DOCUMENTATION AND ACCESS TO INFORMATION RESOURCES ON HAUSA INDIGENOUS MEDICAL PRACTICES IN STATES OF NORTHERN NIGERIA

BY

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DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE

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DECLARATION

I hereby wish to declare that, this dissertation is the product of my research effort and that it has never been presented to any university either partly or wholly for the award of higher degree. All sources of information quoted were **dully (brightly)** acknowledged in references.

…….. ……

Ahmed Aliyu Lemu Date

PhD/EDUC/02272/2006-07

CERTIFICATION

This dissertation entitled "Documentation and Access to Information Resources on Hausa Indigenous Medical Practices in States of Northern Nigeria", by Ahmed Aliyu Lemu has **met** the requirements governing the award of the degree of Doctor of Philosophy of the Postgraduate School, Ahmadu Bello University, Zaria. Thus, is hereby approved for its literary content and contribution to knowledge.

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DEDICATION

This work is dedicated to my father Alhaji Aliyu Maude and to my deceased mother Fatima, who has not lived long to enjoy the fruits of what she sowed in me.

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ABSTRACT

The study investigated documentation and access to information on Hausa Indigenous Knowledge in Medical Practices in States of Northern Nigeria. It adopted survey research method to collect the data used in analyzing the problem investigated. The population of the study comprised of traditional medical practitioners who generate the information on Hausa Indigenous Knowledge in Medical Practices, documentation agencies, research institutes and departments or units of University teaching or researching on aspects of the subject in any State of Northern Nigeria. It used questionnaires, interview and **documentary** analysis for data collection. The study discovered that the major type of knowledge generated by Hausa Indigenous Medical Practitioners was knowledge on medicinal plants and herbs as recorded in responses of 41(14.2%) respondents. It also found out that Hausa Indigenous Medical Practitioners categorized the knowledge they generated by name of plant as recorded in the responses of 72(25.0%) respondents. It established that the agency vested by law with the responsibility for documentation of information on Hausa Indigenous Knowledge in Medical Practices in Nigeria was the Nigerian Natural Medicine Development Agency (NNMDA) as revealed in the responses of 17(31.5%) respondents and the methods of providing access to information on Hausa Indigenous Knowledge in Medical Practices in States of Northern Nigeria was by publishing the information collected in books, journals, and newsletters as recorded in the responses of 10(18.5%) of the respondents. It discovered rather regrettably that no worthwhile libraries to assist the documentation centers to manage the resources in the centers. It concluded that **larger chunk** of the knowledge that was generated on Hausa Indigenous Knowledge in Medical Practices in States of Northern Nigeria remained undocumented because most of them have not been identified by the agencies documenting the knowledge. The knowledge that has not been identified includes healing arts and practices which are important components of Hausa Indigenous Medical Culture. It recommended among others the inclusion of healing arts and cultural practices in documentation of Hausa Indigenous Knowledge in Medical Practices to obtain complete knowledge in the practices. It was inline with this that the study proposed the use of a model tagged Nigerian Indigenous Knowledge in Medical Practices Information Service (NIKMEDIS) for possible adoption. The model is expected to enhance the collation, preservation, access, and dissemination of information on Indigenous Knowledge in Medical Practices with Hausa Indigenous Knowledge in Medical Practices inclusive.

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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The Hausa believed that knowledge is the salt of life; it adds taste and flavour to life. Essentially, knowledge makes one to understand his society and opportunities in the environment. It brings success and riches which can make one to lead an easy and comfortable life. It imparts experience and illuminates many paths in life. This makes the pursuit of knowledge to be important aspect of Hausa culture. In Hausa land, it is common for people to leave the comfort of their homes in search of knowledge because it is believed that knowledge gives sustenance and means of livelihood. A popular Hausa saying highlights the value of knowledge by comparing it with salt as food ingredient - "Ilmi gishirin zaman duniya." Another popular Hausa saying depicts the value of knowledge - "rashin sani ya fi dare duhu". Meaning, lack of knowledge is worse than the darkness of the night. Both sayings recognized the pursuit of knowledge as important in one's life, especially if one desires success in what he/she is involved with.

As an ethnic group Hausa is the group of people found mostly in Northwestern Republic of Nigeria and Southern Niger (Encyclopedia Britannica 2009). The common language of this group is also called Hausa. These people mostly dominate States of Northern Nigeria especially, in the Hausa towns of Bauchi, Daura, Gobir, Kano, Katsina, Rano, Zamfara, Zaria and many others towns. It was in these towns that the Hausa culture evolved, prospered and developed the capacity to innovate, nurtured and sustained its cultural practices to enable the people run their society in prosperity. Smith (1959) posits that 'Hausa' is a linguistic term that distinguishes the Hausa speaking people from other linguistic and cultural groups around it. Accordingly, Hiskett (1973) remarks that Hausa is not a tribal group rather it is a culture defined by the Hausa language as well as habitat of the areas known to be dominated by Hausa people. Thus, Hausa as a culture refers to,

anyone who speaks the Hausa language and is living in the area **occupied** by Hausa people. As a culture Hausa is rooted in social and economic interactions with various ethnic groups and cultures around it. According to Mahdi (1978) a Hausa person can be distinguished by his mode of dressing often white long sleeved robe and religion. Smith (1971) describes the traditional religion of the Hausa before the advent of Islam and Christianity to be based on pagan belief in high and distant god and [iskoki]. [Iskoki] is a Hausa word denoting spirits. However, the beliefs in [iskoki] are concepts introduced in Hausa culture by religions.

Before the advent of Islam and Christianity Hausa people worshiped spirits and other deities which brought about the relationship between the people and [iskoki]. The relationship between the people and spirits was achieved through sacrifices made by the family and initiation in a religion called [bori]. [Bori] refers to cult of spirit possession which is widely **practiced** even today in Hausa land. In [Bori] religion worship is presided over by priest called [Boka] or [bokaye]. [Boka] is a person who believed in the power of the spirits and specializes in relating with the spirits. Today, [Boka] in Hausa language refers to a person who gives medicine. However, most Hausa people are either Muslims or Christians and religion has made them to denounced most of the pagan practices of pre-Islamic and Christianity era. According to Bunza (2009) when "Islamic ideas and religion were introduced and accepted by Hausa people, it reduced the practice of worshiping the spirits and introduced them to new form of culture and educational system based on learning and other scholarly activities.

The concept of knowledge in Hausa is often called [il'mi] meaning a lifelong experience which one pursues actively and vigorously to earn a living. Equally, a popular Hausa saying outlined the difficulties in pursuit of knowledge by referring to the process as [na zangi moriyar ka da nisa]. Meaning that, the benefit of knowledge is far or distant because it does not come easily.

Hausa parent send their children to faraway places to pursue knowledge. Some children often become destitute in attempt to gain knowledge. Knowledge in Hausa is closely related to wisdom and the ultimate goal of seeking knowledge is to make one wise to acquire relevant experience on how to live profitably within the community. The process of knowledge acquisition among the Hausa requires one to be courageous, humble and hardworking. He must be diligent, obedient and respectful of his master and elders in the community. Knowledge acquisition in Hausa is targeted at preparing one to face the present and future challenges in the society. Yet, there is no curriculum as in Western knowledge system which is acquired within the confine of serene environment based on expected or predetermined outcome. In Hausa knowledge is pursue and not acquired because one is expected to assimilate and properly blend **into** the culture before he can understand what he is expected to learn. Reality in Hausa society is shaped by cultural practices and before one can understand the Hausa practices he must believe it and assimilate it before he can blend in the culture. Indigenous practices in Hausa according to Madauchi, et al... (2008) include trades and crafts such as blacksmith and iron smelting, building, butchery, farming and hunting, fishing, animal husbandry, medical practices and many other professions. Each of these practices has its separate understanding, norms and leadership. A leader of any indigenous practice is called [sarki] and that is why there are many [sarki] in Hausa. There is [sarkin fawa] meaning leader of butchers, [sarkin kogi[meaning leader of fishermen etc. Each of these professions and practices produce unique understanding of nature including aspects of medical practices.

Knowledge among Hausa communities is usually expressed in folklores, legends, language, oral history and traditions, as well as in religious practices. In Hausa the person who teaches others the knowledge they do not have is called [malam], which literary translates as teacher. Accordingly, Wall (1988) refers to “malam” as the Qur’anic scholar or a medical practitioner whom through his experience has acquired the teachings of vast areas of knowledge. This gives him the ability to

uncover secrets, [asiri] of knowledge, which increases his spiritual powers. Malam serve as counselors, diviners, astrologers, fortune-tellers, spiritual advisers, pharmacists, and physicians. The secret they possess is kept in Kundi which Bunza (2007) described as a "book containing small sheets of paper, like a pocket dictionary of some important materials." It also represents the traditional technique of preserving medicinal or magical treatise or charms." Many Hausa scholars in States of Northern Nigeria maintain "kundi" as record of their secrets charms. The organization of the content of the kundi is not following any modern standard of documentation hence, the method is unconventional. The use of unconventional procedures in documentation of the kundi often **makes** retrieval of information difficult. As **a** result of this the content of many such "Kundi" are at the risk of being lost. In this case, proper documentation of the content of the "Kundi" is required to preserve the knowledge in the "Kundi" for present and future use. "Malam," therefore, occupies an important position within Hausa society.

Conceptually, Hausa Indigenous Knowledge could be seen as the set of practices and skills maintained by the culture. This form of knowledge according to Christian (2009) is unwritten and exists in the minds of the local people. It is transmitted orally from one generation to another as it plays significant role in the lifestyle of the members of the community. It is an essential resource for human development process, as it is used to form the basis for decisions making pertaining food security, human and animal health, education, natural resource management and other vital community activities. It forms an integral part of the culture and history of communities in Africa hence, it is an asset in the efforts of communities to gain control over their own lives. He added further that one of the best modern approaches to preservation of Indigenous Knowledge is documentation of the knowledge in some permanent form. In addition, documentation and access to Indigenous Knowledge will provide information resources for research and innovation. However, he concluded that the problems in documentation includes the absence of collaborative efforts by

government agencies engaged in documentation of Indigenous Knowledge, the ability of communities to claim ownership and integrity of their knowledge to sustain the future of their knowledge.

Documentation of Indigenous Knowledge is supposed to include repackaging and representation of the knowledge in a form that can facilitate its identification and organization for effective use. To adequately undertake documentation of Indigenous Knowledge, the language of the people, system of naming or classifying things and other resource being used including practices, rituals, spiritualities and religion must be considered. Hausa Indigenous Knowledge in Medical Practice consists of the procedures, know-how and skills in handling diseases and medical problems common to the Hausa communities. This form of knowledge and skill is often not recorded, although there are some families in Hausaland that have their knowledge recorded in "kundi" or manuscript form. These need to be identified and described in order to make the content known to others. The essence of documentation is to organize information resources in a way that will facilitate access to it, and make storage of the information easier using the acceptable medium that can ensure future availability. Documentation provides efficient means of retrieving information and always striving to ensure that the information is used. Therefore, documentation is undertaken to ensure identification, arrangement or organization, availability, access and use of information. Buckland (2006) added that documentation is essentially undertaken to among others provide "uniform practice" in organization and arrangement of knowledge through controlling and co-coordinating information production in the society and to reduce the problem of documentary overload. It is also undertaken to coordinate and encourage access to information by guaranteeing the availability of information in libraries in order to facilitate scholarly communication. These mean that documentation of Hausa Indigenous Knowledge in Medical Practices is supposed to

achieve efficient management of the knowledge in Nigeria by ensuring proper organization and access to it.

1.2 Statement of the Problem

There are many ethnic groups and cultures in Nigeria with each representing unique practices from the other. Despite the large number of Indigenous Practices in the country, it has not been possible for documentation centers in the country to successfully organize the documentations of the different knowledge practices existing. Probably this could be as the result of non recognition of the relevance of the knowledge in the country, or that the documentation centers in the country lacked the capacity to organize the documentation of information on Indigenous Knowledge. Perhaps, it could also be that no value is seen in documenting Indigenous Knowledge because the needs of the people have been taken care of by Western knowledge. Western values have for long been in conflict with African values and the source of this conflict is domination justified by reasons of colonialism which placed Western Knowledge as superior over African Indigenous Knowledge. Mlambo (2006) posited that "Western Science, capitalism and other values and practices of the West not only led to the domination of the African continent by the West but also to its marginalization in terms of economic development and participation in the global knowledge community." Thus, documentation of Indigenous Knowledge would pave the way for Africans to develop the capacity for knowledge creation, and other understanding beneficial to the society. For instance, famers in Africa can use knowledge of weather forecast to say when there will be rain; traditional medical practitioners can use knowledge to cure ailments and give counseling to patients. Africans can use their knowledge to govern themselves and trade with their neighbours in peace. Yet, the knowledge they possess is not being used because it is not accessible.

African Indigenous Knowledge can be used in resolving current developmental problems. For example, the United Nations (UN) and its organs such as UNESCO, World Health Organization (WHO) and the World Bank have since recognized the place and relevance of Indigenous Knowledge in development and have been advocating for its use in modern practices. Moreover, it was due to the recognition of the value and relevance of Indigenous Knowledge that the UN adopted Agenda 21 of the Rio Earth Summit to cover indigenous practices and knowledge in natural resources, environmental management and healthcare services (UN: 1992). Similarly, De Cuellar (2000) maintained that the modern challenge to humanity is to adopt new ways of thinking, new ways of acting, new ways of organizing itself in society, in short new ways of living. According to him the new way is in the use of Indigenous Knowledge to promote the paths of development. To this end, documentation of Indigenous Knowledge in Nigeria is important because it plays important role in identifying Indigenous Practices that are useful, with the view to make the knowledge accessible so that all can benefit. In addition, Indigenous Knowledge in Medical Practices is gaining attention because it has value in solving health related problems of many communities in the world. Tilburt and Kaptchuk (2008) reported that in China, traditional herbal medicine played a prominent role in the efforts to contain and treat of Severe Acute Respiratory Syndrome (SARS). They also noted that 80% of African populations use some form of traditional herbal medicine. The worldwide annual market for these products approaches US$ 60 billion. This resulted in worldwide interest among countries and industries on investment in Indigenous medicines where industries are investing millions of dollars on promising medicinal herbs and novel chemical compounds. This suggests the need to document and make accessible the knowledge with a view to enhance its use in healthcare delivery services so as to improve the life and living standard of the people.

However, preliminary investigations conducted by the researcher revealed that not all aspects of Hausa Indigenous Knowledge in Medical Practices is documented by the institutions mandated to document the practices in Nigeria. It was observed from the publications of some of the institutions that most of the documentations produced were on medicinal plants and herbs that have economic benefits to pharmaceutical organizations. The question now is what could then be the purpose of documenting Hausa Indigenous Knowledge in Medical Practices in Nigeria? Documentation of information on Hausa Indigenous Knowledge in Medical Practice in Nigeria is supposed to ensure the building of a collection of knowledge and to organize the knowledge in a way that can facilitate access to it by many people in the society. Moreover, to make effective use of Hausa Indigenous Knowledge in medical practice, it has to be made accessible. Access to Hausa Indigenous Knowledge in medical practices may be possible through documentation and use of appropriate means of sharing, distributing and transmitting the knowledge in the society. Olowu (2004) opines that access to information in modern society is more challenging as it has gone beyond the scope of individual organization because it has been compounded by so many barriers – natural and artificial. However, generally these barriers can be removed by documenting the information to ensure its availability and subsequent access in libraries and other information centers.

Documentation of Hausa Indigenous Knowledge in Medical Practices is required in Nigeria to help to develop the capacity to improve Traditional Medical Practices and to acquire knowledge on local plants and herbs used in the development of drugs for treatment of many ailments. It is for this that many countries resolved to enact policies and legislations to strengthen the identification, access, and protection of traditional medical practices. According to Emcee (2009) the Nigerian Natural Medicine Development Agency (NNMDA) was an agency of the Federal Ministry of

Science and Technology which was established with the mandate to research, develop, collate, document and promote Nigeria Traditional Health Care System, and to integrate same into the national health care delivery system and to contribute to the socio-economic development of the country. The question is how far have documentation Agencies in Nigeria gone in realizing this objective? Perhaps the Agencies are yet to achieve much in this direction.

The International Federation of Library Association (2009) in a statement reported that it had produced guidelines that will help libraries and documentation centers to effectively manage indigenous knowledge. The guidelines pointed out that in order to manage Indigenous Knowledge there is the need to engage libraries and documentation centers in the following activities:

- Collating, preserving and disseminating Indigenous Knowledge,
- Popularizing the value, contribution, and importance of Indigenous Knowledge,
- Embarking on awareness campaign on protection of Indigenous Knowledge against exploitation,
- Involving the local communities in the documentation of Indigenous Knowledge and sharing the knowledge for people to appreciate its contributions,
- Encouraging the observance of the principles of intellectual property in use of Indigenous Knowledge and the products derived from it. (IFLA Newsletter 42:2009)

This assumes that implementing the IFLA recommendations will provide the framework for documentation and access to Information on Hausa Indigenous Knowledge in Medical Practices in Nigeria. It will also produce the blue prints on how to provide access to the knowledge in Nigeria and produce how to achieve sound management of Indigenous Knowledge including Hausa Indigenous Knowledge in medical practices in Nigeria as the recommendations could help to popularize the contributions of Hausa in medical practices. The IFLA recommendations could also

provide the framework for utilization of Indigenous Knowledge in Hausa Medical Practices in the country.

1.3 Research Questions

The following research questions will be answered:

1 What types of information generated on Hausa Indigenous Knowledge in Medical Practices by Hausa people in States of Northern Nigeria?

2 What is the level of demand of the information generated on Hausa Indigenous Knowledge in Medical Practices in States of Northern Nigeria?

3 Which methods are used by Hausa Indigenous Medical Practitioners in States of Northern Nigeria to categorize the knowledge they generated on Hausa Indigenous Knowledge in Medical Practices?

4 Which institutions are documenting Hausa Indigenous Knowledge in Medical Practices in States of Northern Nigeria?

5 What methods are used by the institutions concerned with documentation of information on Hausa Indigenous Knowledge in medical practice in making the knowledge accessible in States of Northern Nigeria?

6 What types of Information services are derived by libraries from the documented information on Hausa Indigenous Knowledge in medical practice in States of Northern Nigeria?

7 What methods are used for the promotion of Hausa indigenous medicinal products in States of Northern Nigeria?

1.4 Research Hypotheses

The following research hypotheses were tested:

1) There is no significant relationship between type of information on Hausa Indigenous Knowledge in medical practices generated by Hausa people in States of Northern Nigeria and level of demand of information on Hausa Indigenous Knowledge in Medical Practices in libraries in States of Northern Nigeria.
2) There is no significant difference between methods used by Hausa Indigenous Medical Practitioners in categorizing the knowledge they generated and methods of categorization used by institutions documenting information on Hausa Indigenous Knowledge in Medical Practice in States of Northern Nigeria.
3) There is no significant relationship between the documentations produced by institutions documenting Hausa Indigenous Knowledge in Medical Practices and methods of providing access to the documented information in States of Northern Nigeria.
4) There is no significant relationship between types of information services derived by libraries from the documentations produced by institutions documenting Hausa Indigenous Knowledge in Medical Practices and types of information generated by Hausa Indigenous Medical Practitioners in States of Northern Nigeria.

1.5 Objectives of the Study

The objectives of the study are to:

1. Find out the types of information generated on Hausa Indigenous Knowledge in Medical Practices by Hausa people in States of Northern Nigeria.
2. Determine the level of demand of information generated on Hausa Indigenous Knowledge in Medical Practices in States of Northern Nigeria.

3. Establish the methods being used by Hausa Indigenous Medical Practitioners in States of Northern Nigeria to categorize the knowledge they generated on Hausa Indigenous Knowledge in Medical Practices.
4. Find out the institutions which are documenting Hausa Indigenous Knowledge in Medical Practices in States of Northern Nigeria.
5. Assess the methods used by the institutions concerned with documentation of information on Hausa Indigenous Knowledge in medical practice in making the knowledge accessible in States of Northern Nigeria.
6. Establish the types of information services that can be derived by libraries from the documented information on Hausa Indigenous Knowledge in medical practice in States of Northern Nigeria.
7. Assess the methods used for the promotion of Hausa Indigenous Medicinal Products in States of Northern Nigeria.
8. Establish the relationship between type of information on Hausa Indigenous Knowledge in medical practices generated by Hausa people in States of Northern Nigeria and level of demand on types of information on Hausa Indigenous Knowledge in medical practices in libraries in States of Northern Nigeria.
9. Find out the differences between methods used by Hausa Indigenous Medical practitioners in categorizing the knowledge they generated on Hausa Indigenous Knowledge in medical practices and methods of categorization used by institutions concerned with documentation of information on Hausa Indigenous Knowledge in medical practice in States of Northern Nigeria.

10. Assess the relationship between the documentations produced by institutions documenting Hausa Indigenous Knowledge in Medical Practices and methods of providing access to the documented information in States of Northern Nigeria.

11. Establish the relationship between types of information services derived by libraries from the documentations produced by institutions documenting Hausa Indigenous Knowledge in Medical Practices and types of information generated by Hausa Indigenous Medical Practitioners in States of Northern Nigeria.

1.6 Significance of the Study

The broad objective of this study is to enhance the documentation and access to information resources and services on Hausa Indigenous Knowledge in medical practices. Therefore, the findings from the study can be used by information professional in Nigeria and beyond to derive services from the local knowledge existing in their communities for the benefit of the local communities and anyone who may have interest in it. The study will also provide a framework of action on acquisition and management of Hausa Indigenous Knowledge resources and services for the benefit of libraries and archives in Nigeria. In addition, many of the local communities in Nigeria are not much affected by public library services existing in the country because the libraries are sited in urban areas far away from their villages. Similarly, the study can be used further to help to increase the information resources available in public libraries in States of Northern Nigeria. The work would further add value to the relevance of Hausa Indigenous Knowledge Resources in Medical Practices in research and development of ideas. This study would extend the frontiers of the Indigenous Knowledge base of the Hausa society to enable it participate in the global knowledge documentation and management.

1.7 Scope of the Study

The study focused on Hausa Indigenous Knowledge in medical practices within the states in the States of Northern Nigeria. Thus, all aspects of the subject relating to documentation and access to information on Hausa Indigenous Knowledge in medical practices within the states in the States of Northern Nigeria were covered. The states that made up the Hausa states included the areas incorporating the seven traditional Hausa states. According to Encyclopedia Britannica (2010) the seven true Hausa states, or Hausa Bakwai are Biram, Daura, Gobir, Kano, Katsina, Rano, and Zaria [Zazzau] and their seven outlying satellites, or Banza Bakwai are Zamfara, Kebbi, Yauri, Gwari, Nupe, and Kororofa [Jukun]. These areas are the seven traditional independent related states established by [Habe] in States of Northern Nigeria. In the present administrative set up in Nigeria, this translates into five states as follows: Daura and Katsina are in the present Katsina state, Biram is situated between Zamfara and Sokoto states, and Gobir is in the present Zamfara state. Others are Kano and Rano which are situated within the present Kano state and Zaria is in Kaduna state. Therefore, the study area consisted of Katsina, Kano, Kaduna, Sokoto and Zamfara states.

In **an** attempt to achieve the objectives, of the study, the activities of universities, research institutes and libraries on the subject of the study were used to determine the extent to which information on the subject is produced or acquired and method of making the information accessible. Thus, both sources of Hausa medical practices, Hausa medical anthropology and Hausa cultural practices and general history were examined.

Operational Definition of Terms Used in the Study

The following terms were defined by the study as follows:

Access: Process of getting on to something.

Accessibility: Ability of a piece of information to be found.

Asiri: Secret of medicine.

Boka: A soothsayer or wizard who often serves as traditional medical practitioner.

Bori: A form of supposed devil-possession.

Document: Record of something in writing filmed, pictured or audio recorded form.

Documentation Agency: Agency of Government charged with responsibility for documenting Indigenous Knowledge.

Documentation: It is the process of providing written description or information about information resources with the view to manage or control accessibility to information.

Hausa Indigenous Knowledge in Medical Practices: It is the set of practices and skills maintained by Hausa the culture which **includes** folklores, legends, language, oral history and traditions, as well as in religious practices.

Hausa: A person who speaks the Hausa language.

Indigenous Knowledge: Local knowledge systems embedded in the cultures and traditions of regional, indigenous, or local communities.

Information Generation: The act of creating information.

Iska: Spirit which are used for medical cures.

Iskoki: Spirits.

Kundi: Record or diary recording the secrets of charms and medical knowledge.

Malam: Refers to the Qur'anic scholar or a medical practitioner whom through his education was able to acquire the teachings of vast areas of knowledge.

Promotion of Medicinal Products: Advertising medicinal products for human health.

Repository: It is a place for storage of information for safety or preservation.

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CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.3 Introduction

The focus of this chapter is to review previous studies that are related to the present study in order to compare the previous studies with the present study. Hence, the chapter reviewed studies on theoretical, conceptual and practical studies in the area of the study. It also reviewed studies on the efforts made in other countries to document Indigenous knowledge with the view to making the knowledge accessible. For these, the chapter is presented under the following sub – headings:

2.13 History of Hausa People

2.14 Concept of Indigenous Knowledge

2.15 Role of Indigenous Knowledge in Development

2.16 Management of Indigenous Knowledge in Nigeria

2.17 Documentation of Information on Indigenous Knowledge in Nigeria

2.18 Generation of Information on Indigenous Knowledge Among Indigenous Communities in Nigeria

2.19 Acquisition of Information on Indigenous Knowledge for Documentation by Institutions Documenting Indigenous Knowledge in Nigeria.

2.20 Access to Information on Indigenous Knowledge in Nigeria

2.21 Storage and Preservation of Information on Indigenous Knowledge in Nigeria

2.22 Services derived by libraries from Information Generated on Indigenous Knowledge in Nigeria

2.23 Adoption of Information and Communication Technology (ICT) in Documentation, Dissemination and Access to Information on Indigenous knowledge in Nigeria

2.24 Summary of the Review

2.1 History of Hausa People

Origin of Hausa people can be traced to the early settlers of Lake Chad basin. According to Sutton (1979) Hausa people are the descendants of the early settlers of Lake Chad basin. The people presently, occupy the States of Northern Nigerian towns of Daura, Kano, and other towns like Gobir, Katsina, Kebbi, Zamfara, and Zazzau. This view was accepted by Mahdi (1978) who maintained that the people have no other place of origin than these towns because there is nothing to suggest that it was not in these towns that both Hausa language and ethnicity first developed. He defined Hausa as the traditional inhabitants of these areas (Hausaland) as well as, the collective name of the people who speak the Hausa language. This implies that Hausa people can be identified by their language as well as the town they come from. Conversely, Ochunu (2008) maintained that Hausa is more than a language, "it is a category that has become synonymous to and correlates with certain ways of acting, expressing oneself, making a living, and worshipping God." Thus, Hausa carries with it cultural, economic and political connotations because apart from being the language of an ethnic group, it is also the language of trade and social contact in many West African countries. Mazrui (1998) described Hausa as a cosmopolitan language which is being used throughout most of West Africa as a second language and as a lingua franca in most of States of Northern Nigeria.

Hausa, [Hausawa] and [kasar Hausa] denote the language, the people, and the land of the Hausa respectively. Accordingly Hiskett (1960) noted that these terms were believed to be coined by leaders of the Fulani Jihad who, before and during the Jihad collectively referred to the different Hausa states as land of the bad Muslims. Similarly, Ochunu (2008) added that for easy identification of the different dialects of Hausa the Fulani referred to the citizens of the various Hausa states by their state of origin, e.g [Katsinawa], for those from Katsina and [Katsinanci], form

of Hausa dialect from Katsina; [Kanawa] for those people from Kano and [Kananci] Kano dialect; [Gobirawa] for those from Gobir and [Gobiranci] Gobir dialect, [Zazzagawa] for those from Zaria and [Zazzaganci], Zaria dialect, and [Zamfarawa] for those from Zamfara. In addition, Hausa people often called themselves [Hausawa] meaning Hausa people, or [bahaushe] meaning Hausa person. Up to today, the people bear the name of their town or village.

Even though Hausa people share the same language and cultural practices, there are some among them who do not accept to be called Hausawa because of religious differences. This category of Hausa people in Nigeria according to Mahdi (1978) are called [Maguzawa] while those in Niger are known as [azna] or [arna] which translate into pagan Hausa. The name [maguzawa] or [arna] as the case may be emerged with the coming of Islam to Hausaland. Prior to the spread of Islam into Hausa states, Hausa people practiced varieties of pagan beliefs and rituals. Suleiman (2005) identified the pagan practices to include the recognition of a high or distant god [ubangiji] originating from supernatural forces [iskoki] which directly control the lives of the men and women they come in contact with. Still some Hausa people believed that possession of any form of power or knowledge is ascribed to contact with the [iskoki]. This belief is common among some Hausa indigenous medical practitioners and farmers who ascribed knowledge in natural resources such as agricultural land, forests, rivers, iron ore and salt deposits to be in the custody of **some** of these [iskoki]. Thus, harmony with the [iskoki] is taken to be essential for good harvest and for such pursuits as health and wellness. Many professionals and business men performed sacrifices and rituals, around stones, trees or places believed to be the abode of the so called [iskoki]. In order to maintain harmony with the [iska] and to be prosperous one is expected to make sacrifice to the [iska]. The sacrifice is often supervised and conducted by [bokaye] who served as intermediaries between the [iska] and the people. Other Hausa pagan practices include [Bori] which is a traditional

animistic religion which involves spiritual possession**; it** is an aspect of the traditional [Maguzawa] religious tradition, which was before the jihad was once a state religion. [Bori] refers to spiritual forces that reside in physical things, and often relate to practice of medicine. The Bori religion is both an institution to control supernatural forces, it is characterized by ritual, dance and music to control spirits and to heal people afflicted by various diseases. The bori ritual survived the reforms introduced by Islam. It is still being practiced by many Hausa people in West Africa. Cooper (1997) reported that, in Maradi in Niger republic [bori], plays important role in the establishment and preservation of traditional institutions especially; institution of medical culture. Last (1991) described [bori] as an important Indigenous practice which is being used to determine the abode of spirits, to decide where or not to build a house or set a farm. He maintained that power exists in certain places and such places may be used as sacred places for swearing oaths in disputes requiring mediation. In most cases trees or clumps of trees are used as shrines [gunki] of specific medical healers where certain rituals take place. He further added that healing in [bori] rituals is usually done inside a house or sometimes inside a room. He maintained that real Hausa power is unlike the western power. The Hausa power is unseen, unnoticed, hence hard to identify where exactly it is being housed. He concluded that, power places are real in Hausaland because the Hausa people know about this extra dimensional geography, and thus, the knowledge of this should not be maligned as being unusual, especially as it may still have relevance in the society. Hence such knowledge needs to be documented on record before it is lost. The knowledge may be important to the future generations of Nigerians and other foreigners who may be interested in not only Hausa Indigenous Knowledge but also Hausa culture.

The nineteenth century Sokoto Jihad affected Hausa society in many ways. Hiskett (1973) identified that the jihad disapproved many pagan customs and introduced a complete culture based

on teaching of Islam among the Hausa people. Today, the Islamic religion is an important aspect of the identity of most Hausa people as many of the Hausa are Muslims. The religion requires the follower to observe the culture of the religious teachings in conduct, social interactions, food and drinks, education, health, and every aspect of living. Islam introduced among Hausa states cultural revival which resulted in renewed interest in the search for Islamic religious knowledge and knowledge of politics, sociology, commerce, health and many other knowledge areas related to human endeavor. Islam had helped to entrenched Islamic religious teachings and abolished institutions which were connected to pagan beliefs. Thus, in all parts of the Hausa states pagan practices including [bori] were discouraged or largely totally eliminated.

When colonization came it affected Hausa Indigenous practices in many ways by introducing new concepts in Hausa indigenous practices to introduce the people to western knowledge practices. Aikenhead and Ogawa (2007) maintained that "colonization imposed European knowledge system which emphasized the culture of Western science at the detriment of Indigenous values, beliefs, expectations, and technologies." This means that colonization established believe in foreign knowledge system which is predicated on the authority of empirical evidence, as opposed to indigenous knowledge which is based on practical knowledge. This move was spearheaded by the British Royal Society established to institute new social order in all British protectorates and to emphasize Eurocentric knowledge over Indigenous knowledge. Kawada (2001) defined Eurocentric as "culture of Western science which emphasizes western shared norms, values, beliefs, expectations, technologies, and conventional actions".

Modern historical processes and development have affected Hausa cultural practices including Medical Practices. It is therefore not surprising to find information on Hausa Indigenous knowledge in medical practices not properly organized in Nigeria. Yet, Hausa Indigenous knowledge in

Medical Practice is not only about tradition and community wellbeing; but; it is also about culture, education and enlightenment. Therefore, as long as the people continue to exist the knowledge is relevant. Moreover, according to Masquelier (1994) "knowledge is the pervasive ideal and the most convenient label for a society that dream of achieving prosperity and prestige." However, due to conflict with western cultures, Hausa indigenous knowledge in medical practices is allowed to perish due to lack of concerted effort to properly manage the knowledge in our information repositories in Nigeria. The abandoning of indigenous practices may be one of the cause of the under development of many communities in Nigeria. Thus, to achieve any meaningful development, there is the need to manage Indigenous knowledge in a way that the practices can be integrated with modern practices to bring development and to preserve the knowledge for the future generations.

2.2 Concept of Indigenous Knowledge

There are different concepts of Indigenous knowledge and the differences may be due to differences in culture and motivation of scholars who conceived the term. As the result of the differences in the conception of the term various assumptions; metaphysics, epistemologies, and values of Indigenous knowledge have been produced. Accordingly Battiste and Henderson (2000) defined the term Indigenous to mean "the descendents of the first people to inhabit a locality." By this Indigenous people can be collectively identified as belonging to a particular group or locality and can be recognized by other groups or by state authorities as being distinct due to their origin. The group can also strive to perpetuate their cultural distinctiveness in spite of influence of modernization and suppression by other groups to assimilate in to their cultures. Furthermore, Niezen (2003) added that people may be called Indigenous people because they have collective experiences of oppression, marginalization, economic servitude, and socio-cultural problems.

Western countries have for years being marginalizing Africa to the level that anything from Africa is undervalued, made to become underprivileged and underrepresented. This view was echoed by Ocholla (2007) who identified that today, the more a community possesses or practices Indigenous knowledge, the more the community is marginalized or stigmatized. This is the view of Western scholars who believed that anything they cannot understand is falsehood and magical and should be suppressed or oppressed and marginalized to prevent it from spreading. However, what is important about most Indigenous knowledge is they represent culture and that it is the culture of the people that can be used in the development of local communities. Thus, indigenous knowledge is still relevant in the modern times and it should be documented to enhance its access to the people that may need it.

There are many categorizations of Indigenous people including what McKinley (2007) identified as follows: (1) settlers who become numerically dominant in an area; (2) people assimilated or acculturated by colonial legacy, and (3) displaced people who hold on to their cultural identity. This means that indigenous people are everywhere and they can best be identified by their culture rather than by the condition of their living or social problems existing in their community. It means also that culture is the dominant indicator of being Indigenous as each culture conceives its own knowledge based on the conditions and opportunities existing around it. However, it means in documentation of Hausa indigenous knowledge in medical practices in Nigeria the identity of the group must be considered so as to capture the real knowledge.

There are various definitions of knowledge which came about as the result of cultural differences among many different cultures existing in the world. However, Aikenhead and Ogawa (2007) opined that the differences in meaning of knowledge are as the result of non coverage of the term by most Indigenous languages. They maintained that:

> "When translated back into English, the corresponding Indigenous expression often comes out something like ways of living. Therefore, the English expression of Indigenous knowledge obviously conveys, like a Trojan horse, a Eurocentric noun-oriented epistemology. In this Eurocentric worldview, knowledge (as a noun) is something that can be given, accumulated, banked, and assessed by paper and pencil examinations. In short, knowledge within a Eurocentric worldview; is an entity separate from the knower," (Aikenhead and Ogawa 2007).

Today many sources of information in our repositories contained definition of knowledge based on European conceptions. The Hausa referred to knowledge as [il'mi] meaning a lifelong experience which one pursues actively and vigorously earn to make a living. Equally, a popular Hausa saying outlined the difficulties in pursuit of knowledge by referring to the process of acquiring knowledge as [na zangi moriyar ka da nisa]. Meaning that, the benefit of knowledge is far or distant because it does not come easily. Hausa parent send their children to faraway places to pursue knowledge. Equally, Alhassan et al… (1988) added that knowledge in Hausa is closely related to wisdom as its ultimate goal is to make one wise to acquire relevant experience on how to live profitably within the community. They maintained that knowledge gives one the opportunity to earn comfortable living standard, gain admiration, and acceptance in the community. Hausa believed that to earn knowledge one has to undergo hardship of deprivation, love and affection of the family and kinsmen. Some children often become destitute in the process to gain knowledge. The process of knowledge acquisition among the Hausa also requires one to be courageous, humble and hardworking. He must be diligent, obedient and responsible to his master and elders in the community before he can be given the right knowledge. This is because knowledge acquisition in Hausa is targeted at preparing one to face the present and future challenges in the society. Yet, there

is no curriculum to guide the teaching and learning process as in Western knowledge system which is acquired within the confine of serene environment based on expected or predetermined outcome.

Another difference in conception of knowledge was given by Cajete (2000) who sees knowledge as being synonymous to "coming to know" and Peat (1994) qualified this definition by adding adjective "knowing" to it. This means knowledge that knowledge is the same as "coming to knowing." These definitions are indicating that knowledge is a journey toward wisdom as opposed to discovery as it is in western knowledge. In Hausa culture, knowledge is pursue and not acquired because one is expected to assimilate and blend in to the culture before he can understand what he is expected to learn.

Reality in Hausa society is shaped by their practices and before one can understand the Hausa practices he must believe it, assimilate it to blend in the culture. Practices in Hausa according to Madauchi, et al… (2008) include trades and crafts such as blacksmith and iron smelting, building, butchery, farming and hunting, fishing, animal husbandry and many other professions. Each of these practices has its separate understanding, norms and leadership. A leader of anything in Hausa is called [sarki] and that is why there are many [sarki] in Hausa. There is [sarkin fawa] (leader of butchers), [sarkin kogi] (leader of fishermen) and many others for each practice in Hausa culture. Each of these professions and practices produce unique understanding of nature including aspects of medical practices. Thus, documentation of Hausa Indigenous knowledge in medical practices in Nigeria need to identify the different Hausa medical practices with the view to properly include them in the documentation of the knowledge in the country.

The knowledge in a culture is being referred to as Indigenous because it is created by a group of people to serve specific context and need within their community. This type of knowledge has been defined by the International Council for Science (2002) as a "body of knowledge, know-how, practices and representations maintained and developed by people with extended histories of

interaction with the natural environment." Conversely, it implies that any set of understanding, interpretation and meaning including the use of language, method of naming and classifying things, materials use, practices, rituals and spiritualities, and religious beliefs of the people may be regarded as Indigenous knowledge. Thus, Indigenous knowledge covers aspect of specific social settings and other relationships within a human settlement. Human settlement is characterized by many interactions expressed in the relationships existing among the people and in the relationship between the people and the surroundings. Social interactions within a society is defined by the role perform by each member of the society. Each level of role performance by the member of a society represents distinct practice which is supposed to be observed by the group. Practices in Hausa land are based on understanding of what each member of the society is expected to achieve for the group. Practices in traditional societies are express in actions or words and often the practices are forgotten or lost because they are not documented. The format in which societies express their knowledge can be used as basis of communication and documentation of their knowledge. In this sense, it is important to identify the medium of communication that is common to Hausa Indigenous knowledge in medical practices so as to document the knowledge in the format acceptable to the culture.

The sources of knowledge among many indigenous people include trees, rocks, rivers, clouds, rain, birds and other animals in the bush. This resulted in the historical analysis of the concepts of nature to produce metaphysical view of indigenous knowledge. According to Kawagley et al … (1998) Indigenous people establish relationships with all objects around their environment because they believe that since everything is animate then, everything conveys knowledge. This is not possible in western knowledge which only categorized things as living and non living or animate and inanimate. Indigenous people believed that there are interrelationships between spirit of all living things that has life and human beings. This belief fitted with the metaphysical

spirituality described by Ermine (1995) who posits that knowledge is compose of an inner space (the spiritual world) and an outer space, (the physical world); both of which interact holistically. This implies that people who seek to understand Hausa indigenous knowledge in medical practices should study the tangible knowledge use in the practice. Ermine (1995) further explained that understanding the physical world may not shade light in the intricacies of the inner space; it is only through journeys into the metaphysical world that we can fully understand the natural world. Existence only makes sense when physical and spiritual experiences are unified. This was expressed by Western knowledge in the analysis of the fifth element in study of ecology, which incorporates biological, chemical, and physical systems into one. However, the fifth element is often ignored by ecologists in their studies which according to Aikenhead and Ogawa (2007) results in a science that ignores the interaction and needs of societies and cultures. Nature simultaneously interacts with physical and spiritual world to give meaning to the concept of reality. Thus, when the spiritual view is removed the discourse on Indigenous knowledge will reflect Western views which aims at removing knowledge from culture. Documentation and access to Hausa Indigenous knowledge in medical practices should consider that all objects are sources of information and knowledge. This may make the documentation centers in Nigeria to acquire the relevant information on Hausa Indigenous knowledge in medical practices.

Holistic conception of Indigenous knowledge sees it as one. This concept is propagated by Agrawal (1995) was against the attempt to categorize Indigenous knowledge because such categorization is ridiculous. He believed that "it is more sensible to talk of multiple domains and types of knowledge with opposing logics and epistemologies than classifying knowledge." Western knowledge separates knowledge in to several categories like science, art, religion, philosophy, or aesthetics, whereas, such categorization does not exist in Indigenous knowledge. Thus, Giroux (1992) explained further that holism in conception of knowledge sought ''harmony and balance in

the interrelationships existing between man and his environment." Thus, disturbing these interrelationships in documentation of Hausa indigenous knowledge in medical practices in Nigeria may create disharmony as it will result in splitting up and segregating the knowledge in to various categories. Holistic epistemology of indigenous knowledge challenges the methods in Western sciences, which reproduces knowledge by breaking down disciplines. However, Hausa Indigenous knowledge in medical practices may be categorized based on unique practices of the people because most recent Indigenous Knowledge Management Systems accepted this standard in organizing knowledge. Moreover such arrangement may be sufficient in organizing information on Hausa Indigenous knowledge in medical practices in Nigerian.

Indigenous knowledge is a relational knowledge because it symbolizes the relationship with all other things in the world. Bear (2000) explains the relationship existing between nature where he states that "if everything has spirit and knowledge; then all are like me. If all are like me, then all are my relations." This focuses on the relationships between knowledge, people, and all of creation. McGregor (2000) adds that to acquire Indigenous knowledge one is required to "participate fully and responsibly in such relationships." This invariably implies that to document Indigenous knowledge is to understand the relationship between the knowledge creators, the user of the knowledge and value of the knowledge to the society. Understanding these may help to achieve success in management of the knowledge including its documentation in Nigeria. Michell (2005) explained further that balance is required to be maintained through achieving equilibrium between the physical, emotional, spiritual and intellectual worlds. Thus, to maintain balance in documentation of indigenous knowledge in Nigeria is to respect the relationships existing at all levels of the lifecycle of the knowledge to be documented. This can be observed by respecting the relationship between the individual, the family, community, nation, and the whole environment, with plants, animals, and the universe. Knowledge gained by observing these relationships may

establish the responsibility of indigenous knowledge holders to the community who will patronize the center. In this sense the knowledge holder may be more comfortable to pass on his knowledge to others who have formed an appropriate relationship with him. It means that to acquire Hausa Indigenous knowledge by Nigerian libraries and documentation centers such level of trust need to be cultivated between documentation centers and Indigenous knowledge holders.

The values, beliefs, and practices associated with Indigenous knowledge are recognized as being valid for today's generations. This is because the experience offer by Indigenous knowledge may provide lessons that can benefit everyone in the world. Aikenhead and Ogawa (2007) argued that is not only the perspective of the knowledge keepers that is taken into consideration, but ideas tested against views of the ancestors which are contained in the stories, songs, and dances of the group are also considered. To understand Indigenous knowledge the context and meaning attached to things by the knowledge must be understood. Therefore, in documentation of Hausa Indigenous knowledge in medical practices the language will play important role in identifying key terms to be used to organize the knowledge in libraries and documentation centers.

In this study Indigenous knowledge is seen as the construction of reality based on the way Indigenous people viewed reality and wish to lead ways of life and dwell in their environment. Reality is shaped by perception of the problems within the Indigenous community which often requires practical knowledge to solve. Munoz (2007) argued that tradition is a process of communication between generations and it is in the course of this communication that many repeated sensations originate as memories to lead to new type of understanding or experience that can be used to improve the society. Thus, the nature of Indigenous knowledge is based on what members of a society perceived as practicable knowledge. Such realities are enshrined in the cultural practices observed by members of the group to enable each member to function and to be

productive within the group. However, from the literatures it can be seen that Indigenous knowledge is set apart from Western knowledge or Eurocentric science because it has different method, epistemology and value. Thus, in documenting Indigenous knowledge the cultural and social needs as well as practical and relative value of the knowledge to the society should be considered so that relevant information on the knowledge is captured and recorded with the view to make it accessible in the society. Moreover, by documenting Hausa Indigenous Knowledge in Medical Practices the knowledge may be improved by becoming open and accessible knowledge to benefit humanity.

2.3 Role of Indigenous Knowledge in Development

In Nigeria there are many tribes and Indigenous knowledge systems. Each of the different tribe maintained separate identity, beliefs, values, and practices. According to Munoz (2007) culture plays important role in the historical evolution of man and in the formation of societies. It helps the individual to claim his identity by allowing him to trace the different communities in which his history evolves. It also allows him to understand the history of all that is true, good and beautiful. It means that culture contributes to the development of knowledge and in the development of human society. However, modernization is eating into most of indigenous values including the values in Hausa Indigenous knowledge in medical practices. The effects of modernization on indigenous values include among others lost of indigenous knowledge. For this there is the need to document Hausa Indigenous knowledge in medical practices in Nigeria with the view to retain the knowledge in the society.

The International Council for Science - ICSU (2002) declared in a report that indigenous knowledge is useful in sustainable development. The declaration observed that “Indigenous knowledge is dynamic expressions of perceiving and understanding the world.” It represents the

needs of local communities and serves as good source of information on indigenous cultures. However, before Indigenous knowledge can be understood, accessed and use, it has to be harnessed through documentation with the view to organize, preserve, protect and promote access or use of the knowledge in the society. Kabudi quoted in, Mpofu and Miruka (2009) posited that history has identified the survival of civilizations rooted on knowledge and skills exchanges among its people to facilitate the continuity of its legacy. Where there is no proper channels of passing on knowledge to upcoming generations, traditions of the group may be lost. However, documentation of information on Hausa Indigenous knowledge in medical practices will enhance the continuation of cultural practices in Nigeria through access to the knowledge in the practices.

Indigenous knowledge is contributing to sustainable development in developing countries. Conversely, Escobar (1998) noted that indigenous knowledge represents a possible alternative to development among developing countries. He maintained that remaking of development must start by examining local knowledge. Similarly, the International Federation of Library Associations - IFLA (2012) also considered Indigenous knowledge as a tool for socio-economic development. For this it encourages libraries and documentation centers to collect, preserve, and disseminate Indigenous knowledge by publicizing the value, contribution, and importance of Indigenous knowledge to both non-indigenous and indigenous people. However, the World Commission on Environment and Development (1987) lamented the threats to traditional lifestyles by calling for action to halt the lost of traditional knowledge. It stated that today, there are many traditional lifestyles and practices under threat of modern development. Most Indigenous people have no right to participate in formulating most of the policies on development. Indeed, the rights of the people should be recognized, and it should be given priority in policy formulation on resource development. These rights can best be guaranteed through availability of information transfer mechanisms within local communities. To this end the World Bank (1998) identified information

sharing on Indigenous knowledge within and across communities as a means of enhancing cross-cultural understanding that results in fertilization of ideas to promote development. Development may be achieved from the use of local knowledge on economics, social structure and ecological changes that influence the behavior of the people within a community. In development, information on Indigenous practices may be harnessed and shared to influence the exploitation of the economic life of the society and promote the wellbeing of members of the society. Thus, access to information on Indigenous knowledge can bring positive change in a community by stimulating economic opportunities and other opportunities. Hausa Indigenous knowledge contains many understandings which can be shared to other Indigenous group to improve their living conditions. Before this can be achieved the practices in Hausa Indigenous knowledge in medical practices need to be documented and organized in Nigeria to help in Healthcare delivery services.

Due to the important role of indigenous knowledge in development, there are global initiatives among many countries to integrate Indigenous Knowledge in development. Science and Development (2005) reported that, people are becoming more aware of the value of Indigenous knowledge particularly its potential contribution to sustainable development and poverty alleviation. However, it noted that Indigenous knowledge is in danger of disappearing not only as the result of the influence of globalization, but also due to the rapid changes in technology for processing and handling information in the society. There is also lack of facilities for executing the process of documentation including capturing, assessment, validation, protection and dissemination of such knowledge in developing countries. This means that there is dearth of facilities required in management of Indigenous knowledge in Nigeria. The little resources available are being used to capture, record, organize, preserve and make accessible the knowledge in Nigeria. Documentation Indigenous knowledge in Nigeria may guarantee the validity of the knowledge as a useful knowledge that has been contributing to sustainable development of societies. It is in the realization

of the value of such knowledge in development that the United Nations - UN (1992) proclaims 1993 as the "International Year for the World Indigenous Peoples" and called for international effort to preserve and share it. The World Health Organization in the "Health for All Declaration" (1978) highlights the need to include traditional practices in Primary Health Care (PHC) delivery services. The World Health Organization (2009) reported the contributions of Indigenous knowledge in medical practices in healthcare services the world over where it notes that "in Asia and Africa 80% of the population depends on Traditional Medical Practices for primary health care services." It adds, that in developed countries "70% to 80% of the population has used some form of alternative or complementary medicine." The report notes that, "herbal treatments are the most popular form of Indigenous or traditional medicine, and is highly lucrative in the international marketplace." It is obvious from this that the use of Indigenous method in treating diseases and ailments in this modern time has given value and relevance to Indigenous Knowledge in medical practices to call for a study on documentation and access to information on Hausa Indigenous knowledge in medical practices in Nigerian libraries and documentation centers.

Documentation of indigenous knowledge will help to increase its availability to the knowledge and to design relevant information services that will help local communities in Nigeria to exchange ideas. Warburton and Martin (1999) recognized information on Indigenous knowledge as the essential step for development because it allows better innovation and adaptation of technologies, adds to scientific knowledge, increases understanding between researchers and local people, increases the local capacity to experiment and innovate and empowers local people. Information on Indigenous knowledge provides the strategies for problem-solving among local communities and helps to shape local visions and perceptions of environment and society. Typical examples of information on Hausa Indigenous knowledge in medical practices that should be made available should include information on:

- Midwives and herbal medicine.
- Local healers/traditional medicine
- Rituals, initiation, and storytelling in West Africa.
- Food and agriculture,
- Animal husbandry and ethnic veterinary medicine,
- Use and management of natural resources
- Primary health care (PHC), preventive medicine and psycho-social care
- Community development
- Poverty alleviation

The effort to make this information available may be shaped by the ability of the documentation center to identify what or not to acquire, organize, and preserve in the center. The documentation centers supposed to make available collection of value to the community. In this sense Worcman (2002) suggested that documentation centers should involve the community in the process of making available their knowledge because excluding them may deny the public of the much needed information and services. The collection must reflect what the community considered of value to them. Further, Stevens (2008) added that projects to make available information on Indigenous knowledge must be targeted at serving immediate benefits of the communities because it is only through this effort that information professionals can play an important role in assisting with the management of Indigenous knowledge.

The values of Indigenous knowledge in medical practices in Nigeria can be seen in the utility of the knowledge in research, community development, educational and healthcare delivery services. Information on Indigenous knowledge in medical practices can be used to research in many aspects of traditional medical practices and to acquire knowledge on local plants and herbs

used in the development of drugs for treatment of many ailments. For these the knowledge need to be documented and made accessible in Nigeria.

2.4 Management of Indigenous Knowledge in Nigeria

Documentation centers in Nigeria supposed to make available the relevant collections that will promote the cultural identity of local communities. Thus, it is important that these centers manage information on Hausa Indigenous knowledge in medical practices to reflect the cultures of their communities. UNECO Public Library Manifesto (1994) describes the functions of public libraries and documentation centers to include among others provision of all kinds of knowledge and information. The Manifesto further notes that the collections must include all types of appropriate media and modern technologies as well as traditional materials. This implies that information on the traditional practices in Hausa Indigenous knowledge in medical practices including, information on spiritualism, religious and sacred objects, types of ceremonies, Indigenous songs, chants, and music should be included in the documentation. Other materials to be made available include healing arts and medicinal practices, personal or family information, oral histories, community histories, myths and folklore. More information materials on archaeological data, religious literatures, ethno botanical materials, pictures, and family diaries should also be made available by documentation centers in Nigeria.

The challenge in management of Indigenous knowledge is its oral nature which is making it susceptible to extinction due to lack of proper records on it. Msuya (2007) identified that African Indigenous knowledge is not a written knowledge because it is a knowledge which is transmitted orally by word of mouth and that is why it is not easy to capture it. He further added that the major issue in management of indigenous knowledge is that more attention is paid to documentation of Indigenous knowledge systems that have direct cash value while the non cash knowledge is ignored. Notable of the efforts to manage indigenous knowledge centered on medicinal plants

required by pharmaceutical industries to develop medicines. However, there are many practices in indigenous knowledge that are more valuable in many aspects of human interactions. Indeed, Indigenous knowledge is important knowledge sources which need to be managed like the western knowledge.

However, there is the need to create records on Indigenous knowledge in Nigeria to help in improving management of the knowledge. It will also help to design appropriate method of documenting and facilitating access to the knowledge in Nigeria. Thus, Stevens (2008) identified Knowledge management projects in Australia, Canada and the United States to illustrate the different methods and tools that can be used for managing indigenous Knowledge. Different methods and tools can be used in Nigeria to accommodate oral traditions, holistic belief systems, security and address the concern for access as well as, technological limitations in management of the knowledge. This also means that information professionals can come to the aide of Indigenous communities with the management of their knowledge through providing the expertise in documentation of the knowledge including acquisition, documentation, organization, storage and retrieval of the knowledge. This is because information professionals are qualified to manage Indigenous knowledge due to their expertise in adopting strategies that will identify and satisfy the information needs of people in a community.

In support of management of local community knowledge, the Alaska State Library (2001) produced culturally-responsive guidelines to aide the state to respond to cultural needs of its communities. The guidelines are predicated on the belief that culturally appropriate service to local communities is the basic principle to be pursued by libraries and documentation centers. Thus, this means that public libraries and documentation centers in Nigeria should respond to need of the local communities by producing a guideline to pursue professional practices and to incorporate

information on Indigenous knowledge in their collections. If this is achieved it will help to support culturally oriented services and programmes in the documentation centers. Such guidelines if produced are to aid the documentation centers to attain their goals and to accommodate local circumstances and needs of the community. The guidelines may be used to review the mission and vision statements, goals, objectives and policies of the library or documentation center to assure the integration of culturally appropriate practices. Collection guidelines may stipulate the types of resources to be acquired and maintained by the centers. As Information on Hausa Indigenous knowledge in medical practices is not often found in the mainstream publishing channels, there is the need to adopt strategies that will solicit the cooperation of the community in making the knowledge available.

To make management of Indigenous knowledge effective in Nigeria there is need to enact policies and legislations to strengthen the identification, access, and protection of Indigenous knowledge. In this sense, Rens, et al … (2006) reported that South Africa had developed an Indigenous knowledge policy with the objectives to among others:

- Assert African cultural values by emphasizing the promotion of positive African values;
- Develop information services for Indigenous Knowledge holders and practitioners in many areas of human endeavor including traditional medicine, agriculture, indigenous languages and folklore; etc
- Reinforce the contributions of Indigenous Knowledge to the economy especially, in areas of employment and wealth creation; and
- Provide interface between Indigenous Knowledge with other knowledge systems in biotechnology, drug development and other sectors to increase the rate of innovation.

Equally, documentation centers in Nigeria are protected by such policies as the result of this their collections and services are reflecting some aspects of the cultures of the communities in Nigeria. However, Burtis (2004) argues that the discord of modern Information services is that they are oriented towards a scientific logic of information organization, retrieval and access whereby knowledge is reduced into information without due consideration to the cultural context in which it was created. He further advocated for the need of Information professionals to manage information on Indigenous knowledge into context use by the people who generated the knowledge.

However, to manage indigenous knowledge effectively, Burtis (2004) identified the issues surrounding integration of indigenous knowledge and traditional cultural expressions in libraries and documentation centers, archives and other cultural institutions. He considered the need for ethical policies for the management of these knowledge systems, critical approaches to the dominant library paradigm of information management, recent efforts by the World Intellectual Property Organization to craft policy on this topic, and the need for and examples of collaboration with indigenous communities. He maintained that indigenous knowledge management has implications on social change and implementation of socially responsible management systems.

The functions of African libraries and documentation centers in Indigenous knowledge management are to determine what or not to acquire, organize, preserve and access. Ocholla (2007) suggested an agenda for development and integration of Indigenous Knowledge with other forms of knowledge. The suggested agenda focuses on mapping and auditing Indigenous Knowledge capacity in Africa, legal and ethical issues, Indigenous Knowledge management, Indigenous Knowledge education and training, integration of Indigenous Knowledge and Knowledge management, and Indigenous Knowledge brain drain. He finally recommended that information on Indigenous Knowledge be widely shared for evaluation, use and further development. Similarly, Worcman (2002) added that to properly manage Indigenous Knowledge and to create collection of

value, the community needs to be involved because excluding the public from the process of managing their knowledge may deny the public of the much needed information and services. The collection may also not reflect what the community considered of value to them. Further, Stevens (2008) added that projects to manage Indigenous knowledge must be driven by Indigenous communities and should be targeted at serving immediate benefit to the communities because it is only through this that information professionals can play an important role in assisting with the management of Indigenous knowledge. Documentation centers can provide valuable resources and expertise for collection, organization, storage and retrieval of information.

The challenges in management of Indigenous knowledge in libraries and documentation centers include what Ngulube (2002) referred to as neglect of information professionals to focus attention on documenting Indigenous knowledge instead of focusing attention on recorded and codified western knowledge. He further noted that documentation centers in Africa have not been active in managing Indigenous knowledge because they have traditionally focused attention on managing western knowledge. Indigenous knowledge is fundamentally different from western knowledge and therefore, its management requires Indigenous method to achieve. Similarly, Christie (2004) maintained that Indigenous knowledge management can benefit from modern technologies. However, he cautioned that before this can be achieved consideration must be based on the culture of the people and perception of the people on nature of the world, and the nature of knowledge. That is what knowledge is and how the knowledge is preserved and renewed. Modern information management practices organize data based on the structure that reflects European philosophies and conceptions. However, to effectively manage Indigenous knowledge in database, its architecture and structure, its search processes and interfaces, its ownership and uses must reflect and support specific Indigenous ways of accessing and using the knowledge.

The management of information on Indigenous knowledge requires traditional knowledge management techniques and Indigenous knowledge methods need to be used because of the nature of Indigenous knowledge. However, Greyling (2008) remarked that African documentation centers are poorly equipped to make meaningful contribution to the current global digital knowledge economy because of lack of management systems for indigenous knowledge. This requires Afro-centric documentation centers to design Indigenous knowledge management system for community participation in a digital library of indigenous knowledge. He proposed a model which focused on public libraries and documentation centers aimed at creating a virtual resource that is inline with the global information society while at the same time empowering citizens through preservation of their knowledge and through development of digital skills. This means libraries and documentation centers in Nigeria can play important roles in providing resources and expertise in management of Indigenous Knowledge including documentation, acquisition, organization, storage and retrieval of the knowledge.

2.5 Documentation of information on Indigenous Knowledge in Nigeria

Documentation is the process of describing information by recording the information on an acceptable format such as books, journals and also on nontraditional publications like pictures, sound recordings and oral information. Thus, documentation in libraries and documentation centers supposed to be concerned with maintaining records on information with the view to make it available. It is an important information management practice which is undertaken to enable the identification, capturing, organization, storage, retrieval and dissemination of information. According to Buckland (2006) documentation is essentially concerned with "internationalization, standardization, documentary overload, coordinating and encouraging scholarly communication, and peace and international development". This implies that documentation is required to control the literature output in any given discipline and to facilitate easier identification of knowledge.

Equally, Day et al... (2006) described documentation as a process that addresses the information needs of contemporary culture including the needs of the scientific community as well as the information needs of the scholarly community. It is a process that is used to achieve rapid and efficient information delivery to all segment of the society. Thus, documentation supposed to be directed at achieving efficient information sharing by considering the social structure in communication and the cultural dimensions in exchange of information among the different groups of people within a society. For this documentation of information on Hausa Indigenous knowledge supposed to achieve efficient information service delivery within the context of the structure of communication among Hausa communities. It should also encourage the delivery and production of information on Hausa Indigenous knowledge by recognizing the different formats of information representations required in the society.

Efforts to organize Indigenous knowledge on worldwide scale was mounted by School of Information Studies at the University of Wisconsin-Milwaukee (2010) which mounted global action plan on development of Indigenous knowledge organization (IKO) to focus on the development of culturally relevant ways of representing and organizing information, including the design of tools such as subject headings, thesauri, and organization schemes for traditional and electronic collections. The project was designed to bring people from various nations together to further the development of Indigenous knowledge from global Indigenous perspectives. However, the problem with documentation of indigenous knowledge is when it is documented who will claim ownership of the knowledge? This is due to the fact that often indigenous knowledge is a family or community knowledge.

However, in Nigeria earlier efforts made to document Hausa Indigenous knowledge in medical practices in Nigeria began from the late 18th Century to early 19th century AD, from the efforts of local Islamic scholars notably Sokoto jihad leaders. The jihad covered the whole of Hausa

states including other neighbouring areas in States of Northern Nigeria. According to Bunza (2007) Abdullahi bin Fodiyo and Mohammed Bello together, documented more than one hundred materia medica based on personal experimentations and observations they conducted on disease causes, symptoms and cure. The materials documented were tested by them and their medical efficacy established before they were documented. Today, these documentations are often used as reference resources by many Hausa Islamic herbalist in States of Northern Nigeria to dispense drugs and administer treatment. Further, Ellen and Harris (1999) reported that the nineteenth and twentieth century witnessed strong efforts in documentation of local knowledge spearheaded by European institutions. These efforts resulted in revisions of scientific taxonomic understandings in diagnostic and classificatory practices in science. These practices today are represented as science though derived from earlier codifications of Indigenous knowledge. Thus science has a long history of expansion through the contributions of Indigenous knowledge.

In recent time in Nigeria several efforts on documentation of traditional medicine knowledge were made. Such efforts included the work of Nigerian Natural Medicine Development Agency (NNMDA). According to Emcee (2009) the NNMDA is an agency of the Federal Ministry of Science and Technology which was established in 1997 with the mandate to research, develop, collate, document and promote Nigeria Traditional Health Care System, to integrate same into the national health care delivery system and to contribute to the socio-economic development of the country. He noted that the Agency in pursuance of these strategic mandates developed a unit Herbarium of Nigeria Medicinal Plant and a Digital Virtual Library for research and development of Nigeria Traditional Medical System. To this end, the Agency initiated a number of regional projects and programs across the country aimed at documentation and conservation of Medicinal, Aromatic and Pesticidal Plants (MAPPs) used in traditional medicine in Nigeria. One of the projects on identification and documentation of medicinal plants had so far covered two Nigeria

World Heritage Sites and six ecological zones of Nigeria. This also resulted in producing a 143 paged-publication in 2008. The book titled "Biodiversity of the Sukur World Heritage Site Adamawa State, North East Nigeria" listed the species of medicinal plants in the region by clearly stating their scientific name, local names in Nigerian languages, their habitat description, phytochemical constituents and their medicinal uses. The Federal Ministry of Science and Technology (2011) listed the mandate of the NNMDA to include among others:

a) Serve as reference center for development and promotion of traditional medicine by assisting in the promotion, documentation, protection and preservation of indigenous traditional medicine knowledge and to enforce intellectual property, and enhance research, training and commercialization of natural medicine products, healing arts, sciences and technologies in Nigeria,
b) Under take the identification, documentation and development of a national inventory of Medicinal, Aromatic and Pesticidals Plants (MAPPs), animal/animal parts and minerals used in traditional medicine and to aid appropriate species identification, conservation, protection and promotion of entrepreneurship development in MAPPs raw materials for wealth and job creation, and
c) Under take Collation and documentation of published research works and findings on Traditional Medicine Knowledge and Practices (TMKP), identify products and Medicinal, Aromatic and Pesticidal Plants indigenous to Nigeria and develop reference documents for ease of access, reduction of research duplication and promotion of commercialization of research findings.

Similarly, NNMDA (2011) reported that it has been able to achieve these objectives through documentation, preservation and promotion of indigenous medication and healing arts in many publications. Notable of the publications are "Medicinal Plants of Nigeria – North Central Nigeria

Vol. 1", "Medicinal Plants of Nigeria – North Eastern Nigeria Vol. 1"and Medicinal Plants of Nigeria – North Western Nigeria Vol. 1. These publications collaborated with traditional medicine practitioners from selected communities in States of Northern Nigeria. The "Medicinal Plants of Nigeria – North Central Nigeria "volume 1 documented 102 plants species belonging to 48 families, while the "Medicinal Plants of Nigeria North-West Nigeria Vol. 1" documented 139 species of plants representing 50 families, and the "Medicinal Plants of Nigeria North- East Nigeria Vol. 1" produced compilations of 187 medicinal plants belonging to 62 families. In the publications plant species were described and arranged alphabetically based on the families to which they belong to. It also included the common names of the plants; and their local names in some Nigerian dialects. The agency also published an abstracts of published research findings on Nigerian medicinal plants and traditional medicine practice. The book contained collection of 1,050 research efforts by Nigerian scientists on medicinal aromatic plants published in 1,020 international journals since 1972.

Another documentation agency in Nigeria is Bioresources Development and Conservation Programme (BDCP). Emcee (2009) reported that BDCP is a non-profit and non-governmental organization dedicated to sustainable utilization and conservation of biological resources through documentation with the view to among others improve health and environmental conservation. The main objectives of the organization include ensuring the well-being of tropical eco-system and their human inhabitants. In the attempt to achieve its objectives the BDCP established a comprehensive inventory of biological resources called the Computerized Information System of African Medicinal and Aromatic Plants (CISAMAP). CISAMAP provided a common platform that interfaces with four existing databases thereby allowing users to access multi-layered information. The four databases are:

1) AFRICMED: A collaborative inventory of plants used in traditional medicine in West/Central Africa and epimiological survey of the uses of these plants.
2) ICBG Inventory: A database of plant materials, extractions, chemistry and biology.
3) BioMon Database: A database of plants found in the network of ICBG small biodiversity plots in Nigeria and Cameroun. It has drug sample collection locations on the map as well as digital overlays of geographical features of West and Central Africa. The database was established in collaboration with the International Center for Ethnomedicine and Drug Discovery (InterCEDD) and the Smithsonian Institution.
4) Korup Forest Dynamic Project (KFDP): A tree demographic database comprising of plants found in the ICBG biodiversity plots near Nigerian-Cameroun border.

All these institutions produced a lot of documentations on Hausa indigenous medical practices in Nigeria. These efforts have improved access to information on Hausa indigenous knowledge in medical practices in Nigeria. However, access to the documentations in Nigeria is still difficult because from experience of the researcher when conducting this study, it has been difficult for him to obtained copies of the publications of the documentation centers in Nigeria to buy from bookshops and to even access the publications from the library.

Individuals are not left behind in the attempt to record indigenous knowledge in Nigeria. For example recently, Obute (2010) documented common plants used by the Indigenous people of south eastern Nigeria for medicinal purposes. Data was catalogued from observations in field trips and visits to traditional medical practitioners in some south eastern parts of Nigeria. The project described plants species, their local names and the medicinal uses and parts of the plants being used to cure ailments. The significance of the work is preserve knowledge on plant resources and to explore short and long term strategies of conserving them. Emphasis was laid on integration of

traditional with orthodox health care systems in order to enhance the health of the people in this area. Communities in Nigeria have perceived the need to document their knowledge as a means to protect it from improper use.

Documentation of indigenous knowledge is being undertaken by many people from other part of the world. Varkey (2009) reported that in India efforts to extend the protection of Indigenous knowledge, innovations and practices include among others the documentation of the knowledge. She added that proper documentation of associated Indigenous knowledge has helped to check bio-piracy. It is assumed that if the knowledge is documented, it can be made available for protection. It is also hoped that documentation facilitates tracing of Indigenous communities with whom benefits of commercialization of Indigenous knowledge can be shared. Documentation of traditional knowledge is also acknowledged as a means of giving due recognition to the traditional knowledge holders.

In undertaken actual task of documenting indigenous knowledge there are a number of approaches that can be used to record information on Indigenous knowledge practices. Nakata et al (2007) identified that the first task is to identify the goals to be achieved by the documentation project. He proposed that the reason that could necessitate documentation of information on Indigenous knowledge may be driven by urgency on the part of some Indigenous groups to record undocumented oral knowledge that is threatened by intergenerational loss. Another may be pushed by the need to collect traditional and cultural knowledge from Indigenous groups as part of the collection of libraries, archives and museums. In this sense the first task in documentation of indigenous knowledge in Nigeria is to set priorities as this will help to pin point the direction to be followed in undertaking the project.

The role of documentation is to institute the culture of research through production and use of information based on observed pattern of communication agreed by the society. Communication requires social contacts and cultural forms that attach value to information sharing. Thus, Day et al... (2006) further maintained that documentation activities are being coordinated by standardized techniques aimed at building a collection of knowledge and ideas that can be used. Today, there are different representational forms of information like films and video, audio, pictures, live objects, electronic and print. This means that information on Indigenous knowledge can be presented in any format acceptable to people. Thus, documentation of information on Indigenous knowledge in medical practices may require repackaging in a format acceptable to the people who will use it in Nigeria. According to Seracevic and Woods (1981) and Bunch (1984) information repackaging is a "process of selecting appropriate material to reprocess information contained in any medium for presentation according to user specifications." This means that repackaging of information on Hausa Indigenous knowledge in medical practices may be achieved in various ways. For example it can be achieved through the use of drama, video and audio recording of local legends, stories and songs. Similarly, modern technology is making it much easier to repackage information through integration of text and graphics and through recording of oral testimonies, history and songs.

However, the major problem confronting information professionals in documentation of indigenous knowledge is in assigning responsibility for generating the knowledge as anyone who has a hand in the project might have contributed something in recording the work and in making it accessible in the society. Huntington (2009) opined that the work and responsibility of documenting indigenous knowledge should include both the writing of the record of the knowledge and the information it contained. Thus, documentation may include the entire communities or organizations that generated the knowledge as co-authors, as well as the person record the information on the knowledge as major player in the project. He argued further, that credit is certainly deserved by all

who have a hand in the work. It is only unfair that some individuals may be singled out as authors when the body of knowledge is communal. Therefore, caution needs to be observed were cultural proscriptions is stated against claiming individual credit. He added however, that to refer to an entire community may give the erroneous impression that everyone there is a holder of the knowledge that has been documented or has been involved in the study in question. To refer to particular institution may give a similar erroneous impression that the institution and the knowledge holders are exactly the same group. It means that documentation of information on Hausa Indigenous knowledge must consider the culture of the community in appropriating knowledge generated by the community.

In participating in the documentation of indigenous knowledge Sutton (1991) observed that most of the efforts have not involved local communities that possess the knowledge and the often indigenous people are given limited access to the publications on their knowledge which are making efforts in documentation to fall far short of local empowerment objectives. Similarly, Waters-Bayer (1994) remarked that "centers for Indigenous knowledge should not become knowledge banks but should be developed to promote "methods to increase local people's awareness of the wealth they possess and to help them enrich it further." Therefore, the problems in documentation of Indigenous knowledge from the perspective of information professionals are how to involve indigenous people in matters of their knowledge and how to make indigenous knowledge accessible to local communities.

Documenting Indigenous knowledge may be affected by the nature of the knowledge itself and the unwillingness of the knowledge holders to part with the knowledge because of the position it give the respective individual knowledge holder. Doubleday (1993) argued that power made Indigenous people not to willingly share their knowledge with others. This makes Indigenous knowledge holders to be suspicious of any effort to document Indigenous knowledge outside its

cultural environment. They feared that it be misused or totally stolen from them to make them powerless. Indigenous knowledge is communicated to the child by its parents or through dreams by the spirit of ancestors. This often makes indigenous knowledge an individualistic knowledge and makes the people to arrogate power to themselves.

Other problems confronting documentation of indigenous knowledge were identified by Sithole (2006) who outlined the problems faced by African libraries and documentation centers to include lack of legal frameworks at national and international level to support the efforts. Other challenges include financial, human capacity and technology shortages. This implies that African countries are deficient in how best they can document and disseminate oral and community based knowledge because they lacked the capacity to do this. However, the best practices that have emerged in dealing with these challenges were identified by the United Nations (1992) where it noted that success of documentation of Indigenous knowledge rests on solid frameworks put in place to support the initiatives. "Both international agreements and national laws and policies are important frameworks and tools that libraries and documentation centers should be armed with to deliver the documentation of Indigenous knowledge". Agenda 21, adopted at the United Nations Conference on Environment and Development is an important framework supporting such initiatives. National Indigenous policies are critical in the documentation and access to Indigenous knowledge resources in libraries and documentation centers because they set the policies, laws and programmes that regulate documentation and management of information on Indigenous knowledge. Houng (2005) noted that Aboriginal and Torres Strait Islander Protocols for Libraries and documentation centers, Archives and Information Services were developed in response to the challenges to deal with Indigenous collections and to provide services to Indigenous clients. The Protocols identified eleven areas that were relevant to Indigenous information issues and broad principles were developed to highlight the issues and guide the practice. The content of the protocol

include identification of content and perspectives which sought to address issues relating to Indigenous content in collections, the balance in representation of Indigenous perspectives, inclusion of material about and by Indigenous Australians, promotion of Indigenous collections and access policies for Indigenous content in collections. Intellectual property issues sought to draw attention to the rights of Indigenous people as owners and custodians of their cultural knowledge. Access and use addressed the historical exclusion and discomfort of Indigenous Australians in libraries and documentation centers and outline the need for clear strategies for inclusion. Description and classification of materials addressed Indigenous concerns about outdated and inappropriate description and classification of Indigenous materials evident in subject headings, indexing terminology and classification systems. Secret or sacred materials talked about secret/sacred material which has been published and made publicly available in libraries and archives. Offensive materials are about issues surrounding material that is likely to be offensive to Indigenous people. This included outdated, racist, derogatory, sexist, abusive, and inaccurate representations of Indigenous people. Governance and management section recognized that many Indigenous concerns could be facilitated at governance and policy levels through the inclusion of Indigenous people in advisory roles at this level and through the development of Indigenous policies and operational strategies. Staffing drew attention to the need to employ Indigenous people in libraries and archives and to provide appropriate support for them. Education and training for professional practice provided appropriate preparation of professionals on Indigenous information and cultural issues. Awareness and promotion of Indigenous materials is a way of bringing awareness on Indigenous issues to the broader community. Copying and repatriation of records held by libraries and archives have great interest and importance to Indigenous people and communities. Some of this material was created or collected without consent or through deception. Indigenous communities often do not know what material different collecting institutions hold about them.

These communities may also be a long way from collecting institutions making access to any materials difficult. Repatriation is a means of making records and material available in local contexts, usually in the form of copies, and is always a negotiated process.

Information Communication Technologies (ICTs) have presented an opportunity to improve the documentation of Indigenous knowledge in libraries and documentation centers. However, Jensen (2001) noted that there are many problems associated with the use of ICT in documentation which include costs, access and other issues. He added that the level of adoption of ICT in Africa is low which is making it difficult for libraries and documentation centers to document Indigenous knowledge using ICT. The enabling infrastructure such as electricity and telephone connection are erratic thus, rendering ICTs inappropriate to boost the documentation of Indigenous knowledge. The costs of maintaining ICT facilities are also a challenge to many libraries and information institutions, as the ICTs are changing at a phenomenal rate that the institutions can hardly cope with.

2.6 Types of information Generated on Indigenous Knowledge in Medical Practices in Nigeria

Knowledge generation is an important process in documentation of information on Indigenous knowledge because before any knowledge can be documented, its availability has to be guaranteed and the context in which it can be used has to be understood. This implies that knowledge generation supposed to be at the fore front of documentation in libraries and documentation centers in Nigeria. The concept of knowledge generation according to Alavi and Leidner (2001) is "a process synonymous to knowledge creation, or formation, or construction." For this knowledge generation is often the first process in knowledge management including documentation in libraries and information centers. Arguably, Puga and Trefler (2003) maintain

that documentation or knowledge management will be impossible without first generating the knowledge. It means knowledge generation is indeed a vital and strategic element in documentation because the information to be documented must be tangible, that is known and available.

Human interactions play important roles in developing thoughts and creating new ideas and therefore, knowledge is generated from the interactions between individuals in the society. Shrivastava and Anderson (2010) posits that "knowledge emerges from the exchange and integration of individual ideas." Similarly, Boland and Tenkasi (1995) opined that often "the individual does not think in isolation and he is not an autonomous originator of knowledge". Invariably, it means that one conceptualizes an idea from various uses in which the idea is put to use by other people in the society and this often results in improving the old idea. From this process knowledge is generated from original idea and this also initiates the generation of more ideas. Nonaka et al… (1996) were of the view that "knowledge originates from individual's intuition." Furthermore, Soo et al… (1999) added that knowledge creation incorporates environmental and organizational factors in its development. Thus, this means knowledge is generated from the interactions amongst individuals or between individuals and their environment and knowledge generation is about creating new knowledge and learning what other people already know. This implies that the knowledge generated is often different from what is already known about the subject.

In this study, knowledge generation refers to generation of practices from personal or group experiences acceptable to the people. Thus, knowledge generation process involves sharing tacit knowledge, creating concepts, justifying the concepts. Von Krogh et al. (2000) notes that individuals involved in creating knowledge face challenges at the different levels of knowledge generation process. The person involves in knowledge generation shares his personal experience

with others and justifying his belief. Thus, knowledge generation requires favourable environment that enables individuals to create and justify their beliefs.

Process of knowledge generation is influenced by different barriers. According to Nonaka and Konno (1998) knowledge generation is influenced by Socialization, externalization, combination, and internalization of explicit knowledge to tacit knowledge and vice versa. They developed the Spiral Evolution of Knowledge Conversion and Self-transcending Process (SECI) model. The SECI model has four modes of knowledge creation that transforms the knowledge state of individuals and organizations from tacit to explicit and vice versa. The model identified socialization as involving sharing of tacit knowledge between individuals through joint activities (such as mentorship programs, and apprenticeships where the individuals interact with one another in the same environment) rather than the sharing of knowledge via written or verbal instructions. Externalization of knowledge involves the expression of tacit knowledge and its conversion into comprehensible forms that are easier to understand by others (explicit knowledge). Combination refers to conversion of explicit knowledge (created during externalization) into more complex sets of explicit knowledge, with communication and diffusion being the key areas of focus. Internalization is the conversion of explicit knowledge into tacit knowledge. They also identified four kinds of "ba," that is context in which knowledge is shared. The four "ba" are supported by four processes including originating which focused on socialization where individuals share feelings, emotions, experiences and mental models. Physical, face-to-face contact is essential in sharing tacit knowledge and knowledge creation starts here. Interacting context involve people with the right mix of knowledge and capabilities to consciously select to engage in dialogue to convert individual mental models into common terms and concepts. Cyber context refers to the virtual world for combination instead of real space and time where new explicit knowledge is combined with existing explicit knowledge and made available via information technology. Exercising

context involves internalization where formal explicit knowledge can be applied through on the job training and active participation. Invariably, all these mean that the ability to create knowledge can be strengthened by creating a culture that supports the different stages of the knowledge creation cycle. Each culture will have different ways in which to create and support the knowledge creation processes that stem from their cultural inheritance and traditional knowledge practices.

Indigenous knowledge can play a very important role in solving problems in the society when integrated with other forms of knowledge. Such integration according to World Bank (1998) can be facilitated through the exchange of information from one community to another involving the following steps: Recognition and identification of knowledge which involve technical and social analyses aimed at identifying Indigenous knowledge because some of Indigenous knowledge are embedded in a mix of technologies or in cultural values, rendering them unrecognizable at first glance to the external observer; validation involving assessment of the significance and relevance of Indigenous knowledge in solving problems, reliability, functionality, effectiveness and transferability of Indigenous knowledge; recording and documentation pertains to major challenges to be faced more especially as Indigenous knowledge is tacit knowledge which can only be exchanged through personal communication from master to apprentice, and from parent to child; storage in retrievable repositories specification of format of document which could include tapes, films, storytelling, gene banks, databases and libraries and documentation centers; transfer refers to conveying the knowledge including the testing of the knowledge in the new environment. Pilots schemes can be set up to test this approach; and dissemination to a wider community which could add to the developmental stages in the exchange of knowledge and could promote a wider and deeper impact of the knowledge transfer. Exchange of Indigenous knowledge is the ideal outcome of a successful transfer and dissemination. Indigenous knowledge is a resource that can help to solve local problems, to prevent conflict, to build solidarity in communities, to manage local affairs,

and thus contribute to global solutions. However, the method in which information on Hausa Indigenous knowledge is transferred and exchanged consist of beliefs, rituals, real objects, ceremonies, food, religion and worship recorded on semi-recorded format such as manuscripts [kundi], photographs, and folk literature or stories. There are also religious books, ethno-botanical texts and archaeological deposits which all contain information for the consumption of the people. Bunza (2007) described [kundi] as a "book containing small sheets of paper, or a pocket dictionary of some important materials." It also represents the traditional technique of preserving medicinal or magical treatise or charms." Many Hausa scholars in States of Northern Nigeria maintain [kundi] – a book where secrets are recorded. However, due to lack of skills in methods of preserving paper based documents the content of many such [Kundi] are at the risk of being lost. Thus, documenting the content of the [Kundi] will help to preserve the knowledge in the [Kundi] for present and future use. These sources are rich on the culture of the people, methods of living in the community, biotechnology, medicinal knowledge, breeding techniques, agricultural farming systems, healthcare techniques, religious and astrological guidelines and cultural artifacts. Some of the Indigenous knowledge resources are available in written form in primary, secondary and tertiary sources of information. Documenting the knowledge will increase the availability of the knowledge and its subsequent access. Indigenous knowledge is scatted and fragile which call for the need to integrate the scatted and fragile sources of information in libraries and documentation centers.

2.7 Acquisition of Information on Indigenous Knowledge for Documentation by Institutions Documenting Indigenous Knowledge in Nigeria.

Acquisition is the term applied to the library's responsibility of obtaining materials to make up the collection of the library or documentation center. New Oxford English Dictionary (1993) defines acquisition as "obtain or get as one's own, by one's own exertions or qualities". In the

library or documentation center acquisition implies the process of obtaining materials for its clienteles. Acquisition in libraries and documentation centers may be handled by a unit designated to discharge that function. Basically, the activities in acquisition include coordination of selection, management of funds, collecting operational statistics, and maintaining relationship with the sources of materials. The conventional method by which knowledge is acquired in libraries and documentation centers comprises of purchase and gift and exchange. However, Indigenous knowledge resources are not like conventional information resources that can easily be obtained from the market because their acquisition is always defined by the practices and structures within the culture that produce them. Often indigenous knowledge is acquired from membership of the culture. Dei, et al… (2002) posited that the precondition usually attach to the acquisition of Indigenous knowledge is often respect and recognition of the value of the practices in the culture. Indigenous knowledge is handed down from one generation to another through symbols, art, oral narratives, proverbs, and performance such as songs, storytelling, wise sayings, riddles, and dances. It has been observed that this same pattern operates among the Hausa culture where socialization of the child starts from immediate families to extended families, and to the wider community. Tradition, custom, lifestyle, language, stories, songs, art, craft work, rituals and ceremonies, are the subjects of Indigenous knowledge resources.

Indigenous knowledge sources are mostly in tacit form which makes their acquisition by libraries and documentation center difficult. They are different from modern sources of information which are available in the market. Some local people may hardly part with their knowledge while others may entrust them to a trustee. It is because of this that El-Miskin (2007) suggested that the process of acquiring such items should incorporate confidence building measures and ethical conduct that will establish mutual trust. Similarly, the American Library Association (2010) core values recognized librarians as professionals with a social responsibility to provide and promote

public access to information. Due to this they should embrace and respect the diversity of cultures and develop sensitivity and care to advancement of culture as fundamental tenets of librarianship. These will serve as a reminder of core library values and to provide access to materials without sacrificing individual liberty or respect for cultural differences. These principles may advance the role of librarians as stewards of knowledge and cultural heritage. Consensus on these principles within the library community will establish the library's voice advocating for reason and respect in national and international discussions concerning protection of and access to unique creative works of traditional cultural expression. Therefore, if Hausa cultural information is to be acquired by Nigerian libraries and documentation centers there is the need to accord it the same respect as given by the owners.

Hausa people have developed system of imparting positive values in to their young ones which is based on process of imparting habitual forms of thinking and acting acceptable to the community. Cultural transmission among the Hausa is important as it ensures social continuity and control to guarantee direction of the society. Tibenderana (1982) studied traditional system of education in States of Northern Nigeria and identified that the practices vary in the same way that the societies differed from one another. But nevertheless there are some similarities between them in objective which include:

- Development of character,
- Development of vocational skills
- Promotion of cultural heritage
- Development of intellectual skills

Therefore, the major purpose of acquiring knowledge among the Hausa is to make the young to be aware of his environment and its potentials so that he can acquire the skills for exploiting it. Therefore, any material to be acquired by documentation centers should be to increase the

knowledge base of the individual as recognized by culture. Scott (1960) added that Hausa children are acquainted with their culture at early age starting with greeting modes of the society because the Hausa consider greetings as the most important aspect of social life. Greeting in Hausaland is characterized according to the social strata existing in the society. It is exhibited in verbal or physical gestures where equals shake hands and inferior crouched before a superior. The Hausa consider greetings as expression of humility, obedience and conformity to society's code of conduct. Every child is expected to acquire virtues, prowess, perseverance, secrecy, obedience, and loyalty to ensure survival of the culture. Indigenous knowledge materials to be acquired should be such that will give the individual the values expected in him by the culture of his community.

The instructional materials used to transmit indigenous knowledge are folklores, legends, moral values, stories depicting character of the ancestral heroes and religion. Skinner (1969) describes the Hausa folklore as the richest in terms of its content and teachings. Folklore is used to conceptualize and integrate experiences and to promote cultural intellectualism in the society. Folklore is an important source of traditional knowledge which is used by Indigenous people to disseminate information. Therefore, libraries and documentation centers should aim at acquiring local folk stories with the view to improving practices in the culture through access to the relevant information.

Furthermore, Barrett and Sexton (1999) explained that most cultural practices are based on tacit knowledge which is intangible knowledge because it is in oral form and rely mostly on experience, values and personal beliefs. This form of knowledge is only known to knower as it resides only in his mind. The library can document oral knowledge to enhance it preservation and access. Nadal (1972) is of the view that agricultural success in Hausaland was dependant on a high degree of technical efficiency which gave regard to organization of labour and individual technical skills. Tibendarana (1982) maintained that non-muslim Hausa believed that in addition to farming skills

one need knowledge on methods of sacrifices to ancestral spirits and other spirits which might ruin crops. Thus, intellectual development in transmission of culture among this group of people is built on beliefs, ideals, values, and mental models which form part of their nature. The methods people followed to acquire skills to undertake traditional trades and crafts in Hausaland are hereditary where children learn their parent's skills and followed their occupations. Hausa prefer their children to follow their occupation to ensure social continuity and stability in status. For this people are proud and often do not encourage their children to learn other skills apart from their own. However, in situations where a child lacks the ability to comprehend his parent's skills he is sent to other relatives for training.

Religious institutions play significant roles in transmitting knowledge to the young ones. Islam as practiced by majority of the Hausa and this has social and political importance to the people of States of Northern Nigeria. Every Muslim requires knowledge of the religious teachings to be able to discharge his obligations as a Muslim. Uba (2007) emphasized that Islam identifies two types of knowledge: revealed and earthly. The revealed comes straight from God while earthly knowledge is the one discovered by human beings themselves. Both types of knowledge are important and the religion admonishes its followers to pursue both. The Qur'an is the perfect words of God which must be learnt and earthly knowledge compliment the knowledge revealed by God in the Qur'an and helps Muslim to live a productive life in the world. However, since traditional knowledge contains both technical and cognitive skills and is only known to the people who know and practice it; then there is the need to acquire it with a view to make the knowledge accessible.

2.8 Access to Information on Indigenous Knowledge in Nigeria

The concept of access to information and knowledge is at the heart of modern societies. Sen (2005) identified that basically, access depends on two types of factors, technological and cultural.

The technological factors determine the physical requirements for disseminating information including communications, transportation, printing, and the technology of organizing information. The cultural factors depend on the extent the people who possess the knowledge are willing to share it and place it in social domain. To this end Olowu (2004) noted that access to information in modern society is more challenging as it has gone beyond the scope of individual library or documentation center. It is being compounded by so many barriers – natural and artificial. But generally, access can be made easy by ensuring the availability of knowledge sources in the library or documentation center at all times. However, access to Hausa Indigenous knowledge can be provided through the use of appropriate means of sharing, distributing and transmitting the knowledge in learning. Partnership is also required with the people who own the knowledge to participate as both contributors and users of the knowledge. It is equally important that information specialist pay attention to learning about Indigenous knowledge with the view to understanding its bases in the society. Documentation activity will result in development as it will increase the availability of information resources which can lead to access. More local resources including stories, creative works, texts and reports on Indigenous cultures will be made available. Other products of documentation may include more visible media such as film, documentary, radio, the performing arts, and more recently, the internet. Moreover, the inclusion of Indigenous knowledge will significantly increase the intellectual capacity of Indigenous communities. It will also bring development and change among the local communities in Nigeria.

Attempt by many libraries and documentation centers to provide access to Indigenous knowledge may face resistance because of what Nakata (2010) identified in his study that Indigenous people are suspicious or hesitant to allow access to their knowledge due to the fact that all that they have with them is the knowledge, pharmaceutical companies often make money from

Indigenous knowledge without due acknowledgement or compensation, Western concepts of intellectual property are inadequate for responding to collective ownership of ideas and knowledge, and Indigenous people are still discriminated against with few rights or little protection for their knowledge. In this sense disclosing their secret arouse passion and fear of parting with their knowledge which may result in losing their cultural identity. Conversely, Ranasinghe (2008) argued that access to Indigenous knowledge can be made possible by cataloguing the knowledge in libraries and documentation centers. This practice is what obtains in Srilanka where palm leaf manuscripts collections in all libraries, archives and documentation centers were catalogued or listed. However, these listings or catalogues do not provide sufficient access to the contents of the manuscripts other than showing their locations. This can also be applied to paper manuscripts collections too.

Cataloguing and listing may not give the contents of the materials except the titles as given by the library. Raseroka' (2008) reflected on the dimension of information and communication technology facilitates in capturing oral-based knowledge. The basis for this consideration has been the World Summit on Information Society (WSIS) principles which provide the promise of equitable access to information as a base for creation of the knowledge society through ethically grounded information use and sharing mechanisms. Information and Communication Technology facilitates exploitative approaches to information access and encourages the development of knowledge as a commodity for competitive advantage. Anyira et al… (2010), reported that Indigenous knowledge in Niger Delta libraries and documentation centers is made accessible through television/radio broadcasting, exhibits and displays, film, mobile library services, lending of relevant Indigenous materials, and online access. Similarly, Okore, et al... (2009) noted that libraries and documentation centers can use the Internet to provide access to a wide range of Indigenous knowledge in Nigeria.

2.9 Storage and Preservation of Information on Indigenous Knowledge in Nigeria

In preserving Indigenous knowledge it is important to understand the root causes of the loss of Indigenous knowledge and to tackle the problem through advocating for recognition of land rights and the development of laws, policies and programs to protect, promote and strengthen Indigenous knowledge and traditional practices. Tobin (2004) maintained that the threats to Indigenous knowledge include education programs that promote foreign values, science, language and history; health programs that downplay the importance and effectiveness of traditional medicine; and, most significantly, the loss of land, "which displaces communities and separates them from the environment associated with their knowledge" and displaces traditional food-gathering practices. However, the major threat in Nigeria is lack of law on preservation and transmission of traditional and biological resources. Emcee (2009) reported that there is currently, a proposed legislation sponsored by the Nigeria Natural Medicine Development Agency seeking for protection against exploitation of traditional knowledge and biological resources in Nigeria. The scope of protection sought extended to traditional knowledge that is generated, preserved and transmitted in a traditional and intergenerational context; as well as biological resources. The right to use and exploit traditional knowledge is vested in the community, family or recognized individual(s) within the community, who create, develop, preserve, maintain or transmit the knowledge. In this way, the Bill if passed into law will help to preserve the traditional concept of ownership which in most cases is usually communal. This may take time to materialize and many Indigenous communities in Nigeria may not also see the benefit of the law in preserving and transmitting their knowledge.

Many theorists of Indigenous knowledge such as Brokensha et al… (1980), Ulluwishewa (1993), Warren (1989), and Warren et al. (1993) believed that the prime strategy for conserving

Indigenous knowledge is ex situ conservation, i.e., isolation, documentation and storage in international, regional, and national archives. This is technically the easiest and politically the most convenient strategy, but it is also at odds with the desire to maintain distinctions between scientific and Indigenous knowledge. First, if Indigenous knowledge is inherently scattered and local in character, and gains its vitality from being deeply implicated in people's lives, then the attempt to make the knowledge essential, or isolate it, archive and transfer it may contradict the nature of the knowledge. Moreover, western science is condemned for being non-responsive to local demand and divorced from people's lives, hence centralized storage and management of Indigenous knowledge may lay itself open to the same criticism. Conversely, Hamilton (1994) criticized the method as being ill-suited for preserving Indigenous knowledge because of the dynamic nature of Indigenous knowledge and its changing character against the background of the changing needs of peoples. Arguably, Wilson (1992) remarked that even among biologists ex situ conservation is a defective strategy for preserving physically distinguishable entities such as seeds and plants; therefore, it is not proper to advocate the same strategies in preserving knowledge which is usually linked with the lives of people and is constantly changing. However, Massaquoui (1993); Agrawal (1995) and Richards (1980) accepted the utility of Indigenous knowledge in itself, and are proposing for the validation of Indigenous knowledge by means of scientific criteria. They contend that if western science is the ultimate arbiter of knowledge, then there seems little point in advocating the distinction between scientific and Indigenous knowledge.

In Tanzania Msuya (2007) identified that there were several efforts to protect and preserve Indigenous knowledge and one of such efforts is the Tanzania Development Gateway database of the Economic and Social Research Foundation (ESRF). This is a Non Governmental Organization whose main objective is to build and strengthen human and institutional capabilities in economic

and social policy analysis and decision-making and to enhance the understanding of policy options within the government, donor community and in the growing non-governmental sector in Tanzania. ESRF uses information technology and the internet to promote social and economic development within Tanzania. The database was established to enhance sharing and dissemination of Indigenous knowledge information, experiences and practices in Tanzania. Its objectives being to:

- provide a platform where Indigenous knowledge is captured, stored and disseminated;
- provide a mechanism of sharing this knowledge and also integrate it with modern science and technology to enhance information dissemination;
- promote sharing and dissemination of Indigenous knowledge information, experience and practices in Tanzania; and
- realize the contribution of Indigenous knowledge to socio-economic development;
- Create a database to promote development of Indigenous knowledge systems to improve information provision to the local communities.

Ranasinghe (2008) identified that preservation of Indigenous knowledge in Sri Lankan libraries and documentation centers have not been given due attention. To preserve Indigenous knowledge which is mostly in verbal form there is the need to record it first. This process was embarked upon by the Sri Lanka National Library to preserve Indigenous knowledge for future generations. However, the process has been abandoned due to various reasons among which is absence of a clear vision on the importance of recording national Indigenous knowledge The libraries and documentation centers should have specific ongoing programmes to collect Indigenous knowledge before preservation. In general the situation with regard to the preservation of Indigenous knowledge in Sri Lanka is not satisfactory.

In Sri Lanka, so far no concerted efforts have been taken to preserve its Indigenous knowledge. On the other hand legitimized knowledge system of the country is also on the verge of extinction.

Within the next few decades most of the records of this knowledge (palm leaf manuscripts), heaped in Buddhist temples here and there will be destroyed due to neglect. Preparation of bibliographies alone does not preserve these manuscripts. They are immediately to be copied, classified, indexed and preserved. Vast amount of true Indigenous knowledge of the country, the oral knowledge has already vanished since the word by mouth tradition does not exist in modern society. The verbal tradition is on the wane. Young generation of the country is not interested in the practicing of verbal traditional knowledge. Therefore, if no immediate actions are taken, it is inevitable that the verbal Indigenous knowledge in Sri Lanka will be lost by the end of the present generation of elders. Hence, it is to be immediately collected, recorded, preserved and make available to the future generations.

2.10 Library and Information Services Derived from Information Generated on Indigenous Knowledge in Nigeria

The cardinal responsibility of a library in management of Indigenous knowledge is to provide service to all manner of individuals and groups within its community. Thus, libraries and documentation centers develop services that can eliminate economic, language, physical, and educational barriers that may prevent individuals from accessing the information they need. The American Library Association, Intellectual Freedom Committee Subcommittee on the Impact of Media Concentration on Libraries and documentation centers (2007) notes that "barriers to access to library services will diminish when libraries and documentation centers create free spaces both physical and virtual where individuals can locate, read, view, and utilize information central to their lives." It further added that libraries and documentation centers are in a unique position to acquire and make available resources that reflect the voices of underserved populations. Similarly, UNECO Public Library Manifesto (1994) describes the public library as the local center of information

which provides access to all kinds of knowledge and information. It describes the role of the librarian as that of "an active intermediary between users and resources." The Manifesto further notes that library services and collections must include all types of appropriate media and modern technologies as well as traditional materials. Conversely, a library's responsibility in servicing its community starts from building a collection that present a diversity of viewpoints and perspectives. It should in fact adopt a proactive approach to identify and acquire information that may be beneficial to its community. To fulfill this essential role, a library needs to maintain a high level of engagement with the various user populations within its constituency. It should also collaborate with individuals, groups, and organizations to assure that materials created by Indigenous people are acquired and preserved for future generations.

Public Library services are essential public access points because people approach them for variety of reasons including information services. However, Nyana (2009) argued that libraries and documentation centers in Africa are developed according to the Western model of librarianship where knowledge and culture are primarily transmitted through print media, and now increasingly through electronic means. He added that modern library services left out Indigenous knowledge which is the medium of communication in African culture. This approach left out the vast majority of the rural population who are generally unable to read and write and unaccustomed to print and have limited or no access to electronic media. He reflected on some of the problems facing African libraries and documentation centers in the provision of information and services to rural communities regarding: inappropriate collections and services, lack of surveys/ analyses of information needs of rural communities, high-levels of illiteracy, disregard for oral tradition in the provision of services, lack of funding and cooperation between related agencies, and inappropriate training of African librarians, to name a few. He concluded by suggesting for a library system that is sustainable and compatible with Indigenous knowledge, one that provides information in print

relevant to Indigenous needs where information and knowledge are communicated orally; a library collection and services that have been patterned after Western culture and information needs relevant to rural communities in Africa, and produce better trained librarians to meet the information needs of rural communities.

The goal of Indigenous knowledge is to impart knowledge and information to empower people to be productive in the society. However, Western knowledge emphasizes information and literacy as the final goal of information service. The use of Indigenous knowledge in providing services according to Totemeyer (1994) will overcome the reliance on literacy as a precondition of obtaining information and create conditions for personal and societal growth to make the illiterate perceptive to new ideas and create the urge and climate for acquiring literacy to learn even more". He acknowledges the existence of Indigenous knowledge and recommends for the development of reading culture to increase access to knowledge and improve the society.

The problems with modern information services in Africa according to Mchombu and Cadbury (2006) are the low level of use of library services as the result of illiteracy in Western knowledge system. The low use of library services can be attributed to the exclusive use of print in the transmission of information instead of Indigenous knowledge. Mchombu (1991) reported the findings of several surveys in Botswana, Kenya, and Tanzania showing the percentage of library users to be below 7.5 percent. In Uganda, for example, there were only 158,407 registered public library users out of a population of 21 million compared to UNESCO (1989) report that identified 34,900,000 registered users in United Kingdom. It also reported a similar pattern of information needs between Nigerian rural communities and Western countries. The needs of the rural communities include information related to agricultural skills, marketing of produce, and basic

health information. Fulfilling these needs does not require databases or advanced technologies but can be resolve by Indigenous knowledge.

African library and Information services rely heavily on western model of librarianship. To this end Mchombu (1991), concluded that information needs, and the information-seeking behavior of Africans were conceived in identical manner to those of library users in Europe and North America. Similarly, the concept and philosophy of librarianship as practiced in the Anglo-American tradition was imported without modifications to Africa. Further, Chijioke (1989) added that, "African people themselves were to blame for the misconceptions because they accepted the same model as their European counterparts.

The Collections of the African libraries and documentation centers were made up of donated books or written books from the West. The content of most of these books is foreign and does not reflect the culture or address the needs of local communities in Nigeria. Stillwell qoated by Mostert (1996) found that libraries and documentation centers in Ghana imported ninety percent of their materials from Britain and United States, a trend that is common in the rest of Africa south of the Sahara. This has been the result of the failure to recognize the importance of Indigenous knowledge which has been used to transmit information and knowledge in Africa from generation to generation. Indigenous knowledge can add to the information resources in the library. Indigenous knowledge articulates the African needs and present the needs in the way Africans education is transmitted. Nyerere (1967) reported that pre-colonial Africa did not have schools. Yet, children were educated in the homes and on the farms they were taught the skills of the society, and the behavior expected of its members.

For solution to library services in rural areas a community library service was proposed by Mchombo and Cadbury (2006) since Western model for libraries and documentation centers has

been useful in urban areas with higher literacy rates and different information needs of the residents. They maintained that due to the failure of Western model of libraries and documentation centers/librarianship to provide relevant services to rural communities, several African countries have embarked on community libraries and documentation centers and information centers as alternative provisions of services to rural communities in Africa. Yet, many of these community centers still reinforce literacy and rely heavily on sustained foreign donations. Dei et al …(2002) gives a grim picture of the life cycle of rural African libraries and documentation centers: Originating from the initiative of a group from the community or an aid agency, their birth is followed by a year or two of rapid growth and a good deal of local publicity and attention. This is followed by a period of slow decline, accompanied by theft, the departures of initiators, loss of interest among staff and users; the library still exists but signs of life are barely discernible. Sometimes this period continues indefinitely, but often a final stage is reached when all remaining books are removed, stolen, or damaged beyond repair and the premises and staff are allocated to another activity.

The alternative models provided in Ghana and Mali closely match the needs of rural communities because they bring in experts and professionals from different fields to provide information to Indigenous consumers in a format that is meaningful to them. Sturges and Neill (1998) describe Audiotheques rurales du Mali, a community center project. He describes the project as serving 150 villages with a committee at the national level for oral Knowledge consisting of local dignitaries, traditional healers, extension workers and volunteer audio librarians to administer the service. The national structure is intended both to disseminate information on hygiene, health, farming, environmental protection and other practical matters, and give wider access to traditional knowledge in the forms of local history, stories, and songs, medical and agricultural knowledge. Yeboah (2000) described the Danfa project in Ghana which was made in to a center of research into

traditional medicine. It operates as information centers where indigenous and exotic knowledge systems are linked to create new knowledge. The center works with modern medical research specialists, herbal pharmacists, medicine men, community elders and the common people, to exchange ideas and identify, extract and develop useful health care knowledge. However, as the cost of equipment and maintenance is not sustainable for rural communities, African librarians have to look for a cheaper local alternative that is sustainable. Thus, Nyana (2009) suggested among others the incorporation of Indigenous knowledge in library services and in the transmission of information to rural areas since the majority of the population is unable to read or write and cannot use print-based materials. This can be achieved through repackaging of information to meet the oral culture of the African communities. Ideally, the library system should incorporate both oral and print-based modes of information transmission. It means that African librarians should think outside the Western model of librarianship when designing services for rural communities. Consideration should be given to proper format of delivery and sustainable technology. He concluded that ideal library model is required in the creation of information structures and methodologies that would encompass Africa's traditional knowledge resources and modern knowledge resources. Information management and marketing strategies: acquisition, dissemination and use of relevant information; modification of information seeking behavior; and most of all, stopping the inertia of perceiving and expressing problems in terms of external factors, are factors that need immediate attention.

2.11 Adoption of Information and Communication Technology (ICT) in Documentation, Dissemination and Access to Information on Indigenous Knowledge in Nigeria

According to Adam (2009) information and communication technologies play major roles in improving the availability of Indigenous knowledge systems and enhancing its blending with the modern scientific and technical knowledge. ICTs include telecommunications technologies such as

telephony, cable, satellite and radio, as well as digital technologies, such as computers, information networks and software. The new information and communications technologies such as computers and the Internet can help generate wealth and jobs, build bridges between governments and citizens, forge relations among organizations and communities, and improve the delivery of essential services to poor people.

ICTs can be used to:

- Capture, store and disseminate Indigenous knowledge so that traditional knowledge is preserved for the future generation
- Promote cost-effective dissemination of Indigenous knowledge
- Create easily accessible Indigenous knowledge information systems
- Promote integration of Indigenous knowledge into formal and non-formal training and education
- Provide a platform for advocating for improved benefit from Indigenous knowledge systems of the poor

Some people are skeptical about the direct contribution ICTs to Indigenous knowledge transfer and poverty alleviation, there are signs that ICT's can contribute to development goals and to the exchange of Indigenous knowledge. Proper application of ICTs is essential to stimulate the flow of Indigenous knowledge and incorporation of modern scientific and technological understandings to traditional knowledge. This requires understanding of the capacities and contexts. Proper application of ICTs requires understanding of the main characteristics of Indigenous knowledge and defining tools, applications and services that meet those characteristics. Liebenstein (2000) analyses the characteristics of Indigenous knowledge and explain how information and communication technology tools can be used to respond to documentation and access to each category of

Indigenous knowledge resource. He notes that Indigenous knowledge is generated within communities, it exits and works within the community and its potential is also validated in the community. Consideration needs to be given community-based resource Centers that can enhance the flow of Indigenous knowledge within the community. Indigenous knowledge is also location and culture specific and in this case both traditional and modern technologies must be tailored to respond to local culture. It focuses and covers basic needs of human and animal and therefore, ICT should be made to enhance livelihoods. He adds further that, Use of Indigenous knowledge is cost-effective, sustainable and locally manageable as its deployment and mobilization is not expensive ICT services to respond to this should not add additional burden but make Indigenous knowledge more sustainable and manageable. That Indigenous knowledge is dynamic, innovative, adaptive and open for experimentation and ICTs need to support the move beyond documentation and improve adaptation and experimentation. Indigenous knowledge is oral and rural in nature and ICT should focus should be made on tools that promote oral interaction such as audio-visual technologies, text to speech, etc. Indigenous knowledge is not systematically documented and Documentation of Indigenous knowledge without jeopardizing local culture, IPR and other aspects should be considered. Indigenous knowledge is not integrated into modern scientific and technical knowledge and ICT services should be designed to enhance systematic integration of modern and traditional knowledge.

There is considerable skepticism over whether Indigenous knowledge that is recorded and removed from its original context can retain its value. Christie (2004) points out that digital object do not contain knowledge, but rather information. ”The digital object is a representation or an artifact of an earlier act of knowledge performance/production.” He compares a database with a Garma, or ceremonial ground which is an important cultural site for the Yolngu people of Australia. Neither the database nor the ceremonial ground contains knowledge, but they are both sites where

knowledge is produced. Thus, digital objects in a database can be used as tools and incorporated into future productions of knowledge, or education, the same way that other tools, such as books, photographs or maps, would be used. Twarog and Kapoor (2004) further add that this demonstrates that the preservation of Indigenous knowledge should not be seen as a means of replacing traditional forms of education in Indigenous communities, but rather as something that will enhance or be used as an additional tool in this process. There can be other benefits in recording Indigenous knowledge beyond preserving it for future generations. One potential benefit to making traditional knowledge accessible in a digital format is that this may make it more appealing to youth or others who may see traditional knowledge as 'old-fashioned'. Another benefit is that putting traditional knowledge in an accessible format for restricted use by governments, non-governmental organizations and other organizations increases the likelihood that Indigenous needs, rights and perspectives will be considered in policy development and resource management, and that Indigenous knowledge will be integrated into development projects. In addition, Norton and Sullivan (2002) further adds that there can be economic benefits for Indigenous communities who build digital libraries and documentation centers through the creation of training and employment opportunities and possibly sharing knowledge for commercial use.

2.12 Summary of the Review

The review identified that the Hausa are the descendants of the early settlers around the Lake Chad basin who can be found in many parts of States of Northern Nigeria. Hausa culture interacts with many other cultures, notably Arabs, Fulani, Nupe, Kanuri and people of southern Kaduna, Plateau, Bauchi and northern Niger. The interactions have helped to expand the culture beyond its communities to the communities of their neighbours. For this it is often difficult to sometimes distinguish Hausa culture from the culture of other minority tribes living in Hausaland because they

all similar to Hausa culture. It was also discovered that culture can provide solutions to sustainable development needs of the society. Culture is the expressions of perceiving and understanding the world which has been making contributions to the society. It noted that integration of culture in development processes will bring development and strengthen the competitive position of the society. Development leads to economic, social and ecological change as well as efforts to influence the changes taking place within a given society. The review also identified that culture and tradition are transferable and to transfer culture there is need to make it accessible by recording, describing and properly organizing the records of the culture. However, any attempt to document culture has to be based on understanding of its utility which can be ascertained by studying the utility of the culture in the society.

The literature referred to Indigenous knowledge as cumulative body of knowledge, know-how, practices and representations maintained and developed by peoples with extended histories of interaction with the natural environment. These sets of understandings, interpretations and meanings are part of the culture of the people which encompasses language, naming and classification systems, resource use practices, ritual, spirituality and worldview. Indigenous knowledge, like any other form of knowledge, is developed within certain cultural groups over a given period of time and within specific environmental and social settings. Indigenous societies develop their knowledge by acknowledging, accepting and adopting elements of their cultural practices. But documentation and access are attributes of science which if adopted by Indigenous knowledge can add value and quality to the knowledge.

The literature also reported that at the beginning man did not know what was happening to him when he became sick. But later man identified certain plants as remedies to the ailment afflicting him. It further revealed that knowledge of traditional cure came from the wizards and witches who often transform into animals and roam the streets and markets of villages and when discovered they

give the person the knowledge of plant to cure diseases. The review defined traditional medicine as the knowledge of medicinal plants and practices used in diagnosing, preventing, or eliminating physical, mental or social diseases. This knowledge among the Hausa medical practices includes love portion, spiritualism, and psychiatry, borne setting, antenatal and post natal care. Others are minor ailment such as headache, stomach problem, tooth decay, bilhazia, guinea worm treatment, burns and wounds and many others. It adds that many people throughout the world use herbal medicines and up to 80 percent of the world's population rely chiefly on traditional medicine for primary health care. This knowledge is acquired formal training where vocational skills are acquired, apprenticeship and folklores. It noted that Indigenous knowledge is an oral based form of knowledge which made it susceptible to extinction due to lack of records on it. Therefore, the issues in the management of such knowledge systems are on how to document it and preserve it for the future.

Documentation of traditional knowledge is also acknowledged as a means of giving due recognition to the traditional knowledge holders. Documentation activity will result in the production of texts authored by Indigenous people. It notes that it is important to understand the root causes of the loss of Indigenous knowledge and to tackle the problem through advocating for recognition of land rights and the development of laws, policies and programs to protect, promote and strengthen Indigenous knowledge and traditional practices. It argued that historically, Indigenous cultures were rather irrelevant to libraries and documentation centers, but today libraries and documentation centers and the electronic context of information documentation and access are now very relevant to Indigenous people. Information and communication technologies play major roles in improving the availability of Indigenous knowledge systems and enhancing its blending with the modern scientific and technical knowledge. ICTs include telecommunications technologies such as telephony, cable, satellite and radio, as well as digital technologies, such as computers,

information networks and software. The new information and communications technologies such as computers and the internet can help generate wealth and jobs, build bridges between governments and citizens, forge relations among organizations and communities, and improve the delivery of essential services to poor people. Today there is considerable skepticism over whether Indigenous knowledge that is recorded and removed from its original context can retain its value.

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CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter discusses the procedure and methods adopted for the study. It covered the description of the research design, research method adopted, population, sample and sampling procedure. The chapter also described the research instruments as well as, method adopted in validating the research instruments. Finally, the chapter discussed the procedures for data collection and data analysis.

3.2 Research Method Adopted for the Study

The study adopted survey research method to collect the data used in analyzing the problem investigated in the study. According to Trochim (2006) survey research method is "one of the most important measurements in applied social research which covers procedure that involves obtaining data from a sample." It is a method of gathering information from a representative portion of the population being studied. This method was chosen because it offered greater advantages in data collection. It was found to be cost effective since it allows the use of questionnaires and questionnaires are cheap to produce and easy to administer. Besides, was found to be convenient in the study because the population was scattered over many states. It was also easy for the researcher to handle instruments of survey which allows the researcher manipulate sampling to suit the need of the research. Over all, survey method was discovered to provide speedy and economical means of obtaining answers to the research questions raised in the study.

3.3 Population of the Study

The population of the study comprised of Traditional Medical Practitioners who generate the information on Hausa Indigenous Knowledge in Medical Practices. To this effect, the members of

the Gamji Herbalist Association of Nigeria and members of the National Association of Nigerian Traditional Medical Practitioners were used as population by the study. Available data obtained from the secretariat of the Gamji Herbalist Association of Nigeria at Dutse Hospital in Kaduna revealed that there were 1709 registered members of the association. On the other hand, registered members of the National Association of Nigerian Traditional Medical Practitioners in Zaria; as revealed from the interview conducted on 20th May, 2012 with some executives of the association were 2117. Therefore, the total populations of Traditional Medical Practitioners used by the study were 3826 practitioners.

The population of the study was also made up of documentation agencies, research institutes and departments or units of Nigerian Universities teaching or researching on aspects of the subject in States of Northern Nigeria. This included libraries located within the states covered by the study, Pharmaceutical Research Institutes and Ministries which included Nigerian Natural Medicine Development Agency (NNMDA) and Nigeria Institute for Pharmaceutical Research and Development. These research institutes were involved because part of their mandate required them to acquire, organize and facilitate access to information on Hausa Indigenous Knowledge in Medical Practices in Nigeria. The National Library headquarters and its branches in the states were included in the study and so, were State Public Library Boards which also constituted part of the population of the study. The National Library was included in the population because it is the apex library which formulates policies and regulations guiding the operation of public library services in the country and state public library service were the libraries closer to the community.

Subjects were identified from the staff of the institutions that formed the population of the study. The staff from the research institutions that formed part of the population were those directly involved in research and development. Staff of libraries included the National Librarian, Deputy Director Collection Development Department, National Bibliographic Control Department (NBCD)

and Research and Development Department. Other librarians included in the population were the Senior Librarians in-charge of the following divisions or units in the National Library of Nigeria: a) Research and Publications, b) Development and Documentation, c) Legal Deposit, d) Gifts and Exchange, e) Bibliographic Services Division (BSD) f) National Library Statistics Unit, and g) Indexing and Abstracting Section. At the state branches of the National Library of Nigeria the Head of branch, Senior Librarian Collection Development Unit, Senior Librarian National Bibliographic Control Department (NBCD) and Senior Librarians in-charge of circulation, cataloguing and indexing units were taken as subjects. While, the population of librarians from the State Library Boards was selected from the directors, heads of collection development and cataloguing departments. From other institutions people identified to be handling aspects of documentation of information on Hausa Indigenous Knowledge in Medical Practices were selected. In all the total population used in the study was 3895 including both Hausa indigenous medical practitioners and members of staff of the institutions that formed the population of the study. The distribution of the population is given in table 3.1 below.

Table 3.1: Distribution of the Population of the Study

S/No.	Institution	Number of units	Number of subjects
1.	Members of the Gamji Herbalist Association of Nigeria	1	1709
2.	National Association of Nigerian Traditional Medical Practitioners	1	2117
3.	National Library of Nigeria headquarter and its state branches	16	38
4.	State Library Boards (comprising of sixteen states and Federal Capital Territory)	19	19
5.	Federal and State Government funded Universities	7	7
6.	Nigerian Natural Medicine Development Agency (NNMDA	1	2
7.	Nigeria Institute for Pharmaceutical Research and Development	1	2
Total		**46**	**3894**

3.4 Sample and sampling procedure

There was no sampling from the population of National Library of Nigeria headquarters and its state branches, State Library Boards, Federal and state government funded Universities, Nigerian Natural Medicine Development Agency (NNMDA) and Nigeria Institute for Pharmaceutical Research. This was because the members of staff that qualified as subjects from the population were small in number. Therefore, the number 71 in the population of members of staff from these institutions and ministries was retained as the sample of the study.

However, 383 (10%) samples were selected from the total population of 3826 Traditional Medical Practitioners. The samples were selected by criteria sampling technique and 10% sample size was used because the goal was to obtain responses from representative number of the population and to be able to use the responses to reach reasonable conclusion in the study. The 10% sample size was also used because the target was to ensure responses and this was felt by the researcher to best be obtained from smaller groups of people. It was as the result of these that 10% of the population of Traditional Medical Practitioners was used by the study.

Table 3.2: Distribution of the sample of the Study

S/No.	Institution	Number of units	Number of subjects	Number of sample taken
1.	Members of the Gamji Herbalist Association of Nigeria	1	1709	171
2.	National Association of Nigerian Traditional Medical Practitioners	1	2117	212
3.	National Library of Nigeria headquarter and its state branches	16	38	38
4.	State Library Boards (comprising of sixteen states and Federal Capital Territory)	19	19	20
5.	Federal and State Government funded Universities	7	7	7
6.	Nigerian Natural Medicine Development Agency (NNMDA	1	2	2
7.	Nigeria Institute for Pharmaceutical Research and Development	1	2	2
Total		**46**	**3894**	**451**

In sampling the Traditional Medical Practitioners criteria sampling was used to ensure the selection of the right sample. The criteria set included being a registered member of either the Gamji Herbalist Association of Nigeria or National Association of Nigerian Traditional Medical Practitioners, knowledge of herbs **used** in the treatment of ailments, and being a Hausa person. The criterion of being a Hausa person was included because there were many practicing indigenous medical practitioners from different ethnic background in Nigeria. This made it necessary to set criteria to distinguish Hausa indigenous medical practitioner from non Hausa practitioner.

In the selection of the sample accidental sampling was used. This was used so that anyone who met with the criteria for inclusion in the sample could be included. Accidental sampling is a form of non probability sampling which according to Social Research Methods (2011) is used in researches seeking for explanation on procedures and methods of conducting an activity including aspects of documentation and access to Hausa Indigenous Knowledge in Medical Practices in Nigeria. This means that it is valid to use accidental sampling technique for this study. Moreover, the sampling technique used allowed the researcher to select the sample based on availability and ease of access to the Traditional Medical Practitioners. It also aided the researcher to spread the selection of the samples over wide areas to include many local government areas within each state covered by the study.

3.5 Instrument for Data Collection

The instruments used for data collection were designed to collect qualitative and quantitative data. The instruments used were questionnaires, interview and document analysis.

3.5.1 The Questionnaires

Two sets of questionnaires were designed to collect data from the respondents that formed the sample in the study. One set of the questionnaire was designed to collect data from the staff of the institutions that formed the population in the study. The other questionnaire was

meant to collect data from Hausa Traditional Medical Practitioners. Both questionnaires contained close and open ended type of questions. The questionnaire for staff of the institutions that formed the population in the study contained twelve items or questions divided in four parts as follows: Part one was set to obtain responses on personal details of the respondents, while part two was meant to obtain the responses of the respondents on institutions concerned with documentation of information on Hausa Indigenous Knowledge in Medical Practices in Nigeria. Part three was raised to obtain data on sources of information on Hausa Indigenous Knowledge in Medical Practices in Nigeria and part four was to collect data on types of information services required in the society from information on Hausa Indigenous Knowledge in Medical Practices in Nigeria.

The questionnaire for Traditional Medical Practitioners contained fourteen questions divided in six parts as follows: part one was set to obtain responses on personal details of the respondents, part two was raised to collect data on sources of Hausa Indigenous Knowledge in Medical Practices and part three was set to collect data from the respondents on generation of Hausa Indigenous Knowledge in Medical Practices. Other sections of the questionnaire included part four which was meant to collect data on specializations in Hausa Indigenous Knowledge in Medical Practices, part five was raised to obtain data on types of materials used for preparation of Hausa indigenous medical practices, and section six was set to determine the methods used in promoting medicinal products among Hausa indigenous medical practitioners

The two instruments collected data directly from the respondents and thus, it was believed that the two set questionnaires provided accurate descriptions of the processes involved in documentation and access to information on Hausa Indigenous Knowledge in Medical Practices in Nigeria.

3.5.2 Interview

Interview was conducted in few cases where the respondents could not read or understand the questionnaires used in the study. The content of the interview was the same as the content of the structured questionnaire administered to all of the respondents in the study. This was used because of the need to obtain the opinion of every member of the sample in the study. The interview was also used as follow up to the structured questionnaire administered. The responses to this were recorded on paper to enable easier translation and transcription of the result of the interview.

3.5.3 Document Analysis

Document analysis was employed to determine the contributions of institutions in documentation and access to information on Hausa Indigenous Knowledge in Medical Practices in Nigeria. The documents analyzed were the publications from the institutions on the subject of the study.

3.7 Validity and Reliability of the Instrument for Data Collection

In order to ensure that the research instruments collected the relevant data in a consistent manner, the validity and reliability of the instruments were tested. Validity and reliability according to Mason and Bramble (1989) are assessment tools **used** for determining the consistency of research instrument in collecting the relevant data needed in a study. To this end the research instrument used for data was tested using some people in Zaria. Zaria was selected because it was at the center of States of Northern Nigeria.

3.7.1 Validity of the Research Instrument

Content validity of the research instrument was assessed to determine the level at which the questionnaire represents the knowledge in documentation and access to information on Hausa Indigenous Knowledge in Medical Practices in Nigeria. In determining the content validity of the questionnaires used in this study, 7 staff members of Kashim Ibrahim Library in Ahmadu Bello University and 10 Traditional Medical Practitioners in Zaria were administered the questionnaires. However, before this was done the questionnaires were certified to have covered the vocabulary of documentation and access to information on indigenous knowledge in Nigeria by the internal supervisors.

3.6.2 Reliability

Reliability index of the test items in the questionnaire was determined to ascertain the extent to which the instruments yielded consistent outcomes. It is important to determine the reliability of a research instrument because according to Carmines and Zeller (1979) unreliability is always present in every instrument. What is required in a research instrument is consistency in measuring what it is set to measure. For this reason the reliability of the questionnaires used for data collection was determined by using the Cronbach's Alpha to ascertain the extent to which the instruments is reliable and relevant for data collection in the study. The result of the test indicated the reliability coefficient for the two instruments at 0.736 and 0.712 respectively. Using the Cronbach's Alpha assumes that the higher the score, the more reliable the generated scale is. However, Nunnaly (1978) has indicated 0.7 to be the acceptable reliability coefficient but lower thresholds are sometimes used in the literature. Therefore, the instruments used in this study were quite reliable in testing the assumptions of the study.

3.7 Procedure for Data Collection

In order to avoid collecting irrelevant and ambiguous data the aspect of data collection was supervised directly by the researcher. This was because the researcher used research assistants in the data collection exercise. The precaution taken before any research assistant was assigned the task of collecting the data, he/she was tested in order to ascertain their competency and knowledge in collecting the type of data required for the study. Where it was discovered that the research assistants lack the required skills in handling the work; short training was organized to acquaint them with what is expected from them. The Data collection exercise covered a period of four (4) weeks. A follow up on data collection was organized for another four weeks to ensure that all relevant data were collected and all questionnaires distributed were returned dully completed.

In all the data collection exercise covered a period of eight weeks. However, to avoid duplication of data each of the research assistant employed was assigned a specific area to cover within a state. The use of assistants was made possible by the fact that the area to be covered in the study was large and that the respondents in the study were not in one place; often the research assistants may have to follow them where-ever they may be found. This required constant visit and the researcher do not have all the time to do that.

3.8 Procedure for Analysis of Data

In presenting the data collected in the study both descriptive and statistical analysis were used in data analysis. In analyzing the research questions, frequency distribution and percentages were used. Frequency distribution and percentages have been discovered by the researcher to provide a good basis of comparison of data hence, their use by the study. The hypotheses were tested using Pearson Product Moment Correlation (PPMC) because the hypotheses were after the relationship between variables.

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CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION

4.0 Introduction

This chapter deals with analysis of data produced by the instruments administered to the respondents in the study. The findings were based on the responses obtained from the staff of the agencies and ministries responsible for documentation of Information on Hausa Indigenous Knowledge in Medical Practices in Nigeria, and members of the National Association of Traditional Medical Practitioners. The chapter is presented in three parts:

4.1 Response Rate,

4.2 Data Presentation,

4.3 Statistical Data.

4.1 Response Rate

Out of the total number of 450 questionnaires distributed to the two sets of respondents, 342(76%) were returned dully completed. The researcher believed that 76.0% return on questionnaires can enable reasonable conclusion to be reached in the study. Tables 4.1 and table 4.2 below show the response rate.

Table 4.1: Response Rate of Traditional Medical Practitioners Involved in Hausa Indigenous Knowledge in Medical Practices in Nigeria

S/No.	Institution	Number of questionnaires distributed	Number of questionnaires returned dully completed	Percent of returned questionnaires
1	National Association of Nigerian Traditional Medical Practitioners	212	157	**40.9**
2	Members of the Gamji Herbalist Association of Nigeria	171	131	**34.2**
Total		**383**	**288**	**75.1**

Out of the total number of respondents from Traditional Medical Practitioners 73 of them were interviewed in the course of data collection because they could neither read the questionnaire nor understand what was expected of them in the questionnaire. However, from table 4.1 above it can be seen that Traditional Medical Practitioners from the two associations recorded the response rate of 288(75.1%). The reasons for the high response rate could be attributed to the sampling technique adopted for the study. It could also be as the result of the use of research assistants who were residents of the areas covered by the study which enabled them to reach a good number of the respondents.

Table 4.2: Response Rate of Staff from the Agencies Documenting Hausa Indigenous Knowledge in Medical Practices in Nigeria

S/No.	Institution	Number of questionnaires distributed	Number of questionnaires returned dully completed	Percent of returned questionnaires
1.	National Library of Nigeria headquarter and state branches	38	30	44.8
2.	State Library Boards (comprising of five states)	20	17	25.4
3.	Nigerian Natural Medicine Development Agency (NNMDA	3	3	4.5
4.	Faculty of Pharmaceutical Sciences, Ahmadu Bello University	3	2	3.0
5.	Nigeria Institute for Pharmaceutical Research and Development	3	2	3.0
	Total	**67**	**54**	**80.7**

From table 4.2 above it was obvious that the staff of the agencies responsible for documentation of Hausa Indigenous Knowledge in Medical Practices responded very favourably. The high response rate of 54(80.7%) was achieved because there were few respondents which made it easier for the researcher to reach each one of them in the group.

4.2 Data Presentation and Discussion

The data presented and discussed in this section was based on 342 questionnaires that were returned dully completed and the result of the interview conducted on 73 respondents who could neither read nor understand the questionnaires distributed to them, as well as the analyses of the three publications of the Nigerian Natural Medicine Development Agency. The presentations and discussions were done descriptively and statistically. Included also in the discussion of the data were the implications of the findings on documentation and access to Information on Hausa Indigenous Knowledge in Medical Practices in Nigeria.

4.2.1 Descriptive Data

The data collected from these places were presented in frequency distributions and percentages with the aim of comparing cases to find answers to the research questions raised in the study. The findings from the research questions are presented as follows.

4.2.2 Type(s) of Information Generated on Hausa Indigenous Knowledge in Medical Practices by Hausa People in States of Northern Nigeria

In response to the research question on type of information generated on Hausa Indigenous Knowledge in Medical Practices by Hausa people in States of Northern Nigeria, data was collected on this and the responses of Traditional Medical Practitioners to the question is presented in table 4.3 below.

Table 4.3: Type(s) of Information Generated on Hausa Indigenous Knowledge in Medical Practices by Hausa People in States of Northern Nigeria

Category of Knowledge Generated on Hausa Indigenous Medical Practices	Frequency	Percent
Medicinal plants/herbs	41	14.2
Occultism/spiritualism	37	12.8
Traditional surgery	32	11.1
Fortune telling	25	8.7
Boka	23	8.0
Rituals in Hausa Indigenous Knowledge in medical practices	20	6.9
Taboos on Hausa Indigenous Knowledge in medical practices	18	6.2
Bone setting/dislocations	16	5.6
Childcare	15	5.2
Traditional psychiatry	13	4.5
Cult of spirit possession [Bori]	12	4.2
Traditional Birth	10	3.5
Diagnoses of diseases	9	3.1
Using animal parts in traditional medicine	7	2.4
Magic	6	2.1
Incantations	4	1.4
Total	**288**	**100**

Table 4.3 above is indicating the type of knowledge generated by Hausa Indigenous Medical Practitioners. The Table indicates that the major knowledge generated on Hausa Indigenous Knowledge in Medical Practices by Hausa Indigenous Medical Practitioners is knowledge on medicinal plants and herbs as recorded in responses of 41(14.2%) respondents. This finding is therefore, in line with the analysis of data collected on the activities of the agencies documenting information on Indigenous Knowledge in Nigeria. Most of the information documented by these agencies as discovered from their publications was on information on different plant species and

herbs used by Hausa Indigenous Medical Practitioners for preparation of medical cures. This means that knowledge of plants and herbs is the most observed in Hausa Indigenous Knowledge in Medical Practices in Nigeria. It could also mean that the major focus of the agencies documenting Hausa Indigenous Knowledge in Medical Practices in Nigeria is to document plants and herbal species use in traditional medicine. The least knowledge generated according to the table is knowledge on incantations as reported by 4(1.4%) respondents. This means that the use of incantations was the least practice observed among Hausa Indigenous Medical Practitioners as such it might be that there were few practitioners who use incantations among the respondents. The low responses on incantations could also mean that it was not an important practice in Hausa Indigenous Knowledge in Medical Practices. Another reason advanced for the low response rate on incantations was attributed to the fact that incantations may not be part of the interest in the documentations produced by the agencies documenting Indigenous Knowledge in Medical Practices in Nigeria. See Appendix 2 for sample of the types of knowledge generated in Hausa Indigenous Knowledge in Medical Practices by Hausa people in Nigeria.

The implication of the finding on types of knowledge generated on Hausa Indigenous Knowledge in Medical Practices to information services derived from the knowledge in Nigeria, was that more attention need to be accorded to types of knowledge generated with the view to acquire complete knowledge in the practices. Moreover, identifying the types of knowledge generated will help in improving the management of the knowledge in Nigeria. Alavi and Leidner (2001) noted that knowledge generation is often the first process in knowledge management including documentation. Arguably, Puga and Trefler (2003) added that documentation (of Hausa Indigenous Knowledge in Medical Practices in Nigeria) will be impossible without first identifying the types of knowledge generated. This means that knowledge generation is a vital and strategic

element in documentation of Hausa Indigenous Knowledge in Medical Practices in Nigeria. Therefore, documentation agencies need to pay attention to the process of knowledge generation to be able to identify types of knowledge generated before embarking on documentation of the knowledge. Identifying the knowledge generated will enable accurate description of the knowledge to be carried out by librarians which may subsequently enhance access to the knowledge and patronage of the services that can be derived it. This process need to be fully understood as it will form the basis of the effectiveness of the services to be derived from the knowledge generated on Hausa Indigenous Knowledge in Medical Practices. Thus, Hausa Indigenous Knowledge in Medical Practices needs to be identified first before it is indexed and organized in a meaningful order that can facilitate access to it.

4.2.3 Level of Demand of the Information Generated on Hausa Indigenous Knowledge in Medical Practices in States of Northern Nigeria

Due to the importance of demand in management of information generated on Hausa Indigenous Knowledge in Medical Practices, a question was raised on this and the responses are given in table 4.4 below.

Table 4.4: Opinion of Respondents on Level of Demand of Information Generated on Hausa Indigenous Knowledge in Medical Practices in States of Northern Nigeria.

Items	**Response Categories**										**Mean**
	Very High demand		**High Demand**		**Undecided**		**Not very high demand**		**Not High demand**		
	Freq	**%**	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**	
Resource sharing	13*	24.1	15	27.8	2	11.1	10	18.5	10	18.5	3.2037
Referral services	12	22.2	19	35.2	0	0	12	22.2	11	20.4	3.1667
Indexing services	9	16.7	10	18.5	3	5.6	11	20.4	21	38.9	2.5370
Abstracting service	6	11.1	20	37.0	2	3.7	5	9.3	21	38.9	2.7222
Reprographic services	13	24.1	17	31.5	4	7.4	9	16.7	11	20.4	3.222
Lending services	15	27.8	13	24.1	5	9.3	12	22.2	9	16.7	3.2407
Children and young peoples services	13	24.1	11	20.4	6	11.1	15	27.8	9	16.7	3.0741
Database/repository services	15	27.8	10	18.5	4	7.4	17	31.5	8	14.8	3.1296
Cumulative mean											**3.0370**

Decision/aggregate mean = 3.000

Table 4.4 above is indicating the opinion of the respondents on demand of Information generated on Hausa Indigenous Knowledge in Medical Practices in States of Northern Nigeria. Lending services is the most demanded service from information generated on Hausa Indigenous Knowledge in Medical Practices in States of Northern Nigeria with mean response of 3.2407. Reprographic services attracted the second highest demanded service with mean response of 3.2220 respectively. The least demanded service is indexing service which recorded mean responses of 2.4370. In general there is demand for the services from Information generated on Hausa Indigenous Knowledge in Medical Practices in States of Northern Nigeria as the cumulative mean of the variables in table 4.4 is 3.0370 which is higher than the aggregate/decision mean of 3.000.

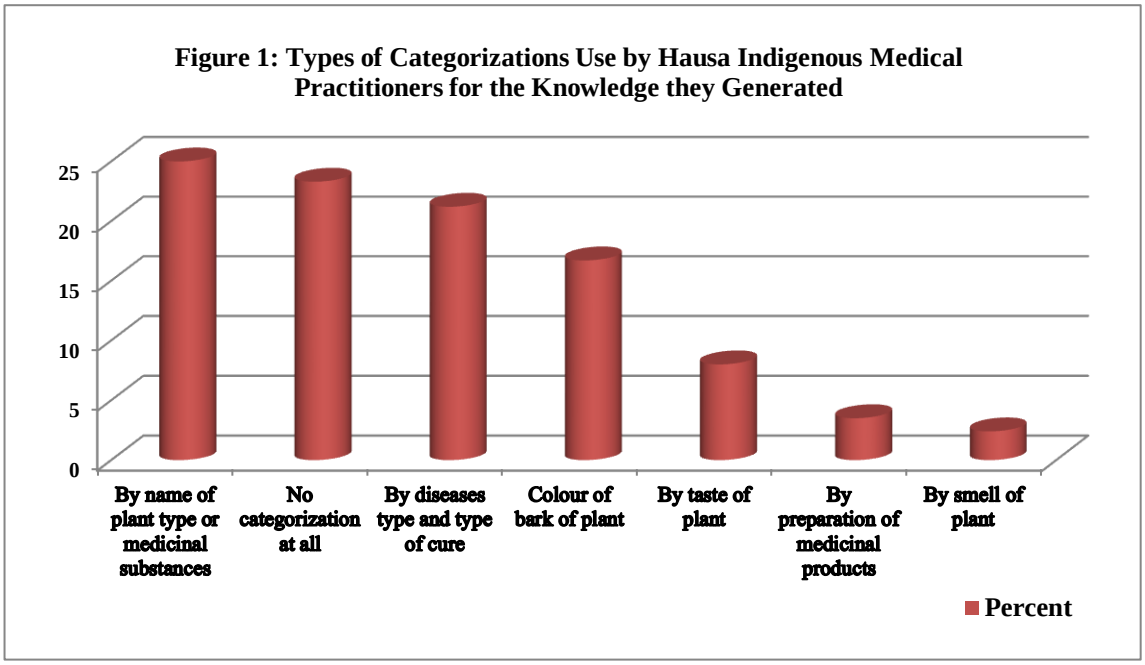
This implies that library services should be provided based on demand and in the case of this study the demand for services from information on Indigenous Knowledge in libraries of States of Northern Nigeria has been established. It identified the services to be provided by any library on information generated from Indigenous Knowledge to be based on data collected. Such data should be accessed by the libraries before embarking on providing services from it. Peteman (2011) posited that the language of needs and demand are the dominant concepts in the contemporary discourse on public services. A Needs Based Library Service is predicated on the assumption that everyone has needs and everyone has different needs. Therefore, a Need Based Library Service is a universal concept which can be applied to any library service in any circumstances at any time. A Needs Based Library Service has the appropriate strategy, structure, systems and culture which enable it to identify, prioritize and meet community needs. A Needs Based Library Service involves and engages the whole of the local community in the planning, design, delivery and evaluation of library services.

4.2.4 Methods of Categorizing Knowledge Generated on Hausa Indigenous Knowledge in Medical Practices by Hausa Indigenous Medical Practitioners in Nigeria.

Another question was raised on method used by Hausa Indigenous Medical Practitioners to categorize knowledge they generated on Hausa Indigenous Knowledge in Medical Practices. The responses of Hausa Indigenous Medical Practitioners on this are presented in table 4.5 and figure 1 below

Table 4.5: Types of Categorizations Use by Hausa Indigenous Medical Practitioners for the Knowledge Generated

Categorizations Used by Indigenous Medical Practitioners	**Frequency**	**Percent**
By name of plant type or medicinal substances	72	25.0
No categorization at all	67	23.3
By diseases type and type of cure	61	21.2
Colour of bark of plant	48	16.7
By taste of plant	23	8.0
By preparation of medicinal products	10	3.5
By smell of plant	7	2.4
Total	**288**	**100**



From table 4.5 and figure 1 above it is indicated that Hausa Indigenous Medical Practitioners categorize the knowledge they generated by name of plant as recorded in the responses of 72(25.0%) respondents. Similarly, careful examination of the publications of Nigerian Natural Medicine Development Agency (NNMDA) revealed that entries of medicinal plants and herbs in the publications were arranged alphabetically by name of plant. This was collaborated by Emcee (2009) where he reported that Nigerian Natural Medicine Development Agency (NNMDA) used name of plant in documentation of Medicinal, Aromatic and Pesticidal Plants (MAPPs) used in traditional medicine in Nigeria. Thus, arrangement of information by name of plant is a standard method of categorizing Hausa Indigenous Knowledge in Medical Practices in Nigeria. However, Berners-Lee, Hendler, and Lassila (2001), noted that knowledge is best organized by reflecting human needs and human needs according to Maslow (1943) are constant because they hardly change. Human needs in knowledge organization include memorisability, easy identification, and reduction in use of physical and mental efforts, easy comprehension, and orderliness. The means adopted by human beings to fulfill their needs today is often dependant on the use of technology for

access and retrieving knowledge in libraries. Thus, in adopting human needs approach in organizing Hausa Indigenous Knowledge in Medical Practices in Nigerian libraries universal applicability, adaptability, interoperability and suitability to both electronic as well as conventional environments need to be considered. Moreover, human needs are often influenced by social, economic, environmental, political, scientific, technological factors which are never constant and as such our perception of the things around us need to evolve with the changes taking place around us. Thus, librarians in Nigeria need to address the problems associated with categorizing Hausa Indigenous Knowledge in Medical Practices to make it fit within the scheme of modern knowledge organization. Perhaps categorization of Hausa Indigenous Knowledge in Medical Practices adopted by Hausa Indigenous Medical Practitioners is more practicable and more applicable to the form of knowledge they generated. If so, then effort in documentation of Indigenous Knowledge should recognize the methods used by Indigenous Medical Practitioners to categorize knowledge more especially that 67(23.3%) reported no categorization at all. This means that the process of documentation of information generated by Hausa indigenous medical practitioners by agencies documenting the knowledge in Nigeria should not adopt the principles of modern knowledge organization which categorizes knowledge in conformity to established order accepted by scientific and educational consensus. More especially, as Indigenous Knowledge is not an objective knowledge as science, instead it should be categorized based on the method accepted by the knowledge creators. This is important as it will enhance the identification and use of any information service that could be derived from the knowledge in libraries.

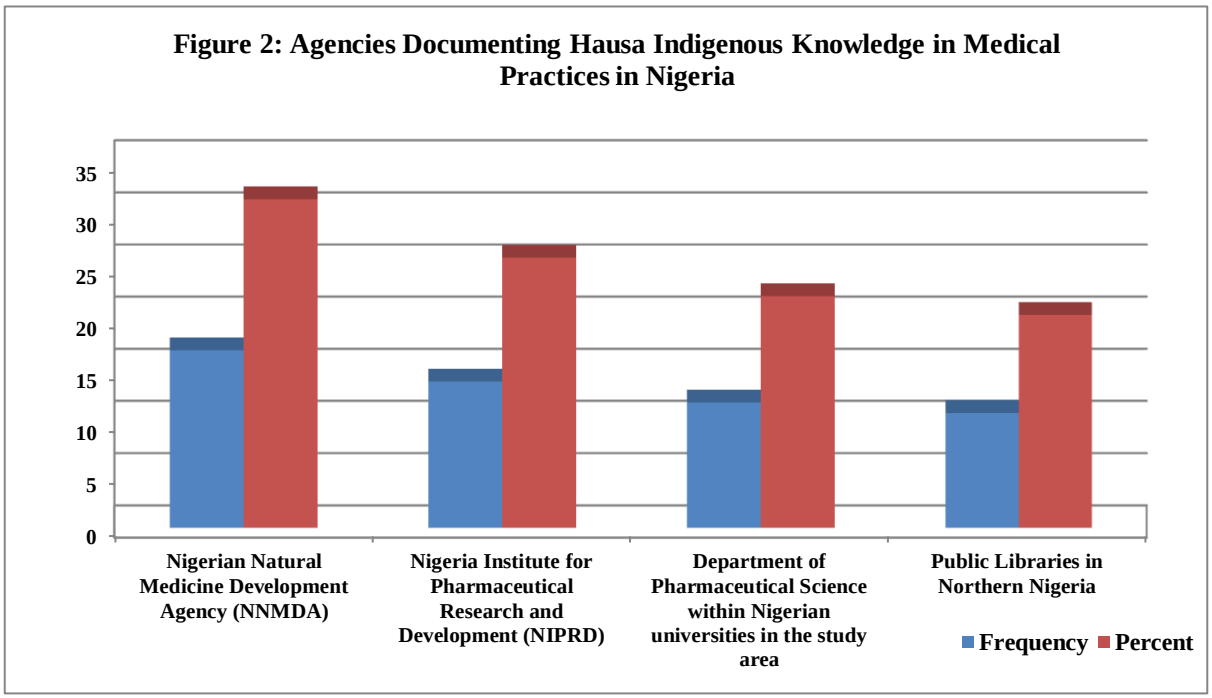
4.2.5 Agencies Documenting Hausa Indigenous Knowledge in Medical Practices in Nigeria

To identify the agencies responsible for documentation of Information on Hausa Indigenous Knowledge in Medical Practices in Nigeria a research question was raised on this with the view to

establish the objective of documentation of Information on Hausa Indigenous Knowledge in Medical Practices in Nigeria. The data on this is presented in table 4.6 and figure 2 below:

Table 4.6: Agencies Documenting Hausa Indigenous Knowledge in Medical Practices in Nigeria

Agencies Documenting Information on Hausa Indigenous Knowledge in Medical Practices in Nigeria	Frequency	Percent
Nigerian Natural Medicine Development Agency (NNMDA)	17	31.5
Nigeria Institute for Pharmaceutical Research and Development (NIPRD)	14	25.9
Department of Pharmaceutical Science within Nigerian universities in the study area	12	22.2
Public Libraries in States of Northern Nigeria	11	20.4
Total	**54**	**100**



From table 4.6 and figure 2 above it can be seen that there are many agencies responsible for documentation of Information on Hausa Indigenous Knowledge in Medical Practices in Nigeria. However, the Nigerian Natural Medicine Development Agency (NNMDA) ranked first as obtained in the responses of 17(31.5%) respondents. This is a rather disturbing finding because

documentation of Indigenous Knowledge is supposed to be handled by the library since it has been made the custodian of culture and information in the society. Moreover, due to their training library and information professionals are the most competent people to handle documentation of Information on Hausa Indigenous Knowledge in Medical Practices in Nigeria. The fact that public libraries recorded 9(14.8%) responses calls for urgent attention of information professionals in Nigeria to see to it that public libraries are involve in documentation of Indigenous Knowledge in the country. Similarly, for the fact that documentation of Indigenous Knowledge in Medical Practices is handled by agencies directly connected with aspects of healthcare delivery services which is a welcome development as this will help to bring information on Indigenous Knowledge in Medical Practices closer to the people that need it. However, as observed by the researcher the question that needs further investigation is on access to Indigenous Knowledge in Medical Practices in Nigeria. As it is today many people contacted in the course of collecting data for the study were not aware of the activities of the agencies documenting Information on Hausa Indigenous Knowledge in Medical Practices in Nigeria. Many of the people, who were aware of the activities of the agencies in Nigeria, do not have access to the products of the documentations produced by the agencies because the products are not available in conventional book trade channels and even in the agencies documenting the knowledge in Nigeria. It was revealed to the researcher that "Abstracts of Published Research Findings on Nigerian Medicinal Plants and Traditional Medicine Practice" produced with collaboration of Federal Ministry of Science and Technology was lost because the library staff who assisted in the compilation could not find it anywhere in the ministry. The issue now is where could this important document be found, if the publisher could not have it? The libraries in the agencies documenting Hausa Indigenous Knowledge in Medical Practices where the products of the documentations are stored have restricted access as such not everyone can go there to use some of the materials stored. It was discovered that in Nigeria there are no

repositories on Indigenous Knowledge in Medical Practices where people can freely access the relevant information they need on the subject. Thus, the question that remained unanswered is on the objective of documentation of Information on Hausa Indigenous Knowledge in Medical Practices in Nigeria. Is it that documentation of Information on Hausa Indigenous Knowledge in Medical Practices is produced for the sake of keeping it in the agencies that is producing the documentations or is it produced with the view to making the content of the documentation accessible to the people who need them? The objective of NNMDA as stated in a bulletin of Federal Ministry of Science and Technology (2011) included repository services and referral services on information on Indigenous Knowledge in Medical Practices. As observed, these objectives are not being satisfied by the agencies documenting Indigenous Knowledge in Medical Practices despite the fact that the agencies have produced many documents on Hausa Indigenous Knowledge in Medical Practices in Nigeria. Despite recording these efforts in documentation of Information on Hausa Indigenous Knowledge in Medical Practices there is also lack of access to the knowledge in Nigeria. As the result of this, information services derived from the documentations are being affected because often the information needed is not accessible. For this, documentation of Information on Hausa Indigenous Knowledge in Medical Practices needs to be directed at creating varied access to the knowledge from different perspective and sources in the country. It is in line with this that the World Bank (1998) warned against the extinction of the knowledge. Saying that unless access to Indigenous Knowledge is guaranteed, the goals of documentation may not be achieved, the use of the knowledge in Nigeria will also be reduced and any effort in preserving the knowledge will be defeated.

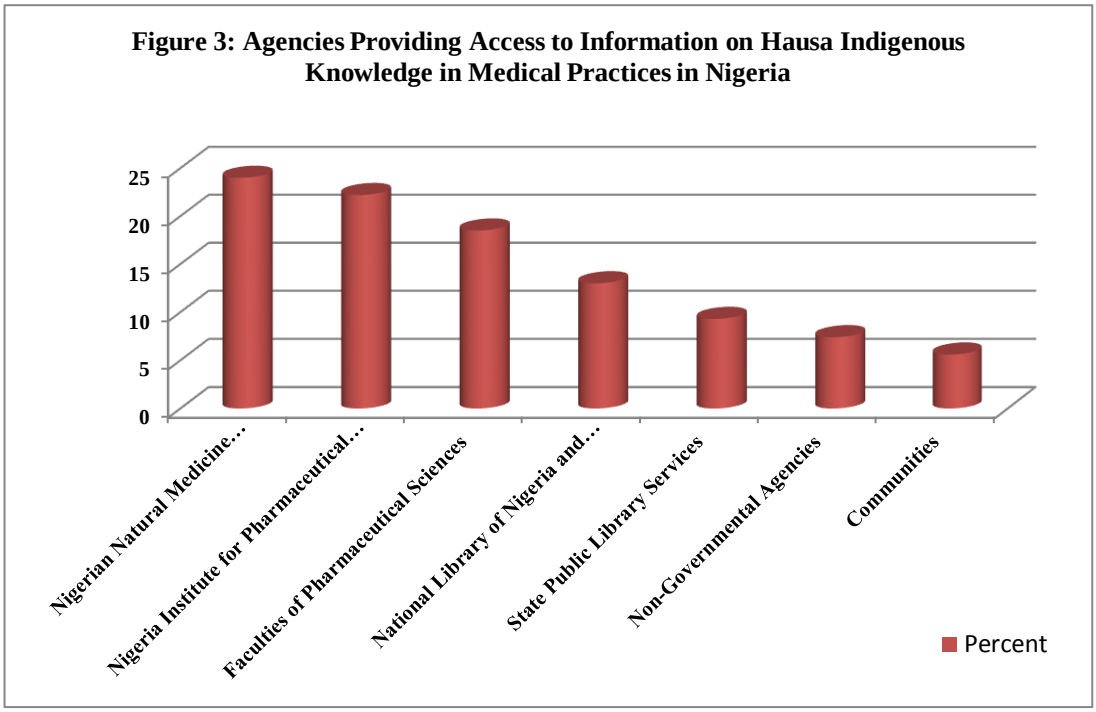
4.2.6 Agencies Responsible for Providing Access to Information on Hausa Indigenous Knowledge in Medical Practices in Nigeria

As follow up question on agencies documenting information on Hausa Indigenous Knowledge in Medical Practice in Nigeria, the researcher sought to find out the agency or unit of an agency responsible for providing access to information on Hausa Indigenous Knowledge in Medical Practice in Nigeria. The data on this is provided in table 4.7 and figure 3 below.

Table 4.7: Agencies Providing Access to Information on Hausa Indigenous Knowledge in Medical Practices in Nigeria

Agency	**Frequency**	**Percent**
Nigerian Natural Medicine Development Agency (NNMDA	13	24.1
Nigeria Institute for Pharmaceutical Research and Development	9	16.7
Faculties of Pharmaceutical Sciences	8	14.8
National Library of Nigeria and branches	7	13.0
State Public Library Services	5	9.3
Non-Governmental Agencies	4	7.4
Library within the agencies documenting Hausa Indigenous Knowledge in Medical Practices	5	9.3
Communities	3	5.6
Total	**54**	**100**

Figure 3: Agencies Providing Access to Information on Hausa Indigenous Knowledge in Medical Practices in Nigeria



The data in table 4.7 and figure 3 above indicate the agencies providing access to documented information on Hausa Indigenous Knowledge in Medical Practices in Nigeria. It is evident from the table that NNMDA is the major agency providing access to information on Hausa Indigenous Knowledge in Medical Practice in Nigeria as indicated in the responses of 13(24.1%) of the respondents. Also looking at the table critically, it can be seen clearly that the agencies documenting Hausa Indigenous Knowledge in Medical Practices have collectively recorded 30(55.56%) responses in their efforts to provide access as against 12(22.22%) responses recorded by National Library of Nigeria and Public Libraries. This revelation means that libraries are not fully involved in the process of documentation of Hausa Indigenous Knowledge in Medical Practices in Nigeria. This fact is further proven by the responses of 5(9.3%) recorded by libraries within the agencies involved in providing access to Hausa Indigenous Knowledge in Medical Practices. Regrettably this negates the roles and responsibility of libraries in the society which according to *White, (*2012) is to among others help in ensuring accessibility to authentic record of

knowledge created and accumulated by past generations. He emphasized that in a world without libraries, it would be difficult to advance research and human knowledge or preserve the world's cumulative knowledge and heritage for future generations. The knowledge that is supposed to be accumulated and preserved by libraries includes Indigenous Knowledge in Medical Practices. This indicates that libraries in Nigeria and within the agencies have not been given full responsibility on acquiring and ensuring accessibility to information on Hausa Indigenous Knowledge in Medical Practices. This is against the convention in most countries of the world, especially looking at the IFLA Statement on Indigenous/Traditional Knowledge (2002) which declared that human beings have a fundamental right to access expressions of knowledge, creative thought and intellectual activity, and to express their views publicly from libraries. The statement acknowledged the intrinsic value and importance of Indigenous Knowledge and local community knowledge in libraries, and proposed the need to consider it in spite of contested conceptual definitions and uses. The statement further noted the need to recognize the significance, relevance and value of Indigenous Knowledge in libraries more especially that it can be used to provide solutions to some of the most difficult modern issues and encourage the use of Indigenous Knowledge in project planning and implementation. For these reasons Hausa Indigenous Knowledge in Medical Practices need to be protected by libraries in Nigeria for the benefit of Indigenous peoples as well as for the benefit of the rest of the world. Moreover, Hausa Indigenous Knowledge in Medical Practices is becoming vulnerable both because it is exploitable and has been exploited, and because of the loss of elders and decline on transmission of the knowledge to younger generations in the face of pressures of modernization. Finally, it maintained that in order to ensure the preservation, access and expansion of Indigenous Knowledge in libraries and archives there should be implementation of programs to collect, preserve and disseminate indigenous and local traditional knowledge resources, make available and promote information resources which support research and learning

about indigenous and local traditional knowledge, its importance and use in modern society, and publicize the value, contribution, and importance of Indigenous Knowledge to both non-Indigenous and Indigenous peoples. This means that in Nigeria there is the need to involve libraries in documentation and access information on Hausa Indigenous Knowledge in Medical Practices.

4.2.7 Method(s) of Making Information on Hausa Indigenous Knowledge in Medical Practice Accessible in Nigeria

Documentation of Hausa Indigenous Knowledge in Medical Practices is one of the key functions of NNMDA as reported by Federal Ministry of Science and Technology (2011). In order to find out how the agencies responsible for documentation of Hausa Indigenous Knowledge in Medical Practices provide access to the knowledge in Nigeria, a research question was raised in this respect. Table 4.8 below show the data collected.

Table 4.8: Ways of Making Information on Hausa Indigenous Knowledge in Medical Practice Accessible in Nigeria

Method(s) of Making Information on Hausa Indigenous Knowledge in Medical Practice Accessible in Nigeria	**Frequency**	**Percent**
By publishing the information collected in books, journals, and newsletters to ensure access of the information in the society	10	18.4
By producing various representational forms of the information on CD, DVD, Film, and print to facilitate easier retrieval	8	14.8
Making information on Hausa Indigenous Knowledge in Medical Practices available in libraries, repositories and book stores	7	12.95
Making Information on Hausa Indigenous Knowledge in Medical Practices physically close to the users save their time in accessing it	6	11.1
By making the existence of various sources of Information on Hausa Indigenous Knowledge in Medical Practices known to people in the society	5	9.25
By digitizing information on Hausa Indigenous medical practices to ensure wider spread of information	5	9.25
Organizing the information in such a way as to for easier access	5	9.25
Maintaining information in the format required by the people in the society	3	5.55
Providing the right level of detail required to understand the information being passed	2	3.7
Creating databases of information on Indigenous Knowledge to provide wider coverage	2	3.7
Collating and preserving manuscripts on Hausa Indigenous Knowledge in Medical Practices	1	1.85
Total	**54**	**99.8**

Table 4.8 above is indicating the methods of providing access to Information on Hausa Indigenous Knowledge in Medical Practices in Nigeria. From the table it can be seen that the major method being used is by publishing the information collected in books, journals, and newsletters as recorded in the responses of 10(18.5%) of the respondents. The least method used by the agencies to provide access to Information on Hausa Indigenous Knowledge in Medical Practices in Nigeria is by collating and preserving manuscript on Indigenous Knowledge as reported in the responses of 1(1.9%) of the respondents. From the interview conducted by the researcher it was gathered that most of the agencies do not have adequate collections of manuscripts. Hence; the reason for low responses, on collating and preserving manuscript as a way of providing access to Information on Hausa Indigenous Knowledge in Medical Practices in Nigeria.

The agencies produced books, journals, and newsletters to ensure that the gap between Hausa indigenous medical practitioners and the knowledge users is bridged up in Nigeria. Publishing the documented Information on Hausa Indigenous Knowledge in Medical Practices in Nigeria is ensuring wider distribution of the knowledge. However, as observed from the data collected by the researcher there is dearth of publications of Information on Hausa Indigenous Knowledge in Medical Practices. This means that book distribution channels are not fully being exploited by the documentation centers in Nigeria which account for the dearth of the publications in bookshops and libraries in Nigeria. It also mean that if the publications of the agencies are made available in libraries it will help to bring the information on Hausa Indigenous Knowledge in Medical Practices closer to the people that need it.

This finding of the study has been corroborated by Akinde (2008) who identified several toolkits that can be used to make Information on Hausa Indigenous Knowledge in Medical Practices accessible in Nigeria. He added that in order to use publishing medium as a means of providing

access to Information on Hausa Indigenous Knowledge in Medical Practices tape recorders, radio, television, newspapers, telephones, and computers, video cameras and Camcorders, internet, e-mails, listservs, fax, CD-ROM, and social gathering in communities could be used by libraries and information centers in Nigeria. He maintained that these tools can be used either singly or combined for good effect and multiple access.

However, the finding made in the study on use of publishing medium may not be the only option for providing access to Information on Hausa Indigenous Knowledge in Medical Practices in Nigeria. What is required is to create information repositories on Indigenous Knowledge in various communities in Nigeria.

4.2.8 Types of Information Services that were derived by Libraries from the Documented Information on Hausa Indigenous Knowledge in Medical Practice in Nigeria

Types of information services provided are important indicators of relevance of information services. As the result of this a question was raised on types of information services that were derived by libraries from the documented information on Hausa Indigenous Knowledge in Medical Practice in Nigeria. The data on this is given in table 4.9 below.

Table 4.9: Types of Information Services that were Derived by Libraries from the Documented Information on Hausa Indigenous Knowledge in Medical Practices in States of Northern Nigeria.

Items	Response Categories					Mean
	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	
Resource sharing	13(24.1%)	13(24.1%)	2(3.7%)	9(16.7%)	17(31.5%)	1.6351
Referral services	17(31.5%)	18(33.3%)	1(1.9%)	7(13.0%)	11(20.4%)	1.5492
Children and young people's services	11(20.4%)	20(37.0%)	2(3.7%)	12(22.2%)	9(16.7%)	1.4362
Database of Hausa indigenous medical practices	15(27.8%)	15(27.8%)	2(3.7%)	12(22.2%)	10(18.5%)	1.5287
Lending services	15(27.8%)	16(29.6%)	1(1.9%)	10(18.5%)	12(22.2%)	1.5741
Extension services	9(16.7%)	12(22.2%)	2(3.7%)	16(29.6%)	15(27.8%)	1.5001
Collaboration and resources sharing with similar centres	8(14.8%)	16(29.6%)	0(0%)	13(24.1%)	17(31.5%)	1.5347
E-library services	7(13.0%)	14(25.9%)	0(0%)	14(25.9%)	19(35.2%)	1.5130
Open discussion with indigenous knowledge holders	9(16.7%)	14(25.9%)	0(0%)	13(24.1%)	18(33.3%)	1.5641
Radio/television documentary services	10(18.5%)	10(18.5%)	1(1.9%)	11(20.4%)	22(40.7%)	1.6102
Cumulative mean						**1.5445**

Decision/aggregate mean = 3.000

Generally looking at the responses it was concluded that types of information services derived by libraries from the documented information on Hausa Indigenous Knowledge in Medical Practices in States of Northern Nigeria are not adequate as the cumulative mean responses of 1.5445 is lower than the aggregate mean of 3.000. This implies that not many services have been derived by libraries from the documented information on Hausa Indigenous Medical Practices. It means also that libraries in States of Northern Nigeria may not be able to provide the information needed by their users from the documented information on Hausa Indigenous Medical Practices. From the table it can also be seen that resource sharing attracted the highest mean response of 1.6351, while Children and young people's services attracted the least mean response of 1.4362.

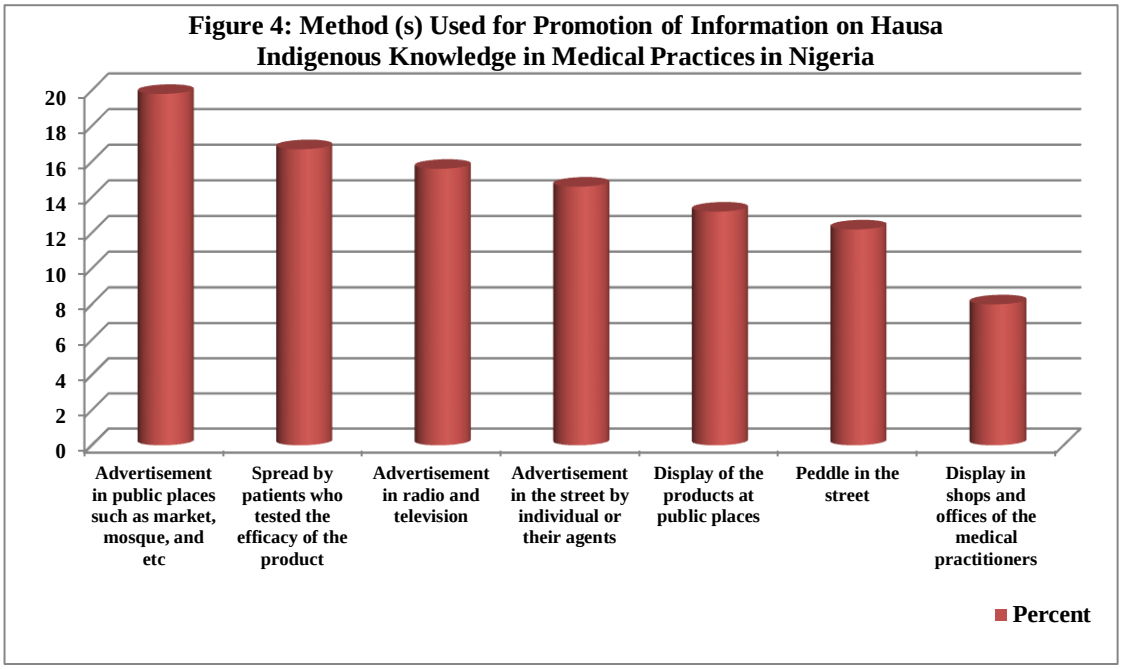
In the light of this Peteman (2011) noted that libraries offer what their users need, "at a time and place that is useful to them, and in a way that makes them want to come back again and again." This will make the libraries to become central points in local communities and can achieve their role by consulting the local people and putting them in the driving seat. Therefore, to provide services based on the needs of their users public libraries in States of Northern Nigeria should work tirelessly to keep up with what is generated and what is made available to the users. If differences are allowed to exist then their services would be questioned and how they were meeting their needs should also be questionable.

4.2.9 Method(s) Used for the Promotion of Hausa Indigenous Medicinal Products in Nigeria

In an attempt to determine the ways in which traditional medicinal products are promoted in Nigeria, a research question was raised to find out the method (s) used by Hausa indigenous medical practitioners in promoting Hausa indigenous medicinal products. The responses of the Hausa Indigenous Medical Practitioners are presented in table 4.8 and figure 4 below.

Table 4.8: Method(s) Used for the Promotion of Hausa Indigenous Medicinal Products in Nigeria

Method (s) is Used for Promotion of Hausa Indigenous Medicinal Products	**Frequency**	**Percent**
Oral advertisement in public places such as market, mosque, and Church	99	34.3
Spread by patients who tested the efficacy of the product	48	16.7
Radio and television advertisement, Newspaper and Magazines	45	15.6
Physical display of the products in public places especially roadsides	38	13.2
Peddle/hawking in the street	35	12.2
Display in shops and offices of the medical practitioners	23	8.0
Total	**288**	**100**



It is evident from both table 4.8 and figure 4 above that Hausa indigenous medical practitioners promote their products using various channels of promotion, however, advertisement in public places such as markets and mosques is the major method used. This is recorded in the responses of 99(34.3%) respondents. Few 23(8.0%) of the traditional medical practitioners indicated that they used display of products in shops and offices for the promotion. This is recorded in the responses of 23(8.0%) of the respondents. However, few of the respondents that were interviewed by the researcher revealed that not all medicinal products required promotion as some Traditional Medical Practitioners were barred by tradition to advertise their medical knowledge and practices. This category of Traditional Medical Practitioners often rely on informal form of promotion where the people who tested their products talk about its efficacy and one may be enticed to try it. Be it as it may, the lack of promotion of products by this category of Traditional Medical Practitioners may be seriously affecting their practices. Display is an important method of promotion among Hausa Indigenous Medical Practitioner it was for this that Ibrahim et al … (2010) studied the Yan-Shimfida at Sabo Wuse in Tafa Local Government Area of Niger State to identify

and document plants and animal materials sold by the Yan- Shimfidas in the local settlement and to study their uses in treatment of ailments and other socio-cultural problems. The result shows that most of the herb sellers of Sabo Wuse were from the Northern part of the country. The study uncovered the remains of ancient medical practices based on trading on medicinal plants, herbs and animal parts which existed in traditional societies. It recommended the documentation of these practices in order to conserve the culture and traditional knowledge of the community.

There are many methods of promoting and selling indigenous medicinal products in Nigeria. WHO (2005) reported that most countries sale herbal medicines in pharmacies as over the counter drugs and through other ways such as peddling in markets and in ambulatory sales - door to door by unlicensed practitioners in indigenous communities. Herbal medicines can also be sold in herbal clinics, traditional healers' shop, health shops, supermarkets, food markets and also through mail order and other levels of marketing systems. However, in Nigeria traditional medicine is peddle everywhere in radio and television, newspapers and magazines, in public and private places. Physical display of medicinal products in public places, peddle/hawking in the street, display in shops and offices of the medical practitioners are acceptable means of promotion in the society.

4.3 Statistical Data

The data presented in this section was based on the data collected in respect of the hypotheses generated by the study. The four hypotheses generated were in the null form. They were tested using Pearson product Moment Correlation (PPMC). In each case the hypotheses were analyzed, discussed and conclusion drawn from the claim made by it.

4.3.1 Research Hypothesis 1 (H01):

The hypothesis states that; there is no significant relationship between level of demand of documented information on Indigenous Knowledge in Medical Practices in library and type of

information generated by Hausa people on Indigenous Knowledge in Medical Practices in States of Northern Nigeria. The data on this is presented in table 4.9 below.

Table 4.9: Pearson Product Moment Correlation (PPMC) Statistic on the Relationship between Level of Demand for documented Information on Hausa Indigenous Knowledge in Medical Practices and Demand for Types of Information Generated on Hausa Indigenous Knowledge in Medical Practices by Hausa People in Nigeria

Variables	N	Mean	S.D	Correlation index r	df	Sig(p)
Level of demand of information generated on Indigenous Knowledge in Medical Practices in library	54	24.2963	11.74193	.998	340	.000
Type of information on Indigenous Knowledge in Medical Practices generated by people in North Nigeria	288	25.9259	12.07813			

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

Details of the summary in table 4.9 above revealed significant relationship between level of demand for documented information on Hausa Indigenous Knowledge in Medical Practices in libraries in Nigeria and demand for type of information generated by Hausa people on Hausa Indigenous Knowledge in Medical Practices in Nigeria. From the table the calculated level of significance (p) of 0.000 is less than the 0.05 level of tolerance at a correlation index r level of .998. Hence, the null hypothesis which states that there is no significant relationship between level of demand of documented information on Hausa Indigenous Knowledge in Medical Practices and type of information generated by Hausa people on Indigenous Knowledge in Medical Practices in North Nigeria was hereby **rejected**.

Even though the hypothesis is rejected it will be wrong to discard the relationship existing in the demand of the services derived by libraries and other information centers from documented information on Indigenous Knowledge and from the information generated by Hausa people on Indigenous Knowledge in Medical Practices. Since the demand for information services from Indigenous Knowledge has been established then libraries, archives and museums in Nigeria need

to recognize the value of Indigenous Knowledge so that it is made part of the collection in the libraries, archives and museums. This may also help to implicate most national, state and local information centers in to working on managing the information collected on Indigenous Knowledge in their libraries, archives and museums. Public Library Service: IFLA/UNESCO Guidelines on Public Library Services (2001) identified some items that can be used to develop library services. For instance, the guidelines reported that in Mali Rural Audio Libraries uses cassettes to distribute information on hygiene, health, animal husbandry and other topics relevant to people's daily life. In Zimbabwe, drama, songs and dances were incorporated as part of information transfer mechanisms in contrast with reading, lending and literacy support. Rural libraries in Cajamarca, Peru are involved in the reinstatement and revitalization of the Andean Indigenous Language in a project set up to publish material on the local culture and the resulting Rural Encyclopaedia provides an alternative to school, empowers people and promotes self-education. In Cuba, libraries act as venues for poets and also encourage research into and the conservation of peasant oral traditions. One objective of the Village Libraries in India is to provide a platform for documenting traditional knowledge where books written by villagers are published. Many things can be used to provide a service in a library, what is important is relevance of the items to be used to the people and the value of the services to the daily lives of the people.

4.3.2 Research Hypothesis 2($H0_2$):

This null hypothesis states that there is no significant relationship between methods used by Indigenous Medical Practitioners in categorizing knowledge they generated and methods of categorization used by institutions concerned with documentation of information on Indigenous Medical Practices in Nigeria. The data collected on this is presented on table 4.10 below.

Table 4.10: Pearson Product Moment Correlation (PPMC) Statistics on the Relationship between Methods Used by Indigenous Medical Practitioners in Categorizing Knowledge they Generated on Knowledge in Medical Practices and Methods of Categorization Used by Institutions Concerned With Documentation of Information

Variables	N	Mean	S.D	Correlation index r	df	Sig(p)
methods used by indigenous medical practitioners in categorizing knowledge they generated on knowledge in medical practices	288	27.2778	11.75283	.991	340	.000
methods of categorization used institutions concerned with documentation of information	54	24.7963	11.35928			

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

The summary of the Pearson Product Moment Correlation statistics on table 4.11 above also revealed significant relationship between methods used by Indigenous Medical Practitioners to categorize the knowledge they generated and methods of categorization used by institutions concerned with documentation of information on Indigenous Knowledge in Medical Practices in Nigeria. The hypothesis was rejected because the calculated level of significance (p) is 0.000 which was less than r correlated index of .991 at 0.05 level of tolerance. By this the null hypothesis which states that there is no significant relationship between methods used by Indigenous Medical Practitioners in categorizing knowledge they generated on Indigenous Knowledge in Medical Practices and methods of categorization used by the institutions concerned with documentation of information on Indigenous Knowledge in Medical Practices is hereby **rejected**.

The decision to reject the hypothesis may be connected with the fact that both the two variables being compared were independent as each group within the cycle operates an arrangement that best suited its needs. It was a fact that Hausa Indigenous Medical Practitioners have different method of categorization and the institutions concerned with documentation of Hausa Indigenous Medical Practices have another. This may not work efficiently in many systems because there is no

consistency in method of categorizing terms and headings. However, what needs to be done is to create a system that can incorporate the aspects of both to make them work as one. In this system the aim will be to enhance the arrangement of Indigenous Knowledge in Nigerian libraries, archives and museums. Closely related to this is to produce the harmony required in knowledge organization or categorization. However, McGarry (1993) cautioned that before setting out to develop alternatives to conventional knowledge organization tools, one should understand some of the fundamental issues like: origins of knowledge, its purpose and functions, influence of socio-economic and cultural factors on knowledge growth, characteristics and role of digital technologies, media and environments on form and format in which information is stored, and study the limitations of subject-based knowledge organization tools, initiatives undertaken to improve the efficiency of existing tools and need for alternative approaches. Clarity on these issues will help in designing efficient and effective knowledge organization tools that will satisfy the present day requirements and hopefully set direction for future development too. Knowledge organization tools are developed to organize the universe of knowledge based on the fundamental subjects or subject groups. The core objective is to provide precise information to users based on their information requirements. However, in the context of today's information environment, people want to have value added and customized information that would help in problem solving and creative thinking. On one hand there is change in the information requirements on the other hand rapid growth in scientific knowledge in the past few decades and emergence of the Internet and world wide web as major repositories of knowledge and information. as the result of these factors the knowledge organization tools developed based on the fundamental subjects are unable to satisfy the information requirements of the 21st century thus compelling information professionals all over the world to find solutions to the problem of information storage and retrieval.

4.3.3 Research Hypothesis 3(H03):

This hypothesis states that there is no significant relationship between Documentation produced by institutions documenting Indigenous Knowledge in Medical Practices in Nigeria and methods of providing access to the documented information in Nigeria. The data on this is presented in table 4.11 below.

Table 4.11: Pearson Product Moment Correlation (PPMC) Statistics on the Relationship between Documentation Produced by Institutions Documentation Indigenous Knowledge in Medical Practices and Methods of Providing Access to the Documented Information in Nigeria

Variables	N	Mean	S.D	Correlation index r	df	Sig(p)
Documentation produced by institutions documentation Indigenous Knowledge in Medical Practices	54	29.9815	11.03936	.989	52	.000
methods of providing access to the documented information in Nigeria	54	32.6481	11.07463			

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

Details of the summary of Pearson Product Moment correlation statistics in table 4.11 above revealed the existence of significant relationship between documentation produced by institutions documenting Indigenous Knowledge in Medical Practices and methods of providing access to the documented information in Nigeria. This is because the calculated level of significance (p) of 0.000 is less than the 0.05 level of tolerance at a correlation index r level of .989. Hence, the null hypothesis which states that there is no significant relationship between documentation produced by institutions documentation Indigenous Knowledge in Medical Practices and methods of providing access to the documented information in Nigeria is hereby **rejected**.

The reason for the rejection of the hypothesis might not be unconnected to the fact that documentation institutions in Nigeria have no means of monitoring access to their products and

services. Whereas, the convention in information management is to institute mechanisms that will monitor and report on access to information services as it will help the information manager to monitor progress on use and users of their products and services. According to Olowu (2004) access to Indigenous knowledge can be achieved through the use of appropriate means of sharing, distributing and transmitting the knowledge in the society. Sen (2005) added that basically, access depends on two factors, technological and cultural. The technological factors determine the physical requirements for disseminating information including communications, transportation, printing, and the technology of organizing information. The cultural factors depend on the extent the people who possess the knowledge are willing to share it and place it in social domain. Therefore, to guarantee access to documented information on Indigenous Knowledge in Nigeria, the culture and means of sharing information within the various cultures in Nigeria must be understood.

4.3.4 Research Hypothesis 4(H04):

This null hypothesis state that there is no significant relationship between types of information services derived by library from documented information on indigenous knowledge in Medical practices in Nigeria and Level of demand of documented information generated by institutions documenting Hausa Indigenous Knowledge in Medical Practices in Nigeria. The data on this is presented on table 4.12 below.

Table 4.12: Pearson Product Moment Correlation (PPMC) Statistics on the Relationship Between Types of Information Services Derived by Library From Documented Information on Indigenous Knowledge in Medical Practices in Nigeria and Level of Demand of Information Generated on Indigenous Knowledge in Medical Practices in Library

Variables	N	Mean	S.D	Correlation index r	Df	Sig(p)
Types of information services derived by library from documented information on indigenous knowledge in Medical practices in Nigeria	228	24.2963	11.74193	.989	340	.000
Level of demand of information generated on Indigenous Knowledge in Medical Practices in library	54	22.9444	11.67390			

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

Details of the Pearson Product Moment correlation statistics above revealed the existence of significant relationship between types of information services derived by library from documented information on Hausa Indigenous Knowledge in Medical Practices in Nigeria and Level of demand of information generated on Indigenous Knowledge in Medical Practices in library. This was obtained because the calculated level of significance (p) of 0.000 is less than the 0.05 level of tolerance at a correlation index r level of .989. Hence, the null hypothesis which states that there is no significant relationship between types of information services derived by library from documented information on Indigenous Knowledge in Medical Practices in Nigeria and Level of demand of information generated on Indigenous Knowledge in Medical Practices in library is consequently **rejected**.

The rejection may be due to the fact that the library services have not been responsive to the needs of the communities in which they are situated. Instead libraries always work towards the fulfillment of their organizational goals. Laser Foundation (2005) posited that in this age “libraries should not be seen as free book shops, or book warehouses or as promoters of book reading. Books are not everything, and book borrowing indicators should not be used as the prime measure of how

libraries contribute to local and national priorities. More complex measures and methodologies are needed to properly capture the social benefits of library services." To achieve this, the library needs to first change its orientation from customer orientation to customer care. Customer orientation comprises a range of techniques for recognizing that customers are not all equal in their life experiences and chances; so we should not treat all of our customers equally, but in a way that meets their individual needs. The library also needs to shift from libraries that are based in communities to community based library. Many libraries are based in a community, but not all libraries are community based. There should be a positive and dynamic relationship between the library and the people who live in the neighborhood. In community based library there is a clear organic connection between the work of the library and the needs of the local community. Everyone in a community based library is needs focused and working to tackle social exclusion and disadvantage in the local area.

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CHAPTER FIVE

SUMMARY OF THE FINDINGS, CONCLUSION, AND RECOMMENDATIONS

5.0 Introduction

This chapter deals with summary of the study, summary of the major findings, conclusion, recommendations and suggestions for further studies.

5.1 Summary of the Study

The objectives of the study were to among others assess documentation and access to Information on Hausa Indigenous Knowledge in Medical Practices in Nigeria. As such the study tried to discover among others the types of knowledge generated by Hausa Indigenous medical practitioners, agencies documenting Hausa Indigenous Knowledge in Medical Practices in Nigeria, and the method of making the documented information accessible in Nigeria. These were assessed with the view to enhance the management of the knowledge in Nigeria.

In an effort to achieve the objectives of the study five research questions were formulated. The study adopted survey method of research to enable it find answers to the research questions raised in the study. It drew samples from the staff in pharmaceutical research institutes, departments and units of Nigerian universities teaching or researching on aspects of the subject and members of staff of the libraries located in States of Northern Nigeria as well as, Hausa traditional medical practitioners from States of Northern Nigeria. It collected data through document analyses, questionnaires and interview administered to the respondents. The data collected were analyzed using descriptive statistics in the form of frequency distribution and percentage. The data collected were interpreted and analyzed to arrive at the findings of the study.

5.2 Summary of the Major Findings

The study presents the following as the summary of the major findings:

1. That the major type of knowledge generated by Hausa Indigenous medical practitioners was on medicinal plants and herbs as recorded in responses of 41(14.2%) respondents. While the least knowledge generated according to the study was on poetry on Hausa Indigenous Knowledge in Medical Practices as reported by 4(1.4%) respondents.
2. Demand for information services is an important factor in information management including the management of Indigenous Knowledge. It is inline with this that this study discovered that lending service is the most demanded service from the information generated on Hausa Indigenous Medical Practices as it attracted the mean response of 3.2407, while Indexing service is the least demanded service with mean response of 2.4370. In general, there is high demand for information generated on Hausa Indigenous Knowledge in Medical Practices in libraries in States of Northern Nigeria as the cumulative mean of the variables tested is 3.0370 which is higher than aggregate mean of 3.000.
3. Although Hausa Indigenous Medical Practitioners categorized knowledge they generated on Indigenous Medical Practices in many ways, such as by disease and cure, colour and taste and type of plant. Categorization by name of plant as recorded in the responses of 72(25.0%) respondents was the major way they adopt for easier memorization and identification.
4. The study discovered that there are many agencies involved in documentation of information on Hausa Indigenous Knowledge in Medical Practices in Nigeria. These agencies are NNMDA, NIPRD, and Department of Pharmaceutical Science within

Nigerian universities and Public Libraries. However, the NNMDA as revealed in the responses of 17(31.5%) respondents is more involved in documentation of Hausa Indigenous Knowledge in Medical Practices in Nigeria.

5. The study also discovered rather regrettably that proper collection, documentation and access to documented information on Hausa Indigenous Knowledge in Medical Practices was not achieved by the agencies documenting Hausa Indigenous Knowledge in Medical Practices because there was no unit or department of the agencies assigned the responsibilities for ensuring access to the documented information. Worst still no well established libraries were found in these agencies.
6. Among the methods adopted in providing access to Information on Hausa Indigenous Knowledge in Medical Practices by the agencies documenting Hausa Indigenous Medical Practices publishing the information collected in books, journals, and newsletters ranked the highest as recorded in the responses of 10(18.5%) of the respondents.
7. The essence of documentation of information on Hausa Indigenous Knowledge in Medical Practices is to provide relevant information services that can be used by all in Nigerian libraries. Regrettably, it was established by the study that the types of information services derived by libraries in States of Northern Nigeria from the documented information on Hausa Indigenous Knowledge in Medical Practices are not adequate as the cumulative mean response of the variables tested is 1.5445 which is less than the aggregate mean response of 3.000. On individual variables tested resource sharing attracted the highest mean response of 1.6351 while children and young people service is the least with mean response of 1.4362.

8. Different methods of promotion of medicinal products were adopted by Hausa Indigenous Medical Practitioners. The promotional methods adopted by Hausa Indigenous Medical Practitioners included oral advertisement in public places such as market, mosque, and etc, using patients who tested the efficacy of the product, radio and television advertisement, physical display of the products in public places, peddling/hawking in the street, and display in shops and offices of the medical practitioners. However, oral advertisement in public places such as market, mosque, and busy streets was the major method adopted as recorded in the responses of 99(34.3%) of the respondents.
9. Significant relationship was discovered between level of demand of information generated on Indigenous Knowledge in Medical Practices in library and type of information on Indigenous Knowledge in Medical Practices generated by people in North Nigeria.
10. Significant relationship exist between methods used by Indigenous Medical Practitioners in categorizing knowledge they generated on Hausa Indigenous Medical Practices and methods of categorization used by institutions concerned with documentation of information on Hausa Indigenous Medical Practices.
11. There is significant relationship between documentation produced by institutions documenting Indigenous Knowledge in Medical Practices and methods of providing access to the documented information by documentation centers in Nigeria.
12. Significant relationship exist between types of information services derived by library from documented information on Indigenous Knowledge in Medical Practices in Nigeria and level of demand of information generated on Indigenous Knowledge in Medical Practices in library.

5.3 Conclusion

Documentation of Indigenous Knowledge is undertaken to promote the use of the knowledge in the society. However, many of the knowledge that were generated by Hausa Indigenous Knowledge Medical Practitioners in Nigeria remained undocumented because most of it has not been identified by the agencies documenting the knowledge in Nigeria. The knowledge that has not been identified includes healing arts and practices which are important components of Hausa Indigenous Medical Culture. Therefore, in order to effectively harness and promote the use of information on Hausa Indigenous Knowledge in Medical Practices in Nigeria there is the need to identify the types of knowledge generated first before embarking on documenting the knowledge.

Process of identifying the knowledge involves ascertaining the physical availability of the knowledge before it can be captured for documentation. However, physical availability of Hausa Indigenous Knowledge in Medical Practices in Nigeria is hampered by norms which prohibit the disclosure or surrender of the secret of medical knowledge outside the family circle and this is making identification and acquisition of Hausa Indigenous Knowledge in Medical Practices for documentation difficult in Nigeria. Thus, removing the cultural barriers may improve identification of useful knowledge that can be used to provide information services for improving healthcare services in Nigeria. It will also help to popularize Hausa Indigenous Medical Culture beyond the Hausa communities in Nigeria.

Similarly, the method of categorizing knowledge is an important in documentation as it reflects the method of arranging, retrieving and accessing knowledge in libraries, archives and museums in Nigeria. Categorizing knowledge based on the pattern acceptable to the knowledge owners is believed to increase the use of the knowledge among the people. Therefore, Hausa Indigenous Knowledge in Medical Practices should be categorized in the manner the Hausa people understand

in order to assist in documentation of the knowledge and access to the knowledge among the Hausa people in Nigeria. Moreover, using this approach will suit the organization and retrieval of the knowledge in libraries irrespective of the medium in which the information on the knowledge is stored.

The demand for documented information on Hausa Indigenous Knowledge in Medical Practices is high. However, the demand is not proportionate to services being derived by libraries from the documentations produced by agencies documenting Hausa Indigenous Knowledge in Medical Practices in Nigeria. This may be attributed to the size of the country, poor communication system and nonchalant attitude of the staff of the agencies responsible for disseminating information on Hausa Indigenous Knowledge in Medical Practices in Nigeria. However, this can be corrected by creating a central repository on Indigenous Knowledge at the Federal Ministry of Science and Technology to be responsible for collectating and providing access to information on Indigenous Knowledge Hausa Indigenous Knowledge in Medical Practices inclusive. When this is undertaken access to the publications of the agencies and other relevant information will be enhanced in the country. Moreover, agencies documenting Indigenous Knowledge in Nigeria have since recognized the cultural diversities in Nigeria and have identified the need to collect information on the diversities in order to serve the people better. A repository on Indigenous Knowledge can provide information to individuals without discriminations and it can overcome many shortcomings.

Efforts to provide people with information services derived from Indigenous Knowledge should adopt service delivery systems that recognized the needs of the clientele. The services should also be marketed to enhance their use. Today, there are sophisticated technologies that can be used for marketing information services, including selling of medicinal products and disseminating of information in the society. This is important because if Indigenous Medical Practitioners fail to

catch hold with the opportunities being provided by new technologies they may failed in their abilities to reach out to the clientele and to make their knowledge relevant in the modern times.

5.4 Recommendations of the Study

The following recommendations are offered based on the findings and conclusion of the study. The recommendations are as follows:

1) Since most of the documentation carried out on Hausa Indigenous Knowledge in Medical Practices did not include knowledge of healing arts and cultural practices; there is the need to include healing arts and cultural practices in the documentation to obtain complete knowledge in Hausa Indigenous Knowledge in Medical Practices in Nigeria.
2) Trado-medical practitioners should be encouraged to come up with a more scientific means of categorizing Hausa Indigenous Knowledge in Medical Practices knowledge. This may include teaming up with librarians to develop control vocabularies on Hausa Indigenous Knowledge in Medical Practices in order to enhance organization and retrieval of the knowledge in Nigeria.
3) That the activities of the agencies involved in documentation of Hausa Indigenous Knowledge in Medical Practices should be harmonized and restructured in order to empower the agencies to acquire, document, organize and disseminate information on Indigenous Knowledge in Medical Practices in Nigeria, of which Hausa Indigenous Knowledge in Medical Practices is inclusive.
4) In view of the above recommendation, it is further recommended that a well defined information system be established in each of the agencies responsible for documentation of Hausa Indigenous Knowledge in Medical Practices. However, a

better option is to create a centralized information system at the Federal Ministry of Science and Technology that will serve as a repository centre for information on Indigenous Knowledge in Medical Practices in Nigeria.

5) Inline with the above recommendation, a proposed model tagged Nigerian Indigenous Knowledge in Medical Practices Information Service (NIKMEDIS) is presented as Appendix 1 for possible adoption. The model is expected when adopted to enhance the collation, preservation, access, and dissemination of information on Indigenous Knowledge in Medical Practices with Hausa Indigenous Knowledge in Medical Practices inclusive.

6) Modern tools such as multimedia, internet, CD and CD-ROM should be employed in recording Information on all Indigenous Medical Practices in Nigeria in order to provide access to the knowledge from variety of media.

5.5 Suggestions for further studies

Based on the findings and conclusion drawn in the study the following suggestions for further studies are given:

1) It was established by the study that documentation centres in Nigeria organised knowledge based on name of plants and not on knowledge specialisation, skills or practices in the knowledge and language. This is reducing the quality of the documentations they produced. Therefore, the study is recommending for further study on organisation of Information on Indigenous Knowledge organisation System for Nigerian libraries, archieves and museaums.

2) The study discovered that many documentation on Indigenous Knowledge have not been produced by documentation centers in Nigeria. For this, a further study is

recommemded to be conducted on the exetent of documentation of Indigenous Knowledge in Nigeria.

3) However, the level at which these documentations are available in libraries or use by people in Nigeria is not known. Therefore, the need for study on availability and use of Information on Indigenous Knowledge in Nigeria.

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APPENDIX 1

PROPOSED DRAFT MODEL OF NIGERIAN INDIGENOUS KNOWLEDGE IN MEDICAL PRACTICES INFORMATION SERVICE (NIKMEDIS)

1.1 Introduction

Documentation of Indigenous Knowledge in Medical Practices supposed to provide access to variety of information resources on Indigenous Medical Practices. It should also extend its services to individuals and groups within Nigeria because the aim is to use it to develop services that can eliminate mental, physical, economic, language, social and educational barriers existing among the people which is preventing them from accessing the relevant information needed in bringing changes to their lives. These goals can best be attained by establishing an information system within the agencies mandated to document Indigenous Knowledge in Medical Practices. The information system is expected to work as repository of information on Indigenous Knowledge in Medical Practices in Nigeria. These agencies include the NNMDA, Nigeria Institute for Pharmaceutical Research and Development (NIPRD), Federal Ministry of Science and Technology, National Library of Nigeria and State Library Boards. For the proposed system to work the activities of the libraries within the agencies documenting Hausa Indigenous Medical Practices should be collapsed so that a repository is created within any of the agencies**.** A repository is required in the country because a central body is needed to organize and control the collection of documented information to ensure standardization in documentation and to provide uniformity in activities. The repository is also needed to bring information on Indigenous Knowledge in Medical Practices closer to the people because as it is access to information on the knowledge is often difficult in the country. It is often not easy to obtain the publications of the agencies from book trade channels including bookshops and libraries. Therefore, it is hoped that creating a repository will remove the barriers against access to services derived from information on Indigenous Knowledge in Medical Practices by the agencies documenting the knowledge in Nigeria. It will also bridge the gap between the

source of the information on the knowledge and the information users in such a way that the users will be brought closer to the source giving the information they need. Closely related to this is the fact that the repository will create spaces both physical and virtual within the libraries where individuals can locate, read, and utilize information on Indigenous Knowledge they need to improve their lives.

Modern information services required efficient system of organizing and accessing information in order to make it work without frustrations. Today in Nigeria most libraries have no accommodation for Indigenous Knowledge materials because they organize knowledge using tools that have been created to arrange Western Knowledge in libraries. However, creating a repository will help to resolve this problem by ensuring the creation of local system of arranging knowledge. This system if created will guide all libraries in Africa particularly Nigerian libraries to find the means of organizing information with local content that has not been represented by Western Knowledge Organization Tools.

1.2 Vision of NIKMEDIS

The vision of Nigerian Indigenous Knowledge in Medical Practices Information Services (NIKMEDIS) is to recognize the diverse cultures in Nigeria. By this it **is** supposed to collect information on Traditional Medical Practices from all the communities and cultures in Nigeria. The people of Nigeria differ by religion, ethnicity, region and language. Religion is used in Nigeria to among others shape belief, attitude and behavior and determines the conception of reality. While ethnicity is often used in the context of cultural identity; practices including, social interactions, education, trades and commerce, opportunities and threats within the community. Region represents the collective aspirations of the larger community the people are affiliated to. Language represents the physical identity of the people and is often the medium of communication. All these can be used

by the repository to achieve unity and development through information service that can provide the information needs of the individuals within each community in Nigeria.

1.3 Mission of NIKMEDIS

Indigenous Knowledge in Medical Practices is contributing to the healthcare delivery services of the communities in Nigeria. Its value to the communities includes ability to solve health related problems of the communities. It is due to this that effort is being directed on designing a service within the libraries in the agencies documenting Indigenous Knowledge in Medical Practices. This will help to provide the people with relevant information on the knowledge. Moreover, this form of knowledge in Nigeria is faced with threats of extinction and thus, it needs to be effectively managed by Libraries and Information Centers before it becomes extinct. It is for this that, this model is being proposed to manage information on Indigenous Knowledge documented in Nigeria. Other missions of embarking on such a service also include finding solution to effective management of the knowledge through the following:

- collating, preserving, and disseminating information on Indigenous Knowledge in Medical Practices ,
- laying emphasis on Nigerian cultural values through in information service that promote the use of Indigenous Knowledge as the only resource,
- popularizing the values, contributions, and importance of Indigenous Knowledge to the communities in Nigeria,
- provide awareness on the protection of Indigenous Knowledge against exploitation and destruction, and
- Serve as community information centre involving all in the community as stakeholders in knowledge sharing.

1.4 Mandate of NIKMEDIS

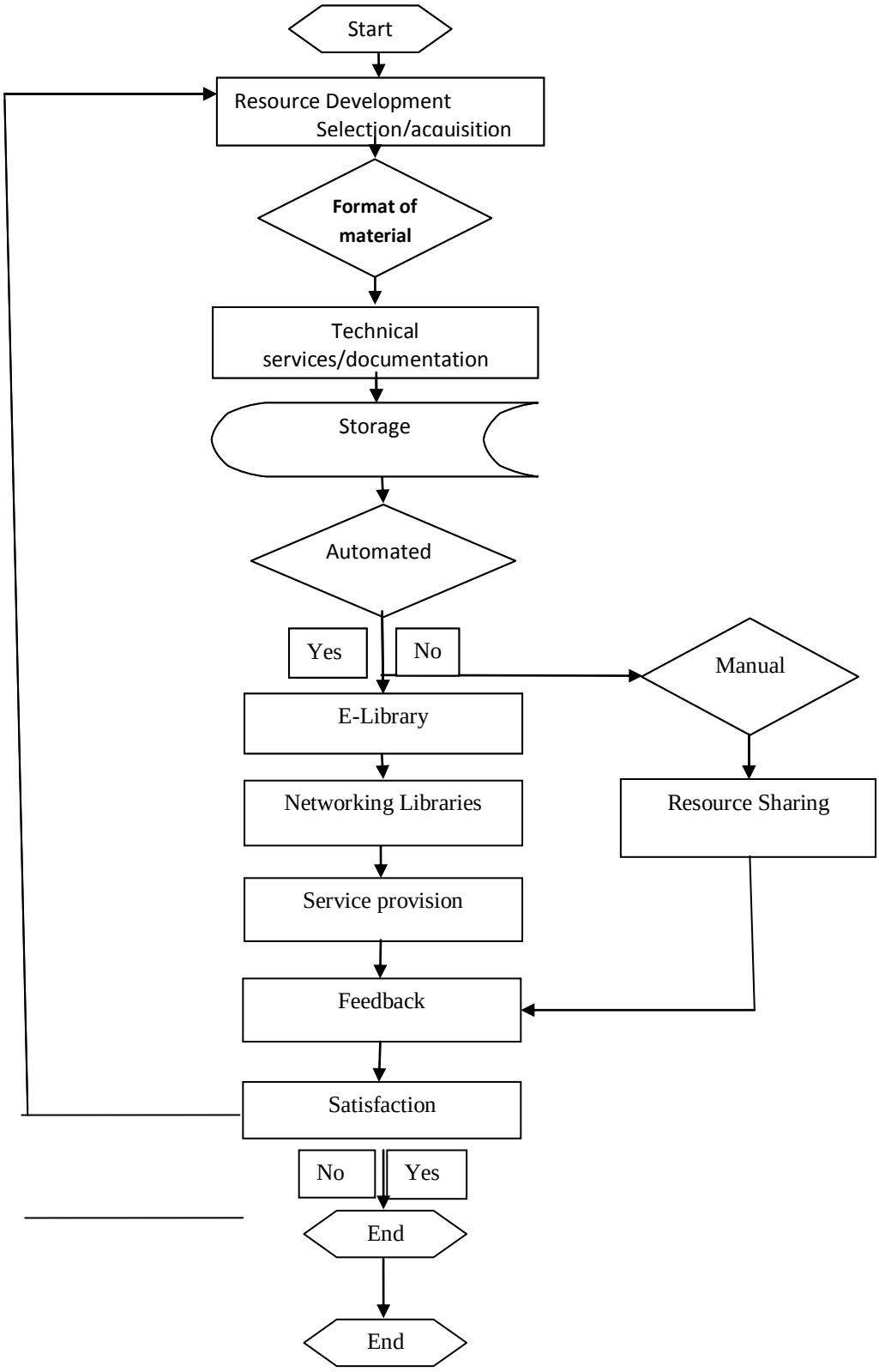
To help in the attainment of goals of the service, the following mandate have been envisage for NIKMEDIS:

- To acquire, document, preserve, and disseminate information on Indigenous Knowledge in Medical Practices ,
- Serve as reference point on disseminate information on Indigenous Knowledge in Medical Practices in Nigeria,
- Promote the use of Indigenous Knowledge materials as information sources,
- Develop information services for communities from information on Indigenous Knowledge in Medical Practices

1.5 Structure of NIKMEDIS

The repository will comprise of all the libraries engaged in the documentation of information on Indigenous Knowledge in Medical Practices in Nigeria. There will be one central repository with the rest of the libraries serving as referral centers. Each library can acquire resources relevant to its mandate but must ensure that a copy is made available to the repository for sharing with the rest in the arrangement. This is important because of the differences in objectives of the libraries as each may be focusing on a different cultural material from the other. It is hoped that adopting this approach will ensure that different cultural orientations and practices including needs of local communities is represented in the repository. This position was taken in the design to allow the libraries to focus on their mandate while being mindful of their obligation to collect other cultural materials. It was hoped that with this arrangement efficient and effective information system will be created on Indigenous Knowledge in Medical Practices in Nigeria. The diagram on the design of the system is presented in figure 5.1 below:

Figure 1: Nigerian Indigenous Knowledge in Medical Practices Information Services (NIKMEDIS)



NIKMEDIS is presented in the above flow chart showing the different sub-systems which include resource development, technical services, storage, and automation/manual. From the chart the workflow in the repository was designed to be consistent with the routine operations in the library which include resource development, documentation and cataloguing, storage and preservation, different services and feedback mechanism. The system can work either as manual system or as automated depending on the facilities available for provision of information services. As a manual library, it will acquire the relevant information on Indigenous Knowledge in Medical Practices in Nigeria which will then be documented with the view to provide service from it. However, to ensure access to various information resources, the repository will utilize resource sharing services so that information can be accessed from any library in the arrangement. If the repository is to work as automated system then all libraries in the arrangement will be networked to ensure prompt service provision. Each library will serve as referral centre on information on Indigenous Knowledge in Medical Practices. However, in order to ensure efficient service delivery a feedback mechanism will be installed to receive response from the users on the services they are receiving from the repository.

All the different components of the repository supposed to work harmoniously towards the realization of the objectives of the repository so that it becomes an effective system of access to information on Indigenous Knowledge in Medical Practices in Nigeria. So, if implemented the repository may be made to serve many purposes including community information service.

The value of such repository have been stressed by many scholars including Ngulube (2002) who pointed out that Indigenous Knowledge in Medical Practices need special attention especially in its management. Although, libraries and documentation centers in Nigeria are in to management of Indigenous Knowledge. However, they lacked the ability to collect and to document the complete knowledge in the practices despite the need for managing the knowledge as the result of

the changes taking place in the society including development and death of Indigenous Knowledge holders with the view to preserve the knowledge for the future generation to make use of it.

1.6 Resource Development

Responsibility for provision of information materials to the repository rests with the respective library within the institution documenting Indigenous Knowledge in Nigeria. This is needed in order to secure adequate funding for the repository. Other activities in selection should be guided as follows:

- Selection of items of information to be included in the system should be based on needs of the library and users to be served by the repository. Data on need assessment should be used to guide the selection of relevant information materials to be acquired. Thus, decision to acquire information material on Indigenous Knowledge in Medical Practices must be guided by adequate data on the agencies and users. This will help to provide for various shades of interest and tailored selection based on the interest shown by the users.
- The resources to be provided should also relate with the goals and objectives of the agency the library is serving.
- Information materials should be provided for all users and should be written in the language of communication the people in the community are familiar with.
- In order to encourage unity while recognizing the diversity in cultural practices in Nigeria all languages should be reflected in the collections of the repository.
- There should be adequate provision of books, newspapers, visual and audio recordings, actual objects and other representational forms of information on Indigenous Knowledge in Medical Practices.

- The libraries may often embark on project to document and aspects of Indigenous Knowledge in Medical Practices. This will require the centre to write or record on paper, video or audio device some important piece of information of interest to the community. Such project will enable the centre to acquire much information on cultural practices.

1.7 Technical Service

In order to ensure prompt access to information, documentation and other cataloguing activities are to be controlled by each library. The central repository only receives copy of each new item acquired by any of the libraries for storage and eventual access. Cataloguing activities is to be conducted using uniform standard so that uniform system of arrangement and access is adopted for all materials.

1.7.1 Cataloguing and Classification of Indigenous Knowledge Materials

The repository will use the categorization of information on Indigenous Knowledge acceptable to the agencies documenting Indigenous Knowledge in Nigeria. It can also adopt arrangement by cultural practices then sub-divided by name of plant or type of medicinal substances, by disease type and type of cure, and by colour of the material. A standard list may be required to take care of problems to be encountered in arranging the materials and in assigning headings to subjects. Where desired subject categorization may be adopted. However, in order to avoid ambiguity and use of general terms which may result in wrong placement of documents caution must be taken when assigning headings to subjects. Therefore, it must be emphasized that the people to handle the processing of the resources are people who are familiar with the terminology of the language of the material as well as with the subject of the material to be catalogued.

In producing the description of material being catalogued the provision of the Anglo-American Cataloguing standards may be adopted as the result of the absence of cataloguing

standard for Indigenous Knowledge in Medical Practices. Thus, the provisions made by the Anglo-American Cataloguing Rules, relating to statement of responsibility, physical description and assigning of access points to documents may be valid.

In carryout classification of information on Indigenous Knowledge in Medical Practices, libraries will be enjoined to modify the existing general classification scheme to accommodate more concepts that have not been represented by the scheme. This practice is being observed in most of the Nigerian academic libraries where Nigerian and African history, language and literature were modified to enable the libraries to accommodate the information on these areas. Gilman (2006) described the Library of Congress Classification Scheme (LCC) as falling short in many areas including "naming and use of language". Thus, the use of inappropriate or incorrect language is one of the major short falls of LCC in organizing information on Indigenous Knowledge in Medical Practices. Instead of consulting with communities to see how they like to be named and described and their experience recorded the scheme often used the term "others". In addition, the scheme is full of linguistic inaccuracies when describing African terms. The ability of the scheme to organize information materials on Indigenous Knowledge is also not fulfilled by the scheme due to its cutter numbering which often says "arrange alphabetically A-Z". Similarly, Olson (1998) criticized the Dewey Decimal Classification (DDC) and Universal Decimal Classification (UDC) for "reflecting only the philosophical and ideological presumptions of their cultures". He purported that, Dewey's cultural emphasis was on marginalization of minority based on religion and race. This was pronounced in class 200 where 201-289 were assigned to Christianity; while; Indic religions, Judaism, and Islam were restricted to one class number each. It also assigned separate class for "American Literature," while all other literary forms were divided by language, with no national classes. All these reflect the

inconsistencies in using existing Knowledge Classification Schemes to organize and provide access to information on Indigenous Knowledge in Medical Practices. The problem could however, be resolved by identifying the inconsistencies in the General Classification Schemes with the view to creating a make shift scheme on the pattern of the general scheme for the use of the libraries. The objective of the make shift scheme is to ensure continuity in the use of the scheme the libraries have been using and to captured all the concepts that have been missed by the General Classification Schemes.

1.7.2 Subject Heading and Thesaurus

Existing subject heading and thesaurus being used in assigning subject headings were also inadequate in arranging information on Indigenous Knowledge in Medical Practices. The failures of the subject heading list and thesaurus are functions of the classification schemes they have been using. However, this may be overcome by creating local subject heading list that captured all the concepts in Indigenous Knowledge in Medical Practices. However, in the absence of the ability to create a subject heading list, the libraries may resort to adopt the general subject heading lists either Library of Congress Subject List of Subject Heading (LCSH) or Sears List of Subject Heading (SLSH) depending on the classification scheme they are using. The inadequacies of any of the general subject heading lists in arranging information materials on Indigenous Knowledge in Medical Practices may be overcome by cataloguers. Olson (2000) noted that the bias in LCLSH, such as gender, race, religious, and ethnic were often the products of cataloguers' interpretation. Similarly, the Library of Congress Subject Cataloging Manual (1996) enjoined cataloguers to "avoid assigning headings that label topics or express personal value judgments regarding topics or materials". This means individual cataloguers' personal knowledge and judgment play a

significant role in assessing the contents of a work. Thus, assigning headings is the reflection of the cataloguers' opinion about the contents which can be corrected if the cataloguer is not being sentimental. He further maintained that in assigning headings the intent of the author or publisher should be considered to avoid being bias. Invariably, this is saying that existing bias in general subject heading list may not be intentional, but often may result from the cataloguer's interpretations. Thus, it was assumed in this proposal that there is no other list of subject headings available other than the ones the libraries have been using. They should continue with them with caution that appeal to cataloguers to resist from being emotional in interpret concepts. Thus, existing subject headings list can also be used in arranging information on Indigenous Knowledge in Medical Practices in the repository. Moreover, Knowlton (2004) believed that in assigning headings cataloguers often assign the heading which "the reader will seek in the catalogue" [and since] "we know these then we can assign such headings to overcome any bias in coverage of the list". Based on these issues the Sears' List of Subject Headings and Library of Congress List of Subject Headings are recommended for use in the repository being proposed.

1.8 **Service Plan**

The services envisaged in the repository are designed to be flexible in meeting the needs of its community. This is necessary since the goal of the model is to impart knowledge and information from information on Indigenous Knowledge in Medical Practices. Thus, services to be provided will overcome the reliance on literacy as a precondition for obtaining information from the library. Instead it will create conditions for personal services that promote personal growth to make the illiterate perceptive new ideas that are beneficial to their lives. Hence, in the repository the following services will be provided:

6.1 Referral service,

6.2 Extension service,

6.3 Young people service,

6.4 Collaboration with similar centers,

6.5 e-library services and,

6.6 Open discussion with Indigenous Knowledge holders

1.9 Supporting Technology

To present information on Indigenous Knowledge in Medical Practices within the global information infrastructure, the repository may use Information and Communication Technology (ICT) to deliver services. The range of ICT facilities to be used to provide services on Indigenous Knowledge in Medical Practices includes:

a) Computers,

b) Internet,

c) Telephone including mobile phones,

d) Television,

e) Radio, and

f) Video and audio players

1.10 Evaluation and Feedback Mechanism

Evaluation and feedback mechanisms are provided to assess the goodness and relevance of the services provided to users. Internal and external evaluative measures will be put in place to assess how the service is meeting its objectives. Internal evaluation will be based on collection user statistics on daily basis to provide input on use of the service, while external evaluation will be based on assessment of what the users are using the information obtained from the repository for. Forms will be provided to users to indicate their satisfaction with the services they are receiving.

The evaluative tools are set to provide valuable information to the staff that will be recruited to man the service. The internal evaluation to be instituted will help to make the system effective and to judge the performance of the staff. It was believed that if the staff is not performing up to expectation the system may collapse.

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APPENDIX 2

SAMPLED ENTRIES OF KNOWLEDGE GENERATED BY HAUSA INDIGENOUS MEDICAL PRACTITIONERS

Basir/Dan Kanoma,
Amadu Musa, Basir/Dan-, Dogarawa, Sabon Gari, Kaduna

Basir/Dan Kanoma,
Doctor Sa'adu, Basir/Dan Kanoma, Billiri, Billiri, Gombe

Basir/Dan Kanoma,
Sa'ad Yunusa, Basir/Dan Kanoma, Jantaro, Gassol, Taraba

Bori,
Hajiya Goshi Mai Kyalle, Bori, Jantaro, Gassol, Taraba.

Daji,
Dr. Mamman Solo, Daji, Mata, Karaya, Kinaka, Y/Deba, Gombe

Gyaran Karaya,
Abdulrasheed Umar, Gyaran Karaya, Kurba, Y/Deba, Gombe

Iska,
Dr Sulele Boka, Iska, Bolari, Y/Deba, Gombe

Kanoma,
Dr Sulele Boka, Iska, Bolari, Y/Deba, Gombe

Karaya,
Dr. Mamman Solo, Daji, Mata, Karaya, Kinaka, Y/Deba, Gombe

Kunan Wuta,
Dr Yusuf Bala, Kunan Wuta, Bali-Zambuk, Y/Deba, Gombe

Kyanda,
Jummai Ibrahim, Kyanda, Gabukka, Akko, Taraba

Maganin Bakon Dauro,
Dr. Samu Mela, Maganin Bakon, Billiri, Billiri, Gombe

Maganin Ciwon al'ada,
Hauwa Mai Jikki, Maganin Ciwon al'ada, Bankiya, Kurfi, Katsina

Maganin Ciwon Ciki,
Alh. Yusuf Muhammad, Maganin Ciwon Ciki, Birnin Kebbi, Birnin Kebbi, Kebbi

Maganin Ciwon Ciki,
Saidu Adamu, Maganin Ciwon Ciki, Ibbawa, Azare, Bauchi

Maganin Ciwon Kai,
Dan Iya Soja, Maganin Ciwon, Dogarawa, Sabon Gari, Kaduna

Maganin Ciwon kai,
Ibrahim Hassan, Maganin Ciwon kai, Deba, Y/Deba, Gombe

Maganin Daji,
Danjuma Makeri Allugu, Maganin Daji, Argungu, Argungu, Kebbi

Maganin Daji,
Hajiya Mairo, Maganin Daji, Tella, Gassol, Taraba

Maganin Daji,
Ibrahim Garba, Maganin Daji, Garba Chede, Bali, Taraba

Maganin Daji,
Ilu Ibrahim, Maganin Daji, Mutun Biyu, Gassol, Taraba

Maganin Farin Jini,
Dr. Danjuma Maga, Maganin Farin Jini, Maga, Danko Wasagu, Kebbi

Maganin Haure,
Mal. Umar Kasko, Maganin Haure, B/Kebbi, B/Kebbi, Kebbi

Maganin Karfe,
Bankiya, Maganin Karfe, Argungu, Argungu, Kebbi

Maganin Kuna,
Kabiru Jikan Hajiya, Maganin Kuna, Bankiya, Kurfi, Katsina

Maganin Kuna,
Magajiya Musa, Maganin Kuna, Lubo, Y/Deba, Gombe

Maganin Kuna,
Yusuf Muhammad, Maganin Kuna, Argungu, Argungu, Kebbi

Maganin Kyanda,
Alh. Kadir, Maganin Kyanda, Tella Gassol, Taraba

Maganin Maciji,
Alh. Aliyu Mai Bada, Maganin Maciji, B/Kebbi, B/Kebbi, Kebbi

Maganin Mata,
Abdulrahaman, Maganin Mata, Deba, Y/ Deba, Gombe

Maganin Miki,
Labbo Wanzan, Maganin Miki, Tungar Rimi, Lailaba, Kebbi

Maganin Sammu,
Mahammadu Al-Hassan, Maganin Sammu, Badagishiri Niger, Kwalli, Tawa

Maganin Sanmatsi,
Abu Sifiyanu Kansa, Maganin Sanmatsi, Bankiya, Kurfi, Katsina

Maganin Sanyi,
Idris Mohammed Sanusi, Maganin Sanyi, Gaya, Gaya, Kano

Maganin Sanyin Jiki,
Alh. Sani Dan Kabo, Maganin Sanyi, Bankiya, Kurfi, Katsina

Maganin Sanyin Kashi,
Homa Bashir, Maganin Sanyin Kashi, Argungu, Argungu, Kebbi

Maganin Shawara,
Adamu Magaji, Maganin Shawara, Dakin Kowa, Y/Deba, Gombe

Maganin Shawara,
Buhari Mahanli, Maganin Shawara, Mahutan Biyu ,Gassol, Tairaba

Maganin Shawara,
Dr. Babaji Yahaya, Maganin Shawara, Shaddu, Akko, Gombe

Maginin Sammu,
Yusuf A. Argungu, Maginin Sammu, Argungu, Argungu, Kebbi

Mata,
Dr. Mamman Solo, Daji, Mata, Karaya, Kinaka, Y/Deba, Gombe

Sammu,
Mal. Mamman Musa, Sammu, Biyu, Gassol, Taraba

APPENDIX 3

QUESTIONNAIRES FOR HAUSA INDIGENOUS MEDICAL PRACTITIONERS

Department of Library and Information Science,
Ahmadu Bello University,
Zaria.
10th May, 2011.

Dear malam/malama/alhaji/hajiya

.....

.....

QUESTIONNAIRE ON DOCUMENTATION AND ACCESSIBILITY TO INFORMATION RESOURCES AND SERVICES ON INDIGENOUS MEDICAL PRACTICES IN NIGERIA

This questionnaire is designed for the purpose of collecting data from Hausa Indigenous Medical Practitioners for purposes of postgraduate research which is being undertaken by the undersigned person. Therefore, your cooperation is hereby solicited in completing the attached questionnaire.

All information provided will be treated in confidence as no part of the questionnaire will be used for any other purpose other than what the research intends to achieve.

Thank you for the usual cooperation.

Yours Sincerely,

Ahmed Aliyu Lemu

INSTRUCTION

You are required to give the precise answer to each of the questions below. Under each question there are options provided, you are to choose from the options by marking the box against the option. Where there is no option to match your response you are expected to write the correct response in the space provided. Thank you.

SECTION ONE
PERSONAL DETAILS

1 Name of Indigenous Medical Practitioner.....
2 Local Government of Origin ……...
3 Location……
4 State……..
5 Present Occupation……...
6 Another Occupation if different from indigenous medical practice

a) Traditional barbing [ ]
b) Butchery [ ]
c) Iron smiting [ ]
d) Farming [ ]
e) Animal husbandry [ ]
f) Trading [ ]
g) Hunting [ ]
h) Building [ ]
i) Weaving and Dying [ ]
j) Fishing [ ]
k) Others (please specify) .....

7 Membership of Registered Professional organization……...
……

8 Sex
a) Male [ ]
b) Female [ ]

9 Age
a) 10 to 19 years [ ]
b) 20 to 29 years [ ]
c) 30 to 39 years [ ]
d) 40 to 49 years [ ]
e) 50 to 59 years [ ]
f) Above 60 years [ ]

SECTION TWO
THE ACTUAL QUETIONNAIRE

10 What indigenous knowledge or practices did you generated on Hausa indigenous knowledge in medical practices?
a) Herbal preparations [ ]
b) Diagnosis of diseases [ ]
c) Love portion [ ]
d) Inorganic residues [ ]
e) Making of tattoos or tribal marks [ ]
f) Medicinal plants [ ]
g) Spirit/spirit guides [ ]
h) Cult of spirit possession (Bori) [ ]
i) Child health [ ]
j) Cutting of epiglottis [ ]
k) Malams and priests [ ]
l) Supernatural or mysterious forces [ ]
m) Diviners or fortune tellers/seers [ ]
n) Male and female circumcision [ ]
o) Child care [ ]
p) Pairing of fractures [ ]

q) Use of Animal parts as medicinal product [ ]
r) Childbirth [ ]
s) Diagnose pregnancy [ ]
t) Incantations [ ]
u) Magic [ ]
v) Treat lunatics [ ]
w) Dentist (Extraction of tooth) [ ]
x) Performance of amputations [ ]
y) Others (please specify).....

11 Please indicate the format in which Hausa Indigenous medical practitioners store the knowledge they generated

a) Kept in the mind of the person who generated the knowledge [ ]
b) Written in books [ ]
c) Written in manuscript/kundi [ ]
d) Recorded on audio CD or tape cassette [ ]
e) Recorded on Video CD, DVD, or video [ ]
f) Uploaded on the Internet [ ]
g) Other format (please specify).....

12 Would you agree with any of the following methods of categorizing knowledge as the one you adopt for the knowledge you generated on Hausa Indigenous knowledge in medical practices

a) By name of plant type or medicinal substances [ ]
b) No categorization at all [ ]
c) By diseases type and type of cure [ ]
d) Colour of bark of plant [ ]
e) By taste of plant [ ]
f) By preparation of medicinal products [ ]
g) By smell of plant [ ]
h) Others (Please specify……

13 Please indicate the common specialization in Hausa indigenous medical practice

a) Herbs/medicinal ingredients [ ]
b) Use of Animal parts [ ]
c) Diagnose pregnancy [ ]
d) Childbirth [ ]
e) Child health [ ]
f) Child care [ ]
g) Traditional berber and surgeon [ ]
h) Dentist (Extraction of tooth) [ ]
i) Pairing fractures/dislocations [ ]
j) Ophthalmology [ ]
k) Treat lunatics [ ]
l) Bori [ ]
m) Diviners/seers [ ]
n) Malams and priests [ ]
o) Supernatural or mysterious forces [ ]
p) Diagnosis of diseases [ ]

q) Magic/mysticism [ ]
r) Spirit/spirit guides [ ]
s) Others (please specify)……..

14 What materials are used for preparation of Hausa indigenous medical practices in Nigeria?

a) Animal parts [ ]
b) Plant and herbs [ ]
c) Incantations [ ]
d) Skills in executing task in preparation of the practice [ ]
e) Magic [ ]
f) Diagnosis of diseases [ ]
g) Inorganic residues [ ]
h) Spirit/spirit guides [ ]
i) Cult of spirit possession (Bori) [ ]
j) Supernatural or mysterious forces [ ]
k) Diviners or fortune tellers/seers [ ]
l) Others (please specify)……

15 How are Hausa indigenous medicinal products promoted in Hausaland?

a) Made public through announcement at public places [ ]
b) Spread by patients who tested the efficacy of the product. [ ]
c) Advertisement in radio and television [ ]
d) Advertisement in the street by individual or their agents [ ]
e) Display of the products at public places [ ]
f) Peddle in the street [ ]
g) Display in shops and offices of the medical practitioners [ ]
h) Others (please specify) ……

16 What medium is used in the promotion of Hausa indigenous medicinal products?

a) Oral announcements by practitioners [ ]
b) Video recordings of the efficacy of the medicinal product [ ]
c) Radio announcements [ ]
d) Television announcements [ ]
e) Bill boards on the products [ ]
f) Handbills and posters on the products [ ]
g) No promotion required for the products [ ]
h) Others (please specify)……

17 What is the effect of the promotion on access to Hausa indigenous medicinal products in Hausaland?

a) It increase awareness of the existence of Hausa indigenous medicinal products [ ]
b) It brings the product closer to the people by indicating where to obtain the product [ ]
c) It popularise the knowledge in the practices of Hausa indigenous medicine [ ]

d) It popularise the potency of the medical practitioners
[ ]
e) It add to the cost of obtaining Hausa indigenous medicinal products
[ ]
f) Others (please specify)……

Thank you for the cooperation

Yours Sincerely,

Malam Ahmed Aliyu Lemu

APPENDIX 4

QUESTIONNAIRE FOR RESEARCHERS, LIBRARIAN AND DOCUMENTALISTS

Department of Library and Information Science,
Ahmadu Bello University,
Zaria.
15th November, 2011.

Dear Respondent,

QUESTIONNAIRE ON DOCUMENTATION AND ACCESSIBILITY TO INFORMATION RESOURCES AND SERVICES ON INDIGENOUS MEDICAL PRACTICES IN NIGERIA

The attached questionnaire is designed to collect data for the above named study. Thus, your co-operation is hereby being sought in responding to the attached questionnaire.

All responses provided will be treated in confidence and will only be used for the purpose of the study. In the questionnaire, you may be expected to tick or make any mark that will distinguish the option you have selected.

Thank you for the usual co-operation.

Yours sincerely,

Ahmed Aliyu Lemu

INSTRUCTION

This section will ask questions and you are expected to indicate the correct response by making a mark in the box provided against the option that best apply to you.

SECTION ONE

PERSONAL DATA

1) **Name of organisation**.....
2) **Position:**
   a) Director [ ]
   b) Deputy Director [ ]
   c) Assistant Director [ ]
   d) Head of department [ ]
   e) Head of unit [ ]
   f) Senior librarian [ ]
   g) Research officer [ ]
   h) Field officer [ ]
   i) Others (Please specify)…….
3) **Designation:**
   a) Cataloguer [ ]
   b) Collection development librarian [ ]
   c) Special collection librarian [ ]
   d) Public service librarian [ ]
   e) Serial librarian [ ]
   f) Documentalist [ ]
   g) Reference librarian [ ]
   h) Others (Please specify)…….
4) **Years of working experience**
   a) 0 to 9 years [ ]
   b) 10 to 19 years [ ]
   c) 20 to 29 years [ ]
   d) Above 30 years [ ]

SECTION TWO
THE ACTUAL QUETIONNAIRE

5) From the list of institutions provided below indicate the one(s) you know to be full responsible for documentation of information on Hausa Indigenous knowledge in medical practices in Nigeria
   a) Department or unit within Nigerian universities [ ]
   b) Research institutes or centers in Nigeria [ ]
   c) Special documentation units or centers in Nigeria. [ ]

d) Libraries in Nigeria [ ]
e) Public organization charged with responsibility of collecting information on Hausa indigenous medical practice in Nigeria [ ]
f) Pharmaceutical industries in Nigeria [ ]
g) Hospitals and medical centers in Nigeria [ ]
h) Others (please specify)……..

6) Indicate the format in which your institution is producing documentations on Hausa indigenous knowledge in medical practices.

a) In the form they collected the information from indigenous medical practitioners [ ]
b) Organise indigenous medical practitioners as resource persons to give talks on their specialty [ ]
c) In written form in books or manuscripts (kundi) [ ]
d) Recorded in CD or tape cassette [ ]
e) Film as in CD, DVD, or video cassette [ ]
f) Database of information on Hausa indigenous knowledge in medical practices [ ]
g) All of the above [ ]
h) None of the above [ ]
i) Other reasons, (please specify).....

7) What are the sources of information on Hausa Indigenous knowledge in medical practices in Nigeria?

a) Department or unit within Nigerian universities [ ]
b) Research institutes or centers in Nigeria [ ]
c) Special documentation units or centers in Nigeria. [ ]
d) Libraries in Nigeria [ ]
e) Pharmaceutical industries in Nigeria [ ]
f) Hospitals and medical centers in Nigeria [ ]
g) Individual knowledge holders [ ]
h) Families/tribes/communities in Nigeria. [ ]
i) Others (please specify)……

11 Please indicate the level of demand of information generated on Hausa Indigenous Knowledge in Medical Practices in your library.

Type of Service	**Very High Demand**	**High Demand**	**Undecided**	**Not Very High Demand**	**No High Demand**
Resource sharing services					
Referral services					
Indexing services					

Abstracting service					
Reprographic services					
Lending services					
Children and young peoples' services					
Database/Repository services					

8 Would you agree with the following as types of Information services derived by your library from the documented information on Hausa Indigenous Knowledge in Medical Practice in Nigeria

Information Services	**Strongly Agreed**	**Agreed**	**Undecided**	**Strongly Disagreed**	**Disagreed**
Resource sharing services					
Referral services					
Lending services					
Database of Hausa indigenous medical practices					
Children and young peoples' services					
Extension service					
Collaboration and resources sharing with similar centers					
e-library services					
Open discussion with indigenous knowledge holders					
Radio/Television documentary service					

9 Which of the following methods of categorizing knowledge does your institution adopt for the information documented on Hausa indigenous knowledge in medical practice?

Method of categorizing knowledge	**Strongly Agreed**	**Agreed**	**Undecided**	**Strongly Disagreed**	**Disagreed**
Medicinal substances					
Botanical name of plant					

Healing art/practices					
Local name of plant					
By name of plant type					
By diseases type and type of cure					
Colour of bark of plant					
By taste of plant					
By preparation of medicinal products					
By smell of plant					

10 Please indicate the acceptable format of documentation agreed by your institution on documenting Hausa Indigenous Knowledge in Medical Practices

Form of documentation produced	**Strongly Agreed**	**Agreed**	**Undecided**	**Strongly Disagreed**	**Disagreed**
Captured in written form as in books					
Database					
Manuscripts					
Kundi (diary)					
Community Discussion Forum					
Captured on CD, DVD, or video cassette					
Recorded on audio CD or tape cassette					
Newsletter					
Published in journal					
Collect actual specimens					

11 What would you agreed to be the methods adopted by your agency in providing access to the documented information on Hausa Indigenous Knowledge in Medical Practice

a) By publishing the information collected in books, journals, and newsletters to ensure access of the information in the society [ ]
b) By producing various representational forms of the information on CD, DVD, Film, and print to facilitate easier retrieval [ ]
c) Making information on Hausa Indigenous Knowledge in Medical Practices available in libraries, repositories and book stores [ ]

d) Making Information on Hausa Indigenous Knowledge in Medical Practices physically close to the users save their time in accessing it [ ]
e) By making the existence of various sources of Information on Hausa Indigenous Knowledge in Medical Practices known to people in the society [ ]
f) By digitizing information on Hausa Indigenous medical practices to ensure wider spread of information [ ]
g) Organizing the information in such a way as to for easier access [ ]
h) Maintaining information in the format required by the people in the society [ ]
i) Providing the right level of detail required to understand the information being passed [ ]
j) Creating databases of information on Indigenous Knowledge to provide wider coverage [ ]
k) Collating and preserving manuscripts on Hausa Indigenous Knowledge in Medical Practices [ ]

Thank you for co-operating with me.

Yours Sincerely

Ahmed Aliyu Lemu