) and key informant interviews (KIIs) regarding social media usage for accessing health information.

### 3.4 Study Population and unit of analysis

The study population consisted of undergraduate students from the University of Nairobi aged 18-34 years of age, both male and female, enrolled at the University's Main Campus. The individual student was the unit of analysis.

### 3.5 Sample size and Sampling Procedure

The University of Nairobi has six colleges with a total undergraduate student population, as depicted in Table 3.1 below.

**Table 3.1: University of Nairobi student population (Source: University of Nairobi's website)**

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<b>Colleges at the University of Nairobi</b>	<b>Number of Students</b>
College of Humanities and Social Sciences	27,609
College of Engineering and Architecture	5,488
College of Physical and Biological Sciences	4,789
College of Agriculture and Veterinary Sciences	3,073
College of Education and External Studies	8,882
College of Health Sciences	3,431
<b>Total</b>	<b>53,272</b>

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**Source: Field Data (2021)**



The main campus was purposively selected because it has the highest number of students in one location. It hosts two colleges, the College of Architecture and Engineering and the College of Humanities and Social Sciences, whose total population is 33,097 students. The researcher employed Cronbach's (1971) formulae designed for large populations to determine the sample size, using the formula  $n = \frac{Z^2 \cdot p \cdot q}{d^2}$ . Where;  $n$  = sample size,  $z$  = confidence interval 1.96 for a confidence interval of 95%,  $p$  = estimated population with attributes of interest which if infinite  $p = 0.5$ ,  $q = 1 - p$ , and  $d$  = degree of desired precision (0.05). Therefore, sample size ( $n$ ) =  $(1.96^2) \times 0.5 \times (1 - 0.5) / (0.05)^2 = 385$ .

The sample was distributed proportionally about population size, as shown in Table 3.2. The participants were conveniently selected: an undergraduate student from these two colleges, aged 18-34, who were willing to participate in the study.

**Table 3.2: Sample size for the study (Source: University of Nairobi's website).**

College	Population	Sample size
College of Architecture and Engineering	5,488	66
College of Humanities and Social Sciences	27,609	319
<b>Total</b>	<b>33,097</b>	<b>385</b>

**Source: Field Data (2021)**

## **3.6 Data Collection Methods**

### **3.6.1 Survey**

A questionnaire was used as a data collection tool for this study (Appendix 2). This tool was used as the sample size was large, and it enabled the collection of both qualitative and quantitative data in a relatively short time. Questionnaires were administered to the respondents by the researcher who was on-site to provide any necessary clarity on the tool that was necessary. The questionnaires elicited information on the student's demographics, the different social media platforms used by students, health information obtained from platforms, their motivations to source health information the challenges inherent in using social media. A total of 385 questionnaires were administered to university students. A response of 313 was received, representing 81.30an % confidence level and which was considered adequate for analytical purposes for the study.

### **3.6.2 Focus Group Discussions**

This tool was used to augment the data collected through the survey method to gain in-depth insight on why some social media platforms were preferred, the information that interested them the most, and the challenges they faced. Two homogeneous FGDs made up of females and males 8, and 9 discussants respectively were conducted. A moderator introduced topics for the discussants and actively helped the group participate in a lively and natural discussion. An FGD guide (Appendix 3) was used for this purpose. The following themes were discussed: the health information media preferred by the students, why they use social media to source health information, the type of health information sourced for, and the advantages and challenges of using these platforms for health information. The inclusion and exclusion criteria included students aged 18-34 years and attending classes in the main campus using the convenience sampling method. Those who participated in the survey were not included. Qualitative data was collected using FGDs, where two FGDs sessions were recorded using a digital audio recorder.

### **3.6.3 Key Informant Interviews**

This tool was used to gain insight from more experienced people on their opinions about social media use and how it has influenced the health-seeking behavior of students. Informants were purposively selected based on their expertise and experience in dealing with students, especially health information-seeking behaviors. They included a nurse and doctor from the University Health Services and a student counselor who handles students with health-related problems. An informant interview guide (Appendix 4) was used to collect the data on the opinion of these experts regarding students' usage of these platforms as a health information source.

### **3.6.4 Secondary Data**

Secondary data was used throughout the study. Information was obtained from journals, publications, websites, and reports. Secondary sources helped the researcher in explaining different facts of the study based on previous studies that have been conducted and concluded

### **3.7 Data Processing and Analysis**

A correlation analysis was performed to describe the relationship between the variables, establishing the best fit line. Correlation coefficients indicate the variation of data points from this line. Correlation takes values between -1 and 1. Values of -1 show perfect negative, while those of 1 shows a perfect positive correlation. A value of zero shows no colleration. In practice, it is impossible to have a perfect positive colleration of 1, -1, or zero but values in between. Values close to 1 show strong positive correlations were included: they were flagged by being starred. Techies were used in analyzing the dates. Statistical Packages for Social Sciences (SPSS) version 22 software was used to analyze quantitative data while the qualitative data was mathematically analyzed. Analysis of Variance (ANOVA) was performed to understand whether there was a significant relationship between study variables at a 5% significant level since the p-value <0.05.

### **3.8 Ethical Considerations**

According to Foulkes (2011), any research involving human subjects should be mindful and sensitive on ethical issues. In social media, most online users have adverse reactions to studies conducted about personal online activities (Hudson & Brickman, 2004). They feel that their freedom is being infringed. The study engaged members who actively use social media, and ethical considerations were considered when collecting data. Confidentiality was stated before any commencement of discussions, and consent was sought from all the respondents.

The researcher undertook various measures to protect the respondent's rights. Confidentiality was maintained by ensuring that none of the respondents was named during the research or subsequent reports. No information that the respondents gave was used in any other way apart from the intended research purpose. Voluntary participation was upheld by ensuring that the respondents were chosen and requested to participate without compulsion. The respondents were allowed to make an informed decision about their participation in the research. Therefore, all respondents were educated on the reason and necessity of the research.

Additionally, informed consent was sought from the respondents. Respondents were made aware of their right to withdraw from the research at any point, on their own accord and with no consequences whatsoever. The researcher upheld anonymity by ensuring that no names or identifying information were given, and codes were used to identify the respondents. To ensure data security, the researcher ensured that all recorded data and documents were kept safe. The researcher also obtained a research permit from the National Commission for Science, Technology, and Innovation (NACOSTI).

## CHAPTER FOUR

# TYPES OF HEALTH INFORMATION SOUGHT FROM SOCIAL MEDIA

### 4.1 Introduction

This chapter presents the study's findings on the type of information sought by the students on social media. The chapter also describes the respondents' social and demographic characteristics and the platforms they use. In addition, the chapter also presents findings on the influence of the type of information sought on the degree of social media usage.

### 4.2 Sociodemographic Characteristics of Respondents

All the respondents in the research were aged between 18 to 34 years of age. 51 % of the respondents were between 18 to 24 years old, the majority of the undergraduates. Regarding diRegarding180, male students represented 58% of the total sample population, while 133, represented by 42 %, were female. Finally, 253 participants were from the College of Humanities and Social Sciences which, is more populous, representing 80% of the total sample size. The rest, 60, representing 20%, were from the College of Architecture and Engineering. This data is presented in Table 4.1 below

**Table 4.1: Sociodemographic characteristics of the respondents**

Age	Frequency	Percentage
18-24	159	51
24-30	123	39
31-34	31	10

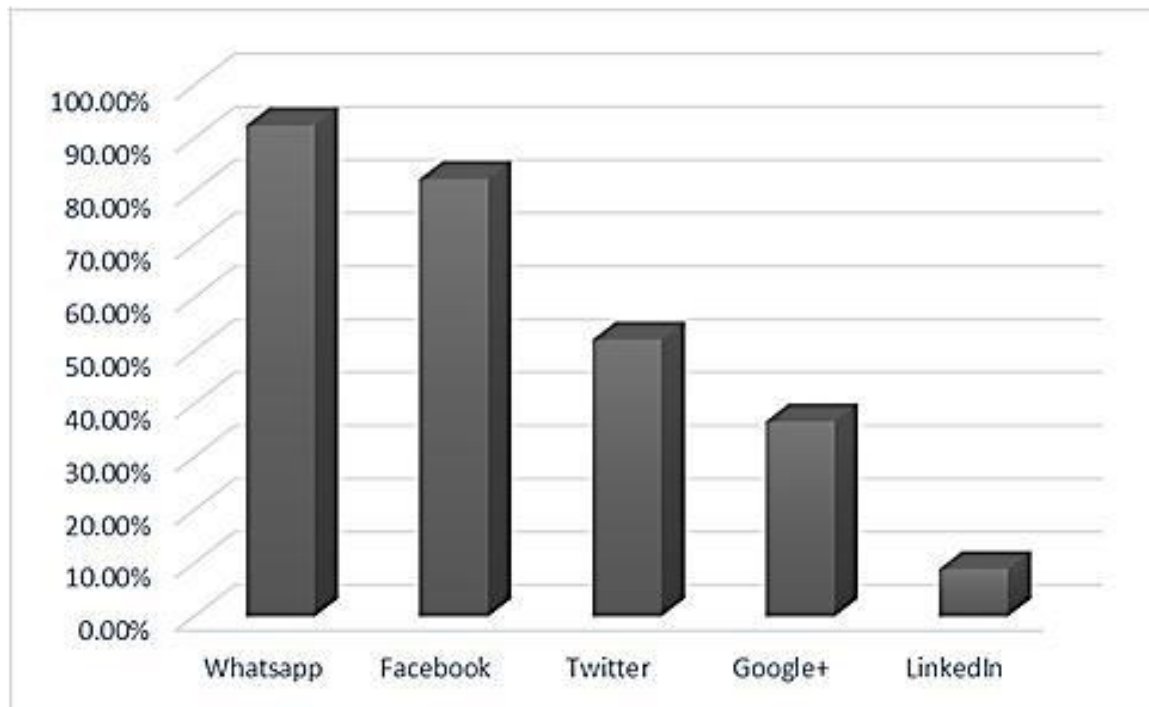
Total	313	100
<b>Gender</b>		
Male	180	58
Female	133	42
Total	313	100
<b>Colleges</b>		
CHSS	253	80
CAE	60	20
Total	313	100

**Source: Field Data (2021)**

### **4.3 Social media membership and usage among the students**

The study's findings indicated that Facebook, WhatsApp and, Twitter were the most popular platforms among the students. Th and this is shown in Figure 4.1 below. Further, the results indicated that Google+ and a professional site, LinkedIn, were also popular among students who source our health information. All the respondents were members of at least one social media platform. However, one emerging issue to note was that the students indicated that they also use the Google search engine to source health information apart from the social media platforms. These findings are in agreement with research conducted by Boyd and Ellison (2007) who, established that young people are

frequently notable users of social media in the creation and maintenance of relationships with individuals from whom they can learn and easily share information, the social media platforms of interest include Google search engine, Facebook, WhatsApp, YouTube, and Twitter.



**Figure 4.1: Social Media Membership**

**Source: Field Data (2021)**

The results from discussions further supported the above findings. Most of the discussants indicated using the Google search engine and social media on numerous occasions for health-related issues. The pattern of seeking information showed that the students first consult the search engine Google where they seek information without involving a third party. After that, the students after that turn to social media sites like Facebook and WhatsApp that allow information sharing. These sites are popular among students, especially when one wants to get a second opinion from peers or get emotional support. As noted by a discussant:

*Whenever I have any health issues, especially really personal ones, I "Google" them even before telling anyone. When I need personal experiences or advice, I switch to WhatsApp or Facebook. (Source: FGD\_01\_Male).*

These sentiments were echoed by respondents who thought they had access to at least social media platforms and sought information from them. This is motivated by the need to widen their scope and make comparisons from different sources, as stated by one of the respondents:

*We seek information from WhatsApp and Facebook groups which we are members but not Twitter, given that it has less allowance for including lengthy information such as symptoms and diagnosis. (Source: FGD\_01\_Male).*

Another respondent stated that:

*Various social media sites have different friends and persons, and at times, one needs to hear from all the platforms they have access to before making a decision. (Source: FGD\_02\_Female)*

Further, a key informant was quoted saying:

*University students are significant users of Facebook and WhatsApp. All members in my group have accounts on WhatsApp and Facebook. Additionally, a considerable number also have other social media accounts Twitter, and Instagram. Most communications are done via WhatsApp and Facebook because they are available, affordable, and effective.*

The final point of the resort is the medical practitioner or experts. This is only done if the need arises or the information obtained is inadequate. The student's however, admitted that even after visiting the health practitioners, they still go back to social media and the internet either to complement or verify what the doctor said if they doubt the doctor's diagnosis. Others said that they would go back online after consulting a doctor to understand the diagnosis and treatment better, get more information about their health issue, or maintain a healthy lifestyle after treatment.



There was a consensus on WhatsApp and Facebook being the most frequented social media platforms for sourcing information on health. This was attributed to the fact that these two platforms are easy to access. Most people on these platforms are well known to the person seeking information, thus providing a friendly environment to share personal health problems.

However, as much as the respondents admitted to using these platforms to source health information, findings on the extent to which they used social media indicated otherwise. The results showed that most respondents did not use social media too extensively while sourcing the information. When probed further on why this was the case, most said that in many instances, they search generally search information on the internet, primarily using the Google search engine, before turning to other people for help. It included seeking professional service from the health practitioners.

These findings were supported by a key informant interviewed, who stated that even though students might be using social media to source information on health, they did not rely entirely on the information found on the internet as the number of students attending the clinic remains relatively constant as it was before the advent of these platforms. As reported by the key informant:

*The only change resulting from the advent of social media and the internet is that the students are more knowledgeable and can ask more questions based on what they have obtained from the internet. (Source: Key informant\_03).*

The findings are as presented in Table 4.2 below.

**Table 4.2: Extent of social media use for health information**

<b>Response</b>	<b>Frequency</b>	<b>Percentage</b>
Very Small Extent	123	39

Small Extent	59	19
Some Extent	103	33
Great Extent	28	9
<b>Total</b>	<b>313</b>	<b>100</b>

**Source: Field Data (2021)**

#### **4.4 Types of health information Sought**

The researcher sought to identify the forms of health information sourced by students from social media. This information was determined and interpreted based on a Five-point Likert scale. The results are presented in the table below

**Table 4.3: Types of health information Sought**

Type of health information	Mean	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Search for symptoms	2.83	28.8%	20.8%	11.5%	16.6%	22.7%
Search for health problems	3.23	15.5%	26.5%	10.5%	15.0%	32.6%
Search for diagnosis	2.61	23.0%	34.8%	12.8%	16.6%	12.8%
Search For patients' experiences	3.36	15.0%	18.8%	6.7%	33.5%	25.9%

Search for the second opinion	3.22	22.4%	12.8%	10.5%	30.4%	24.6%
Search for insurance	2.24	34.5%	38.7%	4.5%	12.8%	9.6%
Search for medication details	2.42	34.2%	25.6%	12.5%	20.8%	7.7%
Search for therapy details	2.3	32.6%	35.5%	11.5%	10.9%	9.9%

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**Source: Field Data (2021)**

Based on the study findings, most of the respondents agreed to see these platforms to search for patients' experiences (mean=3.36), researcher health problems (mean=3.23), and Researcher second opinion (mean=3.22). However, a significant percentage of the respondents disagreed with using social media to search for symptoms (mean=2.83), researcher diagnosis (mean=2.61), Search for medication details (mean=2.42), research or therapy details (mean=2.,3) and search for insurance (mean=2.24). These findings are as discussed below.

#### **4.4.1 Patients' Experiences**

As per the results as illustrated in Table 4.3, most of the study participants, 59.4%, indicated that they searched for patients' experiences from social media. Findings from the focus group discussions corroborated this. This is attributed to the fact that social media platforms are primarily designed for interaction. This enables information generation and sharing, which makes it most convenient for sharing medical issues. In line with this, one respondent said that:

*We try to find out what others went through under similar circumstances, including; the time is taken to heal, any complications arising from the disease, and its treatment process. There are specific groups for people with particular diseases you know, such as cancer or HIV/AIDS. It is common for one to re-post an opinion from one group in another with the caption, "A friend said this,*

*what do you think? ...it is common after, say, visiting the hospital to go online and attempt to discover what the thoughts of others are about what you were told by the doctor, especially when you feel the doctor did not understand you. (Source: FGD\_02\_Female).*

#### **4.4.2 Second Opinion**

According to the research, 55% of the respondents stated that they sought a second opinion from social media. That is, they wanted to get a second diagnosis for whatever health challenge they were going through. A second opinion usually reflects the patient's desire to confirm the first diagnosis or prognosis suggested by the first physician. Since consulting many physicians for the same illness is generally expensive, the students turn to social media. These results agree with Tennant et al. (2015), Khoo (2014), and Pentescu et al. They have established that the internet and particularly social media are health information sources, especially for young adults. The search engine Google and social media platforms, Facebook and WhatsApp, are the most widely used to obtain health information. The majority of them agreed that social media and the internet have generally become a place to seek medical advice. Depending on the needs each one wants to fulfill, they need to seek additional information. Their first stop is the search engine Google where they seek information without involving a third party. However, other sites like Facebook and WhatsApp that allow information sharing are popular among the students, especially when one wants to get a second opinion from peers or get emotional support.

#### **4.4.3 Health Problems**

Further, 47.6% of the respondents said they searched for health problems from social media. This indicates that with the ubiquitous nature of the internet, most people, including students, have access to and are getting accustomed to social media use for their health problem needs. Further, the unregulated nature of these online platforms results in the availability of too much information available. This proliferation results in increasingly more significant numbers of, individuals including students, opting for

online health information sources. This information includes factors that predispose people to different illnesses and how to counter them. When probed, the first respondents stated that they mainly sought information on weight loss, chronic diseases, sexually transmitted infections, reproductive health, and HIV/ AIDS.

#### **4.4.4 Disease Symptoms**

Further findings indicated that 39.3% of the respondents sourced for disease symptoms online. Focus group discussions turned in similar results, with symptoms being one the most sought information on social media. This is because the students usually want to reduce the chances of them having to visit a doctor. This makes the internet and social media the easiest and fastest option as it is easily accessible to them. One discussant had this to say:

*I know of groups where members share sex-related information such as symptoms of sexually transmitted diseases, signs of pregnancy, and reproduction health information. Students seek symptoms of diseases they suspect they might be suffering from or post symptoms that they detect in their bodies, hoping that someone might reveal what they mean or what they indicate. This minimizes the number of times one has to visit the clinic (Source: FGD\_02\_Female).*

#### **4.4.5 Diagnosis, Therapy, and Medication Details**

The other information the respondents sought from social media was a diagnosis, taking up 29.4 % of the respondents, therapy details with 20.8% of respondents, and medication details with 28.5 % of respondents. This information is mainly sought when the health problem is considered not life-threatening in the hope that one will self-diagnose and use over-the-counter drugs. There was an indication that students rarely seek information on medication details and therapy from social media. They believed that medication details and therapy information is sought from medical practitioners.

#### 4.4.6 Hospitals and Health Insurance

Search for information on hospitals and health insurance is not as popular among the students as they attend the clinic, and the university covers their medical expenses. This was represented by 28.2% of respondents seeking information on hospitals and while 22.4 % of respondents searched for general insurance information.

#### 4.5 Influence of type of health information and extent of social media usage

The study sought to establish whether the type of health information searched for affected the degree to which online sources were used, as shown in Table 4.4 below. The analysis of variance showed that the type of information searched affected the extent of using the internet as a health information source. As evident from  $p=0.00<0.05$ . Mainly, searching for symptoms, searching for patient's experiences, searching for healthcare providers and hospitals, and searching for medication details are the type of information that significantly affects the extent of social media use for health information. As per the results, it is clear that a person needs to know symptoms of a disease, patients' experiences, healthcare providers, and hospitals. As well as medication details have a higher likelihood to use online sources than those searching for a diagnosis, therapy details, health problems, and second opinion.

**Table 4.4: Influence of Type of health information sought and extent of Social media use**

	Standardized Coefficients	t	Sig.
Coefficients	Beta		
Constant		4.255	0
I search for symptoms	-0.154	-2.572	0.011

I search for patient's experiences	0.265	4.649	0
I search for healthcare providers and hospitals	-0.187	-2.159	0.032
I search for medication details	0.219	3.389	0.001

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**Source: Field Data (2021)**

There was a similarity of views from the key informants. All three key informants had at least one active social media account. It is evident that they also provide information, to some extent, through these platforms in question-answer format. The health practitioners agreed that convenience and affordability had influenced internet usage. They were also the opinion that the students are using social media to seek sensitive topics that they find embarrassing to discuss with others.

Overall, it is clear that the students have embraced internet search engine Google and social media platforms, especially WhatsApp and Facebook, as health information sources. This has been attributed to affordability, simplicity, and the ability to seek information by anonymous identities. The study established that the type of health information sought influences the source preferred. Disease symptoms, health problems, second opinions, and patients' experiences are the most searched health information forms. On the other hand, details on diagnosis, medication details, therapy details, hospitals, and insurance do not get as much attention from the students.

#### **4.6 Relationship between Age and Extent of Using Social Media for Health Information**

The correlation between age and the extent of social media use as a health information source was positive but not significant. This implies that age does not affect how youth use social media to access health information; as such, there was no statistical significance on social media usage between the different age brackets of the students. The results are shown in Table 4.5 below.

**Table 4.5: Correlations between age and extent of using social media**

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	Age bracket
To what extent do you use social media as a health information source?	0.043

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**Source: Field Data (2021)**

The research concludes that increased internet use, remarkably social media, has changed health behavior among the students. According to health practitioners, an increase in awareness of different health issues has been noted. This is evident in the rise in screening cases in breast and cervical cancer and other global health issues such as diabetes and weight management. In addition, there is an increase in the use of reproductive health-related information. Reported cases of those suffering from sexually transmitted diseases have also increased. This can be due to the use of data to detect symptoms and learn from their peers who suffer from similar conditions through information sharing on social media.



## CHAPTER FIVE

### PERCEIVED BENEFITS AND CHALLENGES EXPERIENCED FROM SOCIAL MEDIA USE

#### 5.1 Introduction

This chapter outlines perceived benefits and limitations experienced by students when sourcing health information. Additionally, the chapter presents a correlation analysis between the health information sought and the perceived benefits and challenges of using online sources, and the influence of their limitations on the extent of internet use while sourcing for health information.

#### 5.2 Perceived benefits of social media as a source of health information

The responses from the data collected in the survey were analyzed and interpreted using a Five-point Likert scale as depicted in table 5.1 below.

**Table 5.1: Perceived benefits of social media as a source of health information**

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Perceived Benefits	Mean	Strongly Disagree			Strongly Agree	
		Disagree	Disagree	Neutral	Agree	Agree
Increased interactions	3.18	19.5%	18.5%	13.4%	22.7%	26.5%
Personalized information	2.9	29.7%	17.3%	12.8%	15.3%	25.6%
Increased access to information	3.61	13.7%	15.7%	7.7%	22.7%	40.6%
Emotional support	3.33	19.8%	15.7%	10.9%	19.8%	34.2%

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**Source: Field Data (2021)**

Based on the study findings, most of the research participants concurred that online health information sources improve the accessibility of information with a mean of 3.61. While participants who believed that social media usage increased interactions and emotional support accumulated to a mean of 3.18 and 3.33, respectively. However, most of the respondents disagreed that social media offers personalized information (mean=2.9). The results are as discussed below.

### **5.2.1 Increased Access to Information**

Increased access to information associated with online sources of health information was sighted by many respondents, as exhibited in table 5.1 with a mean of 3.61. The findings from FGDS further affirmed this assertion. All participants acknowledged the vital role social media has played in their quest to access more information on health issues than before the advent of social media. One discussant had this to say:

*Social media has significantly increased access to information at a relatively cheaper cost. Just a click away, one can access information, and people are willing to share private and sensitive information that sheds more light on several diseases and health complications. Meeting such people would not have happened in real life, and after meeting them, there is a high chance one would not be willing to share such information given it is sensitive and sometimes embarrassing (Source: FGD\_01\_Male).*

Another respondent indicated that:

*To get information from social media, all you need is data bundles or Wi-Fi, and you can access the internet from anywhere with mobile phones (Source: FGD\_02\_Female).*

Studies from different scholars concur with the above findings. According to Solis (2010), various online platforms allow and support content creation, delivery, and consumption of informational material. Other studies concur that the preference of an online platform is user-centered, significantly influenced by the perceived usefulness of

the forum and the different array of information available on each platform (Kaplan & Haenlein, 2010; Moorhead et al., 2013).

### **5.2.2 Emotional Support**

Emotional support came in second as to why students sort the internet in a health information source, with a mean of 3.33. Students seek to widen their scope to get varied information choices compared and seek people with similar experiences. This, by extension, provides social and emotional support. This is because some groups on social media platforms are geared towards bringing people with similar health issues together to support each other emotionally. Emotional support was also cited as a factor by the respondents in the focus groups. One of the respondents noted that:

*Some members offer support by being optimistic about recovery and resuming normalcy.... the knowledge that someone underwent a similar health complication.*

*and was able to recover comforts fully and assures a person facing a similar health complication that they too can overcome. (Source: FGD\_02\_ Female))*

In tandem with the study findings, Al Mamun et al. (2015) established that Facebook provides emotional support to hypertension patients. Flew et al. (2015) also found that the internet offers an array of health information. Some of which are generated by health care practitioners, government health institutions, and agencies. It includes information on how to deal emotionally with an illness and prepare the caretakers psychologically to handle patients under their care.

### **5.2.3 Increased interactions**

The respondents opined that social media provided the responsiveness that one would want regarding health-related issues. This is because social media has a vast audience, with each person having a different opinion. This was inferred from a respondent who said that:

*Posting a query on social media can get more than twenty responses in one day instead of seeking information from one individual ( Source: FGD\_01\_Male).*

Increased interactions when using social media had a significant number of respondents, with a mean of 3.18. This was corroborated by the focus group discussion, where there was increased interaction between persons with related ailments and those with similar interests. A respondent had this to say:

*...members of social media groups discuss health topics such as reproduction, sexually transmitted diseases, breast cancer, cervical cancer, pregnancy, weight-related issues, and health living aspects. Some of these groups are moderated by professionals such as doctors and nutritionists (FGD\_01\_Male).*

The respondents also had similar views on online platforms having members of the same age group; hence, they had a higher likelihood of facing similar challenges and sharing their experiences freely. Another respondent had this to say:

*The WhatsApp groups, such as those of classmates or friends, have members within my age bracket, and so are my Facebook friends and groups. They will be willing to share more information. These group members are less likely to judge you than going to a hospital where you meet an older person... (Source: FGD\_02\_Female).*

This agrees with Osman's (2011) findings which established that the primary purposes of students' social media use were; communication, companionship, and social interaction. This section provides some evidence corroborating the findings of Kirschner and Karpinski (2010) and Hanson et al. (201,1), who argue. They had the current generation of students in America is dependent on social media as their preferred means of communication. It proves why WhatsApp, compared to other social media such as YouTube, Facebook, and Twitter, is a preferred communication tool. Adebayo (2015) and Dhlamini et al. (2015) established that students utilized social media platforms mainly to connect with their colleagues and for academic and research purposes.

## 5.2.4 Personalized Information

Respondents in this category stated that they benefited by getting personalized information from social media. This is in the interest of respondents' knowledge for personal use. When probed further, most noted that the personalized information included health and fitness, dieting and, weight loss. They thought that they wanted their situation individualized on an existential level, and the solution was found without breach of trust or bothering other people. Studies by Aral et al. (2013) also indicated that social media empowers users to recreate the information obtained, enabling team effort, communication, and information generation in entirely new ways. This makes social media users not only consumers but originators also originators of content their needs.

## 5.2.5 Anonymity

The respondents also mentioned that the driver of anonymity opinion thought a pseudo account and accessed the social media platforms without disclosing their real identity. This enables them to access information and express their views without the fear of stigmatization on topics or issues they would otherwise consider too embarrassing. One of the respondents said that:

*One can use fake names to seek sensitive information such as abortion, sexually transmitted diseases, etc. As such, it makes it easier for those with low self-esteem to lack the confidence to ask for such information in person (Source: FGD\_02\_Female)*

The study findings were similar to research by Wakefield et al., 2010 who noted that credible social media has the benefit of preventing, managing, and even treating minor health issues. Particularly, information can help make home remedies for coughs, colds, minor injuries, and even sexual and reproductive health issues. In addition, social media has been instrumental in increasing awareness of current health issues, more especially cancer, reproductive problems, and lifestyle diseases. The university has used social media to campaign effectively against alcohol and drug abuse and encourage HIV testing

and prevention, emphasizing condom usage. This affirms the functionality of social media in providing a credible platform to share and access health information.

### **5.2.6 Affordability**

The study revealed that social media is an affordable means of accessing health information compared to other sources, which mostly charge for consultation. Online sourcing for health information is motivated by easy access, primarily through mobile devices; all you need is an internet connection and smartphone. This is made more accessible because the school has free Wi-Fi and that students have smartphones that can access the internet. In addition, students also prefer to use the internet as it allows access to materials on sensitive topics that they would rather not discuss in person, such as sex-related topics and topics considered too personal or embarrassing. These results agree with a study by Penet al. et al. (2015) who found out that online platforms are affordable sources of information and mostly preferred by many people across the globe.

### **5.3 Relationship between the health information sought and the perceived benefits**

The research sought to establish any relationship between the different forms of health information sought versus the benefits associated with social media use. The correlation analysis shows that online students are likely to benefit from increased access to information and emotional support when sourcing health information. Those who search for symptoms, health problems, diagnosis, and a second opinion are likely to reap the benefits of increased access to information and get emotional support. Similarly, the chances of getting the help of emotional support and access to health information increase when one searches for hospitals, insurance, and therapy details. Those who search for patient experiences are likely to incur benefits of emotional support. In contrast, the search for medication details has a higher probability of incurring benefits of increased access to information. The findings are as shown in table 5.2

**Table 5.2: Correlation between searching for Health information and benefits**

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	Interactions		
	Personalized information	Increased access	Emotional support
Search symptoms		.261**	.138*
Search health problems		.475**	.358**
Search diagnosis			.336**
Search patient's experiences			
Search the second opinion		.397**	0.034
Search hospitals		.271**	.186**
Search insurance		.206**	.174*
Search medication details		.307**	
Search therapy details		.212**	-.188**

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\* Correlation is significant at the 0.05 level (2 tailed).

\*\* Correlation

**Source: Field Data (2021)**

## 5.4 Challenges encountered when using social media for health information

The study findings showed that students faced numerous challenges when sourcing health information from social media. A large number of the respondents, precisely 58.2,% cited lack of reliability as the main challenge experienced. This was followed by a lack of privacy represented by 55.5% of the responses. Inaccurate health information (44.1%), risks of disclosing personal information (31.3,%) and information overload (29.4%) followed. The responses were analyzed and interpreted using the Five-point Likert scale, as exhibited in Table 5.3.

**Table 5.3: Challenges faced when using social media to access health information**

	Least	Small	Neutral	Some	Great
Challenges	Extent	Extent	Extent	Extent	Extent
Lack of privacy	14.2%	16.0%	14.3%	36.7%	18.8%
Lack of reliable information	18.5%	19.5%	3.8%	35.5%	22.7%
Information overload	27.8%	31.6%	11.2%	25.6%	3.8%
Inaccurate health information	14.4%	7.0%	34.5%	18.5%	25.6%
Risks of disclosing information	25.6%	19.1%	24.0%	13.7%	17.6%

**Source: Field Data (2021)**

### 5.4.1 Lack of Privacy

This was cited as significant by 55.5% of the respondents when using the web as a health information source. This is because, unless one has a deeper grasp of the privacy features and how to apply them, their information can be accessed by anyone on social media. According to the study findings, privacy is a real bottleneck and poses sa significant challenge when sourcing health information online. These findings are similar to House



et al. (2014), who established that using social media to gain access to health information succumbs to various challenges, such as confidentiality, security concerns, misinformation, and manipulating identity to post erroneous information. Similarly, Denecke et al. (2015) concluded that this most significant test situation its effective forms used to share health information's confidentiality and privacy. While acknowledging these challenges, other scholars nevertheless posit that these challenges can be mitigated and their effects reduced. This can be mitigated through such mechanisms as changing the privacy settings on one's accounts provided on all social media platforms. For example, an individual's private contact information, geographical position, and relationship status can only be visible to select contacts. One can also use a fake name and share or seek information without disclosing their true identity. Cox-George, (2015) points out that privacy fears can be reduced by changing privacy credentials on social media sites. In addition, regarding reliability and accuracy of information from social media, he further argues that social media sites insist on only quality professionals writing on medical issues. While not by any means easy to implement, such measures would significantly aid in tackling the challenges associated with the usage of social media to access health information.

#### **5.4.2 Lack of Reliable significant Information**

A significant percentage of the participants, 58.2,% cited lack of reliable information most significant retest challenge experienced. This is because it is hard to authenticate content posted on these platforms and the web at large. The information shared could also be inaccurate and misleading. The group discussions reached the same conclusion. One discussant stated that:

*Anyone can open a Facebook page and say they are a doctor, and some people believe and follow their advice...Some social media users share inaccurate information from an unverifiable source, a friend, or an online source. (FGD\_02\_Female).*

Similar to the study findings, McNickle (2012) avers that social media for medical purposes comes with many risks, including patient harm, data breaches, and regulatory

damage to both clinic and patient. Ventola (2014) concurs with McMicken, positing that social media health information is often of quality and consequence. Further, this information may be unreferenced, incomplete, or informal, and the author may have questionable credentials. Ultimately be unaccountable to nobody. This hardly sounds like the death knell for social media as a health information source, but it does present the other side of the argument.

### **5.4.3 Information Overload**

Too much information, or material overload, was significant as a major challenge by 29.4% of the participants. This is a challenge because sometimes different sites will give other information. While seeking a second opinion from fellow social media users, they will offer different opinions based on the nature of their experience, putting the person seeking assistance in a dilemma deciding which information they should adopt. This can lead to misdiagnosis. The focus group discussants also highlighted this particular challenge of information overload. As one discussant stated:

*The internet contains a lot of information about health, including comments, links to websites, blogs, and videos. Once you start looking, you can't seem to stop. If you ask for information, it is given with slightly different versions from tens friends. As such, deciphering and choosing the right and applicable information is a challenge. ...Those who seek it knowledge given information that is too dissimilar. This can be attributed to different persons of the same age and undergoing similar health challenges getting on other diagnoses from their doctors. When they genuinely share the information, the recipient is left to decide which fits their need. (Source: FGD\_01\_Male)*

### **5.4.4 Inaccurate Health Information**

This was cited as a challenge by 44.4% of the respondents. This was attributed to a lack of authenticity and information explosion. When one turns to social media for information, those giving the data are misled by those providing it. Each has a different experience and consequently another point of view. As one respondent mentioned;

*Nowadays, you find that people give varied information depending on their experiences. Each person wants their word to be taken as the gospel truth, and when you ask them for advice, they will make you believe that what they are telling you is correct. Even bloggers will put up information online just to get as many people to read their blogs, and in most cases, the information they provide is not accurate (FGD\_02\_Female)*

Others cited the disclaimers put on pages that provide health information are a bit disturbing. For instance, one respondent had this to say;

*One day I was just curious and decided to check the different types of abortion methods there are. This particular website gave too much information, but then at the end, they tell you that these methods are not proven to be safe, and it does not represent their opinion. I wondered why they should even put it up in the first place (FGD\_02\_Female).*

#### **5.4.5 Disclosing too much information**

Of the respondents, 31.3% the risk of disclosing too much information as one of the challenges they face while accessing health information from social media. This happens when one needs help, especially from support groups or when in need of an expert's advice. This requires some extend of opening up and expressing your needs to stimulate the desired response.

#### **5.4.6 High Cost of Data**

The high cost of data was mentioned by a few discussants who stated that data connectivity and the rest are dependent on the service provider. Unless one has more than one provider, this can significantly affect the students, especially if the network provider is expensive. Additionally, slow connectivity speed was cited as a significant challenge when accessing the internet. A key informant stated that:

*Although social media is good, it comes with high-cost of implications. Additionally, difficulties challenges in network connection and coverage*

*make accessibility of other sites impossible. Power can also be mainly, particularly when one doesn't own a power bank or is out of their workplace (Source: Key Informant).*

However, these claims were disputed by several discussants who felt that there were more than enough avenues to access this information, given that the school has free Wi-Fi. Students can buy data bundles from brokers, commonly called "*bundles mwitu*," purchased at a lower price than buying directly from the service provider.

#### **5.4.7 Distractions**

Another factor mentioned by the respondent, which was not on the questionnaire, as a significant major hindrance was distraction. There is too much activity transpiring on different platforms, and one would easily get carried away or drawn to other things. One of the key informants affirmed this by stating that:

*Sometimes when you are surfing, something interesting just pops up, and distraction sets in quickly, and you find yourself diverting your attention from seeking health information (Source: Key Informant).*

#### **5.5 Relationship between health information search and the challenges.**

The correlation analysis indicates that respondents searching for symptoms are likely to lack privacy and information overload. Additionally, those searching for health problems are less likely to face difficulties of lack of privacy, lack of reliable information, information overload, and getting inaccurate information given the negative relationship.

Furthermore, students using social media to search for opinions are likely to face information inaccuracy and unreliability challenges, risk of disclosing too much information, and lack of privacy. Students searching for medication details are likely to face challenges relating to privacy, reliability, and accuracy of information. Those searching for therapy details are likely to have difficulties regarding confidentiality, the unreliability of information, and information overload. When searching insurance-related

information, students experience is expected to encounter the risk of disclosing too much information. The findings are as depicted in table 5.4.

**Table 5.4: Correlation Between Searching for Information and Challenges Faced**

	Lack of Privacy	Lack of Reliability	Information Overload	Inaccurate Information	Disclosing Personal information
Search symptoms	.162*		.167*		
Search health problems	-.556**	-.396**	-.291**	-.169*	
Search diagnosis		.174*			
Search patient's experiences			0.087		.154*
Search second opinion	.249**	.139*	.204**	.163*	
Search hospitals		.200**	.145*		
Search insurance medication					.146*
Search therapy details	.212**	.283**		.323**	
Search details	.170*	.156*	.225**		-0.044

\* Correlation is significant at the 0.05 level (2-tailed).

\*\* Correlation is significant at the 0.01 level (2-tailed).

**Source: Field Data (2021)**

The analysis of variance showed that  $P=0.123 > 0.05$ , which indicates that the general challenges of seeking health information do not affect the extent of internet use by the

students for health information. Despite the challenges posed by internet use while sourcing health information, social media is still widely used by students.

## **CHAPTER SIX**

### **CONCLUSIONS**

#### **6.1 Introduction**

This chapter gives conclusions based on the study findings in line with each specific objective and provides recommendations on social media usage, policy, and subjects of further research.

#### **6.2 Conclusion**

From the research results, it is evident that social media is an integral part of the day-to-day interactions of all the students who took part in the research. Apart from using social media to connect with friends and family, they have also embraced it as a source where they seek health information from time to time. The accessibility of social media through smartphones owned by the students and the provision of free Wi-Fi by the school further enables this.

The students have embraced internet search engines, Google, and social media sites, especially WhatsApp and Facebook, as sources of health information. This has been attributed to affordability, ease of use and the ability to seek information using fake identities. Information mostly sought is on patients' experiences, second opinions, disease symptoms, and general health problems. On rare occasions, students search for information about the diagnosis, medication details, therapy details, hospitals, and insurance providers. This is attributed to the fact that they prefer to get this information directly from the medical practitioners. Also, while they are within the school, they are provided with medical services from the University Health Services and thus do not require to search for hospitals or insurance providers.

Social media used to source health information is motivated by the fact that it has several benefits. As per the study findings, the students admitted that social media provides them with an array of information that would otherwise be unavailable. It also offers them a

chance to get emotional support from their peers through its capacity to enable people to create and share information. It also provides them with personalized information as one can narrow down their search to the specific information they want. Affordability was also cited as a benefit as they can access social media anywhere, anytime through their mobile devices. Finally, creating fake identities enables them to get information from social media without fearing stigmatization or embarrassment from other social media users.

From a technological point of view, the advancement in technology, cheap smartphones, laptops, and the availability of Wi-Fi and affordable data bundle packages have made social a to-go-to platform for health information. The fact that it can be accessed anytime and anywhere makes it even more palatable. It has become the agent through which the gap between the health practitioners and the students engage.

As noted by the study, social media usage has increased health awareness on cancer, reproductive health, and lifestyle diseases. Consequently, there has been a reduction in minor health challenges reported in the clinic, an increase in the number of cancer screenings, and students seeking information and treatment for sexually transmitted infections (STI). Social media has influenced change in health behavior on students, as echoed by the health practitioners.

On the flip side, however, internet use to seek health information poses several challenges, as established from the study. These include unreliability, privacy concerns, information overload, inaccurate health information, authenticity, and increased risk of disclosing information. The main challenges established in this study were; the lack of privacy and lack of reliability. This is because the information posted on social media includes personal information and sometimes the students are not keen on enabling privacy setting features. Additionally, some health issues are also rather unique and personal. Without proper privacy settings and awareness, personal information would easily be accessible to the non-intended audience. The risk is also increased because a person's connections can share this private information.



There is also a lack of reliable information when someone consciously or unconsciously provides incorrect details or provides information to gain financially. Additionally, since social media is reliant on materials generated by users, most of the sources of this information cannot be verified. Social media provides a wealth of information, including uploads and links to other sources which are updated frequently and available in real-time. This presents a challenge of information overload. There is also a challenge of disclosing too much personal information where sensitive health details are given primarily to seek emotional or social support. Despite the challenges noted above, social media's interactive and dialogic properties make it appropriate for strategic health communication hence supporting the consumption of information that would promote specific behavior for health promotion. The study however noted that the challenges encountered did not affect the degree of social media usage as a health information source.

The study results prove that social media is used similarly when messages are dumped with little or no feedback considerations. Available information is dissimilar to what the students have been exposed to in the school curriculum and the old media. As a result, these platforms can be utilized for health promotion communication among the students who frequent varied social media platforms searching for health information.

The university has adopted social media communication, especially on campaigns against alcohol and drug abuse and encouraging cancer screening and HIV testing. This affirms the role of the internet in providing health material. Increased internet access, mainly social media, has transformed health behavior among the students and by extension, the general population. This is similar to the findings of Wakefield et al. (2010), who noted that mass media and the internet have significantly changed the health behavior of users who use them as health information sources. Users have more information hence empowered to make informed health decisions.

It has been noted that there has been consumption of accurate and inaccurate information in varying degrees. As per the research results, it is common for those seeking medical assistance to compare a practitioner's diagnosis with data obtained from the Internet. This

affects confidence in what the practitioner recommends. Eysenbach (2017) decries the alleged negative and harmful material found online and on social media. He points out that this can lead to patients being misinformed, which may, in turn, result in distress, self-diagnosis, and self-treatment, with disastrous consequences. Bouche (2008) concurs, averring that in terms of garnering health information, the world wide web and social media should only be used to supplement health services rather than as a replacement.

### **6.3 Recommendations**

As per the results of the research, the below recommendations can be made

1. The study recommends the application of specific appropriateness of different social media platforms by the health practitioners to enhance content creation and consumption because students use various platforms with specific preference to a particular message format.
2. Health practitioners also need to quickly change tactics that suit the audience's needs and establish the information that social media audiences are looking for. Targeting communication when the audiences are active in the social media provides real-time feedback and listening to online conversations to understand whether health messages are received as intended.
3. Policymakers, healthcare service providers and stakeholders should seek to promote health through this emerging media. Healthcare institutions should provide online health resources, including social media moderated by professionals targeted at the youth
4. Through social media, those responsible for health promotion should ensure the information is reliable, accurate, concise, and updated. This will help address the challenge of inaccuracy and information overload.
5. Social media is an excellent tool to be used by students to access health-related information, understand health conditions, and obtain social and emotional support.

However, this should not be at the expense of seeking medical attention from health professionals and practitioners.

6. Further, students should seek to use credible and verifiable sources that offer reliable information. In this regard, the youth and general population should be educated on correct and accurate ways of sourcing health information from social media platforms. This includes the notification of trustworthy sources such as renowned health institutions to guarantee professional health advice.

7. The government should provide a friendly environment for internet-based health promotion initiatives through the relevant arms, especially those targeting the youth. This can be done through strengthening legislation frameworks, guidelines, and policies that manages the way health information is provided through social media. Government bodies with qualified staff should be established and accorded sufficient ongoing training on the provision and regulation of access and the distribution of health material through social media. Efforts towards achieving effective health communication among the youth should consider the needs of the audience and the demands that come with social media use when delivering messages.

#### **6.4 Suggestions for further research**

1. More research should be conducted to understand social audiences' information-seeking patterns to attract and retain the audiences. This will help organizations and individuals dealing with health communication develop strategies to achieve successful and effective communication about behavior change. The maintaining of audience on social media will also build loyalty, and audiences can benefit from credible information from the message source.

2. The study also recommends research to establish the relationship between information seeking on social media and attitude, risk perceptions for behavioural change, communications and interventions that could effectively promote health behaviour after the users have consumed such information.

3. Further research should establish how the government can initiate and support a framework that increases sharing and provision of health information through social media focusing on university students (and the youth by extension).

4. Finally, further studies should be conducted on the behaviour and specific reasons or motivations as to why the youth turn to social media for health information and how these insights can inform the healthcare delivery for the students. Furthermore, how these insights can be used to improve service delivery to students

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## APPENDICES

### Appendix I: Informed Consent

Greetings. My name is Joyce Njeri Ngotho, a Master of Arts student in Medical Anthropology from Nairobi. I am currently carrying out a study on youths, investigating the factors influencing them to use social media to source health information.

This study targets the youth aged 18-34 years. You are one of the people chosen to participate in the study, and you are humbly requested to join in this survey. You are going to answer questions, some of which are rather personal. Still, you are only required to participate voluntarily, and you have a right to withdraw or choose not to answer questions that you are uncomfortable answering.

The information you will provide will be kept confidential. No identifying information like names or phone numbers will appear anywhere, and any information provided will be kept safe once the relevant information has been collected. This study will not provide you with any direct benefits. Still, the information you provide will be beneficial for this study and produce relevant information that might improve the quality of health information obtained from social media.

Do you have any questions for me?

I have read the above information, and I agree to participate voluntarily in this study. I understand that I have a right to withdraw from the study anytime with no consequences whatsoever.

Sign.....

Date.....



## Appendix II: Questionnaire

# SOCIAL MEDIA AS A SOURCE OF HEALTH INFORMATION FOR THE YOUTH OF THE UNIVERSITY OF NAIROBI

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I am researching for my MA (Medical Anthropology) at the University of Nairobi. Kindly participate in this research by filling this questionnaire based on the straightforward instructions provided. This research is purely academic and will be treated with the utmost confidentiality.

**INSTRUCTIONS:** Please answer all the questions honestly and exhaustively by indicating with a tick (√) or (x) in the appropriate box that closely matches your view or writing in the spaces provided where necessary.

**NOTE:** Use a scale of 1 to 5 where 1 is to disagree strongly, 2 disagree, 3 neutral, 4 agree, and 5 is strongly agree

**Section A: General Information** (please indicate with an x or √ where applicable to show your response

1. Please indicate your gender.

Male

Female

2. What is your age bracket?

18-24 yrs.

24-30 yrs.

31-34  
yrs.

3. Which college are you in College of Humanities and Social Sciences (CHSS)

College of Architecture and Engineering (CAE)

4. Which of your social media account(s) do you use frequently? Select all that apply.

Social Media Site	
Facebook	
Twitter	
Google+	
WhatsApp	
LinkedIn	
You Tube	
Others (Specify)	

5. To what extent do you use social media as a health information source?

Great Extent	Some extent	Small extent	Minimal extent

**Section B: Type of health information searched from social media**

6. Please rate your agreement with the following statements; (Select all that apply) When searching for health information on social media, I mostly search for ....

*Scale 1 – 5 where: 5 is too agree strongly and one strongly disagrees.*

	5	4	3	2	1
Symptoms					
Health problems					

Diagnosis					
Patients experiences					
Seek second opinion					
Healthcare providers and hospitals					
Healthcare insurance					
Medication details					
Therapy details					
Others (please specify)					

**Section C: Challenges of sourcing for health information from social media**

7. To what extent do you encounter the following challenges when sourcing health information from social media?

*Scale 1 – 5 where: 5 is to a great extent agree and 1 is the minor extent*

<b>Challenges</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
Lack of personal privacy					
Lack of reliability/credibility of information source					
Information overload					
Inaccurate health information					
Unaware risks of disclosing personal information					

8. Please indicate other challenges you encounter when sourcing for health information from social media

- I.....
- ...
- ii.....
- ...
- iii.....
- ...
- iv.....

**Section D: Benefits of sourcing for health information from social media** (Please

indicate with an x or √ to show your response)

9. Please indicate your agreement with the following statement. When using social media to search for health information, I benefit from (select one that applies).

*Scale 1 – 5 where: 5 is too strongly agree and one is strongly disagreed*

	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
Increased Interactions (with peers, professionals, patients, etc.)					
Increased Availability of Personalized/Tailored Information					
Increased Access to Health Information					
Peer/Social/Emotional Support					

10. Apart from the benefits in 11 above in order of significance, please indicate other benefits you get when searching for health information from social media.

- I.....

ii.....

iii.....

iv.....

**THANK YOU FOR YOUR VALUABLE CONTRIBUTION**

## **Appendix III: Focus Group Discussion Guide**

### **Themes**

1. Preferred online sources of health information for the youth
2. Drivers for the child to use social media to search for health information
3. Type of information explored by the child the social media
4. Benefits (Perceived and actual) of searching for health-related information from the social media
5. Challenges of using social media as a source of health information

## **Appendix IV: Key Informant Interview Guide**

1. Do you know what social media is?
  - Are you on social media?
  - Do you provide health information on social media?
  - In your opinion, should students be looking for health information from social media? Why?
2. In your opinion, what drives the students to look for health-related information from social media?
3. How has the proliferation of the Internet and social media in particular changed health behavior?
  - Knowledge on health issues among the students
  - The number of cases reported daily
4. What could be the perceived benefits of using social media to source health information from social media?
  - Is the information found on social media beneficial to the students?
5. In your professional opinion, what challenges and risks do the students face when sourcing health information from social media?
6. Does the University use social media in any way in addressing health-related issues?
7. What could be done to ensure social media is beneficial in providing health information to the students

**THANK YOU FOR YOUR VALUABLE CONTRIBUTION**