



**THE UNIVERSITY OF ZAMBIA**

**SCHOOL OF EDUCATION**

**DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE**

**COURSE:** Research in Development Information Systems (LIS 40I4).

**RESEARCH TOPIC:** Health Literacy Among University of Zambia Students: Case Study of full-time students (registered).

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## DECLARATION

Hereby, Kazembe Mutale, Nkhata Dorothy and Makobo Mary, declare that this report is a result of our own information obtained from the field research at the University of Zambia among students. Therefore, any other students pursuing a degree at the University of Zambia or any other University have by no means presented it. All the published work or materials from other sources that have been integrated have been precisely acknowledged and referenced therein.

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## ABSTRACT

In recent years, the size of information about health and diseases is increasing every passing day with the increasing use of technologies which facilitate access to information. However, health literacy plays a big role in selecting and using existing information in a correct way. It is a known fact that health information, messages and news affect health behaviors of individuals. Health literacy is widely considered as a key determinant of health and a priority in the public health agenda. Health literacy is a key element in the move towards people-centered health systems. When individuals are educated and empowered to act on health information, they can make informed decisions about the care that they or others they care for, receive. Therefore, this study is designed to find out health literacy levels of students at the University of Zambia, particularly among full-time (registered) students. Areas of focus of the study were to find out the health seeking behaviours of full-time (registered) students, their ability to access and their ability to use this information. Data will be collected from 100 randomly sampled or selected full-time (registered) in their first second, third and fourth year for 2018/2019 academic year. A self-administered questionnaire will be used to collect this data and give an opportunity to the students to express their views on health literacy. The results showed that most of the students at the University of Zambia are health literate. This is evident from the data obtained in the field, which indicated that the students have the ability to evaluate, interpret, understand and use health information for various purposes in their social and health lives to make sound and confident health decisions. Furthermore, the results showed that students evaluated health information in order to follow instructions, to know relevant health information, and to timely and accurately access health information. Finally, the study recommended that the central administration at the University of Zambia should collaborate with Library and information science faculty to work towards making University authorities to see the reason to integrate the course 'Health literacy' into the school curriculum.

**Key words:** Literacy, Information, Health, Health literacy, Health information.

## **ACKNOWLEDGEMENTS**

For assistance in the execution of this report, the authors are grateful to many people. First, and foremost, we wish to thank in a special way Mr. Mbewe our supervisor, who provided cordial guidance and encouragement to complete this study.

Alternatively, we also hope to thank the Bursaries Committee for according us with project allowance (finances) that helped us to make our research work a success.

Similarly, we abide to thank students in second, third and fourth year for their enthusiasm in providing the necessary information, we are humbled.

Finally, yet importantly, we thank all our families and friends for supporting us in many ways up to the completion of this study. Most of all, we prominently thank the almighty God for his goodness and kindness. To him we are greatly indebte

## **LIST OF ABBREVIATIONS AND ACRONYMS**

UNZA\_\_\_\_\_ The University of Zambia

HISB\_\_\_\_\_ Health Information Seeking Behaviour

HIV\_\_\_\_\_ Human immune virus

AIDS\_\_\_\_\_ Acquired Immune Deficiency syndrome

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# **CHAPTER ONE**

## **1.0 INTRODUCTION**

### **1.1 OVERVIEW**

This chapter presents the introduction, background of the study, statement of the problem, purpose of study, objectives of the study, research questions, and significance of the study as well as scope of the study and definition of key terms.

### **1.2 INTRODUCTION**

The ability of literacy is the leading ability in terms of making people active in social life and live their lives meaningfully. When it comes to health, this ability becomes extra important. On the other hand, control power of individuals decreases against health and disease circumstances and development of coping skills against these circumstances could make a contribution to the solution of problems (Aslantekin & Yumrutaş, 2014; Altin, Finke, Kautz-Freimuth, & Stock, 2014). Health seeking and compliance with treatments require patients to understand and apply health information. Health literacy is the ability to obtain, process, and understand health information to make informed decisions about health care (National Institute of Health, 2012). Health literacy relates to the possession of knowledge about health. It is a skill-based processes that individual use to identify and transform information into knowledge. This communication process inherently involves decoding a symbol system such as medical terms, prescription, spoken language or visual elements and placing that information into a useful context. Patients with low health and general literacy skills may have poorer health, higher expenses for health care, a higher rate of hospitalizations, lower self-efficacy for preventive care practices and compliance to treatment regimens.

Health information literacy problems have grown as clinicians and health care system providers expect patients to assume more responsibility for their care at a time when the health system is progressively more fragmented, specialized, complex and technologically sophisticated. The complexity of reading health information and the shortage of health information in languages other

than English make it difficult for individuals with low general literacy skills and language differences to understand effectively in health care information (Zagaria, 2006). A majority of printed health education materials, regardless of their topic, require relatively high literacy skills that may not exist among many of their target population (Gal and Prigat, 2005).

In the health care sector, particularly the Zambia, where printed information is frequently provided, this may lead to extreme frustration on the part of the patient. People with speech, language, visual, hearing and intellectual disabilities experience even greater challenges when they need to apply high-level health information literacy skills (Hester and Stevens-Ratchford, 2009). The perspective of people towards health information literacy varies across different healthcare services. A person who functions adequately at home or work may have marginal or inadequate literacy in healthcare information. With the move towards a more "consumer-centric" health care system as part of an overall effort to improve the quality of health care and to reduce health care costs, individuals need to take an even more active role in health care related decisions. To accomplish this, this paper hereby looks at the essential roles play of librarians on healthcare information literacy.

Literacy is the ability to identify, understand, interpret, create, communicate and compute using printed and written materials associated with varying contexts (UNESCO, 2017). Information literacy is the set of skills needed to find, retrieve, analyze, and use information. The twenty-first century has been named the information era, owing to the explosion of information and the information sources. One cannot achieve the study target without practicing special information literacy skills. In other words, information literacy skills empower the people with the critical skills which will help them to become independent long-life learners. These skills will enable people to apply their knowledge from the familiar environment to the unfamiliar.

Due to information explosion it has become increasingly clear that students cannot learn everything they need to know in their field of study, within a few years, at school or the university. Information literacy equips them with the critical skills necessary to become independent lifelong learners. As the American Library Association Presidential Committee on Information Literacy (1989) explains. "Ultimately, information literate people are those who have learned how to learn. They know how to learn because they know how knowledge is organized, how to find information and how to use information in such a way that others can learn from them. They are people

prepared for long-life learning, because they can always find the information needed for any task or decision at hand.

Health is defined as the complete physical, spiritual and social well-being and merely the absence of diseases. It follows that health education should go beyond considerations of disease but also take in its wake economic and social factors that influence health. Health education refers to those processes of empowering communities with information so that they are enabled to take correct actions towards the attainment of healthier lives. It comprises, consciously constructed opportunities for learning involving some form of communication designed to improve healthy literacy, improving knowledge and developing life skills which are conducive to individual and community health (Enwald, 2013).

Health literacy is defined as the degree to which individuals have the capacity to obtain process and understand basic health information and services. (Neimela and Enwald, 2016). Health literacy is both an input and output from the interactions with health systems and the context they are embedded in. That is an individual's ability to interpret health information will depend not only on their personal skills and societal conditions (access to education and training or cultural aspects) but also on how easy health information is presented. Health information literacy comprises a set of abilities and skills needed to recognize health information need, search and evaluate health information from multiple sources and use this information to make appropriate health decisions (Hirvonen, 2015).

Health literacy is widely considered as a key determinant of health and a priority in the public health agenda. Health literacy is a key element in the move towards people-centered health systems. When individuals are educated and empowered to act on health information, they can make informed decisions about the care that they or others they care for, receive. It also helps people take greater responsibility over their own health. For example, a patient who feels empowered can easily tell a doctor that medical instructions are not clear. She may also easily engage in preventive measures, as she has the information and knowledge on for instance what a healthy life style behavior entails (Huotori and Emelia, 2012).

### **1.3 BACK GROUND OF THE STUDY**

The University of Zambia (UNZA) is the oldest and the largest university in Zambia (University of Zambia, 1984). The University is comprised of the following schools: Agriculture sciences, Education, Engineering, Humanities and social sciences, Law, Medicine, Mines, Natural Sciences, Graduate school of Business and Veterinary Medicine. The mission of the University of Zambia is Service and Excellence that has been guided by the development of the University since its inception to be responsive to the real needs of the country and it is an institution, which merits respect and recognition throughout the academic world (Kelly, 1999).

The university has a library who duty is to provide the core business of the university through availing their services to the user community; the library is committed to supporting the teaching, research and outreach efforts of the university and to serving the community through its collection, preservation efforts and access to information in all of its various formats. Being students at university of Zambia who are expected to be more health literate since they are educated.

### **1.4 STATEMENT OF THE PROBLEM**

Health literacy is intrinsically connected to the literacy skills of a person. The lack of capacity to read and interpret information linked to the ability to understand all types of information including health. The association between low literacy and health related outcomes is demonstrated in several studies (Berkman at al., 2011) low literacy skills make individuals less responsible to health education, less likely to use disease prevention services or successfully change chronic conditions. People with lower health literacy may experience difficulties in understanding which health setting to use when they become ill or which preventive measures to engage in (Vandenbosch et al., 2016).

Health literacy is growing more and more complex. As a result, they often place increased demands on individual who need to access health services. Health literacy depends on the interactions of a number of stake holders. As such setting up national strategies can promote system level change. The establishment of health literacy specific strategies to promote smoother and stronger cooperation between stakeholders can allow the development of well-tailored roadmaps with

concrete and defined objectives (Grifoni and Messi, 2012). Strategies play an important role in either enabling or hampering health literacy development.

Health information literacy must be argued for both the health worker and the consumers of health care in order for it to be meaningful to the national and university development agenda. Information helps the health worker in the prevention and treatment of disease whilst the consumer is assisted in recognition and seeking care at the earliest possible time. Health professionals can contribute to patient health literacy by applying better communication skills (Medical library association, 2003).

## **1.5 GENERAL OBJECTIVE**

To investigate the importance of health information among students at the University of Zambia.

### **1.5.1 SPECIFIC OBJECTIVES**

1.1.1 Describe the level of literacy among students on health information.

1.1.2 To evaluate the knowledge of where to seek health information and services among students at the University of Zambia?

1.1.3 To establish the importance of health information literacy among students?

## **1.6 RESEARCH QUESTIONS**

1.1.4 Do you know where to seek health service and information?

1.1.5 What factors affects access to and utilization of health information among students at the University of Zambia?

1.1.6 What is the importance of health information literacy among students at the University of Zambia?

## **1.7 SIGNIFICANCE OF THE STUDY**

General literacy is an important determinant of health, however the concept of health literacy has been developed because it recognized that people need more than general literacy skills in order to manage some of the complex health and health system issues faced by consumers today. General literacy skills are linked to health literacy, but a high general literacy does not directly correlate

with a high health literacy. Both low general literacy and low health literacy are associated with vulnerability and can engender inequity in health care, and low literacy is also associated with the extent to which consumers are engaged with the healthcare system and their own care and management. In health education and health promotion perspective, to understand the concept of health literacy among students that how they navigating with the health care system, to know their abilities to find good health information and use of information for the prevalence of preventable diseases.

Health literacy is widely considered as a key determinant of health and a priority in the public health agenda. Health literacy is a key element in the move towards people-centered health systems. Health literacy generates knowledge and skills which enable a person to navigate three domains of the health continuum: being ill or as a patient in the healthcare setting, as a person at risk of disease in the disease prevention system, and as a citizen in relation to the health promotion efforts in the community, the work place, the educational system, the political arena and the market place. Improving public knowledge and skills is considered a sustainable solution for health and health care. Dissemination of information and knowledge facilitate shifting responsibility and accountability towards public.

Therefore, the information brought out in this study would be useful by both the University Administration and country at large especially Ministry of Health, Education, and other concerned stakeholders interested in addressing problems of health literacy among students, the adverse effects of low health literacy with minimum effort and less expense. The research would be the source of reference for other researchers who intend to study health literacy among university students.

## **1.8 SCOPE**

This study will be conducted on the full time students at the University of Zambia main campus which is located within Lusaka town in Lusaka district of Lusaka province of Zambia.

## **1.9 DEFINITION OF KEY TERMS**

Literacy is the ability to identify, understand, interpret, create, communicate and compute using printed and written materials associated with varying contexts (UNESCO, 2017)

Health literacy is the cognitive and social skills which determines the motivation and ability of individuals to gain access to, understand and use information in ways which promote and maintain good health (WHO, 2007)

Health information is the data related to a person's medical history including symptoms, diagnoses, processes and outcomes (Bruce, 2003).

## **CHAPTER TWO**

### **2.0 LITERATURE REVIEW**

#### **2.1 Overview**

This chapter presents the literature reviewed for the study. The aim of conducting a literature review is to get background information related to the topic under discussion and gain knowledge on how researchers conducted similar studies in the past. Therefore, the literature reviewed is guided by the following themes, health information seeking behavior of students, student's ability to access and use health information literacy and importance of health information literacy among students.

#### **2.1.1 SEEKING HEALTH SERVICE AND INFORMATION**

Health information seeking relates to the ways in which an individual obtains information about health, illness, health promotion activities and risks to health (Lambert & Loiselle, 2007). Research attending to the concept of health information seeking first emerged in the late 1980s (for example, Lenz, 1984; Miller, 1987), however during the mid-1990s research attention escalated exponentially as a result of various forces of change. These forces included: the arrival of the information age and its resulting increase in potential information availability; a growing focus on self-monitoring and self-care in the context of consumer health; and a revival of interest in health promotion and illness or disease prevention activities. Within the overarching research domain of health information behaviour, studies devoted to investigating health information seeking have overwhelmingly received the majority of attention.

In a review of scientific literature from 1982 to 2006, Lambert and Loiselle (2007) examined the concept of health information seeking in order to determine its maturity and essential characteristics. They observed that health information seeking is a concept with multiple understandings and without a universally dominant definition. However, despite variation in how authors have defined this behaviour there is consensus that it involves the use of particular strategies or actions that individuals draw on to pursue or acquire health information. These understandings concur with Wilson's overarching definition of information seeking as "the variety



of methods people employ to discover and gain access to information resources”. Similarly information seeking is also regarded as a purposive behaviour, and an activity that is based upon the need to satisfy a particular goal (Wilson, 2000).

HealthCare seeking is defined in its broadest terms as relating to health care access, service use, and the way in which people respond to their perceived ill health (Ahmed, Adams, Chowdhury, & Bhuiya, 2000). The health seeking behaviour of a community determines how health services are used and in turn the health outcomes of populations. Identifying several determinants of health care seeking behaviour in developing and developed countries, such as the type and severity of symptoms, the course of illness, sick role, perception regarding cause of illness, age, sex, education and economic status, social cost, social networking and lay referral mechanisms, availability

A key determinant for health seeking behaviour is the organization of the health care system. In many health systems, particularly in developing countries such as Uganda, illiteracy, and poverty, under funding of the health sector, inadequate water and poor sanitation facilities have a big impact on health indicators. In addition, cost of services, limited knowledge on illness and wellbeing, and cultural prescriptions are a barrier to the provision of health services. These challenges, which are significant in Uganda’s health system, affect the health seeking practices of communities. Individuals’ HL depends not only on personal characteristics but also on health system attributes. For instance, a patient’s capacity to understand medical instructions will be enhanced by the person’s ability to interpret and ask questions when in doubt, and health professional’s capacity to adjust their communication style to the patients’ needs.

Socio-demographic characteristics may influence healthcare seeking such as gender, literacy, education, regular income and age, as well as access-related concerns. HL is thus characterized as a two-way relationship, with the possibility to optimize the quality of interaction between individuals and health systems. Health care consumers of the 21st century are looking to take more control of their health. While individuals have always had, to some extent, to look after their own – or others they care for - health, this is becoming more critical as life expectancies continue to increase and the burden of chronic diseases is expected to rise. Limited consultation times, medical jargon, and the general complexity of health services, make it hard for patients to access, discern and interpret health information in clinical settings. Health information outside of health care

settings is expanding quickly, offering to offset some of these barriers. In the advent of technology development, apps and websites for instance, are disseminating health information rapidly.

The range of products is wide with health apps monitoring physical activity or supporting self-management in the case of chronic diseases, and websites providing information on diagnosis, symptoms and potential treatment for specific diseases. When health information is wrong or misused it can compromise health outcomes. One can take for example the case of medication adherence. When medical instructions are not clear or individuals are excluded from health decisions, these may reject treatment decisions or lack the motivation to follow therapy. Estimations show poor medication adherence – which can be driven by numerous factors, including patients' health literacy can contribute to nearly 200 000 premature deaths in Europe annually (Kahn and Socha-Dietrich, 2018). Another important example of the latter comes from the insurgence of anti-vaccination movements. Vaccines have proven to be an important and effective preventative measure against infections and diseases.

In clinical settings, good patient-provider communication, adequate information, education and skills are important for patient safety (Slawormiski, Auraaen and Klazinga, 2017) and patient satisfaction. A study conducted in Japan shows patient HL to be positively associated with experience in primary health care settings, supporting patient-doctor interaction and understanding of the service provided (Aoki and Inoue, 2017) People with higher levels of health literacy tend to be more engaged in self-care practices. HL can strengthen individuals' capacities to understand long-term disease, which require continued management and capacity to learn about treatment, risks and self-care (Poureslami, 2016).

In the United States, the Indian Health Service for American Indians and Alaska Natives has an electronic health record that documents patients' level of education and comprehension, barriers to learning and enables setting personal behavioural health goals to support wellness. In Austria, the Electronic Health file (ELGA) is being revamped to provide an enlarged portal to patients that will enable easy and safe access to related health data on a permanent basis. While personalized patient records hold potential for patient empowerment in health, one challenge remains: ensuring patients use these tools. Behavioural studies show that preferences and decisions are sensitive to how information is presented. In United States, an experiment aimed to identify a low-cost and scalable solution to encourage patients to enroll and use their online patient portal and support

their health literacy. The Office of National Coordinator for Health Information Technology, the White House Social and Behavioural Science Team and a local health system revised the online patient portal instructions section of the printed After Visit Summary (AVS).

HL is also determined by individuals' and patients' self-confidence and motivation to act on health information. One area in which this becomes particularly relevant is in promoting good mental health and preventing mental illness. One in two people experience a mental illness in their lifetime, with as many as 80% of those with a common mental disorder not seeking or receiving treatment (OECD, 2012).

### **Levels of Health Literacy**

Health literacy gives individuals an opportunity to manage health and health-related procedures actively. The person who is health literate should have the knowledge and ability to adapt him/herself to health life style and to make healthy choices. In this regard, health literacy is classified in different ways. In one of those classifications, health literacy consists of Operational Suitability, Interactive Suitability, Autonomy Suitability, Informational Suitability, Content Suitability and Cultural Suitability (Ugurlu, 2011). In another classification, according to behavioural features of individuals who display their cognitive and social skills, health literacy is considered on three (2014).

Basic/Functional Health Literacy is based on basic reading and writing skills, and those who have those skills can read educational materials about health risks and use of medical services. In other words, basic literacy is to have competency on reading, writing, speaking, and counting. This type of literacy branches into scientific information literacy, citizen literacy, cultural literacy. Scientific information literacy is to possess the skill related to science and technology containing awareness for several situations happened in scientific process. It is about knowing basic scientific concepts, having the ability of realizing complicated methods, understanding the technology. Citizen literacy is based on awareness for social issues, having abilities of getting involved in critical approach and decision-making process. Cultural literacy stands for the ability to realize and use collective beliefs, traditions, worldview and social identity in order to interpret and implement health information.

Communicative Health Literacy stands for having more literacy, social skills and cognitive gains. Individuals develop positive health behaviours by taking part in health activities and could implement the information they have for changing health conditions.

Critical Health Literacy requires having advanced cognitive gains, social skills and critical thinking skills. Individual could critically evaluate health information through these skills, improve personal and social capacity, behave according to social and economical determinants of health, understand political and economical aspects of health and interpret them (Nutbeam, 2001; Aslantekin & Yumrutaş, 2014).

### **2.1.2 FACTORS AFFECTING THE ACCESS AND THE UTILISATION OF HEALTH INFORMATION LITERACY**

Utilization of health and medical services is defined as the ways in which individuals respond to ill health and disease (Nutbeam, 2001). Many factors may influence this response, including characteristics of the individual and their ability to access the type of resources they may need in their quest to deal with their ill health. Firstly, at the university level, information regarding service utilization and preferences can be used to improve the appropriateness of the medical and health care services offered. Where resources are limited, the value of targeting and prioritizing services cannot be understated.

The access and utilization of a health information literacy may depend on a number of factors. These include factors associated with the potential providers (such as quality of service and area of expertise) and those that relate to the patients themselves (such as age, education levels, gender, and economic status). Such factors can affect access to health care even when services do exist in a university. Despite the availability of many service providers in Uganda, the poor, being financially constrained, normally have limited choice and often use public services many of which are offered free of charge. Indeed, there is a significant difference in access to various health care providers between the rich and poor (Perzylo and Oliver 1992).

The health literacy environment is the infrastructure, policies, processes, materials and relationships that exist within the health system that make it easier or more difficult for consumers to navigate, understand and use health information and services to make effective decisions and take appropriate action about health and health care. The lack of public facilities in some

communities, which are predominantly used by the poor, is likely to affect the health seeking practices of the population. This problem of inequity in health facility distribution affects the health seeking practices of several communities hence hindering health services utilization.

Although self-care and use of traditional healers is categorized under health care, these are often discouraged by health practitioners, with the emphasis on encouraging people to opt for conventional channels with medically trained personnel. The poor and other vulnerable groups such as the elderly, who are mainly concentrated in rural areas in Uganda, are the most affected by health system challenges. Indeed, health facility coverage is greater in urban areas and there is less choice of health service provision in villages. Yet these vulnerable groups are known to be the most at need of these services. The non-use of health facilities leads to undesirable health behaviour such as patients using traditional remedies or no treatment at all which has led to increase in mortality even for easily manageable conditions (Nutbeam, 2001).

The causal mechanisms by which individual health literacy is associated with health outcomes are likely to be complex, and influenced by contextual, personal and external factors such as age, education, socioeconomic status, cultural background, social support, and the media. A number of models have been proposed to explain these links. Generally, the data to support these models is limited and they may underestimate the complexity of the factors, relationships and interactions that exist. Nonetheless, understanding these models is important, as they can suggest places where action can be taken for improvement (Poureslami, 2016).

The interactions between these factors can be manifested in a range of ways. The key causal pathways that have been described relate to the way in which individual health literacy, the health literacy environment and contextual factors influence. How consumers access and use health care services. For example, people with higher levels of individual health literacy may have a greater understanding of when to seek treatment and preventive care, reducing the use of acute health services. The design of health care facilities may make it more difficult for people with lower individual health literacy to find the information and services that they need (Bruce, 2003).

Some of the factors that influence the access and utilization of health information systems include age, lack of user involvement, lack of adequate knowledge on the use of the health information

system, understaffing, change implementation, lack of the refresher training, duration taken to repair the system in case it breaks down and motivation. There is a need to involve users in the development of the system, ensure health facilities are equipped with the right number of staff are trained regularly, ensure the system is repaired (Blunch, 2004).

### **Students Ability to Use Health Information**

Health information is the information that is related to a person's medical history, including symptoms, treatment, diagnoses, procedures and outcomes. The health outcomes determine how information is accessed and utilized either at individual, societal or national level for it to achieve its intended and specific purpose (Bruce, 2003). Blunch (2004) admits, "The ability to access, evaluate and organize health information is important at individual level but the ability to use health information is very crucial, in order to learn to solve a problem and make decisions in both formal and informal learning contexts, at work, at home and in educational settings." The emphasis of health information always lies in the usage of information from a variety of sources and the library has a rich collection of print as well as electronic information resources comprising print books, current print journals, back volumes of journals, CDs and DVDs, theses, online journals, e-books, online and Electronic Base Management (EBM) resources of various publishers and aggregators.

The effectiveness of information use represents the capability of using information optimally in problem solving and/or critical thinking, while the ethical use of information entails using information in a way that does not affect other people's rights. The 'ability to create and communicate knowledge' is the ultimate product of health information since it enables knowledge creation. Eisenberg and Berkowitz (1990) in the Big6 step process provides support in the activities required to solve information-based problems. The big6 process is a process model of how people of all ages solve an information problem by following the suggested 6 steps namely, information problem definition, and information seeking strategies, location and access, the use of information, synthesis and last step is evaluation of information problem. The notable two steps of location and access and use of information comprised of traditional bibliographic skills that help individual students to find resources such as books, magazines, reference materials, and Web sites, but also find the information within each source using tables of contents, indexes, and other resource-specific tools. The idea is for students to make a decision, create a product, or formulate an answer.

Therefore, students are expected to answer the specific question they created when initially engaging in the problem-solving process (Eisenberg, 1990).

Information problem solving is a concept that combines the skills needed to access and use information, and those needed to apply and solve an information problem (American Association of School Librarians 1998; Eisenberg and Berkowitz 1990). In other words, whenever a student encounters a problem that requires information in order to be solved, he/she is encountering an information-based problem, also termed an information problem. Several researchers have examined behaviours and skills associated with information use (Perzylo and Oliver 1992).

Dyson (1978) argued that students need to learn how to use health information effectively and independently. First, Students need to acquire skills, fundamental ideas and concepts, and a broad range of knowledge through the searching process of health information and this determine how they use that information. Students need training to become critical thinkers, seekers and users of health information in order to make sound health choices. Wallerstein (1992) agrees that generally, health decisions are critical as they involve seeking medical care and treatment, adopting healthy or unhealthy lifestyles, and managing one's overall state of health and physical wellbeing. The use of Health information is cardinal in our daily lives, it determines the efficiency in which the public seek care and receive treatment. Barriers to healthcare can be attributed to poor communication, inadequate information, and instructions that are not understandable.

A number of numerous studies have been conducted in the world that bear witness to the above assumption in relation to the ability of students use of health information. The study carried out in Zambia by Makonni (2009) at the University of Zambia Clinic to investigate the effectiveness of information provision on the reproductive health (RH) for Third (3) year LIS students. The interest in the research arose because challenges in accessibility, availability and usability of information of RH, and awareness of RH services as well as disseminating of the RH information to students for preventive care is not effective and adequate. The result revealed that majority of the students knew that UNZA clinic offered RH information services and the consequences of not acquiring this information. It is likely that students who had access to reproductive health information were able to make health decisions related to their sexual metabolism, abortions and relationships.

In addition, Baker and associates' (1998) prospective cohort study of 958 English-speaking patients presenting for nonurgent care at an Atlanta emergency care center and walk-in clinic

examined the literacy level of patients (using the TOFHLA) and its relationship to hospital admissions. The results of the literacy testing itself are noteworthy, 35 percent of the sample population had inadequate literacy, and an additional 13 percent had marginal functional health literacy as measured by the TOFHLA. Almost half of the population studied were unable or had limited abilities to interpret appointment slips, directions for medication, or hospital documents. Baker and colleagues found that patients with inadequate literacy were twice as likely as were patients with adequate literacy to be hospitalized during 1994–1995. After adjusting for age, gender, race, self-reported health, socioeconomic status, and health insurance status, the researchers found that the relationship between low literacy level and higher rates of admission remained at a level reaching statistical significance.

### **2.1.2 IMPORTANCE OF HEALTH INFORMATION LITERACY**

Health literacy is important because there is consistent evidence indicating an association between individual health literacy, health behaviours and health outcomes. Overall it has been estimated that people with low levels of individual health literacy are between 1.5 and three times more likely to experience an adverse outcome. Addressing health literacy can also be seen as a way of protecting consumers from potential harm. It makes sense that ensuring health information, instructions, actions and the environment are clear and empowering consumers to understand and take appropriate action about their health and health care will prevent potentially harmful events (Zarcadoolas, 2005).

Providing unclear information and services can lead to misunderstandings about the risks, consequences and necessity of care, about medication instructions, health care plans or preventive strategies. All of these scenarios have the potential to lead to some level of harm for consumers, whether it is a faster progression of a condition, medication error or poorer health outcome. The area that has been investigated most frequently is the contribution that health literacy makes to medication safety risks, in particular dosing administration risks. Low health literacy has been found to be significantly associated with a poorer understanding of medications, medication instructions and adherence to treatment regimens. Studies have estimated that nearly half of adults misunderstand common dosing schedules (such as take two tablets by mouth twice daily) and warnings (such as do not chew or crush, swallow whole; for external use only) that detail important information to support safe and effective use (Eisenberg, 1990).



In particular, there has been significant research indicating that consumers with lower health literacy have lower adherence to anticoagulation therapy. For example, recent Australian research has found that impaired cognition, depressed mood, and inadequate health literacy are strong risk factors for warfarin instability. It was found that half of patients receiving weekly warfarin at an anticoagulant clinic thought their medication regimen was different from what their clinicians thought. This would suggest that communication of critical medication information between the consumer and the healthcare provider (and verification of the consumers' understanding of that communication) has been less than optimal. In this situation, failing to account for, and address, the consumers' health literacy leads to a misunderstanding of medication.

Health literacy is of concern to everyone involved in health promotion and protection, disease prevention and early screening, health care and maintenance, and policymaking. Health literacy skills are important as they are needed for dialogue and discussion, reading health information, interpreting charts, making decisions about participating in research studies, using medical tools for personal or familial health care such as a peak flow meter or thermometer, calculating timing or dosage of medicine, or voting on health or environmental issues (Zarcadoolas, 2005). A comprehensive understanding of health literacy is essential to understand the full range of needs of the members of the community in order to provide accessible and equitable services to all.

Interactions between consumers and healthcare providers. For example, healthcare providers may have limited awareness of the level of health literacy of their consumers, and may not tailor the information that they provide appropriately. People with lower levels of health literacy may be less likely to ask questions of their healthcare provider, or to ask for more information if they do not understand. Both of these factors can affect the likelihood that consumers will follow recommended treatment.

Individual health literacy is the knowledge, motivation and competencies of a consumer to access, understand, appraise and apply health information to make effective decisions and take appropriate action for their health and health care. How consumers manage their own health. For example, people with higher levels of health literacy may have more knowledge about the actions that they can take to manage their own condition (such as what medication to take in an asthma exacerbation). Programs and support services such as chronic disease self-management. Programs can help to increase knowledge and change behaviour (Kahn and Socha-Dietrich, 2018)

How consumers exert control over the factors that shape health. For example, people with higher levels of health literacy may have a greater capacity to understand the social determinants of health and be involved in influencing these social determinants for others. This engagement can be supported by an environment that provides health education focused both on the development of interpersonal and social skills, as well as knowledge about specific health-related issues.

Health literacy is a complex concept, and it is not always obvious for consumers, the general public or people working in the health system what it means in practice or why it is important to address it. Summarizes some of the benefits that may result from addressing health literacy for different people within the health system. Actions for their health and health care. It is important for health care providers and their relationships with consumers and the way that they provide health care. It is also important for managers and policy makers in the way that healthcare organizations and the health system is organized and structured (Dyson, 1978)

## 2.2 SUMMARY

In conclusion concerning literature review, Research studies on health literacy among students in general is still scanty as little research known has been undertaken to investigate health literacy among students in institutions of higher education. This study therefore bridged the gap by investigating health literacy skills among university of Zambia students. Therefore, this study is investigating how students seek, access, use and the importance of health information to satisfy their health need

## **CHAPTER THREE**

### **3.0 METHODOLOGY**

#### **3.1 OVERVIEW**

This chapter covered the following areas, research design, population of the study, sampling methods and procedures, administration of the questionnaires, research instruments and data collection and data analysis.

#### **3.2 RESEARCH DESIGN**

A research design is used to structure the research, and show how all of the major parts of the research project worked together to address the central research questions. A research is a set of methods and procedures used in the collecting and analysing measures of the variables specified in the problem research. Both qualitative and quantitative information will be used within a specific context. Qualitative research is a scientific method of observation to gather non-numerical data. Qualitative methods are therefore needed, to seek mathematical evidence and justification for such hypothesis for further research (Housley, Henwood, Bellas, 2017). The rationale for using a qualitative approach in this research was to explore and describe the views of university of Zambia (unza) students on their health literacy. Hence, a qualitative approach is appropriate to capture their views on health literacy and this was make it possible to draw conclusions based on the respondents' perspectives and understanding.

While on the other hand quantitative research is the systematic empirical investigation of observable phenomena via statistical, mathematical, or computational techniques (Labaree, 2009). Quantitative methods emphasize objective measurements and the statistical, mathematical, or numerical analysis of data collected through polls, questionnaires, and surveys, or by manipulating pre-existing statistical data using techniques. Therefore, the quantitative aspect of this study will give an exposition of statistically meaningful data of how university of Zambia students searched, access and used health information.

Thus, the reason for combining both qualitative and quantitative approaches is based on the researcher's recognition of the fact that when either of the approaches were used in exclusion of the other, it would have grave limitations and biases, hence combination of both approaches was

to give access to not only the numerical information, for instance what sort of strategies were used to seek health information, but also the reason for the use of those strategies.

(James, 1991) Research design is also exploratory in nature; explorative studies are used when a problem of investigation is not clearly defined. It is conducted to have a better understanding of the existing problem, but will not provide a conclusive result. For such a research starts with a general idea and uses this research as a medium to identify issues, that can be the focus for future. Therefore, this approach is ideal for this research where not much was known about the area under investigation, it is thus chosen in order to bring to the fore information about health literacy among University of Zambia students who are expected to be information literate. In this way, findings from the research would laid a groundwork for subsequent researches in this field.

### **3.3 STUDY POPULATION**

A population is the total number of units from which data can be collected, such as individuals, artefacts, events or organizations. (Weeks, ) describe a study population is the population in research to which the researchers can apply their conclusion. This population is a subset of the study population. It is from the accessible population that researchers draw their samples. The criteria for inclusion in this study was be:

- Registered students from different schools will participate at the University of Zambia.
- Only students from School of Education, Humanities and Natural Sciences will participate in the study.

### **3.4 SAMPLE SIZE AND SAMPLING PROCEDURE**

A sample is a group of people, objects, or items that are taken from a larger population for measurement. The sample should be a representative of the population to ensure that we people can generalise the findings from the research sample to the whole population as a whole. A sample size of 100 university students will be drawn from different schools of the University of Zambia, Great East Road campus for the 2018/2019 academic year.

For this study, researchers will use the both purposive and simple random techniques in sampling the students. Purposive sampling technique is a non-probability sample that is selected baes o the characteristics of a population and the objective of the study. Therefore, researchers knowing that

unza students have specific characteristics that make them fit in the research topic because they are assumed to have adequate knowledge and understanding about the research topic chose purposive sampling. Furthermore, Simple random sampling, which is a probability sampling method, was be used to draw up participants for this study. In this technique, each member of the population has an equal chance of being selected as a subject. The researchers were assured that, with purposive and simple random technique, the findings would be representative and reasonable to generalize the results obtained from the sample to the entire population.

Therefore, students from various schools will be visited in their various classes on scheduled times by the help of class timetables obtained from their class representatives. Therefore, researchers followed a criterion of being logic and systematic. They first randomly sampled 40 students from education will be selected during Class. In the similar manner, 30 students from school humanities and social sciences will be randomly sampled. Lastly, 30 students from school of natural sciences will be sampled or selected. The variations in sampling will be on the understanding of the research topic

### **3.5 RESEARCH INSTRUMENTS AND DATA COLLECTION**

Data collection is a process of gathering and measuring information on variables of interest in an established system, which then enables one to answer relevant questions and evaluate outcomes (Lescroel et al, 2014). Primary data will be collected by the use of self-administered questionnaire. A self-administered questionnaire is a technique of data collection designed specifically to be completed by a respondent without intervention of the researcher (e.g. an interviewer) collecting the data. (Bowling, 2005). Self-administered questionnaires will be used to collect primary data such as opinions, attitudes and perceptions of unza students as a means of assessing Health literacy among them. The questionnaire will contain both close and open-ended questions designed.

The researchers found the self-administered questionnaire as a suitable instrument of data collection for this study for the following reasons. Close-ended questions, whereby a respondent is asked and required to answer by choosing between numbers of alternatives, are easy to complete and to analyse. Closed-ended questions are those which can be answered by a simple yes or no. They provide a range of answers and thus reduce the chances of the respondents overlooking vital information and they reduce the possibility of obtaining ambiguous answers. The self-administered questionnaire is also impersonal and avoids problems of the respondent being influenced by the

presence of the researcher. The questions are completed at the respondent's own time and pace. Moreover, the method is relatively cheap and it facilitates easy access to data. Above all, questionnaires are flexible and can be used to gather information from a large number of people in the shortest possible time (Stebbins, Hanan and Cathy 2005).

On the other hand, an open-ended question will be given to allow respondents to formulate and record answers in their own words (Ibid, 2016). An open-ended question is a question that cannot be answered with a yes or no response or with a static response. This also allowed respondents to include any vital information that might have been overlooked in the close-ended questions. Therefore, the self-administered questionnaire will be used because the targeted population comprise of university students who are considered literate; therefore, they are capable of understanding and completing questions on their own.

### **3.6 Data Analysis**

Data analysis involves unlocking the information hidden in the raw data and transferring it into something useful and meaningful (Monette, 2011). The process of data analysis provides an opportunity to the researcher to make sense of the data after collecting it from the respondents and to learn whether the researcher's ideas are confirmed or refuted from empirical evidence. Data may be analysed qualitatively or quantitatively to embrace both qualitative and quantitative data categories (Creswell 2003).

Quantitative data analysis uses deductive reasoning which entails a general set of propositions that can be used to deduce concrete relationships between the elements of the theory (Monette, 2011). The collected data was entered into a computer and analysed using Statistical Package for Social Sciences (SPSS) and Microsoft excel software. This software's therefore, were selected because there were easy to use and generate statistical tables as well as pose the most suitable instrument for analysis of quantitative data. Therefore, SPSS was useful in summarizing data in a manner that gave answers to research questions.

On the other hand, Qualitative data analysis employed inductive reasoning. Qualitative data from open-ended questions was analysed by the content or thematic analysis. Thematic analysis is process of analyzing qualitative data. This is done by identifying, scrutinizing and reporting patterns or themes within data (Hatch, 2002). The identified theme captures common or similar

data collected in relation to the research question (Weiss, 1998). Therefore, the captured themes allowed researchers to develop explanations and make interpretation, and their intellectual capacity helped them make sense of qualitative data.

### 3.6 Summary

This chapter gave a general overview of the methods used in the study. The relevant methodological issues such as research design, total population, sample size and sampling procedure have been discussed in detail. The chapter also described the process of data collections and analytical methods used.

## **CHAPTER FOUR**

### **4.0 PRESENTATION OF FINDINGS**

#### **4.1 Overview**

This chapter presents the findings of the study on Health Literacy among University of Zambia Students: case study of Library and Information Science Students. In order to answer the above research objectives, researchers asked LIS students the following research questions and researchers received their responses from the data which was collected through closed and open-ended questionnaires. Therefore, it is worth to mention that, a total of 100 questionnaires that were distributed to 2nd, 3rd and 4th year LIS students, researchers were pleased to receive 100% response rate.

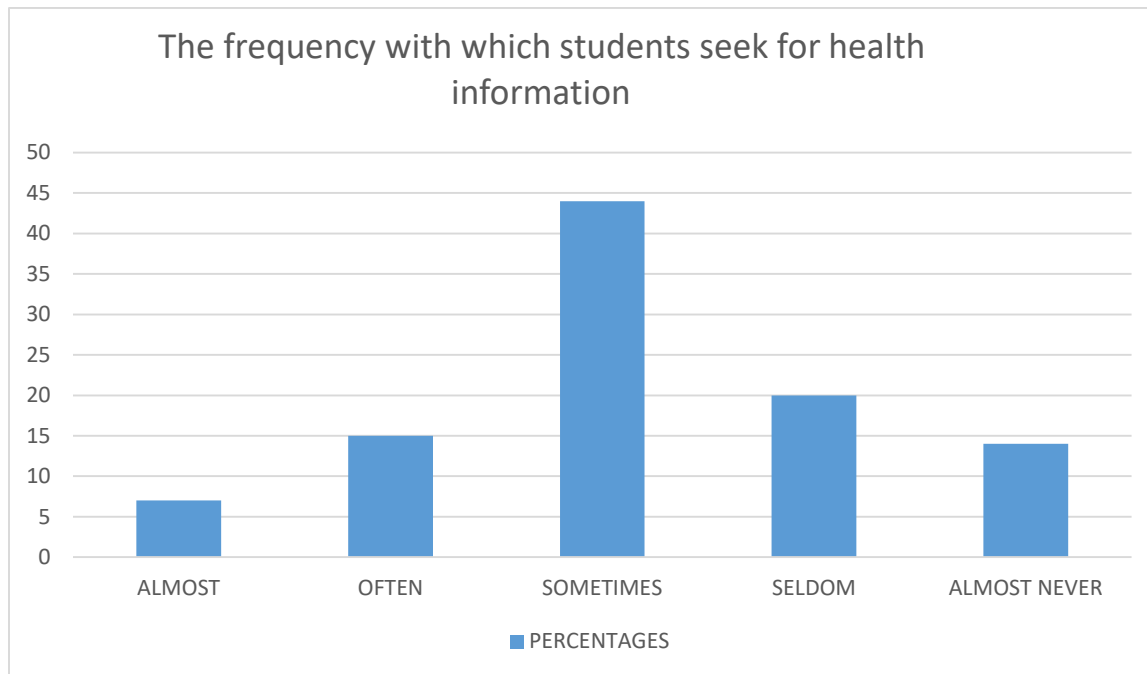
The outcomes are explained based on the responses of 100 LIS students thus, 2nd, 3rd and 4th years. Hence, the findings of this research are presented in line with the three objectives, which are Students health information seeking behaviour, Students ability to appraise health information and Students ability to use health information. The study results are presented in tables, pie charts, bar graphs and themes.

#### **4.2 Characteristics of Respondents**

Out of the total sample size of 100 students in their second, third and fourth year, the majority of the respondents were females represented by 52% while the males who were the minority represented by 48%. Regarding the age, 2% of respondents were within the range of 15-19 years of age, 82% between 20 -24 and 16 % were between 25-29. Hence, most of the respondents were within the range of 20-24 years of age. In terms of year of study, 51% of respondents were in fourth year, 30% in second year and 19% in third year. Therefore, from the data obtained most of the respondents were in fourth year.

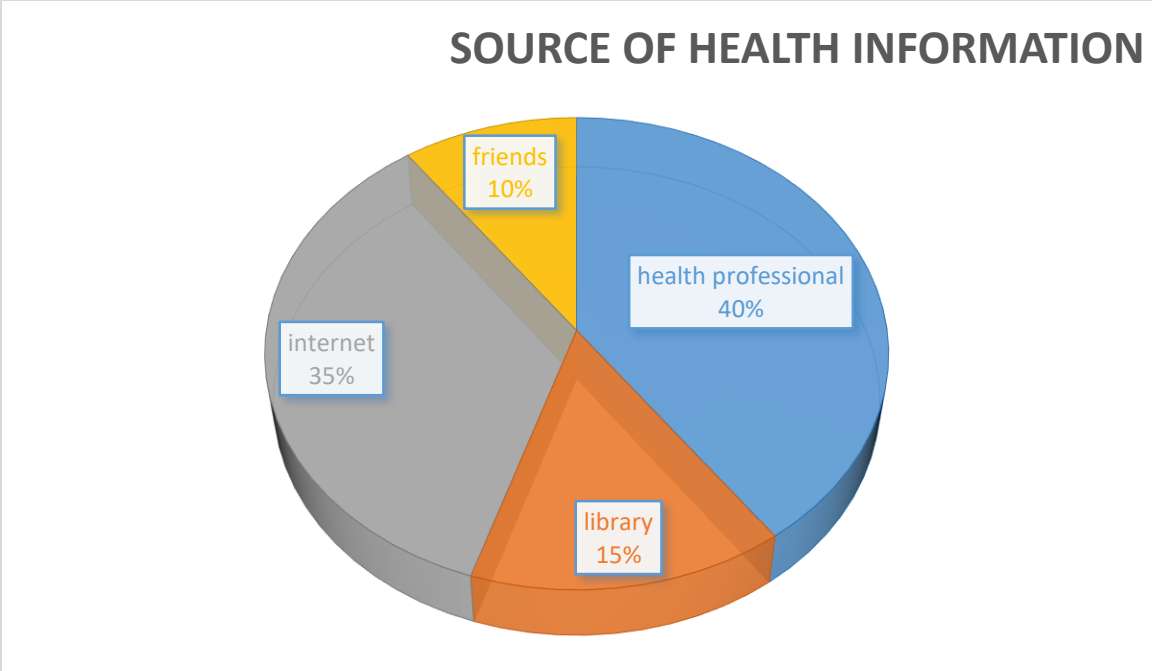


### 4.3 Students Health Information Seeking Behaviour



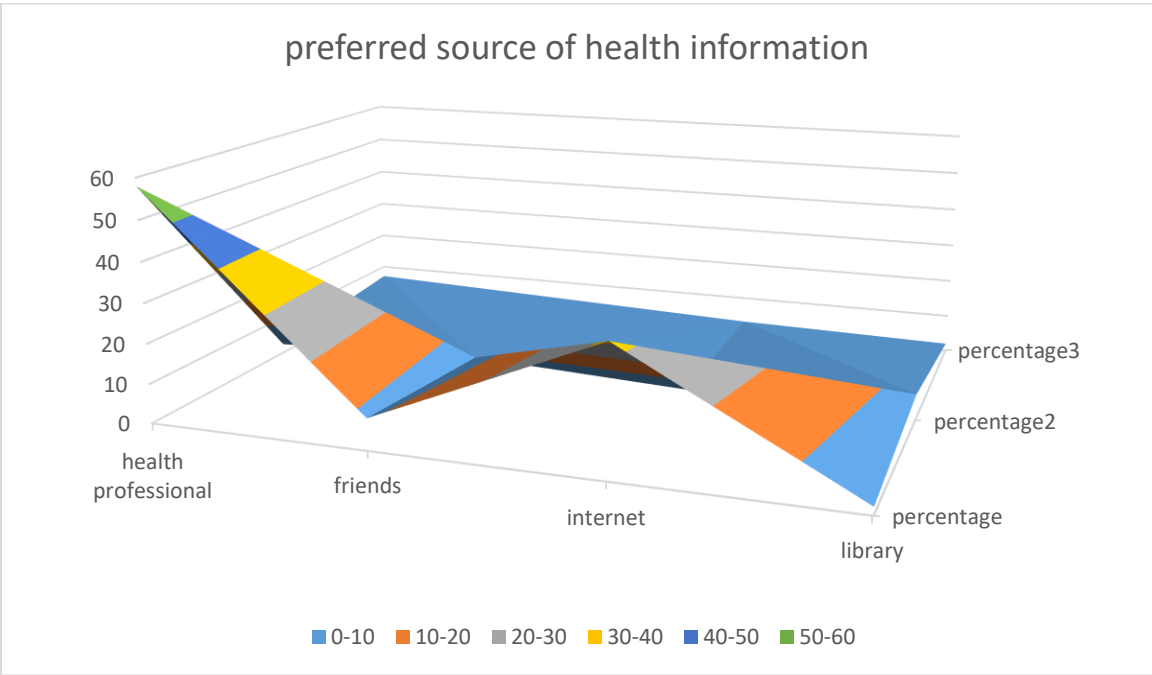
**Figure 1. The Frequency with which Student Seek for Health Information**

As illustrated in figure 1, Students were asked about how often they seek for health information. The research study showed various results regarding how often students seek for health information. Therefore, data obtained showed that 7 % of respondents seek health information usually, 15 % often, 44 % sometimes, 20 % seldom and 14 % almost never seek for health information. Consequently, the frequency with which student seek for health information varied among students. The combination of students, who seek for health information sometimes and seldom, shows that 64% of students rarely seek for health information.



**Figure 2: Sources of Health information**

Students were asked to indicate their sources of health information and as shown in figure 2 above, the sources of health information varied among students. 35% of students sourced their health information on the internet, 40% from health professionals, 15% of the students sourced for health information from friends and 10% of them from the library.



### Figure 3: Preferred Source of Health Information

To find out the sources that students preferred as source of health information. Respondents were asked to indicate their preferred sources. Figure 3 above summarizes the preferred source of health information by students. According to the data obtained 58% of students preferred health professionals, 8% preferred friends, 32% preferred the internet and 2% the library.

SOURCE	PERCENTAGE
Health professional	69
Internet	28
Library	1
others	2

### Table 1: Effective Sources of Health Information

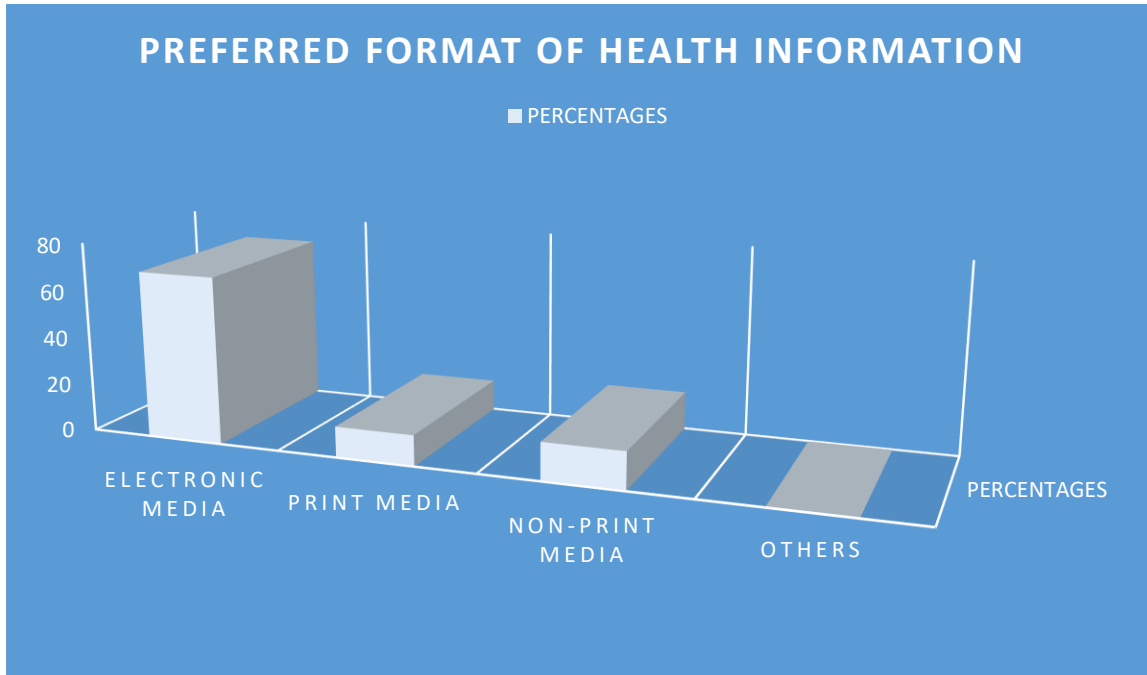
Students were asked to identify which source of health information they thought was the effective source out of the sources they have used before and table 1 above, shows the effective sources of health information for students. Therefore, 69% represented students who indicated health professionals as their effective source of health information, 28% indicated the internet, 2% of them the library and 1% indicated students who sourced other sources like text through phone as the most effective.

GENDER	ACCIDENTALLY	SEARCH FOR IT	TOTAL
Males	15%	28%	43%
Females	10%	47%	57%
Total	25%	75%	100%

### Table 2: Ways in which Students Receive health Information

In order to determine ways in which students receive health information, students were asked to indicate whether they intentionally search for health information or accidentally receive it. It was revealed that the majority of students represented by 75%. do search for information of which 25% indicated that they accidentally received it. Further, a cross tabulation analysis to determine the

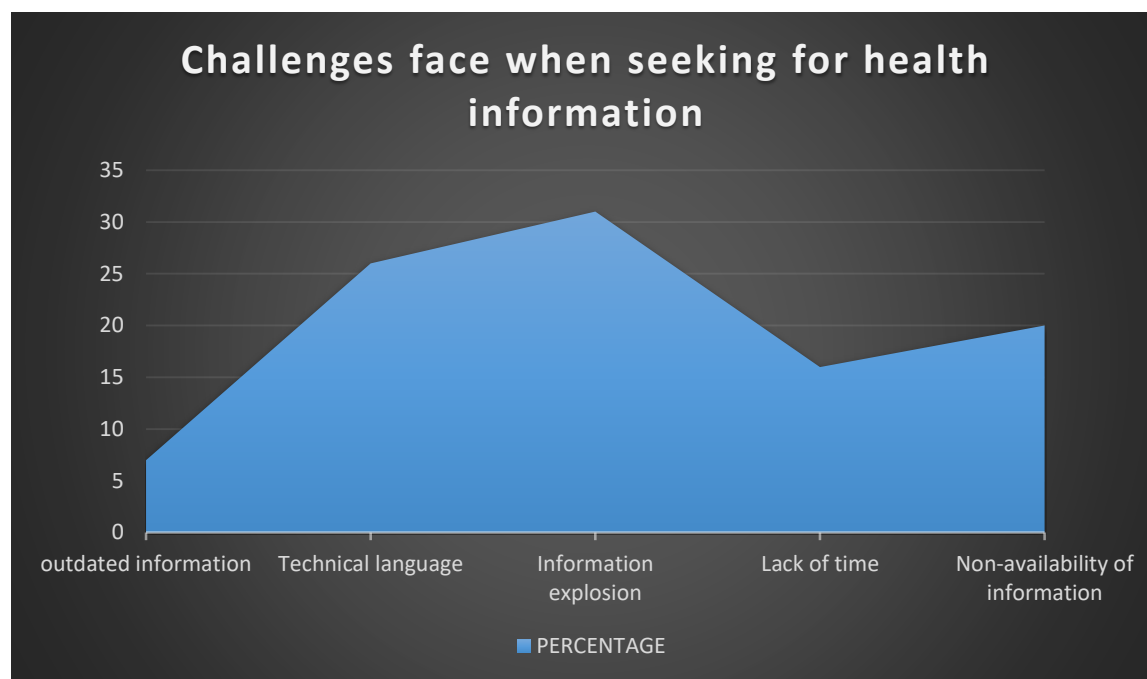
gender that receives more health information and ways in which it is received was conducted, and the results showed that, 43% were Males and 57% were Females. Out of 43%, 15% Males, accidentally received health information and 28% of them searched for it. In addition, out of 57%, 10% were females who accidentally received health information and 47% of them searched for it. Consequently, the findings showed that more females searched for health information rather than receiving it accidentally.



**Figure 4: Preferred Format of Health Information**

The students were asked to identify the preferred formats of health information and Figure 4 above shows the format students preferred for their health information. From the data obtained, 74 % of students preferred their health information in electronic format such as e-journals, e-serials, e-books. In addition, 11% of the students preferred health information in print media, which is information on paper records such as books in the library, periodicals, journals, newspapers, articles and other printed documents on paper. Lastly, 15% of the students were in favour of non-print media also known as non-book materials, which included audio-visual materials. The majority of the students preferred their health information in electronic format because it was easily accessible, easy to locate, retrieve and use. Further, the students said that electronic records

contained updated health information with more ideas and knowledge that can easily be used to solve the problem at hand compared to the other formats.



**Figure 5: Challenges Faced when Seeking for Health Information**

Students were asked to identify challenges faced when seeking for health information challenges students face when seeking for health information. Therefore, out of 100 students selected, 7% students stated that there is outdated information which makes difficult for them to make correct health decisions, 26% students believed that the language is technical for them to understand and access accurate information, 31% students identified information explosion as problematic because they could not easily identify right and reliable health information from varied sources, 16% students indicated that, they lack time to visit various sources of health information and 20% students said that there is non-availability of information specifically in the library and internet hence ,preferred visiting health professional.

Additionally, students were further asked to suggest possible solution to the above challenges identified in figure 6 and it was observed that students had varied solutions. As shown above, 29.8 % of students stated that health information should be readily available in various formats and sources to make required health decisions, 12.5% suggested that health professionals should give clear guidelines, procedures or manuals to be followed to make health and sound decisions and

57.7 % said that the language should be simple for them to easily understand and follow processes recommended by health professionals.

## FACTORS AFFECTING THE ACCESS AND THE UTILISATION OF HEALTH INFORMATION LITERACY

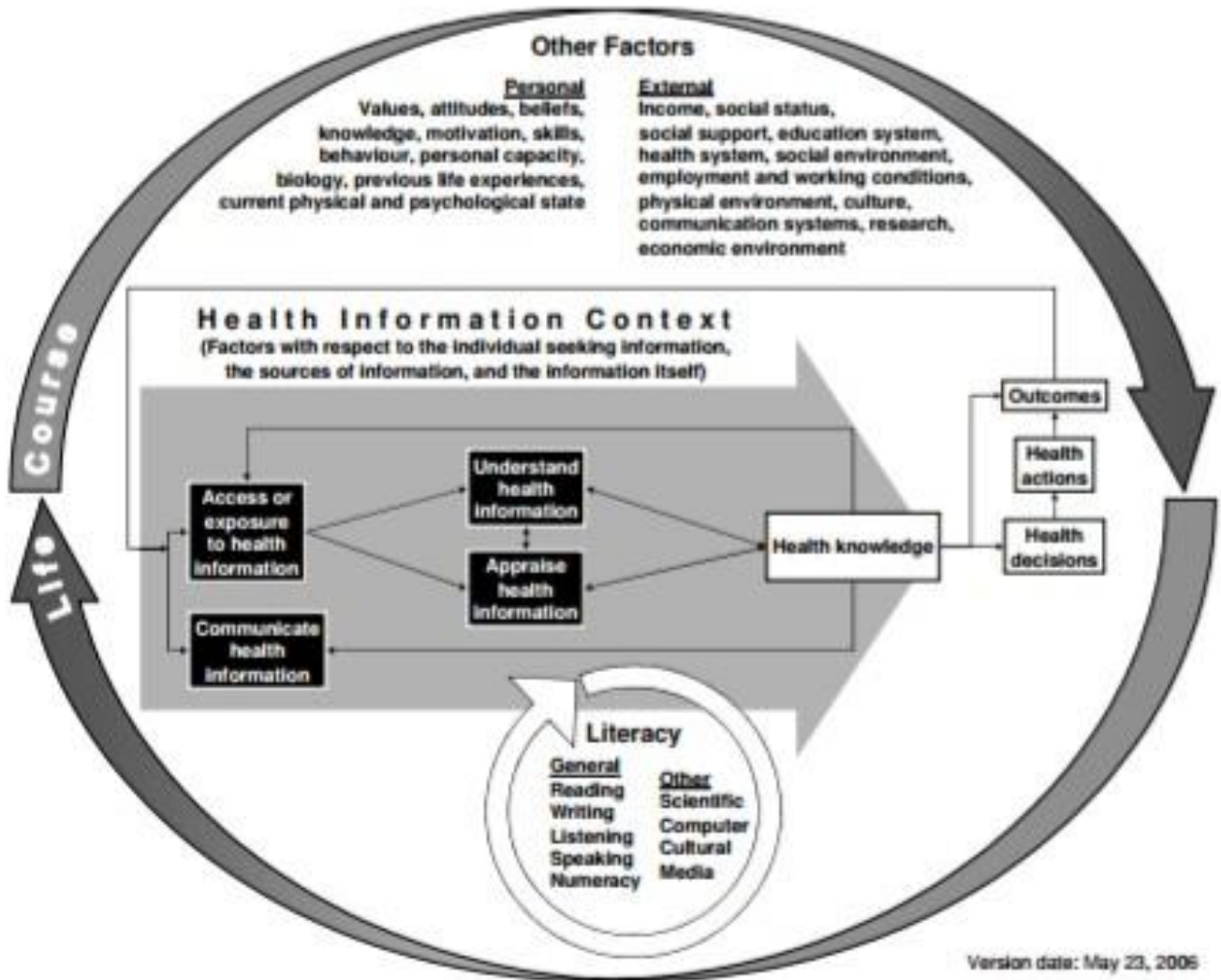
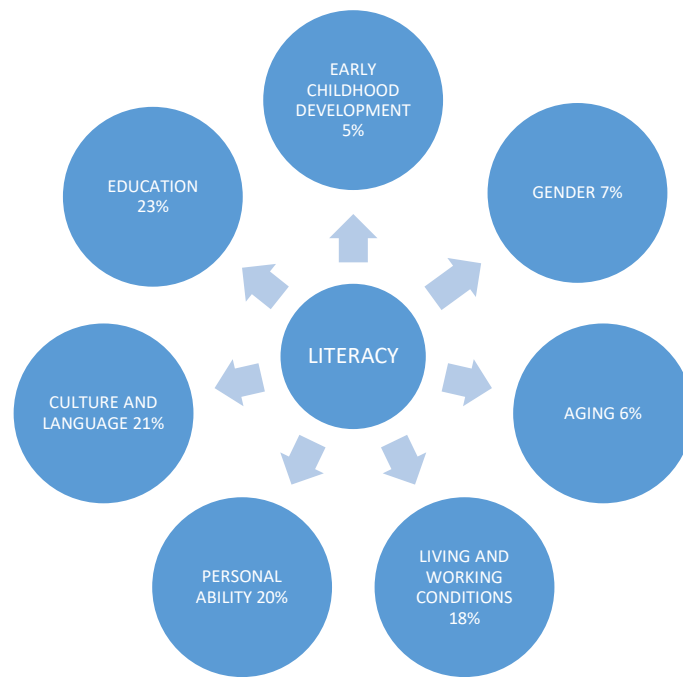


Figure 6; Factors affecting the access and the utilization of health information literacy

The students were asked to identify the factors that affect the access and the utilization of health literacy and figure 6 above indicates the factors affecting the access and the utilization of health

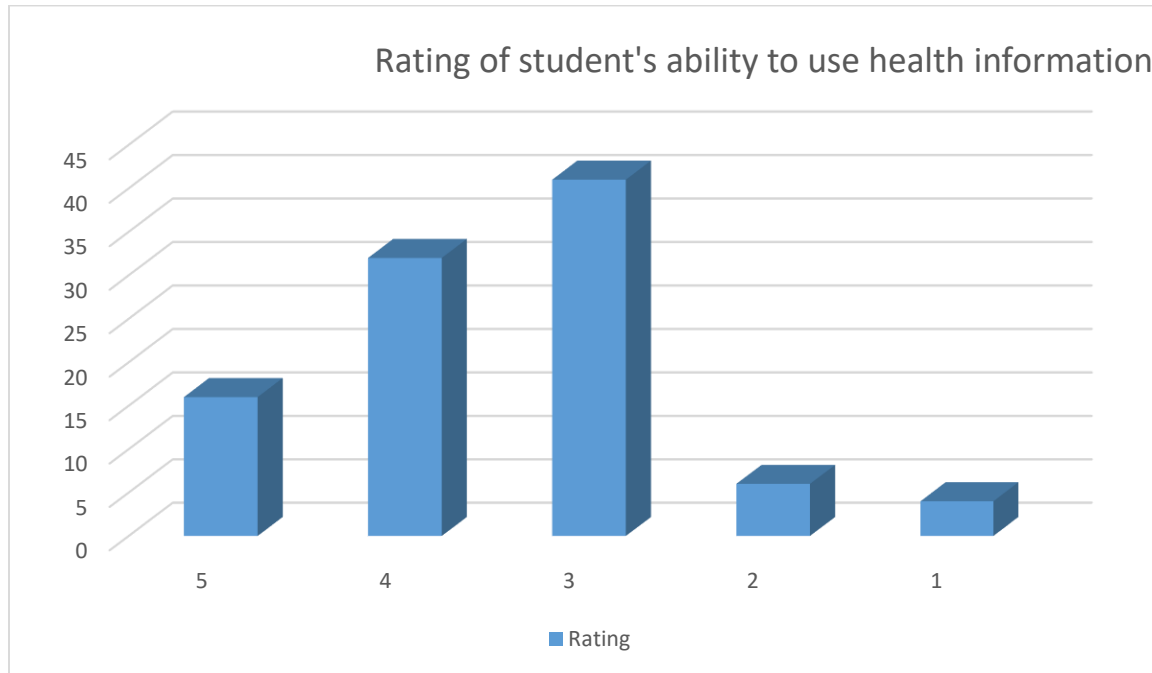
information. Students stated that there are two major factors namely personal and external. Students mentioned that personal factor is influenced by; Values, attitudes, beliefs, knowledge, motivation, skills, behaviour, personal capacity, biology, previous life experiences, current physical and psychological state. However, respondents also mentioned that external factors are influenced by; Income, social status, social support, education system, health system, social environment, employment and working conditions, physical environment, culture, communication systems, research, economic environment.



**Figure 7; Factors and conditions that influence literacy rates**

Students were asked to identify factors and conditions that influence literacy rates. Therefore, out of 100 students selected, 7% students stated that gender is one of factor that influence health literacy, 21% students believed that culture and language is technical for them to understand and access accurate information, 23% students identified education, 20% students indicated that, personal ability also a contributing factor that influence health literacy, 18% students said that living and working coditions influence health literacy and 5% of respondents stated that, early childhood development influence health literacy and while 6% students mentioned aging.

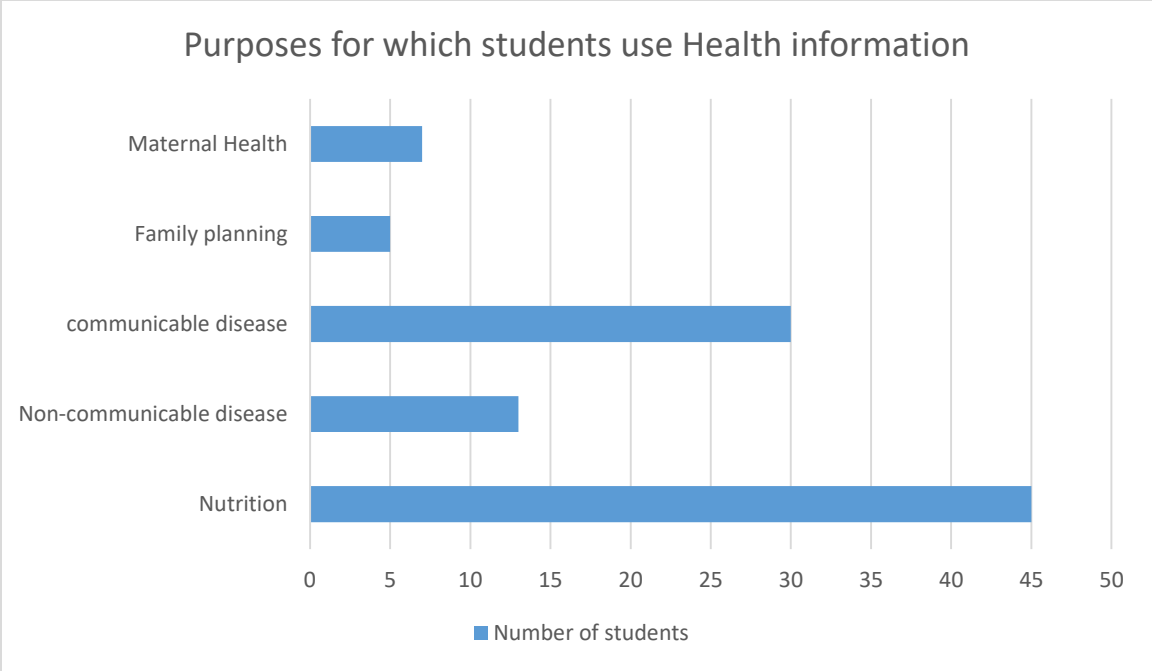
#### 4.5 Students Ability to Use Health Information



**Figure 8: Ratings of Student’s Ability to Use Health Information**

To find out about student’s ability to use health information, students were asked to rate their ability to use health information on a scale of 5-1, with 5 being the highest scale and 1 the lowest. As indicated in figure 8 above, 16% of the student indicated 5, which is the highest rating, 31%, indicated 4, which is the second highest rating on the scale, 41% of students indicated 3, 7% of them indicated 2 and 5% of student indicated 1 which was the least on the scale. Therefore, on the scale of 5-1, most of the student indicated 4 as a rating of their ability to use health information





**Figure 7: Purposes for which Students Use Health Information**

When asked about the purposes students used health information for, it was discovered that 45 respondents were used it for nutrition, 14 for non-communicable diseases, 31 for communicable diseases, 4 for family planning and 6 for maternal health as illustrated in figure 9 above.

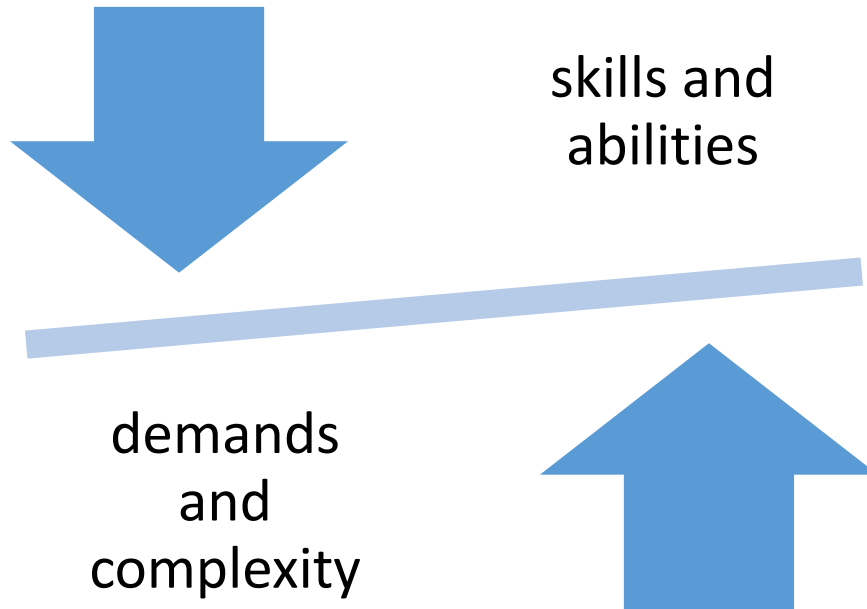
## IMPORTANCE OF HEALTH INFORMATION LITERACY

IMPORTANCE OF HEALTH LITERACY	FREQUENCY	PERCENTAGE
Access to care and use of services, self-care of chronic conditions	30	31%
Maintenance of health and wellness/greater adherence to treatment	23	20%
Help individuals to have more active role in decisions and managements	32	35%
Greater efficiency and cost savings to the health system as a whole.	15	14%
TOTAL	100	100

**Table 3: Importance of health information literacy.**

Students were asked about what they thought would be the importance of health literacy and Table 5 above exemplifies the student views on the importance of health information. From the data obtained in the field, 30 respondents represented by 31% specified that a health literacy is essential for successful access to care and use of services, self-care of chronic conditions, 23 represented by 22% stated that health literacy is fundamental for maintenance of health and well or greater adherence to treatment, 32 represented by 35% stated that health literacy is fundamental to healthcare that requires individuals to have a more active role in decisions and managements and 15 respondents represented by 14% stated that health literacy leads to greater efficiency and cost savings to the health system as a whole.

## A Framework for Health Literacy



The above figure illustrate that, people with low health literacy are overwhelmed by healthcare because their skills and abilities are challenged by the demands and complexity required.

PEOPLE WITH LOW HEALTH LITERACY	FREQUENCY	PERCENTAGE
Are less able to care for their chronic conditions	11	9%
Use more healthcare services	15	11%
Have higher mortality rates, especially from cardiovascular disease	12	9.5%
Are more likely to engage in unsafe or inappropriate use of prescription or over-the-counter medications	22	26.5%
Are less likely to use preventive health services	25	32.5%
Have difficulty navigating the health care system	15	11.5%
TOTAL	100	100

**Table 4: People with low health literacy**

Students were asked to identify challenges faced by people with low health literacy and table 4 above indicates the challenges students face with low health literacy. Therefore, out of 100 students selected, 9% students stated that they are less able to care for their chronic conditions, 11% students believed that people with low health literacy they use more healthcare services, meaning that they visit and stay longer, 9.5% students identified they have higher mortality rates, especially from cardiovascular disease, 26.5% students indicated that, they are more likely to engage in unsafe or inappropriate use of prescription or over-the-counter medications, 32.5% students said that people with low health literacy are less likely to use preventive health services, and 11.5% students mentioned that people with low health literacy have difficulty navigating the health care system.

STATEMENT	Gender $\chi^2$ value (p-value)	Age group $\chi^2$ value (p-value)	Education level $\chi^2$ value (p-value)
It is easy for me to decide in which kinds of situations I need health-related information	0.692 (ns)	6.647 (ns)	10.810 (0.016)
I know which sources to turn to in order to obtain health-related information	2.225 (ns)	1.863 (ns)	10.015 (0.020)
It is easy for me to find the health information I need from the information sources I use	1.910 (ns)	4.063 (ns)	16.129 (0.003)
I obtain too much health-related information	2.388 (ns)	3.626 (ns)	1.879 (ns)
It is easy for me to determine whether health information is trustworthy or not	1.556 (ns)	4.150 (ns)	11.001 (0.023)
I learn many new things from the health-related information I obtain	.973 (ns)	1.151 (ns)	20.731 (0.000)
I know how to use the health information I obtain to take care of my health	6.070 (0.048)	3.421 (ns)	9.957 (0.038)
I often have difficulties to understand words or sentences used in health-related information	1.235 (ns)	1.919 (ns)	23.075 (0.000)

ns, non-significant

### **Table 5: Demographics and health information literacy**

When men and women were compared with regard to their perceptions of the different dimensions of HIL, hardly any differences between the two genders could be found. As can be seen in Table above, it is only concerning confidence in their own ability to use the obtained information to take

care of one's own health (statement 7), that a significant relationship was found between gender and HIL dimensions. Women showed stronger confidence, as 54% (n = 66) of them, compared with 42% (n = 34) of the male respondents, agreed with this statement. The age groups showed no significant relationships at all with any of the HIL dimensions.

Education level was, however, significantly related to most of the HIL dimensions (Table 5). Nearly 8 out of 10 (78%, n = 46) respondents with a high level of education agreed with statement 1: that it was easy to decide in which situations they needed health information, while this was the case among only 54% (n = 50) of those who had a basic education. Another 78% (n = 47) compared with 67% (n = 83) of those with a medium level education and 57% (n = 54) of those with only a basic education agreed that they knew which information sources to turn to (statement 2). Furthermore, 60% (n = 36) of the respondents with the highest level of education thought that it was easy to find the needed information (statement 3) compared with 43% (n = 53) of those with a medium-level education and 39% (n = 37) of those with a basic education. Those with only a basic level of education seemed to have the most trouble in determining whether an information source was trustworthy or not (statement 5), as more than a half (n = 49) disagreed with the statement saying that this is easy. In comparison, only 25% (n = 15) of respondents with the highest education level disagreed on this. A higher level of education also seemed to make it easier to learn from the obtained information (statement 6). More than half (53%, n = 32) in the highest education level group compared with less than 40% (n = 46) in the medium-level education group and only a third (n = 31) in the basic-level education group agreed with this statement. In the basic-level education group nearly 40% (n = 36) instead disagreed with the statement. Those who had the highest education level also seemed to be more confident in their ability to use the obtained information (statement 7); two-thirds (63%, n = 38) of the respondents in the highest education level group compared with only 38% (n = 36) of those in the basic-level education group agreed with this. Furthermore, education seems to be related to the ability to understand health-related information (statement 8); 60% (n = 36) of the respondents who were educated to a university level disagreed with the statement that it is difficult to understand terminology, whereas almost half (47%, n = 45) of the ones who had only a basic education instead agreed with this statement. Only statement 4, concerning information overload, was not significantly related to any demographic factor.

STATEMENT	Interest $\chi^2$ value (p-value)	Seeking activity $\chi^2$ value (p-value)	Self-rated health $\chi^2$ value (p-value)
It is easy for me to decide in which kinds of situations I need health-related information	5.263 (ns)	11.864 (0.018)	12.461 (0.014)
I know which sources to turn to in order to obtain health-related information	5.018 (ns)	5.394 (ns)	9.466 (0.050)
It is easy for me to find the health information I need from the information sources I use	14.651 (0.005)	17.908 (0.001)	20.865 (0.000)
I obtain too much health-related information	2.086 (ns)	2.927 (ns)	1.055 (ns)
It is easy for me to determine whether health information is trustworthy or not	6.137 (ns)	21.371 (0.000)	5.172 (ns)
I learn many new things from the health-related information I obtain	40.332 (0.000)	45.945 (0.000)	21.175 (0.000)
I know how to use the health information I obtain to take care of my health	15.006 (0.005)	32.286 (0.000)	34.528 (0.000)
I often have difficulties to understand words or sentences used in health-related information	8.372 (ns)	5.845 (ns)	4.294 (ns)

ns, non-significant

**Table 6: Motivation factors and health information literacy**

Interest in health information was significantly related to some dimensions of HIL (Table 6). Slightly more than half (n = 104) of the respondents who were fairly or very interested in health information compared with a third (n = 7) of those who showed only little, or no, interest at all,

thought that it was easy to find the needed information from the information sources they use (statement 3). Interest was also strongly associated with perceptions of abilities to learn from obtained information (statement 6), as well as of abilities to use this information for the benefit of one's own health (statement 7). Half (n = 50) of the most interested respondents thought that they learn a lot from the information, while nearly 60% (n = 11) of the least interested ones disagreed with this statement. More than half (54%, n = 60) of the most interested respondents compared with a third of both the moderately (n = 19) and the least interested ones (n = 7) were, furthermore, confident that they knew how to use the obtained information.

Seeking activity was also significantly related to several dimensions of HIL. Nearly 70% (n = 115) of the most active seekers compared with about 60% (n = 25) of the least active ones and half (n = 32) of the moderately active ones agreed with the statement that it is easy to decide in which situations they need health information (statement 1). The least active ones were, however, most inclined to disagree with this statement (22%, n = 9). The most active seekers also agreed with the statement that they find the required information easily (statement 3) more often than did those in the other two groups (53%, n = 92, agreed, vs. 32%, n = 20, and 33%, n = 14 in the moderately and little active groups respectively). The least active information seekers seemed to have more difficulty than the other seekers in determining whether health information is trustworthy or not (statement 5); as many as 60% (n = 25) of the respondents in the least active group compared with only 31% (n = 54) of those in the most active group disagreed with the statement that it is easy to determine the trustworthiness. The ability to learn from obtained information (statement 6) is significantly related to seeking activity, as well; half (n = 88) of the most active seekers but only 22% (n = 14) of the moderately active ones, and 17% (n = 7) of the least active ones agreed with the statement saying that they learn many new things from the obtained information. In fact, as many as 56% (n = 23) of the least active respondents disagreed with that statement. Furthermore, the most active seekers were more confident in their ability to use the obtained information for their own health (statement 7). Whereas 60% (n = 103) of the active seekers agreed with this statement, only 29% (n = 18) in the moderately active group and 33% (n = 14) in the least active group did alike.

Current self-rated health was significantly related to several of the HIL dimensions, as well, as Table 6 shows. More than 70% (n = 94) of the respondents, who rated their health as good or



excellent, compared with slightly more than 40% (n = 18) of the ones who thought that their health was poor, agreed that they knew how to decide in which situations they needed health information (statement 1). Nearly 75% (n = 97) of those who rate their health as good/excellent, but only half (n = 23) of the those with poor health thought that they could find information sources to turn to (statement 2). Those with good/excellent health (58%, n = 77, agreed, vs. 34%, n = 33 of those with mediocre health, and 36%, n = 16 of those rating their health as poor) also thought that they find the needed information more easily (statement 3). Furthermore, 52% (n = 68) of those with good or excellent health agreed with the statement that they learn a lot from the obtained information (statement 6), while only 31% (n = 30) of the respondents rating their health as mediocre and 25% (n = 11) of those with poor health agreed with this. Instead, as many as 41% (n = 18) of the respondents rating their health as poor disagreed with this statement. Poor health was also connected with difficulties in using the obtained information. While nearly 61% (n = 80) of those who rated their health as good or excellent agreed with the statement that they know how to use the obtained information (statement 7), this was the case with 45% (n = 44) of those with mediocre health and only 22% (n = 10) of those with poor health. In the latter group, 44% (n = 20) instead disagreed with this statement. As with the demographic factors, only one HIL statement was not significantly related to any motivation factor at all, and that was, again, the one about obtaining too much information (statement 4).

## **CHAPTER FIVE**

### **5.0 DISCUSSION OF FINDINGS**

#### **5.1 Overview**

Having received 100% response rate from 100 questionnaires both open and closed ended questions from LIS students therefore, it was worth to mention that, the findings of the research objectives were discussed in relation to other research studies conducted on the similar or related topic.

#### **5.1 Information seeking behaviour**

##### **5.1.1 The frequency with which students seek for health information**

In order to find out the frequency with which students seek for health information, students were asked about how often they seek for health information from various sources such as health professional, friends, internet based materials as e-books, e-journals, e-articles and other electronic published documents and printed media such as newspapers, traditional books and other publications and mass media documents consisting television, and other audio-visual materials. The results interestingly revealed that 7% of the students seek health information usually, 15% often, 14% almost never search for health information from any source and 64% only search sometimes and seldom for health information.

The above findings are similar to Lampe (2008) who showed varying responses on how respondents search for health information particularly on internet, and OPAC. Out of 150 respondents, 48.1% indicated that they sometimes search for health information on the internet and OPAC and 14% indicated that they often or very often seek or used the internet or the library catalog for health information. While 37% indicated that they seldom searched the information on the internet and its collaborative tools such as the wikis and blogs and 50.9% of the respondents indicated that they had never searched health information on the internet nor library catalog.

Still interestingly, Wallerstein (1992) reported that, due to inadequate functional health literacy, more than half 53.8% said they did not usually ask anyone to help with health information apart from their physician, and only 29% reported asking friends to help them read the written materials

given to them by the hospital. This study is not much different from the current study that alluded that the least 7% of the students seek health information usually; this included seeking information from various sources such as health professional and friends, even if the study could not obtain actual data about how many students specifically could search for health information from friends and physicians.

### **5.1.2 Sources of Health information**

In order to establish students' sources of health information, students were further asked to indicate sources of their health information, and the study revealed an interesting finding that, 44% of students indicated the internet as source of health information that included e-books, e-journals, e-articles and other digital resources, 43% identified health professionals and 13% of the students sourced their health information from friends.

Similarly, Rains (2007) revealed that 86% of the US population are sourcing health information online, but still many others sourced health information from a friends and health professionals with 10%. However, still others sourced health information from traditional library that included books, brochure and magazines representing 4%. This implies that a large number of people are aware of health information online and this was accompanied by its popularity and readability to be accessed and used.

However, the findings of the current study are contrary to Lampe (2008) who observed that, 50.9% of the people had never searched for health information on the internet nor the library. This was because they were not motivated to search for health information on the internet and the library hence, they sourced for information from health professionals, printed materials readily available to them at that particular time of need that included newspapers and periodicals and other non-media documents such as television and radio.

### **5.1.3 Preferred Source of Health Information**

In order to establish preferred sources of health information, students were asked to indicate their preferred sources and still an interesting finding was established that 58% of students preferred health professionals, 8% of the students preferred friends, 32% preferred the internet such as e-books, e-journals, e-articles and other available published online documents and the rest 2% of the

students preferred the library. From the research findings, it can be established that many students preferred health professionals as their source of health information.

However, the findings of the current study are different from the findings by Rain (2007) who observed that 86% of the US population stressed that the internet was the number one choice for finding health information other than health care professional because health professional also turn to the internet as an alternative source of information in order to gain a perspective different from what they read from a traditional media source or library or what they heard from an unsatisfactory doctor-patient interaction.

#### **5.1.4 Effective Sources of Health Information**

In order to elicit the effective sources of health information from various sources such as the health professionals, friends, library, internet that consisted of e-books, e-journals and e-articles, printed media such as traditional books, newspapers and other publications, and mass media documents such as television and radio. Students were asked to identify which source of health information they thought was the effective source out of the sources they had used before. The findings showed that 69% of the students indicated health professionals as their effective source of health information, 28% indicated the internet, 2% of them the library and 1% indicated students who sourced other sources like text through phone as the most effective.

However, findings of the current study are contrary to the findings by Bakar (2011) who showed that 90% of women in a village of the District of Gombak, in the State of Selangor depended mostly on mass media such as newspapers, magazines, television and radio for their effective source of health information. At least 10% recorded the use of Internet as the active source of health information and most of the housewives use the relevant websites or homepages to get the needed information. Furthermore, Balasubramanian (2014) presents different findings from the current study that identifies the internet as the number one source of health information for students over the library and health care-professionals.

#### **5.1.5 Ways in which Students Receive Information**

In order to determine ways in which students receive health information, students were asked to indicate whether they intentionally search for information or accidentally receive the information. The findings established that, 78% of the students search for information of which 22% indicated

they accidentally received it. The findings further established that, out of 100 respondents, 48% were Males and 52% were females. Out of 48%, 13 were Males who accidentally received health information and 35 of them searched for it. In addition, out of 52%, 9 were females who accidentally received it and 43 of them searched for it. The findings showed more female received health information than males by searching for it.

The above findings are Similar to Natarajan (2010) who found that, in a networked environment, library users were motivated searching library's catalogue, browsing electronic journals and accessing subject guide or database without visiting the library premises to acquire information. similarly, Brown (1999) showed that, individuals who prefer an active or collaborative role when making decisions with health professionals are also more active in their search for health-related information from the internet, friend and occasionally from the library. This is similar to the current findings that showed that 78% of the students searched for health information from various sources such as internet, library catalog and friends.

#### **5.1.6 Preferred Format of Health Information**

In order to establish preferred formats of health information, students were asked to identify the preferred formats of health information. It was discovered that, 74% indicated electronic media such as e-journals, e-serials, e-books and e-articles and other electronically published including CD-ROMs. 11% were in favour of the printed media that included traditional books, periodical, newspaper and other printed documents on paper and 15% preferred non-print media such as television and radio which included audio-visual materials.

The findings of the current study are similar to the findings by Wallerstein (1992) who showed that 47% of the respondents preferred e-journals and articles as the most popular kinds of electronic resources, 50% respondents preferred books and magazine, 3% respondents preferred television and radio. Similarly, Rains (2007) observed that, library users always preferred to use online-journals, e-articles, e-books, online and electronic databases due to their vastness to accommodate ideas and knowledge that can easily be compared to other documents online at once.

However, Lampe (2008) observed that, 50.9% of the people had never preferred electronic resources for health information because they were not motivated searching for health information on them hence, their number one choice was non-print media such as television and radio and other

printed materials that included newspapers and periodicals readily available to the user at that particular time of need. This is contrary to the current study that found that 74% of students preferred electronic media that included e-journals, e-books, e-articles and many other formats in the electronic media.

#### **5.1.8 Challenges faced when for seeking health information**

In addition, Students were asked to identify the challenges they faced when seeking for health information. The research findings specified that the health information found was outdated and this made it difficult for students to make correct health decisions, some believed that the health language was too technical for them to understand and access accurate information. Better still to mention, students identified information explosion as a challenge because they could not easily identify right and reliable health information from varied sources. In addition, students indicated that they lacked time to visit various sources of health information and that there was non-availability of information specifically in the library, thus students' preferred visiting health professional. From the research findings, students stated that the major challenge that they faced when seeking for health information was the availability of outdated information in the library and information explosion on the internet which made it difficult for them to make correct health decisions.

The research findings are different to Barkar (2011) who reported that, accessing relevant and comprehensive information is difficult because of the complexity in searching literature from various information resources especially from library and digital resources. The scholar further reported that users had challenges in understanding, evaluating and retrieving information from various information resources because of the technical language used.

Additionally, students were further asked to suggest possible solutions to the challenges faced when seeking for health information. Students stated that health information should be readily available in various formats and sources to enable them make required health decisions. Students further postulated that health professional should give clear guidelines, procedures or manuals to be followed to make health and sound decisions and that the language should be simple for them to easily understand and follow processes recommended by health professionals. However, the research results are different from those found by Okki and Asiru (2011) who reported that challenges faced when searching for health information can be removed by improving internet

connectivity in schools to enable students access the information easily and conducting information literacy program to improve the search skills of students.

## **5. 2 Factors affecting the access and the utilization of health information literacy**

The students were asked to identify the factors that affect the access and the utilization of health literacy and figure 6 above indicates the factors affecting the access and the utilization of health information. The research findings specified that there are two major factors namely personal and external. Students mentioned that personal factor is influenced by; Values, attitudes, beliefs, knowledge, motivation, skills, behaviour, personal capacity, biology, previous life experiences, current physical and psychological state. However, respondents also mentioned that external factors are influenced by; Income, social status, social support, education system, health system, social environment, employment and working conditions, physical environment, culture, communication systems, research, economic environment.

### **5.2.1 Factors and conditions that influence literacy rates**

Students were asked to identify factors and conditions that influence literacy rates. The research further found that health information literacy is influenced by gender the state of being male or female contributed to the factors and condition that influence health information literacy, some believed that culture and health language was too technical for them to understand and access accurate information. Furthermore, students identified education and personal ability as most influential factors that influence the access and utilization of health information literacy. The research also stated that living and working conditions influence health literacy and early childhood development influence health literacy and while 6% students mentioned aging. From the research findings, students stated that the major factors that affect the access and utilization of health information literacy was personal ability, education level and culture and health language.

## **5.3 Students Ability to Use Health Information**

In order to determine students' ability to use health information, students were rated on how they used health information using the scale of 5-1, 5 being the highest scale and 1 being the lowest. The findings showed that most of the students rated 3 on the scale were the majority who used health information and the lowest rating was 1 showing the minority students who used health information.

The ratings above can be explained as follows, three (3) implied that majority of the students had the ability to interpret, understand and use health information for various purposes in their social and health lives to make sound and confident decisions. A study by Baker, (1998) confirmed that, 13% patients were able to demonstrate health information competence and the ability to use it for many purposes,” including the demonstration of competent, ethical, and responsible use of information at personal and society level and were able to identify, access, retrieve, and apply relevant content while 35% had a challenge in reading and interpreting health instructions given. In addition, it was observed that students were able to acquire health insurance and become more knowledgeable of specific health issues and health services in their communities, and health professionals were able to become more culturally and linguistically attuned to the needs of patients. Social and health life.

Furthermore, findings established that, students rating one (1) said that they had difficulties or hardly searched and applied health information properly in their social or health lives. These findings are similar to Zond (1992) who confirmed that students with a limited use of health information were more likely to have problems following verbal or written medical advice and medication instructions or understanding health-related materials.

The research further found that most of the respondents used health information for nutrition. Some of the students used health information for preventing themselves against both communicable diseases such coughs and flu and non-communicable diseases malaria, dysentery and among others, while others stipulated that they used it for family planning as well as for maternal health. These findings are contrary to Fidzani (1998) who reported that most students were good at the use of the health Centre and were able to care for themselves at home and at the university against Sexual Transmitted Diseases and other related health diseases only. The difference could be because of the students’ low levels to use health information and lack of awareness about health information.

#### **5.4 IMPORTANCE OF HEALTH INFORMATION LITERACY**

Students were asked about what they thought would be the importance of health information literacy. From the data obtained in the field, respondents specified that a health literacy is essential for successful access to care and use of services, self-care of chronic conditions, some stated that health literacy is fundamental for maintenance of health and well or greater adherence to treatment.



The research further found that health literacy is fundamental to healthcare which requires individuals to have a more active role in decisions and managements and it further stated that health literacy leads to greater efficiency and cost savings to the health system as a whole.

The so-called motivation factors (interest, seeking activity and self-rated health) were found to be related to several HIL dimensions each. The actual seeking skills of the respondents were not tested in this study, but self-confidence regarding seeking and use of health information was assessed. Motivation is an important factor and it may not be surprising that those who are more motivated, i.e. interested in health information and more active at obtaining it, are also more confident in their ability to do so. Lack of knowledge or confidence to seek health information has been shown to be a barrier to obtaining such information (Eskola, 2005). Being more active at seeking information means that a person is more used to seeking information and hence he or she can be expected to be more confident in the own skills. One interesting finding is that those who rated their health as being good or excellent were also more confident in their abilities to find and use information. Deteriorating health is often mentioned as a reason for increased needs for information and seeking of it, but in this study those who had poor health seemed to be more discouraged to even seek and use information. Other studies have, however, found that it is not uncommon that people seek information about health matters not only because they feel unwell, but because they have a general interest in the matter according to Norman and Skinner, (2006)

Those who had the lowest level of education found it more difficult to evaluate information and they more often thought that health-related information was confusing and contradictory (Nutbeam, 2008). Also, in the current study, the female respondents were more inclined to think that they knew how to use the obtained information for the benefit of their health and a higher level of education was connected to several of the HIL dimensions. The other dimensions of HIL were not significantly related to gender, although it was found that women, like in other studies, were more interested in, and active seekers of, health information than men. In a study describing health information literacy among young adults in differing health situations, it seemed that those who were more active at seeking information were also more health information literate and showed better knowledge levels and health behaviour. In the current study, seeking activity was significantly related to the ability to decide when information is needed, to find information easily, to evaluate the obtained information, and to both learn from and use information.

Studies examining health literacy among people with different kinds of health problems have found that poor health literacy is common among patients with chronic medical conditions, such as type 2 diabetes, asthma, AIDS and hypertension (WHO, 1998). In the current study, HIL was also more advanced among those who rated their health as better. The fact that those with poor health experienced more difficulties in seeking and obtaining health information is a matter of concern, as those with poor health might need health-related information more than others. In conclusion, there seem to be some categories of students who are more vulnerable when it comes to obtaining and using health information: those with lower levels of education, those with poor health and those who are not interested to seek out information actively. To seniors who are found in any of these categories, it is important that available health-related information is understandable and can be accessed without too much effort, and providers of health and medical information, both within the healthcare context and information services, should take this into account.

## **CHAPTER SIX**

### **6.0 CONCLUSION AND RECOMMENDATIONS**

#### **6.1 Conclusion**

Health literacy makes contribution to sharing responsibilities between health care providers and those who get health care, and to better mutual understanding for both sides in the course of communication. It is seen that health literacy affects many factors such as use of internet, mobile applications, demographical, socio-cultural and psychosocial factors, general literacy level, personal features, experiences about illness, health care system. It is determined that individuals with low level health literacy are hospitalized and use emergency department more often, participate into screening programmes less often, benefit from protective health services less often, have less information about their illness and treatments and even have an increased death risk.

Health literacy demands that an individual should be able to evaluate, analyse, interpret and understand health information at hand before using it. Therefore, In relation to the research findings, most of the students second, third and fourth year are health literate. This is evident from the data obtained in the field, which indicated that the students have the ability to evaluate, interpret, understand and use health information for various purposes in their social and health lives to make sound and confident health decisions. In addition, according to the research findings, students evaluated their health information before using it by seeking for professional advice, reading further on health information at hand, seeking for parental guidance and acquiring advice from friends. Further, students evaluated health information in order to follow instructions, to know relevant health information, to timely and accurately access health information.

#### **6.2 Recommendations**

This section provides recommendations for improving health literacy among students at the University of Zambia and the nation at large. Based on the findings of the study, the following measures are recommended for efficient and effective health literacy at the University of Zambia. The following recommendations are made:

- First and foremost, the study recommends that the central administration at the University of Zambia should collaborate with Library and information science faculty to work towards making University authorities to see the reason to integrate the course 'Health literacy' into the school curriculum.
- Incentivize accountable care organizations (ACO)'s and patient centered medical homes (PCMH) to be health literate, guided by the 10 Attributes of a Health Literate Organizations. Goal: Align demands/complexity of health care with skills/abilities of users
- Health care librarians should support patients and users of health care information by developing readable materials for easy understanding.
- Health care providers should develop partnerships with public libraries,' public and private schools, and health care association so as to promote and expand health care literacy opportunities for users.
- Streamline Medicaid enrollment across states to improve consumer understanding and use.
- • Support monitoring and evaluation of the Plain Language Act of 2010 implementation. Goal: Compliance across HHS, improving the public's ability to use essential health documents
- • Support and monitor efforts to expand health literacy skills and competency of work force.
- • Understand and promote safe medication use as an issue at the intersection of health literacy and quality care. Goal: Systematic improvements in patient-centered, standardized medication labels
- • Seek opportunities to leverage technology as communication tools continue to shift to digital platform.
- • Incentivize efforts in prevention, self-care, care coordination, and quality that utilize a health literate approach.Goal: The demands/complexity of what is needed aligns with the skills/abilities of those needing information, care and services.
- Considering the results of the current study, there is a clear indication that it is essential to enhance student's skills in using, appraising and seeking health information for their well-being. Therefore, there is need for students to be properly initiated and guided by faculty into being good information resource users so that they do not depend mainly on lecture notes to accomplish their knowledge goals.

- There is need for health care librarians to carry out research in the areas of best practice so as to promote health education.
- Librarians should try as much as possible to discharge their duties and roles as a specialist in information acquisition.
- As a final point, librarians should enlighten the users of health care information on how to access quality information.

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APPENDIX 1

BUDGET

ACTIVITY	DESCRIPTION	QUANTITY	AMOUNT	TOTAL IN KWACHA
Printing of Questionnaire	Printing of questionnaires	100 copies	K4 per copy	K400
Printing and Binding of final proposal	Printing of the research final proposal and binding before submission	1 copy	K23.00	K23.00
Printing and Binding of final report	Printing and binding of the final report before its submission	1 copies	K67.00	K67.00
<b>TOTAL</b>				<b>K490.00</b>

APPENDIX 2



**THE UNIVERSITY OF ZAMBIA**

**SCHOOL OF EDUCATION DEPARTMENT OF LIBRARY AND INFORMATION  
SCIENCE**

**LIS 4014 Questionnaire**

**RESEARCH TOPIC:** The Importance of health information literacy among Unza students

Dear Respondent

We are fourth year students at the University of Zambia (UNZA), conducting a research on the research topic mentioned above.

You have been randomly selected to help in the investigation by completing this questionnaire. This research is purely academic and the information obtained will be treated or handled with maximum confidentiality and anonymity.

Instructions: Do not indicate your name on the questionnaire

Please tick the appropriate provided box to express your view e.g.

Write briefly, but precisely where appropriate e.g.....

Please Answer All Questions.



## PART A: BACKGROUND INFORMATION

Q1. What is your gender?

1. Male
2. Female

Q2. How old are you?

1. 15 – 19
2. 20 – 24
3. 25 – 29
4. 30 – 34
5. 35 – 39
6. 40 – 44
7. 45 and above

Q3. What is your year of study?

- i) First
- ii) Second
- iii) Third
- iv) Fourth
- v) Fifth
- vi) Sixth

PART B: STUDENTS HEALTH INFORMATION SEEKING BEHAVIOUR Q4. Do you know what health information literacy is?

- a) No

b) Yes

Q5. In your opinion, what is health information literacy?

.....  
.....

Q4. How did you learn about health information literacy?

- a) From friends
- b) From the clinic
- c) From the internet
- d) Through a training
- e) Other (specify).....

Q5. How do you seek health information?

- a) From health professionals
- b) The internet
- c) Friends
- d) Library
- e) Other (specify).....

Q6. Has the information been useful?

- a) No
- b) Yes

Q7. To what extent has the information acquired about health helped you?

- a) No impact
- b) Moderately
- c) Large extent

d) Less extent

Q8. How often do you use the information you have about health?

a) Not at all

b) Not often

c) Very often

Q9. How would you rate the availability of information on health on campus?

a) Poor

b) Average

c) Good

d) Excellent

Q10. Are you able to acquire health information from resources in the library?

a) Yes

b) No

#### PART C: FACTORS AFFECTING THE ACCESS AND UTILISATION OF HEALTH INFORMATION

Q11. Do you think there are factors affecting health information literacy?

i. Yes

ii. No

Q12. If yes to question 6, what are the factors affecting health information?

i. Environmental factors

ii. Socio-economic factors

iii. Demographic factors

iv. Other (specify).....

Q13. To what extent has the factors you mentioned in Q7 affected the health information?

- i. Large extent
- ii. Moderate extent
- iii. Less extent

Q14 are there benefits in assessing health information?

- i. No
- ii. Yes

Q15. If yes to Q14, in your opinion, what are the benefit(s) of assessing health information?

.....  
.....

Q15. What is the consequence(s) of not assessing health information?

.....  
.....

Q16. Have you ever used health information services at the University of Zambia?

- i. No
- ii. Yes

Q17. If yes to the above question for what purpose(s)?

.....  
.....

Q18. Were the services helpful?

- i. No
- ii. Yes

Q19. If yes to Q18, how effective were the services?

- i. Not very effective
- ii. Moderately effective
- iii. Very effective

PART D: THE IMPORTANCE OF HEALTH INFORMATION LITERACY Q20. Is health information important to students?

- i. No
- ii. Yes

Q21. If yes, what is the importance of Health information literacy to a student?

.....

# APPENDIX 3

## SPSS-Variable View

Name	Type	Width	Decimals	Label	Values	Missing	Columns	Align	Measure
QNO	Numeric	8	0	QID	None	None	8	Right	Scale
Q1	Numeric	8	0	Q1)What is your gender?	{1, Male}...	None	8	Right	Nominal
Q2	Numeric	8	0	Q2)How old are you?	{1, 15-19}...	None	8	Right	Nominal
Q3	Numeric	8	0	Q3)What is your year of study?	{1, Second}...	None	8	Right	Nominal
Q4	Numeric	8	0	Q4)How often do you seek for health information?	{1, Almost Always}...	None	8	Right	Nominal
Q5	Numeric	8	0	Q5)What are your sources of health information?	{1, Health profession}...	None	8	Right	Nominal
Q6	Numeric	8	0	Q6)Which one do you prefer most?	{1, Health profession}...	None	8	Right	Nominal
Q7	Numeric	8	0	Q7)Which of these do you think is effective?	{1, Health profession}...	None	8	Right	Nominal
Q8	Numeric	8	0	Q8)How do you receive health information?	{1, Accidentally}...	None	8	Right	Nominal
Q9	Numeric	8	0	Q9)What format do you most prefer for your health information?	{1, Electronic media}...	None	8	Right	Nominal
Q10	Numeric	8	0	Q10)Has Library and information science enhanced your health information seeking behavior?	{1, Yes}...	None	8	Right	Nominal
Q11	Numeric	8	0	Q11)Kindly Give reason/s for your answer in question 11?	None	None	9	Right	Ordinal
Q12	String	20	0	Q12)What challenges do you face when seeking for health information?	{1, Non availability of ...}	None	8	Left	Nominal
Q13	Numeric	8	0	Q13)What do you think should be done to overcome the challenge/s you have mentioned in question 12?	None	None	20	Right	Ordinal
Q14	Numeric	8	0	Q14)Do you evaluate health information?	{1, Yes}...	None	8	Right	Nominal
Q15	String	8	0	Q15)If yes to question 14, how do you evaluate health information? (Tick as many as apply)	{1, Reading further on ...}	None	8	Left	Ordinal
Q16	Numeric	8	0	Q16)In your opinion, what are the benefit (s) of assessing health information?	None	None	8	Right	Nominal
Q17	Numeric	8	0	Q17)What is the consequence (s) of not assessing health information?	None	None	20	Right	Nominal
Q18	Numeric	8	0	Q18)On a scale of 1-5, 5 being the highest scale and 1 the lowest score. How would you rate your ability ...	{1, 5}...	None	8	Right	Nominal
Q19	String	8	0	Q19)Kindly tick the purpose(s) you use health information for. (Tick as many as apply)	{1, Maternal Health}...	None	8	Left	Nominal

## SPSS-Data View

Case	QNO	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13
1	1	2	2	2	3	1	1	1	1	1	1	.	3, 4 & 5	.
2	2	2	3	2	2	1	1	1	2	3	1	.	1 & 5	.
3	3	1	2	1	4	1	1	1	2	2	1	.	4	.
4	4	2	2	1	3	1	1	1	2	1	1	.	3 & 4	.
5	5	2	2	1	3	1	1	1	2	3	2	.	3	.
6	6	1	2	1	2	3	3	1	2	3	1	.	2 & 3	.
7	7	1	2	1	3	3	1	1	2	1	2	.	2,3,4 & 5	.
8	8	1	2	1	3	3	3	3	2	1	1	.	4	.
9	9	1	2	1	1	3	3	1	1	1	1	.	5	.
10	10	2	2	1	1	3	1	1	2	1	1	.	3 & 4	.
11	11	2	2	1	4	1	1	1	2	1	1	.	3	.
12	12	1	2	1	4	2	2	3	1	1	1	.	2,3 & 4	.
13	13	2	2	3	4	3	3	3	2	1	2	.	4	.
14	14	1	2	1	5	3	3	3	2	1	1	.	3, 4 & 5	.
15	15	1	2	1	1	3	3	3	2	3	1	.	3	.
16	16	2	2	3	3	1	1	1	2	2	1	.	5	.
17	17	2	2	2	4	2	2	1	2	1	2	.	1,3 & 4	.
18	18	1	2	3	2	1	1	3	2	1	1	.	1	.
19	19	2	2	3	4	2	2	3	2	1	1	.	3	.
20	20	2	2	3	3	3	3	3	2	1	2	.	1	.
21	21	2	2	3	1	3	1	1	2	1	1	.	1	.
22	22	1	3	3	3	2	1	1	2	1	1	.	3 & 5	.
23	23	1	2	3	5	1	3	5	1	1	1	.	1	.
24	24	1	2	3	5	2	3	2	2	1	1	.	2	.

