

**THE ROLE OF PUBLIC LIBRARY IN IMPROVING THE LIVELIHOOD OF
NOMADIC COMMUNITIES IN GARISSA COUNTY, KENYA**

ABDI YUSSUF OMAR

**A Thesis Submitted to the School of Science and Technology in Partial
Fulfilment for the Requirements for the Conferment of Master of Information
Science of Kenya Methodist University**

SEPTEMBER 2024

DECLARATION AND RECOMMENDATION

RECOMMENDATION

This thesis is my original work and has not been submitted for a degree or any other award in any other University.



Signature: -----

Date:

Abdi Yussuf Omar

ISK-3-0525-1/2020

DECLARATION

We confirm that this thesis has been submitted with approval from university supervisors.

Signature: ----- Date:

Prof. Paul MakuGichohi, PhD.

Kenya Methodist University



Signature: -----

Date:

Dr. IddiJuma, PhD

Garissa University

COPYRIGHT

© 2024

ABDI YUSSUF

All right reserved. No part of this thesis may be reproduced, stored in any retrieval system, or transmitted in any form or by any means: electronically, mechanically, by photocopying or otherwise, without prior written permission of the author, and Kenya Methodist University.

DEDICATION

This thesis is dedicated to my mother Rahma Hassan and sister DekaYussuf, my wife FatumaAli and my children Mohamed, Abdullahi, Abdirahman, Zakaria, Ismail and Yussuf your love and support during the study period has made this happen.

ACKNOWLEDGEMENT

This work has been possible due to support from several people of whom I must acknowledge and appreciate. Utmost gratitude goes to the Almighty for giving me the strength and wisdom which has been seeing me through this task. Special gratitude goes to my supervisors, Prof. Paul Gachohi and Dr. IddiJuma for their Guidance, constructive criticisms and support in the successful completion of this thesis. I wish also to express my heartfelt gratitude to my best friend and dear wife, Fatuma Ali, for her moral support and emotional support towards my education. My sincere gratitude goes to my sincere Sisters Deka,Hawa, Amina and Brother Ahmed you have always been there for me, Thanks for your immeasurable love and support. I also appreciate support of colleagues Garissa University Stafffor their constructive comments. Since it is impossible to exhaust this list , I am very grateful to all those who have supported me in one way or another be it moral, spiritual, or financial. My Almighty God bless you abundantly.

ABSTRACT

Increasing access to information and knowledge for nomadic communities supports sustainable development and improves the community's livelihood while establishing active, responsible, and inclusive institutions at all levels. This study investigated the role of public libraries in enhancing the livelihoods of nomadic communities in Garissa County. The objectives were to determine the information needs, examine the information sources and services provided by public libraries, and evaluate strategies that enhanced community participation in public library programs and livelihood improvement in Garissa County. The research was anchored by the Wilson Model of information seeking behaviour, social inclusion, innovation theory, and community development theory. Descriptive survey research design was adopted. The target population was 377, including library users, heads of public libraries, and sub-county officers. Data were collected using questionnaires and interview schedules, which were validated and tested for reliability through pretesting in Tana River County. SPSS version 26 was used for data analysis, employing frequency distribution and central tendency measures. Ethical considerations included obtaining a NACOSTI research permit, confidentiality, and academic integrity. The findings revealed that nomadic communities in Garissa County had distinct and pressing information needs to enhance their livelihoods. Sustainable farming practices, effective livestock management, and educational opportunities tailored to the nomadic lifestyle were identified as key areas of interest. By providing tailored resources and programs, public libraries addressed these needs to some extent. However, to meet the unique challenges of nomadic lifestyles effectively, libraries must continue to adapt and expand their services. The study recommends regular needs assessments to identify and address the specific information requirements of nomadic communities. Furthermore, public libraries should collaborate with community leaders to ensure that their collections and services meet the practical and cultural needs of the nomadic community, fostering greater engagement and livelihood improvement.

TABLE OF CONTENTS

DECLARATION AND RECOMMENDATION	ii
COPYRIGHT	iii
DEDICATION	iv
ACKNOWLEDGEMENT	v
ABSTRACT	vi
TABLE OF CONTENTS	vii
LIST OF TABLES	x
LIST OF FIGURES	xi
LIST OF ABBREVIATIONS AND ACRONYMS	xii
LIST OF APPENDICES	xiii
CHAPTER ONE	1
INTRODUCTION	1
1.1 Background of the Study	1
1.2 Statement of the Problem	9
1.3 General Objective	10
1.4 Research Questions	11
1.5 Justification of the Study	11
1.6 Significance of the Study	12
1.7 Scope of the Study	13
1.8 Limitations of the Study	14
1.9 Assumptions of the Study	14
1.10 Operational Definition of Terms	15

CHAPTER TWO	17
LITERATURE REVIEW	17
2.1 Introductions.....	17
2.2 Theoretical Framework	17
2.3 Information Needs of Nomadic Communities in Garissa County	26
2.4 Sources of Information for the Nomadic Community in Garissa County	32
2.5 Utilization of Public Libraries by Nomadic Communities in Garissa County.....	37
2.6 Strategies that Enhance Community Participation in Public Library Programs	42
2.7 Livelihood of Nomadic People	51
2.8 Conceptual Framework	53
 CHAPTER THREE	 56
RESEARCH METHODOLOGY.....	56
3.1 Introduction	56
3.2 Location of the study	56
3.3 Research Design.....	57
3.4 The Target Population.....	58
3.5 Sampling Techniques and Sample Size	58
3.6 Data Collection.....	60
3.7 Data Collection Instruments.....	60
3.8 Pre-testing of Instruments	61
3.9 Validity and Reliability	62
3.10 Data Collection Procedures.....	63
3.11 Data analysis and presentation	64
3.12 Ethical Consideration	64

CHAPTER FOUR.....	66
RESULTS AND DISCUSSION	66
4.1 Introduction.....	66
4.2 Response Rate.....	66
4.3 Demographic Information of Respondents.....	67
4.5 Information sources and services provided by public libraries to nomads.....	76
4.6 Utilization of public libraries services by nomadic communities.....	79
4.7 Strategies that enhance community participation in public libraries programs.....	84
4.8 Livelihood of Nomadic People	89
4.9 Inferential Analysis.....	93
 CHAPTER FIVE	 98
SUMMARY, CONCLUSION AND RECOMMENDATIONS.....	98
5.1 Introduction.....	98
5.2 Summary of Findings.....	99
5.3 Conclusions.....	101
5.4 Recommendations.....	104
5.5 Recommendations for Further Studies.....	106
 REFERENCES	 108
 APPENDICES	 120

LIST OF TABLES

Table 3.1: Target Population	54
Table 3.2: Sample Size determination.....	55
Table 4.1: Gender.....	62
Table 4.2: Education level	62
Table 4.3: Number of years worked.....	63
Table 4.4: Marital status.....	64
Table 4.1 Information needs of the nomadic communities.....	64
Table 4.6 Information sources and service.....	69
Table 4.7 Utilization of public library.....	72
Table 4.8 Strategies for community participation.....	72
Table 4.9 Livelihood of Nomadic people.....	81
Table 4.2 Model Summary.....	84
Table 4.3 ANOVA.....	85
Table 4.4 Coefficients.....	85
Table 4.5 Correlations.....	87

LIST OF FIGURES

Figure 2. 1: Conceptual Framework.....	49
---	-----------

LIST OF ABBREVIATIONS AND ACRONYMS

ASAL	: Arid and semi-Arid land
CAS	: Current awareness Services
COVID	: Corona virus disease
GoK	: Government of Kenya
ICT	: Information and Communication Technology
IDT	: Innovation Diffusion Theory
KNLS	: Kenya National Library Services
NACOSTI	: National Commission for Science, Technology, and Innovation
NGO	: Non-Governmental Organisation
SDG	: Sustainable Development Goal
SPSS	: Statistical Package for the Social Sciences
STPI	: Save the Pastoralist Initiative

LIST OF APPENDICES

- Appendix I: Introductory Letter
- Appendix II: Respondent's Consent Letter
- Appendix III: Questionnaire for Library Users
- Appendix IV: Introduction Letter
- Appendix V: NACOSTI Research License

CHAPTER ONE

INTRODUCTION

This chapter introduces the study. It consists of the background to the study, the statement of the problem, the objectives of the study, the research questions, and significance of the study, the assumption of the study, scope and finally the limitations of the study.

1.1 Background of the Study

Livelihood issues have direct impact on the achievement of the nomadic community and are considered to be a socio-economic priority where every community needs to find the right information resources to address and maintain the continuous improvement in economy, education, security, health and other forms of livelihood. In the situation of this study, livelihood refers to capabilities that enhance the socioeconomic of life of community through efficient use of material and social resources needed to achieve the necessities of life for a means of living.(Su et al., 2022).

Due to the nature of their lifestyle nomadic community is characterized by constant mobility which excludes them from the most essential livelihood services such as education, crop farming and medical welfare services (Gammino et al., 2020; Sangare et al. 2021; Ng'asike,2019). According to Mia (2020), non-existence of access to the right information by the nomadic communities is depriving them access to essential necessities of life exposing them to poverty. This statement is echoed by Dorga (2022) who avers

that nomadic people have experienced difficult stay in the lifestyle of mobility and suffer from increased marginalization in recent period as both their needs and potential have not received the due consideration from information experts due to inadequacy of information related to the nature of information seeking behaviour of the community which has scaled down their livelihood achievements in education and health care services among others.

Across the world, public library's mission in addressing the information needs of many societies is to provide information users with different opportunities that have diversity to access information services which enhance livelihood development. In Australia for instance, public libraries have equal opportunity approach that is similar in the United States of America, to place a social worker in the library to assist disadvantaged patrons who are homeless to access livelihood skills in area of health care, education and substance abuse control (Garner et al., 2021).

In developing countries, the public libraries are providing essential support in improving the livelihood of the nomadic community through provision of information access and engaging the public participation in livelihood development by supporting various programs which are vital to human development. In Ghana, for instance, the public libraries support United Nation agenda on sustainable development (SDG) by providing the relevant skills that support the nomadic communities and those that are marginalised in areas of farming, entrepreneurship, health and environment development through information literacy, health awareness, environmental education, and agricultural training (Omona,2022).

Similarly, Marcella and Chowdhury (2020) noted that information helps to shape the livelihood of disadvantage communities by creating strong a bond that inspires the community to value the priority area of livelihood and instil information awareness as the majority of people living in villages are not conscious about the significance of accessing information that is useful to their socio-economic prosperity.

It is important that for any future development, people must have reliable avenue that empowers them on information in order to keep pace with the national development (Mia, 2020; Ali, 2019). A study by Ali et al. (2019) revealed that the nomadic women are not accessing reproductive and maternal health services due to lack of access to relevant information exposing them to maternal risk with rare visitation by health care personnel. According to Atmi and Prihani (2022) noted that public libraries are institutions that navigated communities to varied opportunities that are available by providing access to information in social heritage, livelihood development, improved service delivery that are recognised as pillars of SDGs of 2030 and many nations have shown progress to prioritize the information resource for those who are in remote to improve livelihood development.

Approximately 80% of Kenya is featured as arid and semi-arid lands (ASALs) with the communities living as pastoralists depending on oral communication as the main source of information. This adversely affects the livelihood of the community in the sense that due to lack of correct and adequate information, it is unable to make critical decisions that affect every aspect of their livelihood (Nyariki & Amwata 2019). They further noted that due to inadequacy of information, the pastoralists have been underestimated leading

to marginalisation that have affected their livelihood existence with little preference given by information providers in areas of information access. Mia (2020). Stated that due to the complexity of oral source of information, pastoralists require information that is sustainable and helpful in making informed decisions on animals' diseases, nourishment, medical treatment and diseases prevention, breeding method and livestock marketing, among other needs of information.

The Constitution of Kenya, 2010 allows every citizen to access valuable information from relevant bodies to empower every community to improve on various aspects of livelihood developments such as education, environment, health, and infrastructure among other however, many nomadic communities living in Kenya are not accessing information on various development matters happening in the country due to lack of knowledge, thus, affecting their development agendas.

Lokeshappa (2019) noted that every engagement by the society requires information and public libraries stand the best position to support the public in areas of livelihood sustainability that supports education, health, recreation and literacy. People realize a lot of benefits when they receive information that supports their livelihood. Mutu (2019) highlighted that Turkana community who is predominantly nomadic has benefited from the Pastoralist Initiative (STPI) programme with acquisition of knowledge in areas of agriculture, resilience, and nutrition. Government agencies and development partners are playing major roles in projects and programs in the county that support nomadic community on issues of access to livelihood services such as education, health and security.

However, access to these services still remains low due to inadequate information access and lack of engagement by relevant stakeholders that have potential to bring changes in areas of livelihood. (Carmen et al., 2022). Although public libraries play a vital role to disseminate relevant information and provide necessary information resources to distant communities, they only exist in urban and sub-urban neighbourhood (William-Cockfield & Mehra, 2023). Establishment of public libraries in marginalised areas will boost the living standard of the community by providing opportunities for accessing information that transforms their living standard (Jackson, 2020). Chaputula (2022) echoed that public libraries also provide opportunities to communities who have been marginalized and are not participating in various development agendas taking place in the country in order to achieve their goals and improve their quality of life through various development engagements. Libraries are, therefore, important pillars in any society.

Kenya National Library Services (KNLS) is a state corporation established in 1965 to serve public information services to Kenyan communities and has branches in all counties. However, they are only concentrated in major towns and cities delinking the crucial information from those that live and engage in mobile livelihood such as pastoralist communities. For sensitization in health issues, village volunteers and chiefs who receive short trainings from the health professionals are used to assist in major health campaigns. Kweku et al., (2020) noted that timely health information services curb the spread of deadly diseases such as covid-19 and tuberculosis. In this regard, community volunteers play a key role in disseminating health information and providing treatments as they are often considered to be trustworthy and knowledgeable in sharing crucial information with the community.

Jamali (2019) noted that there is inadequate information known about the behaviour and needs of the nomadic communities by the information providers and therefore, it requires a more reliable information source that purifies their indigenous knowledge and skills in livelihood development. Garissa's provincial library service was launched in 1979 as a branch of Kenya National Library Services. The main aim of establishing was to provide opportunities for communities to enhance their reading and information seeking habits and provide information resources and reading spaces to its clients. Since the launch of camel libraries in Garissa County, only few schools in the hinterland are benefiting and most of the information resources were of academic value and therefore little complements their livelihood development. The greatest challenge facing the nomadic community in Garissa County is lack of access to information and the few community libraries established by the governments are experiencing infrastructural problems such as poor road network affecting the development of the community.

According to reports on human mobility in Garissa County, the community who are 95% pastoralists faces daunting problems from threats like food insecurity, climate change and animal diseases with main issue being lack of information to provide responses as the community solely depends on oral traditional as the main source of information. In the available literature relating to the functions of public libraries in improving the distant and marginalised communities, there are a few articles describing how the livelihood benefits the nomadic community to access information in public libraries. This study seeks to find out the role of public libraries in enhancing the livelihood of pastoralist communities living in Garissa. Public libraries are essentially established to provide equitable and unlimited access to information. In carrying out this role, the libraries

provide services that break social, political and economic barriers affecting communities particularly those in marginalised areas.

The main priorities for Kenyan nomadic groups' library information demands are relevance to their way of life and ease of access. Mobile libraries that are portable are vital because of the nomadic lifestyle of these tribes. Materials reflecting the languages and cultural legacy of the nomadic peoples should be available in libraries. Children who live nomadic lifestyles need access to educational resources that may be used in casual situations in order to improve their literacy and learning. The traditional nomadic lifestyle and contemporary information needs can be reconciled with the aid of technology by enabling digital access to information (Akafor, 2020).

Kenyan public libraries strive to close the information gap between traditional lifestyles and contemporary information requirements by offering a wide range of information sources and services to nomadic populations. Mobile library services are provided by the Kenya National Library Service (KNLS) to reach people living in rural places, including those who are nomadic. This creative method sends books to remote tribes and schools using camels. Technology is being used by public libraries to offer digital access to information, which is especially useful for groups who are nomadic and constantly on the move. Procedures for offering resources and support for community activities are outlined by the KNLS while conducting community information services (Leorke & Wyatt, 2019).

A number of factors, such as technological availability, relevancy of materials, and accessibility, affect how often nomadic communities in Kenya use public libraries. In

order to reach isolated locations and deliver books directly to communities, mobile library services have been created, such as the Camel Library Service in Garissa and Wajir. This service is especially helpful for tribes who are nomadic and always on the move. Library resources that are representative of the languages and cultural traditions of the nomadic peoples are necessary. Offering resources that are appropriate for different cultures has been a goal of the Kenya National Library Service (KNLS). In order to assist close the gap between traditional nomadic life and contemporary information demands, the KNLS is implementing technology to enable digital access to information. Procedures for offering resources and support for community activities are outlined by the KNLS while conducting community information services (Mohamed, 2019).

Several tactics have been used to increase community participation in public library programs targeted at improving livelihoods. One such strategy is community engagement, in which libraries collaborate with members of the community to create shared experiences and make sure that programs are tailored to the needs of the community. working in tandem with other public agencies, the volunteer sector, and local government to promote democratic governance and civic engagement. identifying outreach initiatives and evaluating their effects by carrying out asset mapping, gap analysis, and needs assessments. establishing positions to lead projects, such as outreach librarians or directors of civic and community involvement. Providing civics education classes, arranging for speakers to address pertinent topics, and putting people in touch with volunteer opportunities. promoting media literacy to guarantee that community members make informed decisions (Mohamed, 2019).

1.2 Statement of the Problem

Increasing access to information and knowledge to nomadic communities supports sustainable development and improves community's livelihood and establish active, responsible and inclusive institutions at all levels. According to Makori (2022), library provides opportunities for inclusiveness for every citizen to have equal access to valuable information that propels the communities towards economic achievements. Communities that are equipped with information are well empowered to make better decisions to improve their necessities of livelihood. According to Mia (2020), every community require specific information to supports its development agenda and when information is not available many development priorities of the community is deprived off. This is supported by United Nation 2030 on sustainable development that in adequate and timely information by disadvantaged community put them at socio-economic alerts.

The public libraries have a central role to play in their respective counties, and the main function is to provide factual information to communities in order to enhance them in social-economic development. The nomadic communities in arid and semi-arid lands have restricted access to information due to their geographical, economic and social marginalization. The irony of the situation in nomadic communities in Kenya is that although information is more available globally, today than in any other time of human history, the public libraries are located in towns and most of them are inaccessible by nomadic communities in Kenya and at present it appears that most public libraries have either poorly staff professional and inadequate stock which cannot meet the needs of the pastoral community that are already affected by the nature of the mobility. The camel

library that was launched in 1996 to serve the pastoral community in Garissa County was withdrawn due to lack of funding.

This is the reason why the impacts of the improved agricultural, environmental, health, educational and communication sectors are not significantly felt by nomadic community in Garissa County. In order to realise Kenya Vision 2030, Sadare et al., (2022) opined that public libraries have a role to play in supporting poverty eradication by relevant provision of information on agricultural production, support quality education, health, culture and innovation. A number of scholars such as Nyariki and Amwata (2019), Mia (2020), Jamali and Foroutan (2019), and Nyambura (2020) have examined different strategies to improve livelihood of marginalised communities such as nomadic communities. However, they did not specifically explore information access factor for improving the livelihood existence of the community, a gap that this study addressed.

1.3 General Objective

The purpose of this study was to investigate the extent to which the public library helps to improve the livelihood of the nomadic community in Garissa County.

1.3.1 Specific Objectives

This study seeks to achieve the following objectives, to:

- i. Determine the information needs of the nomadic communities in improving their livelihood in Garissa County.

- ii. Examine the information sources and services provided by public libraries to nomadic communities in improving their livelihood in Garissa County.
- iii. Examine the utilization of public libraries services by nomadic communities in improving their livelihood in Garissa County.
- iv. Evaluate strategies that enhance community participation in public libraries programs in improving the livelihood in Garissa County.

1.4 Research Questions

This research is seeking to answer the following questions

- i. What are the information needs of nomadic communities in improving their livelihood in Garissa County?
- ii. What information sources and services are accessible by nomadic communities in improving their livelihood Garissa County?
- iii. How does the utilization of public library services help to improve the livelihood of nomadic community in Garissa County?
- iv. What strategies have been used to enhance community participation in public library programs aimed at livelihood improvement?

1.5 Justification of the Study

Public libraries perform a leading role in providing infrastructures that support information access by all citizens, every community requires information which support their livelihood. This study informs the public libraries to provide access to useful information to nomadic communities in order to eradicate poverty and inequality,

improve farming, livestock rearing, health, culture, security, education and research. It will also help the communities that have for a long time suffered from the shocks of economic and social crisis to improve their lives by expanding their potential to exploit available business and education opportunities

1.6 Significance of the Study

The outcome of the study contributes to new information that could be utilized by public libraries to improve the livelihood of nomadic communities through provision of information access. Its finding is useful to the nomadic communities to get opportunities to access various sources of information that are useful to their livelihood development. The study benefits other stakeholders such as health sectors for example data collected during census enables experts understand the livelihood of local residents, NGOs and other information centres to empower the nomadic communities in various areas of livelihood by understanding the literacy levels of the local residents and what measures can be undertaken to improve the livelihood of local residents., The Ministry of Youth Affairs, Sports and the Art in charge of library services to be better informed on the nature of services and programs to enhance for the local residents who are naturally nomadic communities.

From the findings of the research the library administration may devise relevant policy that supports relevant materials resources to assist the nomadic community access information that equip them with skills and knowledge to improve their livelihood achievement. Further, the findings to be instrumental in information resource allocation

by the government, which is a major stakeholder in supporting public libraries information access to improve the community livelihood.

The study to promote proper dissemination of information resources to nomadic community which has not benefited from information access due to the nature of their lifestyle. In addition, the study to benefit library staff by providing necessary skills to promote nomadic livelihood. The policy formulators to find this study useful as it gives foundational skill on why there need to priorities on the need of the nomadic community gained provided the researcher with more knowledge on the compensation strategies within hotel organization and its implications towards employee performance.

1.7 Scope of the Study

The study is about the role of public library in improving the livelihood of nomadic communities in Garissa County. Located in the north-eastern region of Kenya, Garissa County is one of the 47 counties in the nation. It takes up roughly 44,175 square kilometres and is called Garissa after its principal city. The majority of people living in the county are Muslims, and they belong to the Somali ethnic group. Garissa County encountered issues with infrastructure, education, and healthcare throughout the post-independence era. The arid and semi-arid environment of the area posed challenges for water resources and agriculture. Public libraries operate in the department of education, information, and ICT with the aim of promoting, revitalizing, and developing library services. Public libraries in Garssa County are a representative of public libraries in Kenya hence the study aims to look at the the role of public library in improving the

livelihood of nomadic communities in Garissa County. The study targets library users, head of libraries in Garissa public libraries and Sub County education officers.

1.8 Limitations of the Study

One of the major limitations of this study is the mobility challenge associated with arid and semi-arid areas which expected to make travelling around the county quite costly and time consuming. To mitigate this problem the researcher intends to identify and utilize key informants from each area to gather the needed data for analysis and interpretation. The study might focus on specific aspects of public libraries or pastoralist livelihoods, potentially overlooking other relevant factors. To mitigate this, researchers should clearly define the scope and boundaries of their study. Qualitative research often involves interpreting subjective data. Researchers may interpret themes or concepts differently based on their perspectives. To address this, cross-checking interpretations with other scholars or colleagues can help minimize subjectivity bias. Public libraries often operate within budget constraints, affecting the range and quality of services they can provide. Researchers should recognize the extent of available resources and consider their impact on the study.

1.9 Assumptions of the Study

This study was conducted with the assumption that: nomadic communities utilize public library resources and services to improve their standards of living. It is also assumed that despite high levels of illiteracy among nomadic communities, respondents gave objective and informed responses.

1.10 Operational Definition of Terms

Community Information: information services that supports access to available information in order to gain confidence to solve the community problems (Arindam, 2019).

Current awareness services (CAS): services that update the reader with new information about specific subject and related topics in a prompt manner (Dika, 2019).

Library: collections of information materials, documents, periodicals, and other sources of recorded information such as reference works, that offer factual information and directories that aid users get information from other sources (Mose, 2020).

Livelihood: refers to the ways in which communities sustain themselves and their families involving a delicate balance between livestock-based activities and diversification to cope with the challenges of their environment (Nyariki, 2019).

Mobile Library: library that sources information materials from outside of the library's fixed location to users that lack the chance to access the resources (Sikes, 2020).

Nomadic community: a society without not normal and fixed dwellings and regularly moves with their livestock in search of fresh pastures and water (Patterson, 2022).

Public library: a library recognized under the clear directive of law sustained fully from public fund, providing all its provision free of cost with equitable access by all members of the public regardless of their age, sex, religion, language and structural level of education (Mose, 2020).

CHAPTER TWO

LITERATURE REVIEW

2.1 Introductions

This chapter presents review of relevant literature in relation to roles of public libraries in improving the livelihood of nomadic community in Garissa County, Kenya. The chapter is in three major sections. The first section covers the theoretical framework, where Wilson model, Innovation Diffusion Theory (IDT), Community Development Theory and Social Inclusion Theory have been discussed. The second section covers empirical literature review based on the main variables of the study.

2.2 Theoretical Framework

The public libraries have an important role to lead as a change agent for contributing to the livelihood of nomadic communities. However, to achieve such role, the public library should expand its area of interest by providing information access in wide scope that caters for all the communities across socio-economic environments. Not every community around the world has the resources to build a library to offer its members access to information and creating scenario of information poverty that negates the livelihood of the community (Mia, 2020).

Various theoretical models such as; Wilson model, social inclusion theory, Use of Innovation theory and Community Development Theory have been applied to discuss information needs of the nomadic community, sources of information used by nomadic community, their resource utilization and challenges faced by the community in access

public library resources. Various researchers applied theories to support various studies especially in improving the information access by disadvantaged and marginalised communities

2.2.1 Wilson Theory

In order to encourage experts and a wide range of individuals to participate in information seeking behaviour research in the years 1981 through 1999, created a number of models pertaining to the behaviour of people seeking information. When it came to seeing feedback as important during the information seeking process, Wilson's 1981 theory of information seeking established precedence. However, in 1999, the model was enhanced, especially in relation to the subject of information and library studies (Wilson, 2000) with observations that there was a significant surge in research focused on user demands, needs for information. Concurrently information seeking behaviour following the 1948 Royal Society Scientific Information Conference. Wilson theory provides pertinent information behaviour and contain a wide range of patterns of information seeking behaviour

Wilson's initial model recognized both the factors that promote knowledge seeking and the barriers that prohibit it. Wilson (2010) claimed that the notion was centred on human information-seeking behaviours, which can be enhanced as three solid frameworks: the user, the information system, and the information resource. Wilson (1981) identifies the factors that impact information seeking while also highlighting the many hurdles that the action faces. These include: Search by people who lack access to information systems of any kind but use the place they are in and their personal expertise. Search pathways

involving an intermediate or information system, the intermediary's search tactics are employed to satisfy the user's requests and achieve the stated aim and the user or intermediary's strategies for using ICT.

In Africa, information is still predominately embedded in oral tradition therefore most communities whose livelihood depend on mobility such as nomadic communities depend on available information within their surroundings because animals' welfare takes precedence. Especially the use of elders' experience and opinion leaders are the major sources of information that community depends (Jamali & Foroutan, 2019) Despite the emergence of information globally, African communities are still underprivileged to benefit from this era in order to productively manage livelihood uncertainty. Africans are mainly rural and nomadic they are normally affected by information gap syndrome because such communities scatter suddenly and widely due to their endless mobility.

Wilson theory is well applied when identifying the information seeking behaviour of the users that are dominated by livelihood activities and require special attention to address such needs and provide solutions to the barriers that restrict the accessibility of getting the information. Nomadic communities are dominated by the activities related to their social environment; therefore, the theory provides the search paths that satisfy the user's information demands of every user. The model is also applied when managing inclusive access of information to all users regardless of their livelihood activities.

According to Jamal and Foroutan (2019b) the Wilson theory interprets the dominance of oral culture among nomadic people and provide proper sustainable information path that bridge the information gap among the communities that for a long-time experienced lack

of access to information due to literacy problems, problematic roads that constrains access to the world of information and the inadequate supply of electricity to use modern information technology among others. The inclusion of this model in the study is justified by its comprehensive examination of all aspects of nomadic communities' information demands, including information sources and services, as well as the utilization of public libraries in Garissa County.

Wilson's (1999) theory is particularly useful since it provides a concise and understandable illustration of the connection between information retrieval, information seeking, and user behaviour. Wilson's thesis is crucial to comprehending consumers' information behaviour, their needs and services, and how to satisfy them, according to (Ugbalaet et al. 2022). Given this, the theory offers useful guidelines for analyzing how users in this example, nomadic populations seek information. The theory has been criticized heavily for over generalizing, which means that not all fields of knowledge would necessarily benefit from its postulates. It offers sufficient assistance for analyzing users' information-seeking behaviour despite its flaws (Ugbala et al. 2022).

2.2.2 Innovation theory

One theoretical framework for comprehending how people within a social system can adopt an idea is Rogers' diffusion of innovation theory. The innovation itself may help spread if it has certain qualities. Relative advantage, compatibility, complexity, trial ability, and observability are some of these qualities. According to Rogers (2003), innovation is any concept, thing, or action that is seen as novel. Even if something has

been around for a long time, it might still be considered innovative to the individual who uses it.

The diffusion of innovation theory has been widely tested and implemented. It has been used to explain how individuals and societies accept new ideas, inventions, and behaviours. As a result, the model has been used as a framework for many other fields. According to the hypothesis, creativity spreads through certain channels throughout time among members of a social system. This definition consists of four major components: innovation, communication medium, time, and social system. Communication channels are mediums for exchanging information among community members. In this environment, information about an innovation must be distributed in order to introduce it. Rogers (2003) identifies mass media and interpersonal communication as the two communication channels used to communicate an innovation from the source to the receiver.

Garcia-Aviles (2020) defined the diffusion of innovation as the process by which systematic channel is established to communicate and share innovations among the members of a social system. In regard to information access, the information providers require the understanding of unique survival and living of nomadic communities within their ecological system. Niu (2020) recommended the need to recognise innovations in the public libraries to support the relevant information stakeholders to propel the development agendas of communities. This helps the librarian to maximise the use of innovation to reach such communities as the nomads who have a unique environmental adoption to access information.

Innovation theory has been widely tested and implemented especially the use of mobile libraries to disseminate information to communities that have no access to information from the public libraries. For example, Kenya and Djibouti in Africa have adopted Camel library to deliver books and other information services to pastoralists living in remote areas to improve the literacy of their school children. Thus, the pastoralists are able to utilize the services and information delivered to them.

The ideal communication for diffusion happens when public libraries as change agents are more technically competent to offer innovative services to their target users (Mersand et al.,2019). Distinct innovativeness is the degree and rate with which persons in a social system adopt a new idea that focuses on the usage of public library services by nomadic populations. The rate of adoption of an innovation is the relative speed with which a new idea is adopted and is measured in terms of the number of members in a social system who adopt the new idea at a given time, thereby enhancing the ability of public library officers and nomads to evaluate strategies that enhance community participation in public library programs aimed at livelihood improvement. As an element, the social system is made up of a number of interconnected units, including people who seek out and provide information in the community, organizations, and subsystems that work together to solve problems and improve the lives of community members. According to Rogers, the main factor used to identify adopters is a person's innovativeness, which is influenced by the social system in which they live.

One effective strategy for altering socially normative and trend-influenced behaviours is the diffusion of innovation. The concept emphasizes qualities, which clarifies how to

promote desired behavior. This could be accomplished by using change agents, or early adopters of a new behavior who support and urge others to follow suit. Agents of change can be community workers or people who have adopted the new behaviour and can serve as role models. If a new habit is directed toward well-known individuals, peers, local authorities, celebrities, or other influential persons, it may catch on faster. Public libraries in Carissa County may thus choose to add services that cater to the information needs of the traveling public.

2.2.3 Community Development Theory

Community development theory by Robert Chambers, a British academic and development practitioner, who has significantly influenced the field of international development studies. Community development theory in the context of public libraries involves a community approach which emphasizes the active participation of community members in decision-making processes. Public libraries can adopt a similar approach by involving local residents, organizations, and stakeholders. Community development theory enables libraries to empower community members by providing information literacy programs so as to promote critical thinking, research skills and digital literacy (Cornwall & Scoones, 2022).

Robert Chambers' Community Development Theory has a significant impact on participatory development practices although it is not directly tied to public libraries, its principles can inform library programs and services in several ways such as libraries should be welcoming spaces for everyone, regardless of age, ethnicity, gender, or socioeconomic status. Provision of culturally relevant materials, and diverse

programming promote inclusivity. Community development theory promotes collaboration and partnership in which public libraries can collaborate with local organizations, schools, and businesses. Joint initiatives enhance community development. Public libraries serve as physical hubs for community interaction and study spaces, virtual spaces such library websites, social media and extended community engagement (Agyekum, 2022).

Community development theory emphasizes social justice. Libraries can advocate for equitable access to information, education, and resources. Further libraries contribute to lifelong learning through book clubs, workshops, and lectures. In summary, applying community development theory in public libraries involves creating inclusive spaces, empowering residents, and collaborating with the community. By doing so, libraries become catalysts for positive change and community well-being. Chambers' methodology emphasizes enabling local communities to take control over their own development. This practice-oriented approach has garnered attention and influence among NGOs and development agencies.

However, the empiricist Chambers and other practitioners have focused primarily on what works in the field, rather than delving into deeper theoretical questions. As a result, critical issues such as legitimacy, justice, power dynamics, and gender politics have been overshadowed or ignored. In summary, while Chambers' theory was not specifically designed for public libraries, its principles align with community development and participatory approaches. By embracing these principles, libraries can better serve their

communities and foster meaningful connections in their daily livelihood (Cornwall & Scoones, 2022).

2.2.4 Social Inclusion Theory

Social inclusion theory encompasses a multifaceted exploration of how individuals and groups participate in society. Social inclusion is a contested term, with diverse interpretations in both academic and policy literature. The theory includes who to be included and the ideologies which emphasize access and economic factors, community participation. Social inclusion theory focuses on sociological perspective such as social stratification and practical interventions such as community partnership which the community and public libraries need for members of the public to access information so as to improve their livelihood (Harrington et al., 2020).

The key component of social inclusion involves the process of ending poverty and promoting shared prosperity in the community and sustainable development. Social inclusion theory finds practical application in public libraries facilitate community conversations and encourage the development of community-based solutions. Public libraries have a vital role in providing services to all excluded groups in society. They go beyond merely providing books and extend their reach to marginalized communities. Libraries offer locations, programs, and resources that support social inclusion. Initiatives aimed at promoting socioeconomic inclusion in public libraries require government backing.

Public libraries have the power to create new social contracts in developing countries by giving people easier access to resources for knowledge and information that enhance educational systems. Additionally, they act as a link between the public and the government, which can result in the creation of plans to increase community involvement in livelihood-improving public library initiatives (Bouaamri, 2023). Critics argue that the moral meta-narrative underlying social inclusion is that it is inherently good and desirable because it is the opposite of social exclusion. Implicit criteria for inclusion are commonly established by social norms; disobeying these criteria leads to exclusion (Sarafa & Oyewole, 2023).

2.3 Information Needs of Nomadic Communities in Garissa County

A person's desire to choose and obtain knowledge that fulfills a conscious or unconscious need is referred to as an information need. Public libraries are those that get funding from state and local governments through taxation and law. As a result, it is accessible and free for everyone, irrespective of status, gender, age, or religion (Bouaamari, 2023). According to Wickramarachchi (2021), the primary purpose of a public library is to serve the general public with information services, irrespective of their age, gender, position, or occupation, and these services ought to be provided for free or at a minimal cost. According to Mohamed (2019), the main purpose of public libraries is to serve the broader public, which is the entire community. Public libraries have traditionally been seen as knowledge institutions since they offer open places for research and information and are available to all societal segments, regardless of gender, age, or ethnicity. (Sadare et al., 2022).

According to Mwaniki (2022), public library patrons have various needs, hence libraries are supposed to provide a wide range of services to them. He emphasized that the services requested by public library customers are not static; rather, their demands are dynamic, necessitating different services at different times. According to Mwanatimwa (2022), consumers may demand knowledge on local history, industries, and personalities. According to him, a layperson may require information to survive and as a result, the public library has evolved into an important reservoir of knowledge, serving the information requirements of all groups in the community in which it is located.

Public libraries are supposed to serve an important role in their communities by providing users with access to information in an efficient and timely fashion. According to Bello and Salawu (2020), libraries' primary goal is to give users with timely, accurate, relevant, and reliable information. He continued by saying that improving information access is a priority for librarians and that the needs of users come first. In literate nations, libraries are the most widely used information source, claims (Thanuskodi, 2019). Librarians need to know what kind of information people are looking for and how to find it. The library needs to provide and maintain effective services due to the rapidly increasing expenses associated with obtaining and maintaining print publications and electronic materials.

To identify information needs, one should use a variety of approaches to collect data on the many elements that drive information needs. It is vital to carefully pick and blend multiple strategies based on the needs of the user being investigated. In fact, the information needs identifier should thoroughly research, prepare, and equip him/her before attempting to identify information needs. Measuring information user needs is the

process of determining the specific information that a user need to complete a certain action or achieve a specific objective. This can include soliciting user feedback, assessing their behaviour and preferences, and gathering data about their needs using a variety of tools and methodologies. Survey research allows for the collection of both numerical and textual data. Survey methods are also widely employed in LIS, with questionnaires and interviews serving as the primary data collecting sources (Mubofu, 2023).

Sime et al. (2022) described the need of the library community in information provisions as dynamic and includes; food and nutrition, education, business, medical care, and social welfare among other needs. Public libraries form the strong pillar to serve all the needs of the community by providing the right facilities and resources to identify both the general and specific priority needs of the people. To ensure rural communities are integrated in socio-economic development, they must be fully aware of the kind of information which can help them support the right decision to improve their lives (Adesoji & Olabode, 2020).

Globally, public libraries increasingly find information needs as a priority for all library communities and marginalized users such as nomadic people in order to improve their welfare by accessing information that is relevant to their livelihood. In China, a study on the roles of the public libraries in improving the socio-economic development largely recommends identifying the information needs of the community through maximising the use of information and communication technology and essential skills that improve access to information (Nyika, 2020). The study further recommended that there should be

a more realistic approach to help the rural community access information services by improving its informal structure.

A similar case study by Summer (2022) on the roles of public library in improving the lifestyle of the community highlighted the benefits that the socially disadvantage community gets from the public library in advocating for equality to access service delivery. The study reveals that the public library is essential in identifying the perennial information related problems of the marginalised communities and identifies the relevant skills and knowledge that assist them through information and knowledge empowerment, which can eventually reduce social inequality.

Moreover, a study conducted by Cahayani and Wicaksono (2021) to investigate the roles of library in the community empowerment in Pakisaji Village in Indonesia, concluded that the Leshutama Library has an active role in changing the society through empowerment of the community in various fields, namely the environment, information skills, and literacy. Additionally, a research conducted by Anna on the “assessment of the function of community-related public library in supporting Surabaya society in Indonesia, reveals that the main goal of a library is to build a broad and reliable library of materials on behalf of the society. The study further reveals that the collection capacity comprises current materials that are relevant to assist the local communities in various sectors of the economy (Anna et al., 2020).

In Africa, every sector is making concerted efforts to improve its socio-economic gain as information becomes an essential ingredient to every significant development of livelihood achievement. Although there is an upsurge of information in the world, Africa

as a continent is dragging behind as the access to information is still poor as the rural dwellers are unable to determine their information needs. The African community living in rural villages are related with oral tradition and are most affected by inadequate access to information. To have a developed information hub in Africa, there must be a structure that will constantly assist to identify the needs of the marginalised communities. The research highlights that public library has been supportive to the community and can still provide or play a significant role in assisting the communities in the rural setup (Ogbonna, 2020). Strategies That Public Libraries Use to Build Communities readings, poetry slams and classes; digital literacy and computer skills training; and early childhood education through story time and cultural programming for young children.

The study by Saka (2021) on the improvement of information services, rural communities in Nigeria, reveals that in rural sectors where there is poor information access would lead to high illiteracy rate, unreliable source of income and livelihood. This is to create a situation where the livelihood of the rural community would be at stake. Communities living in the rural areas, far from the formal structures where services are provided require a reliable and precise that would improve their livelihood development. (Saka, 2021). A similar study was conducted by Mosweu (2019) at the ministry of trade and industry in Botswana on the factors influencing the information need of the community. The study shows that the most significant barriers to improve the livelihood of nomadic community were lack of awareness to access the right resources to meet the information needs by nomadic community, a negative attitude on the usage of public library services and illiteracy of the community.

The study also reveals that information needs of nomadic community has a bearing on a person's activities, the socio-economic development, and sustainable agro-ecological farming based on sustainable development pillar. The study recommends that the public library has an active role to improve the capacity and meet the diverse and unique information needs of the marginalized communities. According to Jamali and Foroutan, the pastoral community is driven by information needs that relates to major areas including funeral rites, political, health, parenting and animals husbandry. There are few triggers for seeking information by the community as noted in the study such as improving the livelihood of their family, best animal breeds and the market preference.

In Kenya, Due to the nature of lifestyle of Nomadic people living in Kenya, the community continue to remain dormant to exploit the economic gain of information access despite the government putting up several public libraries in major counties such as those on Arid & Semi-Arid land, the noticeable livelihood activities where libraries have provided support include access to information to eradicate poverty, security and other livelihood supports. Marcella & Chowdhury (2020). Highlighted that in developing nations like Nigeria and Kenya, public libraries should find and assist significant functions that assist community who are experiencing in poverty so as survive from these social problems by disseminating relevant information materials that support the needed information in the most appropriate need.

A study related on the functions of libraries in the achievement on livelihood development (Sadare et al., 2022). The study finds out the roles the library play in contributing to the SDGs in Kenya. The study reveals that library serve as one of the key

areas identified to propelled the development agenda as spelt out in the international agreements which highlight that information as the determinant of the needs of every community regardless of their social status.

A case study on the functions of publics libraries in promoting literacy (Mose, 2020). The study was based in Narok, Kenya on establishing the measures used by public libraries in supporting literacy level in the whole nation. It investigated the innovative strategies like story telling sessions would help the pastoralist community improve the level of literacy despite the socio-economic challenges. The study reveals that the public libraries in pastoralist dominated areas are placed to support the community in accessing the relevant information in order to meet their diverse needs. The public libraries being one of the socio- economic catalyst would be the best driving force to steer the community out of the challenges by exposing them to wide range of resources and facilities that are available to meet the need of the oral community.

2.4 Sources of Information for the Nomadic Community in Garissa County

Nomadic community need timely and relevant sources of information to meet their varied needs. Access to relevant source of information, correctly provided at the right occasion would help the rural society to manage uncertainties and other livelihood diversity (Cahayani & Wicaksono, 2021). People tend to prioritize certain types of information sources in order to meet their information needs. Significant portions of their information demands were frequently met by family members, acquaintances, and other community leaders such as imams.

Pastoral nomads in Northern Kenya rely heavily on radio as their primary information source. Pastoral nomads utilize radio for entertainment and companionship when travelling through the bush with their cattle. Pastoral nomads typically meet their information needs through informal sources (representatives from the host community, scouts, and discussions at market stalls) as well as one formal source (radio). Aside from library extension agents, books and newspapers are the least popular sources among pastoral nomads. Despite Nomadic Education efforts to improve the nomads' literacy levels, their reliance on books and newspapers as sources of information remained low (Jamali & Foroutan, 2019).

Common evaluation factors for library users' information selection include purpose and intended audience, authority and trustworthiness, correctness and reliability, currency and timeliness, and objectivity or bias. Measuring information sources is the process of determining the credibility and dependability of information sources. This is necessary to determine the accuracy and usefulness of the information obtained. A source's accuracy can be measured using a variety of methods, including fact-checking, cross-referencing material from numerous sources, and examining the author's or organization's qualifications. Furthermore, there are several frameworks and models that may be used to assess the dependability and credibility of information sources, such as the peer review process. Data collection is the process of acquiring and measuring information on variables of interest in a systematic manner that allows one to answer specific research questions, test hypotheses, and assess results (Lalmas et al., 2022).

However, for most people living in the rural especially in the developing nations, accessing information is difficult and have been expensive and inaccessible, affecting community participation in national decision making. Arindam (2019) argued that due to changing evolution in the area of the varied users, public Libraries are dissemination relevant information sources to enhance the capacity of the community users to meet their information needs.

Governments and NGOs are making use of mobile phone- and Internet-based communication as a source of information to provide access to public services for the disadvantaged people in the community. A study conducted in assessing the sources of information relevant to the disadvantage community in Greek (Linos et al. 2021). Found that administrative cost was the significant barrier to the community to make use of the available communication media such as phone and internet.

A study by Lal on the socio-economic role of public library in rural setups asserts that accessing relevant information resources is very significant as it motivates the degree of commitment as well as educational development. According to the study, Information is considered as an economic source or as a means to growth and for contributing high-quality decision. A knowledgeable community always seek relevant source of information that improve their livelihood and as well as future prospect to meet the information need for their socio-economic development. Public libraries are significant entity in local society, particularly in rural and marginalised people and they are more than shelves of books. The study concluded that public libraries in India links the source of information and rural community by proving specialised information at all level

necessary for all sphere of life including social, political, economic and cultural development in the society.

A study by Okike and Oyeniya (2019) highlighted that different sources of information are considered as a substantial pillar which is significant in the process of assisting decision making for the concerns of the community. Information enhances community value when disseminated through proper awareness. The evolution of information technology, particularly the use of media has made considerable changes in all areas of production and service-oriented institutions such as libraries and other information sectors.

The study of Jamali & Foroutan on reliance on the oral culture as a major source of information such as elders, religious leaders, chiefs and neighbours. The study found that over reliance on the traditional source of information by nomadic community even in the developed society, can be associated to a number of factors. In addition to low literacy level due to lack of learning equipment, factors such as difficulty infrastructures such as road network that make access to information difficult and lack of power to use modern technology such as the use of media have contributed to this negative impact in information usage. Even the use of cell phones is sufficient source for community source of information as service might not be guaranteed when the community is going through difficult roads in the forests and valleys. The study further revealed that the community (Jamali & Foroutan, 2019).

Garmer in his study investigated how the scarcity of the information negatively impacted on the livelihood growth of the community. According to the study he identified that

public libraries established at the time of information scarcity. However, in today's information age, there is a great change in the evolution of information sources available for use everywhere in different formats, and people no longer rely on one information media to find the right information (Cigarini et al., 2021). A study on media cultures in nomadic communities, Waters-Bayer (2021) investigated on particular communities' occurrence on the use of internal online as a source of information for the mobile communities.

The study focuses on different communities, particularly the Maasai in Tanzania and Mongolians in Northern China. The study revealed that particularly for pastoralist herders that dwell in isolated rural areas such as those that live in marginalised zones, which most researchers are uncertainly to go as individual. In his study, the researcher noted that social platform allows different avenues to solve this social isolation. The study examines how nomadic people have adopted the prominent images and narratives that highlight the reality of herders to the attention of the policy makers. The nomads traversing large vast of land in rural areas for engaging in productive livelihood are using technology to access information networks that bring their plights and manipulate decision making at both national and internal level.

Sharief and others studied on the management of indigenous knowledge of the oral community. The research was based in Sudan rural community on the role of librarian awareness of the culture of the community. The research found that public libraries have a function to perform in preserving the traditional knowledge as a source of information to help the identity of local community be reflected in the national heritage (Sharief et

al.,2021). The study of Mwantimwa reveals the importance of using mobiles phone among the nomadic communities in Moduli and Bagamoyo district in Tanzania in improving the information access and supporting the poverty prevention programs. The study also emphasis on the urgent need to re-think and use mobile technology to address the information access problems in nomadic community and enhance development-related information provided by media facilities (Mwantimwa, 2020).

A study by Mude in the significance of managing livestock shocks such as prolonged droughts and improving information access platforms in distant community Arid and Semi Lands (ASALs) of North-eastern Kenya which is dominated by nomadic communities. The study reveals that national and county governments and non-government organizations (NGOs) have discussed considerable mechanisms to address the challenges of the pastoral community and provide the relevant information to improve the development of the mobile community of the area. However, the researcher noted the huge gap in meeting all the needs of the community despite considerable efforts to keep pace with prevailing information demands from the community. Mude (2016) asserted that rural dwellers need timely, accurate, pertinent and reliable information.

2.5 Utilization of Public Libraries by Nomadic Communities in Garissa County

To the extent that information resources and services are used to support every nomadic group in Africa, adequate usage of library information services is a unique determinant (Garaba & Mohammed,2019). Historically, services offered by libraries included course reserves, inter library loans, circulation, information desks, reference desks, and library instruction (Carver, 2019). A wide range of services are provided by the library to its

patrons, such as circulation, readers' services, registration, abstracting/indexing, current awareness (CAS), selective dissemination of information (SDI), bibliographic, research, book and newspaper services, searching and retrieval, audio-visual, and user support.

Users' interactions with libraries have been impacted by restricted physical space, resource digitization, and technological improvements (Garoufali & Garoufallou, 2024). ICT use in libraries, according to Nyika (2020) has allowed libraries to increase client access and enhance the quality of services they offer. Langdon & Parker (2019), however, views ICTs as instruments that have both brought about a revolution that librarians and libraries must deal with, as well as established competitive conditions for the provision of information services, such as bibliographic training, which is now accessible online. Since they can now access library services and information sources from anywhere at any time, library users are becoming less and less limited by time or geography (Strover et al., 2020). Visitors to the library come for a variety of reasons, including reading books, journals, and newspapers; borrowing and returning periodicals; getting general or specialized information; and using the internet (Lenaiyas et al., 2020).

Several indicators can be used to measure public library use by users, including: Circulation which essentially displays the number of information beings checked out from the library's collection, as well as user registration, the number of users served by the reference and information services desk. Program attendance this applies to customers who attend library programs such as book clubs, author talks, and other events. Computer usage indicates the number of hours spent using library computers as well as

the number of computer sessions. The space consumption indicates the number of people who log in and the amount of time spent on the internet (Wilson et al., 2019).

There are numerous methods for determining indications of public library use by users or the community. One typical way is to keep track of how many items are checked out, loaned, or reserved, as well as how many people visit the library. Surveys and user feedback can also help establish the library's level of satisfaction and collect data on how frequently visitors visit. Another approach is to measure the number of job searchers and available job training programs, as well as the use of online resources and e-books, to analyse the library's influence on the community.

The use of library services by the rural dwellers has a positive impact in their social, cultural, demographic, educational, craft and technical challenges that support development at the grass-root level (Yap et al.,2020). The function of public libraries in distance community is appreciated as many people access information to shape their lives. (Rajendran & Ladan, 2020). Garaba and Mohammed (2019) opined that the major skills used by rural communities to access information resources was by visiting institutions such as libraries to use the information resources that are available. The study highlights that other information sources to find, access, utilize information services beside those of the libraries include. Visiting personal friends, neighbourhoods, related people, and other persons during market week, visiting officers, community elders, spiritual community, herders as well as mobile phones.

In Africa, utilization of information even in the wake of information explosion is still low. According Ogbonna (2020). the utilization of information in the public libraries

should integrate the economic and social development of the country. For an enriched information environment in developing countries, Ogbonna in his study highlighted that there must be an information system that constantly updates and disseminates information services to the disadvantaged community. Public library is the umbrella of the community information service point and is always available to the community by contributing or playing a significant role in sustainable information in rural community. Ogbuabo (2021) conducted a study on Ohangwena, Omaheke and Oshana regions in Namibia with high population of marginalized communities evidenced with high rate of illiteracy and homeless street children. Its impact is felt on the socio-economic development of the region. The Government of Namibia, with funding from the United States Government built the public libraries in the three cities specifically to address the problems of low literacy levels and to support economic development initiatives of the respective regions.

The use of Information has become an important part of the current socio- economic world. Although the increased use of data technologies has revolutionized and made a great move in the public environment, the situation in developing world particularly Africa is still worrying. According to Ogbonna (2020), the evolution of information in the world not only gave birth to knowledge society but also created a gap in information usage by particular society that are behind in development. According to Hammock et al., (2023), the rural community is disadvantaged with regard to access to medical services. As a result, public libraries provide support through medical information services. In North Carolina, public libraries have adopted health assessment program and feedback.

With little health awareness, public libraries assist in the promotion of health services and related initiatives.

Summers (2022) conducted a study on the disadvantaged community living in Guangdong Province, China. The study found that public libraries in this province have been providing support such as promoting cultural service to the marginalized communities. A full array of activities has been carried out which include providing free reading materials, establishing information service centres in the neighbourhoods of the disadvantaged community, delivering reading materials at the doorstep and providing services such as computer skills and instruction for the disadvantaged community. This implies that public library provides a great tool that support information contained in different media that assist the community in various aspects of development. In related study by Nurdin and Saufa (2020) on the role of home libraries in rural places, it social changes occur through distinct phases such as invention/discovery, diffusion, accumulation, and adaptation which interrelate the roles of the library and improvement on education and economic development of the kepek communities.

In South Africa, Boloka and Ngoepa (2024) asserted that every community including those that are marginalised in rural villages require fair access to information in diverse formats for individual and economic development. However, study also shows that utilization of the information resources is affected by the exiting historical divisions which is evidence that there is a distinct gap in information access in South Africa. The research concludes that these divisions deny users the right to impartially use available information services to meet their needs. The research recommends access to information

to all public libraries to enable users to meet their current and dynamic information needs.

In Kenya, a study on Promoting literacy through community libraries (James & Ngindiru, 2022). shows that there is a significant correlation between community-based learning environments for supporting community engagement and improving opportunity access in areas of high need, thus bridging the inequity in underserved communities. According to the study the establishment of public library has helped transform the learning experiences for people in Tana-Delta especially at the height of COVID -19 when all the schools were closed. Decentralisation of public library functions by Kenya National Library KNLS) to rural and nomadic dominated counties such as Garissa County was to extend library services to the remote communities that live far from the facilities of the public library. The establishment of Mbalambala and Masalani community libraries in Garissa County have demonstrated great opportunities in assisting literacy, development and lifelong learning.

2.6 Strategies that Enhance Community Participation in Public Library Programs

The state of public libraries varies widely among nations due to many political, social, cultural, and economic factors. A developed nation like the United Kingdom serves a population of over sixty-three million people through a well-supported library system that reaches every neighbourhood across the nation (Kronenfeld & Kronenfeld, 2021). Kenya, like many other developing nations, has a very small number of public libraries compared to the United Kingdom. The country's population of over forty million people is served by just sixty public libraries nationwide. Programs offered by public libraries give locals

access to opportunities, resources, and information that piques their interest, acting as entry points for them.

For these groups, the public library is a vital resource as they might not have access to other information sources and frequently don't seem to know about community resources that can help them further their interests. The community can avail itself of a multitude of free educational programs at the public library, in addition to free access to resources and information. These include lifelong learning initiatives such as workshops, poetry slams, and community talk techniques; training in digital literacy and computer skills; and early childhood education through Story time and cultural events for small children (Sikes, 2020).

In 1996, the Kenya National Library Service (KNLS) began offering library services via camels to nomadic pastoralists in the North Eastern Province of the country. The Camel Library Service Project was based out of two districts: Garissa and Wajir. According to the KNLS web site, the program was developed to provide books and other material to pastoralists in the area, fight illiteracy, support formal education, and support education and reading for vulnerable. The camel library service involved a local herder, a “librarian in charge,” and two assistants lead the camels in caravans of three. Together, the three animals carry four boxes of books, a tent, two chairs, a table, and umbrellas. At each stop along the journey, the crew unloads the camels and sets up a tent-library where materials can be checked out. Stops include schools in pastoralist communities, adult literacy centres, and refugee camps. Grazing lands for the camels are donated by local

communities and the government, and local veterinarians care for the animals (Rwotolonya, 2023).

Research on community engagement in public libraries has primarily focused on urban systems; however, there is a dearth of studies investigating community engagement in rural library systems. The majority of the population in the Canadian province of Nova Scotia is sparsely populated and rural, with an elderly and declining rural population. Through interviews with local librarians, the study investigates how community engagement might foster connections between the residents of the remote public libraries and one another.

The material from these interviews is synthesized in this report, which also offers an overview of the community involvement initiatives being carried out across the Canadian Nova Scotia region. In the end, this study found that even though rural librarians encounter several obstacles when trying to implement community engagement such as inadequate funding and staffing—they are nevertheless incredibly passionate and committed to providing the most meaningful and pertinent services to their communities. With only one public library and a sparsely populated community, the study carried out in the similar to the current situation in Garissa (leBrasseur, 2022).

Research, carried out in Malaysian libraries, aimed to strengthen the functions of libraries in advancing information and technology exchange, community welfare, and social transformation through community engagements. Specifically, the focus was on library initiatives that facilitate community access to collections, services, and events. Initiatives included institutional partnerships, international and rural libraries, embedded services,

bridges as well as we technologies. The study offered insight from several library perspectives, emphasizing that academic libraries should also be involved in community involvement and that community outreach shouldn't be limited to public libraries (Ryan, 2023).

For many years, public libraries in Spain have proven to be resilient institutions that can adapt to the social shifts in the communities they serve while also serving as reliable sources of information. Public libraries are dealing with new and disruptive issues in the current revolution, which is changing the way knowledge is created through digitalization and widespread technology use. Some public libraries have changed to take advantage of these innovative potential by developing invention ecosystems that put the community at the centre of the creation and co-design processes. Based on that socio-technical architecture, case studies were conducted to analyze how digital technologies might be catalysts for socioeconomic change when public participation is prioritized in innovation processes. Two examples were used to illustrate this point. Through contextual, communal, and technology-based innovation practices, public libraries can play a significant role in promoting and enhancing social cohesion. This case study sheds light on this possibility (Hernández-Pérez, 2022).

Studies on community engagement in public library systems have mostly looked at urban systems; however, there aren't many that look at rural library systems. The bulk of people living in the Canadian province of Nova Scotia are rural and sparsely populated, with an aging and shrinking rural population. The study examined community engagement strategies for Nova Scotia's rural public libraries. To find out more about the community

involvement techniques that librarians from eight mostly rural library systems in the province are already using and how their users, particularly young people, are reacting to them, interviews with librarians were conducted. This article provides an overview of community involvement efforts being carried out in Nova Scotia and summarizes the content from these interviews. The final outcome of the study demonstrates that rural librarians are unwavering in their resolve to offer their communities the most significant and relevant services, even in the face of several challenges they face when attempting to adopt community engagement (Reid & Casey, 2022).

The library and information services (LIS) industry in South Africa acknowledges with great respect the acceleration of information access through the provision of library and information services to rural areas. Finding out if these libraries and information service centres satisfy the information needs of the communities, they serve is crucial as more community libraries and public libraries undergo renovations. A study that looked into the opportunities and difficulties facing public and community libraries in South Africa's Limpopo Province. Staff members at a few public and community libraries in the province of Limpopo were given a questionnaire to fill out, which contained both closed- and open-ended questions, in order to collect data.

The study found those small buildings, out-of-date and irrelevant materials, a lack of databases, inadequate internet access and connectivity, and a shortage of materials for individuals with disabilities account for the majority of the obstacles to the provision of library and information services in the province of Limpopo. Therefore, it appears that some information demands are unmet by even the best and most recently built libraries

and information service centres. Such national studies to enable the formulation of potential remedies and plans for the enhancement of LIS in the future, particularly with regard to the execution of South Africa's national LIS policy (Bopape et al., 2021).

Africa lacks the necessary infrastructure, including libraries and information centres, to meaningfully participate in the contemporary global digital knowledge economy. The absence of management frameworks for indigenous knowledge contributes to the low quality of local information on the Internet, delays community acceptance of digital resources, and impedes the development of digital skills. Provision of indigenous knowledge resources should be a feature of afro centric libraries and information services. The study focused on public libraries and sought to build a digital resource that is up to date with the global information society, all the while empowering individuals by developing digital skills and preserving traditional knowledge (Bopape et al., 2021).

Humans have long tamed animals to help farm the land, but they have also been asked to contribute to the cultivation of the mind by providing library services. Research conducted in the United States by Jason Vance highlighted a number of official library initiatives that have been implemented worldwide to provide books and other library resources to populations living in isolated, rural locations. These initiatives have involved domesticated horses, mules, donkeys, camels, and elephants. Non-motorized mobile libraries were formerly classified as mobile library programs that use wheelbarrows, bicycles, boats, and animals (Lo & Stark (2021). Nonetheless, the study suggested creating a new classification known as "Animal-Assisted Libraries" (AAL) in order to

recognize officially recognized library programs that employ animals to transport information.

Through the employment of labour animals to pull, carry, and transport books, periodicals, and multimedia equipment to previously disadvantaged groups, these AAL programs—both historical and contemporary—promote reading, literacy, and information access globally. By depending on the conventional animal transportation methods for a certain region, they mix tradition and innovation by utilizing those methods to grant access to a new service of media, books, periodicals, and the Internet (Lo & Stark, 2021).

Under the auspices of KNLS, there are currently over thirty public libraries in Kenya. The government funds and oversees each of these libraries through KNLS. Public libraries cater to the general public, which includes people of all ages. They do this by fostering a library culture and enabling patrons to use not only book-based services but also website-based information by utilizing ICTs for information search purposes. The government has placed KNLS in a position to carry out planned library education, giving Kenyan youngsters a solid foundation in national reading culture. Additionally, the role of public libraries in the context of the information age is changing, moving from that of a source of book-based information to that of an internet service provider (Kaaria & Namande, 2021).

A descriptive survey design was used in the study to determine the elements that impact the provision of high-quality services in Kenyan public libraries, with a focus on the Garissa Provincial Library. The data were gathered using questionnaires and both

qualitative and quantitative analysis, with the sample consisting of librarians and camel riders. The results showed that reading material accessibility has an impact on the provision of high-quality library services. There was not enough information in the library for every kind of user. Results also showed that technology adaptation affected the provision of high-quality library services. For instance, every person who used the library including patrons, librarians, and camel riders said that it was not internet-connected.

The results indicate that the librarians claimed the library had phones and computers, but not enough of either. According to library employees, there were no audiovisual devices available in the library. We were unable to watch educational movies in the library because it lacked a TV and audiovisual equipment. Findings also showed that infrastructure had an impact on the provision of high-quality services. The study came to the conclusion that reading material availability affected the provision of high-quality library services based on its findings. There was not enough information in the library for every kind of user (Nyambura & Muthee, 2022).

Users of the library reported that they could always find what they were looking for there. Because of the distance between the library and their field of study, the users did not receive the services they needed from it. The study also found that the delivery of high-quality library services was impacted by technological adaption. The absence of audiovisual gadgets and internet connectivity at the library negatively impacted the level of services provided. According to the study, reading materials should be provided by the government in order to improve the quality of services provided at libraries. To enable the provision of high-quality services at the library, the government should improve

technological adaption in the library. The county is currently in charge of the government, and it provides the infrastructure required to improve the level of services provided at libraries (Nyambura & Muthee, 2022).

In Kenya, public libraries were founded with the intention of offering services related to information to the broader population. Through its nationwide network of libraries, the Kenya National Library Service (KNLS) is in charge of offering services. The library has already started a number of programs, such as community libraries and mobile services, to fight illiteracy. Public libraries are currently undergoing a transition from traditional paper-based library services to digital technologies that provide access to information. It is clear that a large portion of the discussion on the function of actual library facilities in Kenya to be fuelled by the ease of access to and availability of the internet (Baalachandran & Balasubramanian, 2019).

Without a doubt, this study to provide evidence to budgetary decision-makers that public libraries and their services are still vital to the development of an informed population. Lastly, Hernández-Pérez et al., (2022) asserted that the ability to employ technology tools located in libraries to integrate the usage of books and other electronic resources with access to digital information is what makes public libraries such effective learning environments. Population libraries (KNLS) have started digital technology projects, but Kenya has a long way to go in overcoming obstacles and offering sufficient and high-quality information services to meet the needs of the general population.

2.7 Livelihood of Nomadic People

Nomadic communities' way of life is complex, influenced by their distinct way of life, movement, and cultural customs. Herding livestock is the main source of income for many nomadic communities. They look for feeding areas by moving their herds across wide stretches of terrain. Their communities depend on the sale of meat, milk, and other animal products. Artisanal crafts including weaving, ceramics, and leatherworking are frequently practiced by nomads (Shekari et al., 2022). Their income is derived on these skills, which are inherited through the generations. Nomads engage in direct exchanges of products and services with nearby communities through barter commerce. They can purchase needs through this method without having to use official money (Shekari et al., 2022).

Firewood, pasture, and water are among the natural resources that nomads rely on. The survival of these resources depends on sustainable management. Nomads migrate to lower places in the winter and to higher altitudes in the summer according to seasonal trends. Their means of subsistence changes accordingly. Robust social networks are essential for nomadic societies. For them to be healthy, sharing resources, cooperating, and offering mutual support are vital. Climate change, problems with land ownership, and restricted access to healthcare and education are some of the difficulties faced by nomads. Tradition and modernity are difficult to balance at all times (Cigarini et al., 2021).

Public libraries are essential to improving nomadic populations' standard of living. Libraries can be effective allies in tackling the particular issues faced by these nomadic

and frequently stigmatized communities. Libraries support nomadic populations in a multitude of ways the development of mobile library services that go to nomadic communities in their current location (Qayyum et al., 2020). These mobile libraries provide books, educational resources, and information to people in various places. Language instruction, literacy initiatives, and educational materials are all provided by public libraries. They provide nomadic people the tools they need to engage more completely in society by fostering reading and numeracy abilities through literacy programs. Rich cultural traditions are found in nomadic societies (Palmer, 2022).

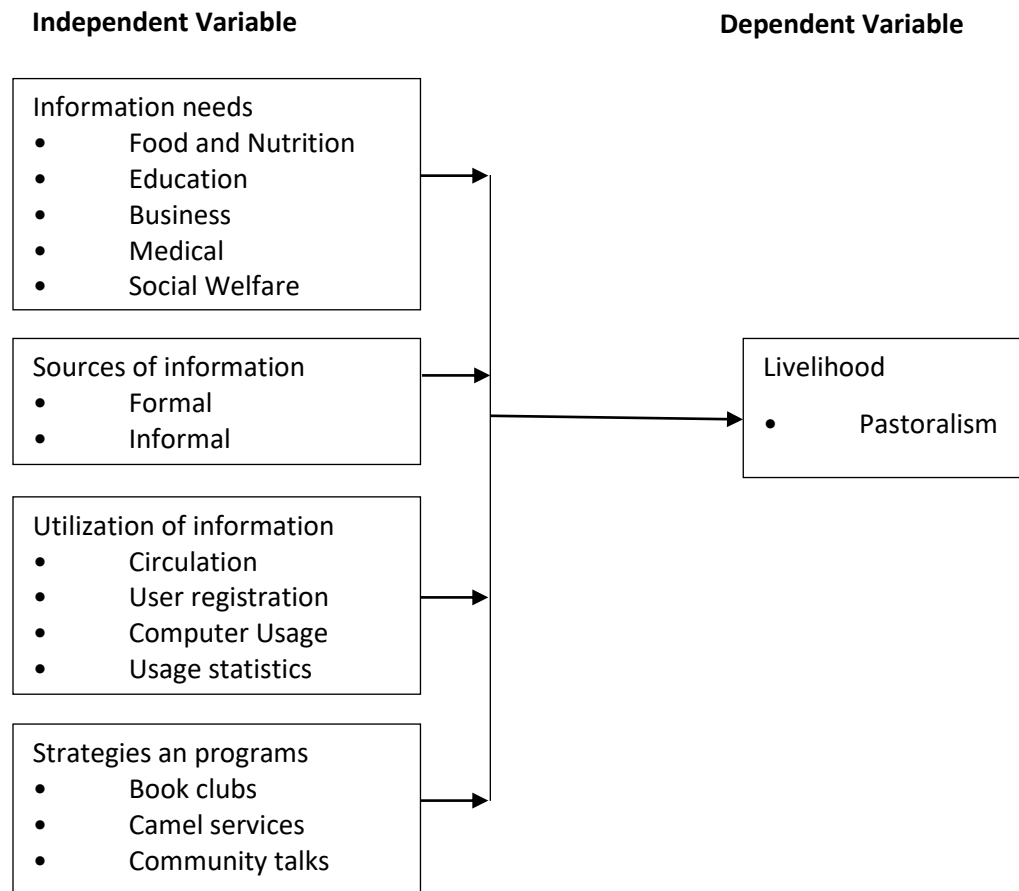
Oral histories, folktales, and relics can all be gathered and preserved by libraries. This guarantees that their history to be preserved and honoured. Libraries have the ability to provide nomadic tribes with health-related information. This covers family planning, disease prevention, and cleanliness habits. Resources on entrepreneurship, career training, and diversifying sources of income can be found in libraries. Gaining knowledge about sustainable means of subsistence can boost one's chances for financial success. Digital literacy skills can be taught in libraries as technology becomes more widely used. It is possible for nomads to acquire the skills necessary to operate smart phones, access the internet, and communicate efficiently. For communities of nomads, libraries provide inclusive, secure environments. They are able to hold workshops, cultural events, and community meetings (Oskar et al., 2022).

2.8 Conceptual Framework

A conceptual framework is a tool used in research to outline the expected relationships between variables or concepts. It serves as a guide for the research process, helping to clarify the objectives and how they interconnect to form coherent conclusions. This study is based on a conceptual framework that shows the relationships between the variables that the research identified as being significant to the research problem. In this regard, the relationships between the variables are as indicated in Figure 2.1. Also shown are the indicators that relate each variable to the livelihood of the pastoralist community.

Figure 2. 2

Conceptual Framework



2.8.1 Description of Variables in the Conceptual Framework

Figure 1 shows that Information needs, Information services, Sources of information, utilization of information services and challenges of accessing information services are the independent variables that positively or negatively influence the public library in improving the livelihood of nomadic community in Garissa County. Sources of information is the second variable among independent variable for finding the right sources of information to help the community improve their livelihood and is characterized by access to relevant source of information at the public library. Utilization of available library services is the third variable in the study and is featured by finding out how the nomadic community utilize the information services, familiarity of library and information resources and the capacity of the public library to enhance the use of the available resources.

Evaluate strategies that enhance community participation in public library programs aimed at livelihood improvement. Interested. The public library is a significant resource for these community because they may lack other opportunities to find information and often seem unaware of chances in the community through which they can improve their interests. In addition to providing free access to resources and information, the public library provides a myriad of educational opportunities, for free, to the community. These extend from lifelong learning programs, like community talk strategies, poetry slams and classes; digital literacy and computer skills training; and early childhood education through story time and cultural programming for young children.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The chapter provides research methodology that was followed when carrying out this study it outlines the description of the research design, study area, target population, Sampling technique and Sample size, data collection methods, data analysis procedures, validity and reliability of research instruments and ethical considerations.

3.2 Location of the study

Kenya's Garissa County to be the site of this investigation. This particular county is roughly 44,175 km² in size and is situated in northeastern Kenya. Situated in the northeastern area, the county shares borders with Wajir County to the north, Tana River County to the west, and Isiolo County to the northwest. The county is home to three public libraries: one each in Masalani, Balambala, and Garissa (List of public libraries in Kenya, 2024). The main departments that make up the public library section are acquisition, technical, circulation, reprographic, computer, and reference. The government's large investments in the need to disseminate information to the public that supports socioeconomic growth in all counties, including Garissa County, and fosters efficient service delivery, made the researcher's interest in this study important (Makori, 2021).

3.3 Research Design

The research design for this study is descriptive survey. The framework of descriptive research, according to Siedlecki (2020), is a scientific method that entails watching and interpreting a subject's behavior without exerting any kind of influence. Research benefits from the use of descriptive survey designs since they yield rich data that may be gathered in huge quantities together with detailed quantitative data. By looking at the increased responsibilities that public librarians in Kenya are taking on, research has been done to determine whether these professionals are more effective as infomediaries or apomediaries. This study used a descriptive research design and survey face to face survey method to collect data from public librarians and county education officers who are currently employed. The study's population consisted of senior librarians from three public libraries in Garissa County and nine education officer. According to the findings, Public librarians no longer only provide information to their consumers; they now primarily serve as apomediaries, enabling them (Nakitare et al., 2020).

The researcher had the free will of interrogating the proposed variables through dependence on the targeted respondent's inferences answering why, what, how and when questions from the independent constructs sentiments for improving livelihood of nomadic community in Garissa County. Such approach were better addressed when used in a descriptive narration manner in which each narrative were given explanation of the specific reasons and effects upon establishment of the real situation.

3.4 The Target Population

The term "population" refers to the total number of units from which the researcher seeks to draw conclusions (Emelianova, 2019). This research was carried out in public libraries in Garissa County which comprise of Garissa, Mbalambala and Masalani. The target population was 4,207 where the respondents included; Library Users; the head of Libraries, Educational Officers in Garissa County, Kenya. The information needs of the nomadic communities in Garissa County are determined by the library officers manning the three KNLS branches. The librarians provided information with regards to the nature of information provided to the community it serves besides the librarians to meet the information needs of their users.

Table 3.1

Target Population

	Category	Population
1	Library Users	4195
2	The heads of Public Libraries	3
3	Sub County education officers	9
	Total	4207

3.5 Sampling Techniques and Sample Size

A sample design is the structure or method used to choose study participants (Rahman,2023). The goal of obtaining a representative sample from a population,

according to Van Haute (2021), is to allow the researcher to gather information, evaluate it using that sample size, then extrapolate the findings to the entire population. To get a sample of library users, a Multistage sampling method was used to draw a sample from the population by progressively selecting smaller and smaller groups at each stage it was useful in collecting data from the nomadic community. Six educational officers and the three head of libraries were sampled through purposive sampling, while library patrons were sampled randomly. Thereafter, the sample size for library users was determined using Yamane (1967) formula which states that;

$$n = \frac{N}{1 + N(e)^2}$$

where n is the sample size, N is the target population and e the level of precision which in this case is 5% which is the acceptable level of significance in social science research.

Calculating the sample size using the formula gave a value of;

$$n = \frac{4195}{1 + 4195(0.05)^2} = 365$$

Table 3.2

Sample Size determination

	Category	Sample size
1	Library Users	365
2	Head of libraries	3
3	Sub County education officers	9
	Total	377

3.6 Data Collection

This section describes the procedures to be used in data collection as well as the instruments to be used. The data collection procedures and the instruments for analysis are explained in the ensuing discussions

3.7 Data Collection Instruments

Data gathering refers to the procedure of meeting required data to answer research questions systematically. It provides a basis for accepting or rejecting the hypotheses. Researchers employ data collection instruments to collect data on the research problem. Choice of data collection instruments depends on research topic, choice of study, sample size, type of data, time and research approach (Mwita, 2022). I therefore used questionnaires and interview schedules to collect data on public libraries.

3.7.1 Questionnaires

Self-administered questionnaires were used in this study. The data collected was numerical. Questionnaires consisted of mainly closed ended items on a five-point Likert Scale ranging from (1 = strongly disagree) to (5 = strongly agree). The researcher chose Likert scale items because they are easier to construct and data collected was more reliable than other types of scales (Jebb& Tay 2021).

3.7.2 Interview schedules

Data was collected from librarians and sub county education officers using interview schedules. This instrument of data collection was an additional source of data to increase validity. The researcher visited the librarians and Education officers in person and administered the interview schedules.

A well-crafted interview schedule was taken to account the goal of the interview which includes a planned sequence of administering the questions, and enough time for each inquiry allowed for In-depth questioning and ensuring the interviewee's comfort.

3.8 Pre-testing of Instruments

The pre-testing the instruments is a distinct test to ensure the quality of the questionnaires and help the researcher to establish any vulnerability ahead of proceeding to the final process in collecting data. pretesting helped determine if the research instruments was reliable as well as valid for the study. According to Sukmawati (2023), Pilot study with 10% of the whole sample with homogeneous characteristics was used. The data

collection instruments were piloted in Tana River County community library which has similar services to Garissa county public Library which constitutes 10% of the sample size. This was done to identify any questions that may be unclear and ambiguous to the respondents. In addition, the sampled respondents were not part of the final research.

3.9 Validity and Reliability

The degree of accuracy with which research instruments can measure the objectives of the study is indicated by their validity (Rahman, 2023). The research's conclusions ought to be indicative of the variables being examined (Sukmawati, 2023). The validity of the instruments was evaluated before the study was conducted. The goals of the study was to establish construct, content, and face validity. Furthermore, face validity was increased by asking questions in an understandable manner and providing clear directions. By selecting the questionnaire measuring items from the operational framework, content validity was attained. Furthermore, 10% of the population selected from the study area but not included in the study sample completed pre-tests of the questionnaires in order to verify the content validity. The validity of the instrument used in the investigation was ascertained in part by analyzing the outcomes of the pilot study. By ensuring construct validity, the variables collected resembled those in the conceptual framework.

Conversely, reliability ensures that similar results are consistently produced during multiple trials. The internal consistency technique, which illustrates how much the procedures evaluate the same attributes, was applied. There was an analysis of the composite reliability of all variables as well as the individual dependability of each parameter. As per Shrestha (2021), the threshold values for the individual coefficient,

composite coefficient, and Cronbach alpha should all exceed 0.5, 0.7, and 0.8, respectively. The coefficient was 0.7 indicating that it was good. The data collection tools was shown to be dependable if these levels are reached. Prior to drawing conclusions about the research variables, a number of diagnostic tests were carried out to determine whether the data is appropriate.

3.10 Data Collection Procedures

Data collection refers to ways of meeting data from respondents for purposes of analysis to prove facts (Kaberia et al., 2021). Primary data was collected in this study directly from library users using questionnaires.

3.10.1 Procedures for administering questionnaires

A crucial step in obtaining information for surveys studies is administering questionnaires. important steps for establishing the population sample while distributing surveys so that the results can be used broadly. Whether the questionnaire is self-administered or researcher administered depended on the sort of survey. Although they may need more resources, questionnaires administered by researchers yields deeper insights. The questions can be rewarded to conform to the research objectives. closed-ended questions were included in questionnaires. The questionnaires were distributed by the researcher, who permits follow-up inquiries and clarifications, or by the self-administered method, which may be subject to biases owing to non-response. Following collection, the data is examined, and the findings are disseminated.

3.10.2 Procedures for administering Interviews

Sub-county education officers and library heads were interviewed face-to-face. Semi-structured interviews with both open-ended and predetermined questions were used. To achieve accurate and trustworthy results, it's critical to adhere to a methodical process when gathering data through interviews. These are the procedures for conducting interviews while gathering data, which begin with clearly identifying the objectives of the study and outlining its goal. The selection of data collection methods, such as focus groups, interviews, experimental research, and observation, is contingent upon the objectives of the study. Interview guide was created to contact the subjects in person. Privacy and geographical logistics was taken to account.

3.11 Data analysis and presentation

The researcher checked comprehensiveness of the serialized questionnaires. The raw data that had been collected was cleaned and processed to extract pertinent information for use in drawing conclusions. Prior to analysis, the gathered data was processed by sorting and reviewing the questionnaire replies to make sure no information is missing or incorrect. After editing, the data was coded numerically. SPSS version 26 was used to examine the coded data. Descriptive data was interpreted and conclusion drawn.

3.12 Ethical Consideration

Prior to collecting the data, KeMU University granted approvals thereafter the National Commission for Science, Technology, and Innovation (NACOSTI) permit was issued to the researcher. To prevent keeping the responders waiting, promptness in keeping

scheduled appointments were monitored. The goal of the exercise and its significance to the respondents were clarified by the researcher. Enough information about the items in the research instrument and the level of involvement were provided to the management of the sampled library customers. In order to take part in the study, respondents were asked for their consent. The privacy and confidentiality of respondents was respected, safeguarded, and assured. Information sources used in the study were cited and referenced.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the research findings and discussions based on the data collected to address the objectives of the study. The study aims to understand and improve the livelihood of nomadic communities in Garissa County through various facets of information provision and utilization. The specific objectives include determining the information needs of these communities, examining the sources and services provided by public libraries, assessing the utilization of these services, and evaluating strategies to enhance community participation in library programs. The findings provide insights into the current status, challenges, and potential improvements in information services for nomadic communities in Garissa County.

4.2 Response Rate

The response rate for the study was 92.04%, with 347 out of 377 distributed questionnaires returned and usable. This high response rate demonstrates strong respondent engagement, enhancing the reliability and validity of the study findings, and providing a solid basis for drawing meaningful conclusions and recommendations from the collected data.

4.3 Demographic Information of Respondents

4.3.1 Gender

Table 4.1 presents the gender distribution of the respondents in the current study.

Table 4.1

Gender

		FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
Valid	Male	202	58.2	58.2	58.2
	Female	145	41.8	41.8	100.0
	Total	347	100.0	100.0	

Out of the 347 respondents, 202 were male, representing 58.2% of the total sample, while females accounted for 145 respondents, making up 41.8% of the sample. As shown in Table 4.1 below, the valid percent column confirms that the percentage distribution of gender among respondents remains consistent when considering only those who provided valid responses, with males at 58.2% and females at 41.8%. The higher male participation rate compared to females suggests a gender imbalance in the sample, which is an important factor to consider when interpreting the study's findings. Understanding this gender distribution is crucial for ensuring that the perspectives of both genders are adequately represented in the study.

4.3.2 Education level

The education level distribution among the respondents in the study shows that a significant portion has attained higher education. The results are as shown in table 4.2.

Table 4.2*Education level*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Secondary	16	4.6	4.6	4.6
	College level	145	41.8	41.8	46.4
	Undergraduate	141	40.6	40.6	87.0
	Masters	41	11.8	11.8	98.8
	Phd	4	1.2	1.2	100.0
	Total	347	100.0	100.0	

Out of the 347 respondents, 4.6% have a secondary education, 41.8% possess a college-level education, and 40.6% hold undergraduate degrees. Additionally, 11.8% of respondents have a master's degree, while 1.2% have earned a PhD. As shown in Table 4.2 below, the cumulative percentages confirm that all responses were valid and accounted for. The data indicates that the majority of respondents, 82.4%, have at least a college-level education, reflecting a highly educated sample. This distribution is critical for interpreting the study's findings, as it provides insight into how education levels may influence the outcomes.

4.3.3 Number of years worked

The study categorized respondents' work experience into five distinct groups based on the number of years they have worked. This categorization helps to analyze the distribution of work experience among the respondents, providing insights into the varying levels of expertise within

the workforce. The details of the work experience distribution are presented in Table 4.3 below:

Table 4.3

Number of years worked

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 1 years	75	21.6	21.6	21.6
	2 - 5 years	145	41.8	41.8	63.4
	6 - 10 years	76	21.9	21.9	85.3
	11 - 15 years	38	11.0	11.0	96.3
	more than 16 years	13	3.7	3.7	100.0
	Total	347	100.0	100.0	

Among the 347 respondents, 21.6% had worked for less than one year. The largest group, comprising 41.8%, had worked between two to five years. Those with six to ten years of work experience made up 21.9% of the respondents, while 11.0% had worked for 11 to 15 years, and 3.7% had more than 16 years of work experience. As shown in Table 4.3 below, the cumulative percentages confirm the valid and comprehensive nature of the data, illustrating a diverse range of work experience among the respondents. This distribution provides valuable insights into the respondents' professional backgrounds, which is crucial for understanding the study's findings and their implications.

4.3.4 Marital status

The marital status of the study respondents was divided into two categories: Single and Married. The details of the respondents' marital status distribution are presented in Table 4.4 below:

Table 4.4

Marital status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Single	98	28.2	28.2	28.2
	Married	249	71.8	71.8	100.0
	Total	347	100.0	100.0	

Out of the 347 respondents, 28.2% were single, and 71.8% were married. As shown in Table 4.4 below, the cumulative percentages confirm that the data fully accounted for all respondents. This distribution indicates that the majority of respondents were married, which is an important demographic factor for interpreting the study's results and understanding their implications.

4.4 Information needs of the nomadic communities

Table 4.5 reveals the information needs of nomadic communities regarding public library services.

Table 4.6*Information needs of the nomadic communities in improving their livelihood*

	1	2	3	4	5	Mean	Std. Deviation
The public library meets my information needs by availing information materials	66	49	20	46	166	3.5677	1.62278
When I visit the library within my sub county, I'm able to access information on food and nutrition.	28	84	44	54	137	3.5418	1.41844
The public library within the sub county provides information with regards to personal educational needs.	31	90	37	50	139	3.5072	1.45325
The public library offers Information on animal health, market prices, and drought-resistant crops.	31	83	20	50	163	3.6657	1.47740
The public library within my sub county provides information on business.	39	75	29	42	162	3.6138	1.51128
Public library users able to get a variety of medical information	82	57	12	30	166	3.4063	1.71840
As a public library user, I'm able to access social welfare information.	31	38	36	29	213	4.0231	1.40171
The nomad's need is able to get information on locating water sources, water purification methods, and sanitation practices.	28	96	30	47	146	3.5389	1.46068
The public library provides information awareness about hygiene, waste disposal, and water conservation is crucial.	44	101	7	54	141	3.4236	1.55136
The public library provides information about security threats, conflict resolution mechanisms, and legal rights is essential.	39	75	29	42	162	3.6138	1.51128
The public library provides information on community-based approaches to conflict prevention and resolution can be effective.	50	65	12	62	158	3.6138	1.54719

Table 4.5 reveals the information needs of nomadic communities regarding public library services. Respondents rated the availability of information materials at the library with a mean score of 3.57, indicating moderate satisfaction. Access to food and nutrition information scored 3.54, suggesting this service is generally useful. Educational information was rated slightly lower at 3.51, while information on animal health, market prices, and drought-resistant crops received a higher mean score of 3.67, reflecting strong approval. Business information and social welfare services were also well-rated, with mean scores of 3.61 and 4.02, respectively, showing these areas are highly valued. In contrast, medical information had a lower mean score of 3.41, with greater variability in user experiences. Information on water sources, sanitation, hygiene, and waste disposal, as well as security and legal rights, showed moderate satisfaction, with mean scores ranging from 3.42 to 3.61. Overall, while the library services generally meet the information needs of the nomadic communities, areas like medical information and hygiene awareness could be improved to better support their livelihoods.

The findings from Table 5, which detail the information needs of nomadic communities regarding public library services, align well with the literature reviewed. The data indicates moderate satisfaction with the availability of information materials, food and nutrition information, and educational resources, while areas like medical information and hygiene awareness show lower satisfaction. This reflects a nuanced understanding of the role that public libraries play in addressing diverse information needs. According to the literature, public libraries are designed to serve a broad spectrum of information needs, as they are accessible to everyone regardless of status or background (Okafor, 2020; Wickramarachchi, 2021). The findings from the study corroborate this view by

showing that while some areas such as business information and social welfare are highly valued, others, like medical information, still require improvement. This is consistent with Mwaniki's (2022) assertion that library patrons have dynamic needs, necessitating diverse and evolving services.

The review emphasizes that public libraries should provide timely and accurate information to meet community needs effectively (Bello & Salawu, 2020). The high ratings for business and social welfare information in the study suggest that libraries are fulfilling these roles to some extent. However, the lower satisfaction scores for medical information and hygiene awareness indicate areas where improvements are needed, aligning with findings from Vitak (2018) and Bello & Salawu (2020) about the necessity for libraries to adapt to user needs continually. Further, literature highlights that libraries should address both general and specific community needs (Sime et al., 2022; Adesoji & Olabode, 2020). The study's results showing strong approval for information on animal health and market prices reflect this principle. However, the moderate satisfaction with information on water sources, sanitation, and legal rights suggests a gap in service provision that needs addressing.

The review also stresses the importance of libraries in rural and marginalized communities, particularly in Africa (Ogbonna, 2020; Saka, 2021). The findings of moderate satisfaction with various services support this perspective, although they also highlight that more targeted efforts are necessary to improve information access in certain areas, such as medical and hygiene-related information.

In summary, the study's findings are largely consistent with the reviewed literature, indicating that while public libraries effectively meet many of the information needs of nomadic communities, there are specific areas, such as medical information and hygiene, where service enhancements are required to better support these communities.

Sub-county educators were interviewed to state the ways in which library users' information needs are met based on the following areas: Food and Nutrition, Can be met by books and journals that have information that contains healthy eating habits

Provide books and resources to school children that have topics on food and nutrition

Avail accredited textbooks with pictures that display different categories of food and nutrition. Attends events and functions on food education organized by library with partnership with organizations.

Education: Provide training centers that empowers the community on issue of FGM, and drugs abuse, early marriage and farming

Provide books to the teachers to guide the learners who cannot access books and materials due the cost of purchase

Business: Provide talks on importance of financial savings Provide information on marketing

Medical: Host medical camp in the library space to educate the community on health prevention such as HIV/AIDS, malnutrition, Provide information materials to medical professionals that organize outreach program to the nomadic communities that are far

away from the library services. Share information of the government on the health prevention such as covid 19.

Social Welfare: Libraries serve as a significant community spaces where people connect, exchange ideas, and celebrate common interests. Support through activities on book clubs, craft workshops, and cultural events, libraries provide opportunities for the community to strengthen relationships and forge connections with others in their community.

Library heads interviewed to state the ways in which library users' information needs are met based on the following areas:

Food and Nutrition: Share information materials on food nutrition donated by unicef with the community on prevention of malnutrition that are prevalent in children and adults. Provide information on materials translated in the local language on the importance of balance diets.

Education: Provide training centred that empowers the community on issue of FGM, and drugs abuse, early marriage and farming. Provide books to the teachers to guide the learners who cannot access books and materials due the cost of purchase.

Business: Provide talks on importance of financial savings provide information on marketing

Medical: Host medical camp in the library space to educate the community on health prevention such as HIV/AIDS, malnutrition.

Provide information materials to medical professionals that organize outreach program to the nomadic communities that are far away from the library services. Share information of the government on the health prevention such as covid 19.

4.5 Information sources and services provided by public libraries to nomads

Table 4.6 presents the information sources and services provided by public libraries to nomadic communities in Garissa County and their effectiveness.

Table 4.6

Information sources and service

	1	2	3	4	5	Mean	Std. Deviation
The public library offers fiction Books such as novels, short stories, and poetry collections for leisure reading.	31	90	37	50	139	3.5072	1.45325
The public library stocks non-Fiction Books covering a wide range of topics, from history and science to self-help and biographies.	31	83	20	50	163	3.6657	1.47740
In the library textbooks on educational materials used for learning and reference.	29	53	27	32	206	3.9597	1.42788
The library provides current affairs services through newspapers on current news, editorials, and feature articles and Magazines are specialized publications on various subjects, such as fashion, health, technology, and hobbies.	44	79	25	29	170	3.5821	1.56406
The library provides encyclopaedias offers comprehensive reference works covering a broad spectrum of knowledge.	28	66	20	36	188	3.9135	1.47954
The library provides atlases and Maps offer geographical information.	23	114	17	54	139	3.4957	1.45326
The library provides directories on the listings of organizations, businesses, and individuals.	47	115	23	46	116	3.1988	1.51989
The library provides records and tapes with music and spoken-word recordings.	41	154	17	46	89	2.9654	1.44213
The library equips the library with audio and video	52	107	17	37	134	3.2709	1.57889
The library provides online databases to facilitate	36	105	12	37	148	3.5274	1.57884

access to scholarly articles, research papers, and specialized information.							
The library provides blogs and personal websites are available where individuals share their experiences, opinions, and expertise on various topics.	29	149	42	53	74	2.9827	1.33202
The library provides community bulletin Boards notices, announcements, and local events posted by community members.	47	112	0	51	137	3.3429	1.57490
The library provides oral histories Interviews	43	99	29	46	130	3.3487	1.51563
The library provides local newsletters and Grassroots publications covering neighbourhood happenings, art, culture, and activism.	43	104	25	38	137	3.3516	1.53862
The library provides computers and internet services where users can access social media groups Online communities where people discuss shared interests, events, and local issues.	48	110	4	41	135	3.3804	1.62512

Table 4.6 tabulates that, Fiction books such as novels, short stories, and poetry collections had a mean score of 3.51 with a standard deviation of 1.45. Non-fiction books covering a wide range of topics scored 3.67 with a standard deviation of 1.48. Textbooks on educational materials used for learning and reference had a mean of 3.96 and a standard deviation of 1.43. The library's provision of current affairs services through newspapers and magazines scored 3.58 with a standard deviation of 1.56. Encyclopaedias, which offer comprehensive reference works, received a mean score of 3.91 and a standard deviation of 1.48. Atlases and maps, which provide geographical information, had a mean score of 3.50 and a standard deviation of 1.45. Directories, listing organizations, businesses, and individuals, scored 3.20 with a standard deviation of 1.52. Records and tapes with music and spoken-word recordings had a mean score of 2.97 and a standard deviation of 1.44. Audio and video resources, offering educational

programs and entertainment, received a mean score of 3.27 with a standard deviation of 1.58.

Online databases scored 3.53 with a standard deviation of 1.58. Blogs and personal websites had a mean score of 2.98 with a standard deviation of 1.33. Community bulletin boards, which post notices and local events, had a mean score of 3.34 and a standard deviation of 1.57. Oral histories, capturing memories and perspectives, scored 3.35 with a standard deviation of 1.52. Local newsletters and zines covering neighborhood happenings had a mean score of 3.35 and a standard deviation of 1.54. Computers and internet services, including access to social media and online communities, scored 3.38 with a standard deviation of 1.63. The majority of respondents expressed moderate satisfaction with most library services, particularly educational textbooks, encyclopedias, and current affairs materials, while areas such as music recordings and blogs received lower satisfaction ratings.

The findings from Table 6 reveal that while nomadic communities in Garissa County express moderate satisfaction with certain library services, there are notable discrepancies in how various resources are valued. The high satisfaction with educational materials like textbooks and encyclopedias aligns with the literature emphasizing the need for timely and relevant information to meet diverse needs (Jamali&Foroutan, 2019). However, the lower satisfaction with music recordings, blogs, and some online resources suggests that these may not fully address the community's preferences or needs. This mirrors concerns about the challenges of accessing and utilizing formal information sources in rural settings (Mwantimwa ,2020; Mamabolo&Durodolu (2023).

The findings also reflect the broader shift towards technology in information dissemination, yet the lower ratings for some technological resources indicate that they might not be effectively bridging the information gap (Mwantimwa, 2022). Moreover, the moderate approval of oral histories and community bulletin boards underscores the importance of traditional knowledge, consistent with the need to integrate traditional and formal information sources (Sharief et al., 2021; Jamali&Foroutan, 2019). Overall, while libraries provide valuable resources, there remains a need for improvement in aligning services with the specific needs and preferences of nomadic communities.

Sub-County directors interviewed on which information sources and services are accessible to communities in Garissa County? had the following to say: Books, journal, maps, charts, Audi-visuals. Informal sources are acquired through normal procedures of books sourcing , donations and library book week. Information sources are acquired by through interview the resource persons , phone calls and getting information on mail.

4.6 Utilization of public libraries services by nomadic communities

The study sought to examine the utilization of public library services by nomadic communities in Garissa County and their impact on improving livelihoods. Table 4.7 highlights various aspects of library services and their effectiveness.

Table 4.7*Utilization of public library*

	1	2	3	4	5	Mean	Std. Deviation
Public library circulation services ensure that pastoralists have easy access to reading materials.	24	55	35	43	190	3.9222	1.37998
Public library through the circulation enables access to information which is essential for making informed decisions about livestock management, health, and other aspects of their lives.	39	37	29	48	194	3.9251	1.44259
Public library Initiatives like the Camel Library provide a successful access to information	44	55	16	21	211	3.8646	1.55500
User registration allows community members to access library services effectively.	16	66	29	17	219	4.0288	1.37663
Registered users can borrow books, use computers, attend workshops, and participate in various library programs.	24	39	75	12	197	3.9193	1.36189
Registered users receive updates about library programs, events, and new acquisitions.	53	55	54	12	173	3.5677	1.57579
For pastoralists, who often live in remote areas, computers bridge the gap by connecting them to global knowledge networks.	37	52	59	16	183	3.7378	1.48123
Access to the internet allows the community members to explore topics related to livestock management, health, climate resilience, and sustainable practice	49	71	37	21	169	3.5476	1.57653
Computers enable pastoralists to communicate with government agencies, NGOs, and other stakeholders.	34	70	29	12	202	3.8012	1.52369
Pastoralists can explore new markets, sell their products, and diversify income sources	23	62	33	33	196	3.9135	1.40335

Table 4.7 shows that, Public library circulation services, which ensure that pastoralists have easy access to reading materials, received a mean score of 3.92 with a standard deviation of 1.38. This indicates that these services are highly valued by the community. The ability of the library to provide essential information for informed decision-making about livestock management, health, and other aspects of life had a mean score of 3.93 and a standard deviation of 1.44, reflecting a positive impact on pastoralists' decision-making processes. Initiatives like the Camel Library Service, which offers mobile library services, had a mean score of 3.86 with a standard deviation of 1.56, showing a successful approach to reaching remote areas. User registration, which facilitates effective access to library services, scored the highest with a mean of 4.03 and a standard deviation of 1.38, indicating significant importance in service utilization.

Registered users' ability to borrow books, use computers, attend workshops, and participate in various library programs scored 3.92 with a standard deviation of 1.36. This highlights the broad range of services available. Updates about library programs, events, and new acquisitions had a lower mean score of 3.57 and a standard deviation of 1.58, suggesting room for improvement in keeping users informed. The availability of computers to bridge the gap for remote pastoralists received a mean score of 3.74 with a standard deviation of 1.48, emphasizing their role in connecting users to global knowledge networks. Access to the internet for exploring topics related to livestock management, health, climate resilience, and sustainable practices had a mean score of 3.55 and a standard deviation of 1.58, indicating its importance but also areas needing enhancement.

Computers enabling communication with government agencies, NGOs, and other stakeholders had a mean score of 3.80 with a standard deviation of 1.52. Lastly, the potential for pastoralists to explore new markets, sell products, and diversify income sources scored 3.91 with a standard deviation of 1.40, reflecting the value of these opportunities provided by library services. The majority of respondents expressed high satisfaction with the accessibility and range of library services, particularly the circulation services and user registration, which play a crucial role in supporting the livelihoods of nomadic communities.

The study's findings align well with the literature regarding the utilization of public library services by nomadic communities and their impact on improving livelihoods. The high satisfaction with circulation services and user registration supports the assertion by Palmer (2022) that library services are crucial for supporting nomadic groups by providing essential information. The effectiveness of library services in facilitating informed decision-making and offering mobile services like the Camel Library Service mirrors the positive impact discussed in the literature (Ocran et al., 2020) highlighting the role of libraries in overcoming geographical barriers and enhancing service delivery.

The study's findings also reflect the literature's emphasis on the importance of a wide range of services provided by libraries, including access to computers and internet resources (Strover et al., 2020). The lower scores for updates about library programs and access to specific online resources align with concerns about the limitations and challenges of ICT integration in libraries, as discussed by (Hammock, 2023 & Ogbonna, 2020). These findings suggest that while libraries are valuable, there are areas needing

improvement, particularly in ensuring that users are kept informed and have access to relevant digital resources.

The high satisfaction with user registration and the ability to explore new markets reflects the literature's views on the positive social and economic impacts of library services (Rajendran & Ladan, 2020). This reinforces the idea that public libraries play a significant role in supporting community development and access to information, especially in marginalized and rural settings. The study's results are consistent with the literature's broader observations on the importance of integrating library services into community development efforts and addressing the challenges faced by rural and nomadic communities.

Sub-County directors interviewed how does the utilization of public library services help to improve the livelihood of nomadic community in Garissa County? State the benefits of each item listed below:

Circulation: Educators receive books from library to teach the community. Adult books on different topics are dispatched to school centers to enlighten adult on various livelihood ensnarement.

User registration: Open registration where teachers and schoolchildren are registered to borrow books to aid literacy.

Computer Usage: Schools children attend youth hubs to connect on internet. Attend workshop that train on the user of online platforms to help the educators on improving the knowledge of the local.

Library heads interviewed on how does the utilization of public library services help to improve the livelihood of nomadic community in Garissa County? State the benefits of each item listed below:

Circulation: Allow the community access more materials by allow borrowing and easy access of the information materials. Donated information materials that are useful to the community through education officers and chiefs.

User registration: Allow open registrations to all categories of users regardless of age and education background. Monitor the library registration and analyse and see how the non-school users benefits from the library services

Computer Usage: Creates youth corner that have internet connections that help the library community.

Provide information through internet platform on job creations. Share information on how nomadic community would benefits research on drought resistance, early marriage, resilience.

4.7 Strategies that enhance community participation in public libraries programs

The study sought to evaluate strategies that enhance community participation in public library programs and their impact on improving livelihoods in Garissa County. Table 4.8 presents the effectiveness of various strategies employed by public libraries.

Table 4.8*Strategies for community participation*

	1	2	3	4	5	Mean	Std. Deviation
The public library enables the local community in defining library activities and services.	53	55	38	12	189	3.6599	1.59829
The library conducts custom training programs to share knowledge on sustainable farming and livestock management.	44	60	38	8	197	3.7320	1.56375
The public library promotes community engagement by offering community conversations through safe spaces that create welcoming environments where residents can openly discuss livelihood concerns.	57	55	38	12	185	3.6138	1.61662
The public library offers listening sessions to regularly engage with community members to understand their evolving needs.	49	47	38	12	201	3.7752	1.56780
The public library provides education to nomadic children is challenging due to their mobility. Information on mobile schools, literacy programs, and vocational training can empower these communities.	40	42	47	12	206	3.8703	1.49678
The public library offers digital literacy and access to educational resources are essential for both children and adults.	53	55	38	12	189	3.6599	1.59829
The public libraries use book clubs as a catalyst for community engagement.	44	60	38	8	197	3.7320	1.56375
The book clubs within the sub county often organize related events, such as author visits, book signings, or themed activities.	57	55	38	12	185	3.6138	1.61662
The book clubs enable the public libraries within the area enhance the overall wellbeing of the community	49	47	38	12	201	3.7752	1.56780
By reaching out beyond library walls, mobile book clubs engage a broader audience and create a sense of community cohesion.	40	42	47	12	206	3.8703	1.49678

Table 4.8 tabulates that, The public library's role in enabling the local community to define library activities and services received a mean score of 3.66 with a standard deviation of 1.60. This suggests a moderate level of effectiveness in involving the community in library planning. The library's custom training programs on sustainable farming and livestock management had a mean score of 3.73 with a standard deviation of 1.56, indicating a positive impact on local knowledge and practices. Promoting community engagement through safe spaces for open discussions about livelihood concerns had a mean score of 3.61 and a standard deviation of 1.62, reflecting a moderate level of success in creating supportive environments.

Listening sessions to regularly engage with community members and understand their needs had a mean score of 3.78 with a standard deviation of 1.57, showing a relatively high effectiveness in addressing evolving community needs. Education for nomadic children, despite the challenges posed by mobility, received a mean score of 3.87 with a standard deviation of 1.50. This indicates that information on mobile schools, literacy programs, and vocational training is considered highly valuable for empowering these communities.

The provision of digital literacy and access to educational resources scored 3.66 with a standard deviation of 1.60, underscoring its importance for both children and adults. The use of book clubs as a catalyst for community engagement had a mean score of 3.73 and a standard deviation of 1.56, highlighting their role in fostering community interaction. Book clubs organizing related events, such as author visits and themed activities, had a mean score of 3.61 with a standard deviation of 1.62, showing moderate effectiveness in

enhancing community engagement. The ability of book clubs to enhance overall community wellbeing scored 3.78 with a standard deviation of 1.57, reflecting their significant impact. Mobile book clubs, which engage a broader audience and foster community cohesion, received a mean score of 3.87 with a standard deviation of 1.50, indicating a strong role in building community connections. The majority of respondents indicated that strategies such as community-defined library activities, custom training programs, listening sessions, and mobile book clubs significantly enhance community participation and contribute to improving livelihoods in Garissa County.

The study's findings align well with the reviewed literature on the role of public libraries in enhancing community participation and improving livelihoods. The moderate effectiveness of the library's role in enabling local communities to define activities and services (mean = 3.66) resonates with the literature's emphasis on the importance of libraries in providing essential resources and opportunities, especially in developing nations like Kenya (Sikes, 2020). The positive impact of custom training programs on sustainable farming and livestock management (mean = 3.73) reflects the literature's recognition of libraries as vital sources of targeted educational programs and skill-building opportunities (Rwotolonya, 2023).

The moderate success in promoting community engagement through safe spaces for discussions (mean = 3.61) aligns with the literature's insights on the challenges and achievements in rural library systems (Heather et al., 2015). The high effectiveness of listening sessions for engaging with community members and understanding their needs (mean = 3.78) supports the literature's findings on the importance of regular and

meaningful community engagement (Crowe & H  louvy, 2022). The strong positive response to education for nomadic children (mean = 3.87) mirrors the historical success of initiatives like the Camel Library Service Project, which aimed to support education in nomadic communities (Atuti, 1999).

The moderate importance of digital literacy and resource access (mean = 3.66) underscores the ongoing need for improvements in digital literacy and technological access in libraries (Kaaria & Namande, 2021). Finally, the high effectiveness of book clubs and mobile book clubs (mean = 3.87) is consistent with the literature's observations on the role of these programs in fostering community cohesion and interaction (Ruheni & Tate, 2004). Overall, the study's results align with the literature's views on the significant role of public libraries in enhancing community participation and supporting livelihood improvements.

Library heads were interviewed on what strategies have been used to enhance community participation in public library programs aimed at livelihood improvement? Based on the items listed below:

Book clubs the following areas: Visit the market centred and open tent to share information that affects the nomadic communities. Invite professionals in the library events on how to reach the community that are far from the government services.

Provide donations to the best readers to encourage more contributions. Organized library events for the children and write composition on the values of libraries for the nomadic people.

Camel library: Use camel loaded with books to the nomadic people cannot access books.

Use camel to allow the community to connect the books with culture and thus allow more reading. Provide easy pictures that educate illiterate on the importance of livelihood engagements

Community talks:Organized different talks that are useful specially those that touch community livelihood such as security , farming , livestock marketing,women empowerment.

4.8 Livelihood of Nomadic People

The study sought to evaluate the impact of various library services on the livelihoods of pastoralists in Garissa County. Table 4.9 presents the mean scores and standard deviations for different library services and their perceived effectiveness.

Table 4. 7

Livelihood of Nomadic People

	1	2	3	4	5	Mean	Std. Deviation
Libraries provide access to information on livestock management, health, market trends, and sustainable practices.	59	74	48	8	158	3.3804	1.61262
By accessing books, journals, and digital resources, pastoralists can make informed decisions about their herds and livelihoods	44	64	38	8	193	3.6974	1.56850
These services reach remote areas, ensuring that even those far from fixed library buildings can benefit from reading materials.	53	51	42	12	189	3.6715	1.58984
Adaptability is key as pastoralists' movement patterns change mobile libraries pivot with these shifts,	46	88	45	0	168	3.4496	1.58922

providing relevant resources							
Libraries offer literacy programs, vocational training, and digital literacy.	36	79	61	12	159	3.5159	1.50016
Empowered individuals contribute to stronger communities and sustainable livelihood	38	109	48	4	148	3.3314	1.53842
Libraries facilitate access to market information market interaction helps pastoralists sell their livestock effectively.	48	86	54	8	151	3.3689	1.56070
Libraries can promote alternative livelihoods, reducing dependence solely on animals	58	76	33	12	168	3.4496	1.63229
Libraries contribute to the overall well-being of pastoralist communities	45	75	54	12	161	3.4870	1.54760
The pastoralists through the library are able to get resilience is built through knowledge sharing, disaster preparedness, and collective action	38	98	53	12	146	3.3746	1.51800

Table 4.9 tabulates that, Libraries providing access to information on livestock management, health, market trends, and sustainable practices received a mean score of 3.38 with a standard deviation of 1.61, indicating a moderate level of effectiveness in supporting pastoralists. Access to books, journals, and digital resources for informed decision-making about herds and livelihoods had a mean score of 3.70 with a standard deviation of 1.57, suggesting a positive impact on pastoralists' decision-making processes. Services that reach remote areas, ensuring access to reading materials even in distant locations, had a mean score of 3.67 with a standard deviation of 1.59. This demonstrates that these services are somewhat effective in extending library benefits to less accessible areas. Adaptability of mobile libraries to pastoralists' movement patterns had a mean score of 3.45 with a standard deviation of 1.59, showing that while adaptability is important, its effectiveness varies.

Libraries offering literacy programs, vocational training, and digital literacy had a mean score of 3.52 with a standard deviation of 1.50, reflecting moderate effectiveness in enhancing skills and knowledge. The contribution of libraries to stronger communities and sustainable livelihoods had a mean score of 3.33 with a standard deviation of 1.54, indicating a moderate to low perceived impact on community strength. Libraries facilitating access to market information to help pastoralists sell livestock effectively had a mean score of 3.37 with a standard deviation of 1.56, showing a modest effectiveness. The promotion of alternative livelihoods to reduce dependency on animals received a mean score of 3.45 with a standard deviation of 1.63, indicating a similar level of effectiveness in fostering alternative income sources.

Libraries contributing to the overall well-being of pastoralist communities scored 3.49 with a standard deviation of 1.55, reflecting a moderate positive impact. The ability of libraries to build resilience through knowledge sharing, disaster preparedness, and collective action had a mean score of 3.37 with a standard deviation of 1.52, showing a moderate level of effectiveness in enhancing community resilience. The majority of respondents indicated that libraries play a crucial role in providing valuable information and resources to pastoralism communities, with varying levels of effectiveness depending on the specific service or strategy employed.

Library heads interviewed on From your own perspective as head of public library in Garissa County how has the library impacted on the livelihood of the nomadic community?

Pastoralism: Providing information to the community in decision making. Providing supports in schools that does exist far from the library facilities. Link between library and information in areas of livelihood. Providing training's that helps the pastoralism in acquiring skills in managing livestock's, marketing , education , security. Resilience on drought to ensure proper maintenance of the environment.

*Farming: Provide information on farming skills, Improve on farming production
Ensure the nomadic communities ensure that they diversify the livelihood.*

County educators interviewed had the following to say: From your own perspective as head of public library in Garissa County how has the library impacted on the livelihood of the nomadic community?

Pastoralism: Providing information to the community in decision making Providing supports in schools that does exist far from the library facilities Link between library and information in areas of livelihood. Providing trainings that helps the pastoralists in acquiring skills in managing livestock's, marketing , education , security. Resilience on drought to ensure proper maintenance of the enviroment. Farming: Provide information on farming skills, Improve on farming production. Ensure the nomadic communities ensure that they diversify the livelilhood.

4.9 Inferential Analysis

4.9.1 Regression

As shown in Table 4.10 below, the study sought to assess the effectiveness of various predictors in explaining the improvements in pastoralists' livelihoods due to public library services in Garissa County.

Table 4.8

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics R Square Change	F Change	df1
1	.932 ^a	.869	.867	4.40216	.869	566.687	4
a. Predictors: (Constant), Strategies that enhance community participation, Information sources, Information needs, Utilization of public libraries services							

Table 4.10 presents the model summary, which includes several key statistics for evaluating the model's performance. The model's R value is 0.932, indicating a strong positive correlation between the predictors and the outcome variable. The R Square value of 0.869 suggests that approximately 86.9% of the variability in the improvements in livelihood can be explained by the predictors included in the model. The R Square Change is 0.869, which shows the proportion of variance explained by the addition of predictors in the model. The majority of the variation in the dependent variable is well explained by the combination of strategies that enhance community participation, information sources, information needs, and utilization of public library services, demonstrating the model's effectiveness in capturing the impact of these factors on pastoralists' livelihoods.

4.9.2 ANOVA

Table 4.9

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	43927.370	4	10981.842	566.687	.000 ^b
	Residual	6627.621	342	19.379		
	Total	50554.991	346			

a. Dependent Variable: Performance
b. Predictors: (Constant), Strategies that enhance community participation, Information sources, Information needs, Utilization of public libraries services

Table 4.11 presents the ANOVA results for evaluating the regression model used to examine factors influencing performance related to public library services in Garissa County. This indicates the amount of variation in the dependent variable (performance) explained by the predictors in the model. The F statistic is 566.687, and the Sig. value is 0.000, which is statistically significant. This suggests that the model as a whole is a good fit for the data and the predictors collectively have a significant impact on performance. The ANOVA results confirm that the regression model is statistically significant and effectively explains the variance in performance due to the predictors related to public library services.

4.9.3 Coefficients

Based on the regression analysis, the coefficients in Table 4.12 show the impact of various predictors on performance related to public library services.

Table 4.10*Coefficients*

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.435	1.336		4.067	.000
	Information needs	.075	.048	.065	1.553	.121
	Information sources	-.001	.033	-.001	-.031	.975
	Utilization of public libraries services	-.025	.084	-.021	-.292	.771
	Strategies that enhance community participation	.732	.056	.901	13.019	.000

The constant has a significant value of 5.435 with a standard error of 1.336, a t-value of 4.067, and a significance level (p-value) of 0.000. This indicates that when all predictors are zero, the baseline performance level is 5.435, and this is statistically significant. The B coefficient is 0.075 with a standard error of 0.048, resulting in a t-value of 1.553 and a p-value of 0.121. This predictor is not statistically significant ($p > 0.05$). The B coefficient is -0.001 with a standard error of 0.033, a t-value of -0.031, and a p-value of 0.975. This predictor does not have a significant impact on performance. The B coefficient is -0.025 with a standard error of 0.084, a t-value of -0.292, and a p-value of 0.771. This variable does not significantly influence performance. The B coefficient is 0.732 with a standard error of 0.056, a t-value of 13.019, and a p-value of 0.000. This predictor has a significant positive impact on performance, as it is the only variable with a p-value below 0.05.

The regression analysis indicates that Strategies that enhance community participation is the only statistically significant predictor when all variables are considered together in one model, with a p-value of 0.000. The other variables (Information needs, Information

sources, and Utilization of public libraries services) have p-values above 0.05, indicating they do not significantly affect performance in this context.

4.9.6 Correlations

The correlation analysis presented in Table 4.13 assesses the relationships between various independent variables (Information needs, Information sources, Utilization of public libraries services, and Strategies that enhance community participation) and the dependent variable (Performance). This analysis helps to understand the strength and direction of these relationships and how they respond to the individual research questions.

Table 4.11*Correlations*

		Information needs	Information sources	Utilization of public libraries services
Information needs	Pearson	1	.	
	Correlation			
	Sig. (2-tailed)			
	N	347		
Information sources	Pearson	.850**	1	
	Correlation			
	Sig. (2-tailed)	.000		
	N	347	347	
Utilization of public libraries services	Pearson	.811**	.795**	1
	Correlation			
	Sig. (2-tailed)	.000	.000	
	N	347	347	347
Strategies that enhance community participation	Pearson	.804**	.771**	.958**
	Correlation			
	Sig. (2-tailed)	.000	.000	.000
	N	347	347	347
Performance	Pearson	.771**	.731**	.893**
	Correlation			
	Sig. (2-tailed)	.000	.000	.000
	N	347	347	347
**. Correlation is significant at the 0.01 level (2-tailed).				

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The study investigated the role of public libraries in improving the livelihoods of nomadic communities in Garissa County, Kenya. The purpose of the study was to examine how public libraries address the unique information needs of these communities, particularly in areas such as sustainable farming, livestock management, and education tailored to their lifestyle. The specific objectives were to determine the information needs of the nomadic communities, examine the sources and services provided by public libraries, assess the utilization of these services, and evaluate strategies that enhance community participation in public library programs.

The study was anchored in theories including the Wilson Model, Social Inclusion Theory, Innovation Theory, and Community Development Theory. A descriptive survey research design was employed, targeting a population of 377 individuals including library users, heads of public libraries, and sub-county officers. The sample size and data collection tools included questionnaires and interview schedules, with data analyzed using SPSS for frequency distribution and central tendency measures. The objectives guided the presentation of summaries, conclusions, and recommendations in the study's final chapter, ensuring a structured approach to addressing the research problem.

5.2 Summary of Findings

5.2.1 Information needs of nomadic communities in Garissa County

The study revealed that nomadic communities in Garissa County have distinct and pressing information needs to enhance their livelihoods. These include knowledge on sustainable farming practices, effective livestock management, and educational opportunities tailored to their mobile lifestyle. Libraries are crucial in addressing these needs by providing targeted resources and services. The findings highlight a strong demand for customized information and educational support that aligns with the nomadic way of life, emphasizing the need for libraries to develop specialized programs and services.

5.2.2 Sources of information for the nomadic community in Garissa County

The research indicated that public libraries in Garissa County offer a range of services aimed at addressing the information needs of nomadic communities. These include training programs on sustainable farming and livestock management, as well as educational resources for nomadic children. While some services are effective, the impact varies. Libraries have made efforts to provide relevant and useful resources, but challenges such as infrastructure limitations and accessibility issues have affected the overall effectiveness. The study underscores the necessity for libraries to continuously assess and adapt their services to better meet the evolving needs of these communities.

5.2.3 Utilization of public libraries by nomadic communities in Garissa County

The study found that public library services are utilized to a moderate extent by nomadic communities in Garissa County. Services such as digital literacy training, mobile book clubs, and educational programs for children are appreciated but not always fully engaged with due to practical constraints. Issues such as limited access, lack of awareness, and logistical challenges affect service utilization. To improve engagement, it is crucial to address these barriers and enhance the availability and accessibility of library services, ensuring that they are better integrated into the daily lives of the communities they aim to serve.

5.2.4 Strategies that enhance community participation in public library programs

The research identified several effective strategies for enhancing community participation in public library programs. Involving the community in defining library activities, organizing listening sessions, and implementing mobile book clubs have all proven successful in fostering greater engagement. These strategies help libraries connect more meaningfully with the communities they serve, leading to increased participation and support. By involving community members in decision-making and creating opportunities for active involvement, libraries can strengthen their role in community development and improve their impact on local livelihoods.

5.2.5 Livelihood of Nomadic People

The study's findings on the livelihood of nomadic people in Garissa County revealed several key insights. The nomadic communities rely heavily on livestock rearing as their

primary source of income, with the sale of meat, milk, and other animal products being central to their livelihood. Additionally, traditional crafts such as weaving, ceramics, and leatherworking were identified as important supplementary income sources. The study highlighted the significant challenges these communities face, including limited access to healthcare, education, and information due to their constant mobility and remote living conditions. Seasonal migration patterns were found to be crucial for sustaining their livelihoods, as they move to different areas depending on the availability of resources like water and pasture. The role of public libraries was seen as pivotal in enhancing the livelihood of these communities by providing mobile library services, health-related information, educational resources, and skills training. However, the study also emphasized the need for libraries to continue adapting and expanding their services to meet the unique needs of nomadic lifestyles, particularly in areas of digital literacy and sustainable livelihood practices.

5.3 Conclusions

This chapter presents the conclusions drawn from the study, based on the analysis of the findings.

5.3.1 Information Needs of the Nomadic Communities in Garissa County

The study concluded that the nomadic communities in Garissa County have specific and pressing information needs that are critical to their livelihoods. These needs revolve around sustainable farming practices, effective livestock management, and educational opportunities that are compatible with their nomadic lifestyle. Public libraries have been instrumental in addressing these needs by providing access to relevant and practical

information. However, the study also identified a gap in fully meeting the unique requirements of these communities, underscoring the importance of continuous assessment and adaptation to their evolving needs.

5.3.2 Sources of Information for the Nomadic Community in Garissa County

The research identified that the primary sources of information for the nomadic communities are informal, relying heavily on traditional knowledge passed down through elders and community leaders. Despite the availability of public libraries, these services are underutilized due to cultural practices and mobility constraints. The study concluded that public libraries must expand and diversify their information sources and delivery methods, such as mobile libraries and digital resources, to better cater to the nomadic population's specific needs.

5.3.3 Utilization of Public Library Services by the Nomadic Communities

The study revealed that the utilization of public library services by the nomadic communities remains relatively low. This is largely due to factors such as geographic isolation, lack of awareness, and a misalignment between available services and the specific needs of nomads. It was concluded that there is a need for public libraries to enhance their outreach and engagement strategies. By increasing the visibility and accessibility of their services, particularly through mobile libraries and community-centered programs, libraries can significantly improve their utilization among nomadic populations.

5.3.4 Strategies That Enhance Community Participation in Public Library Programs in Garissa County

The study identified several strategies implemented by public libraries to enhance community participation, including initiatives like the Camel Library Service and community engagement talks. These strategies have shown effectiveness in reaching and engaging the nomadic communities. However, the study concluded that these strategies need continuous evaluation and adaptation to remain relevant and effective. There is a critical need for ongoing collaboration with community leaders and stakeholders to ensure that library programs are tailored to the dynamic needs of the nomadic communities.

5.3.5 Livelihood of Nomadic People in Garissa County

The study concluded that public libraries hold significant potential to improve the livelihoods of nomadic communities in Garissa County by providing tailored information and services. However, to maximize this potential, public libraries must adopt a more flexible and responsive approach. This involves ensuring that their offerings are aligned with the cultural and practical needs of nomadic people. Regular needs assessments, active community participation, and innovative service delivery methods are essential to enhancing the positive impact of public libraries on the livelihoods of nomadic communities.

5.4 Recommendations

This section presents the recommendations based on the study's conclusions and findings, addressing each of the key areas analyzed.

5.4.1 Information Needs of the Nomadic Communities in Garissa County

To better meet the information needs of the nomadic communities, it is recommended that public libraries conduct regular needs assessments to stay informed about the evolving requirements of these communities. Libraries should focus on providing more targeted information, particularly in areas like sustainable farming practices and livestock management, which are critical to the livelihoods of the nomadic population. Additionally, efforts should be made to integrate culturally relevant educational resources that align with the nomadic lifestyle.

5.4.2 Sources of Information for the Nomadic Community in Garissa County

To enhance the effectiveness of information dissemination, it is suggested that public libraries diversify their sources and methods of providing information to nomadic communities. This could include expanding mobile library services and increasing the availability of digital resources that are accessible even in remote areas. Collaborating with community leaders to bridge the gap between traditional knowledge and formal information sources could also improve the relevance and utilization of library services.

5.4.3 Utilization of Public Library Services by the Nomadic Communities in Garissa County

Increasing the utilization of public library services by nomadic communities requires a focused outreach strategy. Public libraries should consider implementing more robust awareness campaigns to inform the nomadic population of the services available to them. Additionally, making library services more accessible through mobile units and flexible service hours could significantly improve their utilization. Training programs that empower community members to better use library resources could also enhance service uptake.

5.4.4 Strategies That Enhance Community Participation in Public Library Programs in Garissa County

To improve community participation in public library programs, it is recommended that libraries regularly evaluate and adapt their engagement strategies. Expanding successful initiatives like the Camel Library Service and introducing new, innovative programs tailored to the nomadic lifestyle can foster greater involvement. Moreover, ongoing collaboration with community leaders and stakeholders will be crucial in ensuring that these programs remain relevant and effective in meeting the needs of the nomadic communities.

5.4.5 Livelihood of Nomadic People in Garissa County

To positively impact the livelihoods of nomadic people, public libraries should continue to tailor their services to the specific needs of these communities. This includes providing

information on sustainable livelihood practices and offering training on how to utilize available resources effectively. Libraries should also consider developing partnerships with other organizations to provide comprehensive support that addresses both the immediate and long-term needs of the nomadic population. Expanding digital literacy initiatives could also help nomadic communities better engage with and benefit from modern information resources.

5.5 Recommendations for Further Studies

The findings of this study have highlighted several areas that warrant further investigation to deepen our understanding and enhance the effectiveness of public library services for nomadic communities. First, while this study focused on the role of public libraries in improving the livelihoods of nomadic communities in Garissa County, there remains a gap in understanding the long-term impact of these services on the socio-economic development of these communities. Future research could explore how consistent access to information and educational resources provided by public libraries influences the economic resilience and social mobility of nomadic populations over time. This would provide valuable insights into the sustainability and broader impact of public library interventions.

Second, the study identified a significant underutilization of public library services by nomadic communities, largely due to cultural practices and mobility constraints. However, the specific barriers that prevent these communities from fully engaging with public library services were not deeply explored. Further research is needed to investigate these barriers in detail, including socio-cultural factors, literacy levels, and perceptions of

formal information sources. Understanding these challenges could lead to the development of more effective strategies for increasing library service utilization among nomadic populations.

Third, while the Camel Library Service and other mobile library initiatives were recognized as effective strategies for reaching nomadic communities, there is a need to evaluate the scalability and adaptability of these models in different contexts. Further studies could examine the feasibility of implementing similar mobile library services in other arid and semi-arid regions, both within Kenya and in other countries with similar nomadic populations. Such research could also explore the potential integration of digital technologies to complement mobile services, thereby expanding the reach and impact of public libraries.

REFERENCES

- Adriyana, L., & Cahyaningtyas, D. F. (2022). *The Importance of Rural Library Services Based on Social Inclusion in Indonesia*. <https://www.igi-global.com/chapter/the-importance-of-rural-library-services-based-on-social-inclusion-in-indonesia/291398>.
- Agyekum, B. (2022). Public libraries: Enacting “public spaces” for community development and lifelong learning. *Journal of Learning Spaces*, 11(1), 1-11. <https://www.researchgate.net/publication/340417715>.
- Ahmad, D., & Afzal, M. (2021). Impact of climate change on pastoralists’ resilience and sustainable mitigation in Punjab, Pakistan. *Environment, Development and Sustainability*, 23(8), 11406-11426. <https://doi.org/10.1007/s10668-020-01119-9>.
- Akbar, S. A., & Asmiyanto, T. (2021). Multicultural perspective in public library services. *Library Philosophy and Practice*, 5291, 1-11. <https://digitalcommons.unl.edu/libphilprac/5291>.
- Ali, M., Cordero, J. P., Khan, F., & Folz, R. (2019). ‘Leaving no one behind’: a scoping review on the provision of sexual and reproductive health care to nomadic populations. *BMC women's health*, 19(1), 1-14. <https://link.springer.com/article/10.1186/s12905-019-0849-4>.
- Arbia, G., Solano-Hermosilla, G., Micale, F., Nardelli, V., & Genovese, G. (2020). Post-sampling crowdsourced data to allow reliable statistical inference: The case of food price indices in Nigeria. *arXiv preprint*, arXiv:2003.12542. <https://arxiv.org/abs/2003.12542>.
- Arindam, S. (2019). Public libraries and community information services: An experience in blocks of Sundarban Region, South 24 Parganas. *SRELS Journal of Information Management*, 56(1), 32–35. <https://doi.org/10.17821/srels/2019/v56i1/131264>.
- Arlinghaus, S. (Ed.). (2020). *Practical handbook of spatial statistics*. CRC Press.
- Atmi, R. T., & Prihatini, I. C. (2022). The library development based on social inclusion in Kediri and Jombang, East Java, Indonesia. *Library Philosophy and Practice*, 1-12. https://animorepository.dlsu.edu.ph/conf_clis/2022/Schedule/3.
- Baada, F. N. A., Ayoung, A. D., Bekoe, S., & Azindow, F. B. (2020). Resource constraints and quality public library service delivery in Ghana. *International Information & Library Review*, 52(1), 10–31. <https://doi.org/10.1080/10572317.2020.1713390>.

- Baalachandran, S., & Balasubramanian, P. (2019). *Public Libraries and its users*. MJP Publisher.
- Bello, A. A., & Salawu, I. K. (2020). Information repackaging in public libraries: An exploratory study. *FUOYE Journal of Education*, 3(1), 1-10. <https://www.researchgate.net/publication/355361201>.
- Biswas, S., & Mahato, A. (2020). The role of public libraries in local economic development in West Bengal. *Library Philosophy and Practice (e-journal)*, 31, 1–10. <https://core.ac.uk/download/pdf/286730239.pdf>.
- Boloka, M., & Ngoepe, M. (2024). Leaving no one behind: Information (re)packaging for rural dwellers in South Africa. *Information Development*, 1-13. <https://doi.org/10.1177/02666669241227877>. <https://journals.sagepub.com/doi/pdf>.
- Bopape, S. T., Dikotla, M., Mahlatji, M., Ntsala, M., & Lefose, M. (2021). Public and community libraries in Limpopo Province, South Africa: prospects and challenges. *South African Journal of Libraries and Information Science*, 87(1), 9-19. <https://journals.co.za/doi/full/10.7553/87-1-1810>.
- Bouaamri, A. (2023). The roles of public libraries in enhancing educational systems and social inclusion in Africa. *PROSPECTS*, 1-7. <https://doi.org/10.1007/s11125-023-09630-7>.
- Buruga, B. A., & Osamai, M. O. (2019). Operational challenges of providing library services to distance education learners in a higher education system in Uganda. *Library Philosophy & Practice (e-journal)*, 2499. <https://digitalcommons.unl.edu/libphilprac/2775>.
- Cahyani, T., & Wicaksono, M. F. (2021). The role of rural library in community empowerment (Leshutama library case study). *Library Philosophy and Practice*, 1-15. <https://digitalcommons.unl.edu/libphilprac/6250>.
- Carmen, E., Fazey, I., Ross, H., Bedinger, M., Smith, F. M., Prager, K., & Morrison, D. (2022). Building community resilience in a context of climate change: The role of social capital. *Ambio*, 51(6), 1371-1387. <https://link.springer.com/article/10.1007/s13280-021-01678-9>.
- Carroll, A., & Kapilashrami, A. (2020). Barriers to uptake of reproductive information and contraceptives in rural Tanzania: an intersectionality informed qualitative enquiry. *BMJ open*, 10(10), e036600. [heath care\). https://bmjopen.bmj.com/content/10/10/e036600.abstract](https://bmjopen.bmj.com/content/10/10/e036600.abstract).
- Carver, D. (2019). *From circulation to access services: the shift in academic library organization*. In *Access Services in Libraries*. Routledge.

- Casey, R. (2022). There's no place like (rural) home: Why people choose rural despite decline. *Journal of Rural and Community Development*, 17(4), 57-75. <https://www.google.com/url?sa=t&source=web&rct=j&opi=89978449&url=https://www.quora.com>.
- Chaputula, A. H. (2022). E-records management practices in public universities: a developing country perspective. *Records Management Journal*, 32(3), 213-230. <https://www.emerald.com/insight/content/doi/10.1108/rmj-06-2021-0027/full/html>.
- Cigarini, A., Bonhoure, I., Vicens, J., & Perelló, J. (2021). Public libraries embrace citizen science: Strengths and challenges. *Library & Information Science Research*, 43(2), 101090. <https://doi.org/10.1016/j.lisr.2021.101090>.
- Colibaba, A., Skinner, M. W., & Furgal, C. (2019). The challenges and opportunities of sustaining volunteer-based rural libraries. *Public Library Quarterly*, 38(4), 410–427. <https://doi.org/10.1080/01616846.2019.1658967>.
- Cornwall, A., & Scoones, I. (2022). *Revolutionizing development: Reflections on the work of Robert Chambers*. Taylor & Francis.
- Crowe, K. M., & Hélovry, J. (Eds.). (2022). *Building community engagement and outreach in libraries*. Emerald Publishing Limited. <https://doi.org/10.1108/9781839099367>.
- Dalili, S., M., Salami, M., Soheili, F., & Ziaei, S. (2022). Augmented reality technology in the libraries of universities of medical sciences: identifying the application, advantages and challenges and presenting a model. *Library Hi Tech*, 40(6), 1782-1795. <https://www.emerald.com/insight/content/doi/10.1108/LHT-01-2021-0033/full/html>.
- Dika, S. I. (2019). Utilization of social media services for current awareness provision to registered users of federal university library, Lafia. *Library Philosophy and Practice*, 1-16. <https://www.proquest.com/openview/386c224a33e396ed0073bf95db639316/1?pq-origsite=gscholar&cbl=54903>.
- Dissanayaka, D. N. N., & He, M. (2023). Exploring Impact of “Dambana Radio” as an Indigenous Community Radio in Sri Lanka. *Advances in Journalism and Communication*, 11(3), 247-262. <https://www.scirp.org/journal/paperinformation?paperid=127383>.
- Dogra, (2022). *Marginalized and misunderstood- nomadic communities in desperate need of better policy*. <https://arxiv.org/abs/2211.02701>

- Dyer, C., & Rajan, V. (2020). *Educating South Asia's internally migrating children*. In *Handbook of education systems in South Asia*. Springer. https://doi.org/10.1007/978-981-13-2619-0_20-1.
- Ezekwe, F. A. (2019). Availability and utilization of information and communication technology resources by undergraduate library users in Anambra State University libraries, Nigeria. *Library Philosophy and Practice*, 2473, 1-34. <https://www.proquest.com/openview/ccf1048ebaebd1709069c8041ee4f6d8/1?pq-origsite=gscholar&cbl=54903>.
- Flick, U. (2020). *Introducing research methodology: Thinking your way through your research project*. Sage.
- Garaba, F., & Mohammed, B. B. (2019). An investigation on the forms of information sources and services utilized among rural dwellers from public libraries in the North-West zone of Nigeria. *South African Journal of Information Management*, 21(1), 1-13. <https://doi.org/10.4102/sajim.v21i1.1043>.
- García-Avilés, J. A. (2020). Diffusion of innovation. *The international Encyclopedia of media psychology*, 1(8). <https://doi.org/10.1002/9781119011071.iemp0137>.
- Garner, J., Mitchell, L., Bell, K., Lockwood, A., & Wardle, S. (2021). Social work in Australian public libraries: An interdisciplinary approach to social justice. *Public Library Quarterly*, 40(6), 504-520. <https://www.tandfonline.com/doi/full/10.1080/01616846.2020.1825917>.
- Garoufali, A., & Garoufallou, E. (2024). Transforming libraries into learning collaborative hubs: The current state of physical spaces and the perceptions of Greek librarians concerning implementation of the "Learning Commons" model. *Global knowledge, memory and communication*, 73(6/7), 828-852. <https://doi.org/10.1108/GKMC-06-2023-0087>.
- Hammock, A., Pandolfelli, G., Samuel, T., Fils-Aimé, P., Grande, M., D'Ambrosion, M., & Scott, L. B. (2023). Understanding how suburban public librarians respond to the health and social needs of communities. *Library & Information Science Research*, 45(1), 101217. <https://doi.org/10.1016/j.lisr.2023.101217>.
- Harrington, S., Churchill, V., Curanzy, L., & Bellinger, H. (2020). Equity on the ground: Promoting social justice in a library staff reading group. *The Serials Librarian*, 79(1-2), 9-18. <https://www.tandfonline.com/doi/full/10.1080/0361526X.2020.1772176>
- Hart, G. (2021, October). *Public libraries stepping into the gap? A study of school learners' use of libraries in a disadvantaged community in Cape town*. IASL Annual Conference Proceedings, 1-12. <https://doi.org/10.29173/iasl7142>.

- Hernández-Pérez, O., Vilariño, F., & Domènech, M. (2022). Public libraries engaging communities through technology and innovation: Insights from the library living lab. *Public Library Quarterly*, 41(1), 17-42. <https://doi.org/10.1080/01616846.2021.1972421>.
- Hirsh, S. (Ed.). (2022). *Information services today: An introduction*. Rowman & Littlefield.
- Hull, S. L. (2022). Diffusion of public library innovations: A case study on parking lot Wi-Fi hotspots diffusion development [Doctoral dissertation, Old Dominion University]. ProQuest Dissertations & Theses Global. <https://doi.org/10.25777/rr49-6472>.
- Jackson, E. A. (2020). Importance of the public service in achieving the UN SD
- Jamali, H. R., & Foroutan, F. (2019). Everyday life information-seeking behaviors of nomadic pastoralists in their oral culture. *Proceedings of the Association for Information Science and Technology*, 56(1), 432–434. <https://doi.org/10.1002/pra2.2>.
- Kaaria, R. K., & Namande, B. W. (2021). Evaluating information services offered to physically challenged users to satisfy their information needs: the case of Kenya National Library Services, headquarters, Nairobi. *Journal of applied information science*, 9(2). <https://web.p.ebscohost.com/ehost/detail/detail?vid=0&sid=bd0eb784-e9f0-4ec5-a675-5f360d854543%40redis&bdata>.
- Kaberia, J. I., Senaji, T. & Rintari, N. G. (2021). Managerial Ties, Citizen Participation and <https://doi.org/10.1234/ijpp.v9i1.68>
- Karim, M. M., Choudhury, M. M., & Latif, W. B. (2019). The impact of training and development on employees' performance: An analysis of quantitative data. *Noble International Journal of Business and Management Research*, 3(2), 25–33. <https://www.napublisher.org/pdf-files/NIJBMR-517-25-33.pdf>.
- Kiss, K., Ruszkai, C., Szűcs, A., & Koncz, G. (2020). Examining the role of local products in rural development in the light of consumer preferences—results of a consumer survey from Hungary. *Sustainability*, 12(13), 5473. <https://doi.org/10.3390/su12135473>.
- Kronenfeld, M. R., & Kronenfeld, J. J. (2021). *A history of medical libraries and medical librarianship: from john shaw billings to the digital era*. Rowman & Littlefield Publishers. <https://books.google.co.ke/books?hl=en&lr>.
- Lalmas, M., O'Brien, H., & Yom-Tov, E. (2022). *Measuring user engagement*. Springer Nature.

- Langdon, A. N., & Parker, K. E. (2019). Bridging the gap: Rural librarians' journey to understanding students' role in OER outreach. *The International Journal of Open Educational Resources*, 2(1). <https://doi.org/10.18278/ijoe.2.1.5>.
- Leal Filho, W., Taddese, H., Balehegn, M., Nzengya, D., Debela, N., Abayineh, A., & Wolf, F. (2020). Introducing experiences from African pastoralist communities to cope with climate change risks, hazards and extremes: Fostering poverty reduction. *International Journal of Disaster Risk Reduction*, 50, 101738. <https://doi.org/10.1016/j.ijdr.2020.101738>.
- LeBrasseur, R. (2022). Cultural greenspaces: Synthesizing knowledge and experience in Nova Scotia's African-Canadian communities through participatory research and SoftGIS. *Social Sciences*, 11(7), 281. <https://doi.org/10.3390/socsci11070281>.
- Lenaiyasa, M. L., Bruyere, B. L., Salerno, J., & Pickering, T. (2020). Pastoralists' use of income diversification as a strategy for adapting to social-ecological change in Samburu, Kenya. *Regional Environmental Change*, 20, 1-11. <https://www.researchgate.net/publication/344620567>.
- Leorke, D., & Wyatt, D. (2019). *Public libraries in the smart city*. Palgrave Macmillan.
- Lo, P., & Stark, A. (2021). Examining the relationship between social inclusion and mobile libraries in the age of Internet connectivity: A qualitative study of mobile librarians around the globe. *Journal of Librarianship and Information Science*, 53(2), 245-270. <https://doi.org/10.1177/0961000620935476>.
- Lokeshappa, H. (2019). Role of libraries in emanating the information to the society: An overview. *International Journal of Library and Information Studies*, 9(1), 46–51. <https://doi.org/10.48165>.
- Lyubenov, L. (2024). Marketing strategy for a public library. *Regional Environmental Change* 20(1), 3-20. <https://www.researchgate.net/publication/337673778>.
- Makori, E. O. (2021). Sustainable information development practices and societal transformation in Kenya. *International Journal of Library and Information Services (IJLIS)*, 10(2), 1-19. <https://www.igi-global.com/article/sustainable-information-development-practices-and-societal-transformation-in-kenya/279832>.
- Mamabolo, M. J., & Durodolu, O. O. (2023). Rural accessibility to digital libraries: requirements and challenges. *Digital Library Perspectives*, 39(4), 551-570. <https://doi.org/10.1108/DLP-04-2023-0025>.
- Marcella, R., & Chowdhury, G. (2020). Eradicating information poverty: An agenda for research. *Journal of librarianship and information science*, 52(2), 366-381. <https://doi.org/10.1177/0961000618804589>.

- Masot, A. N., & Gascón, J. L. G. (2021). Sustainable rural development: Strategies, good practices, and opportunities. *Land*, 10(4), 366. <https://doi.org/10.3390/land10040366>.
- Mia, M. S. (2020). The role of community libraries in the alleviation of information poverty for sustainable development. *International Journal of Library and Information Science*, 12(2), 31–38. <https://doi.org/10.5897/IJLIS2020.0921>.
- Mohammed, B. B. (2019). Provision of public library services to meet the information needs of rural dwellers in the North-Western zone of Nigeria [Doctoral dissertation]. <https://core.ac.uk/download/pdf/250414247.pdf>
- Mose, P. (2020). Public libraries and public primary school literacy: A Kenyan case study. *Library Management*, 41(8/9), 689-701. <https://www.researchgate.net/publication/343637014>.
- Mosweu, T. L. (2019). The use of social media by the Botswana Government and governance of liquid communication. *Mousaion: South African Journal of Information Studies*, 37(1), 1- 22. <https://doi.org/10.25159/2663-659X/5967>.
- Mubofu, C. (2023). Experiences, purposes, satisfaction and missing library services as predictors of library information services provision: A case study. *Alexandria: The Journal of National and International Library and Information Issues*, 33(1-3), 64–79. <https://doi.org/10.1177/09557490231163017>.
- Mutu, P. L. (2019). Drought coping and mitigation strategies amongst the Turkana nomadic pastoralists of Ilemi triangle region of northern Kenya. *Environmental Studies*, 74, 19–23. <https://www.researchgate.net/publication/362903988>.
- Mwaniki, V. (2022). Utilization of digital information at the Kenya national library service, Nairobi County, Kenya (Doctoral dissertation). <http://ir-library.mmarau.ac.ke:8080/handle/123456789/13583>.
- Mwantomwa, K. (2020). Livelihood information and knowledge needs, access, and exchange in rural communities in the Bunda District, Tanzania. *Rural Society*, 29(1), 30–43. <https://doi.org/10.1080/10371656.2020.1721655>.
- Mwita, K. M. (2022). Factors to consider when choosing data collection methods. *International Journal of Research in Business & Social Science*, 11(5), 532-538. <https://doi.org/10.20525/ijrbs.v11i5.1842>.
- Newman, M., & Gough, D. (2020). *Systematic reviews in educational research: Methodology, perspectives, and application*. In *Systematic reviews in educational research: Methodology, perspectives, and application*. Springer.

- Ng'asike, J. T. (2019). Indigenous knowledge practices for sustainable lifelong education in pastoralist communities of Kenya. *International Review of Education*, 65(1), 19–46. <https://doi.org/10.1007/s11159-019-09767-5>
- Nicol, E., Willson, R., Ruthven, I., Elswiler, D., & Buchanan, G. (2022). Information intermediaries and information resilience: Working to support marginalized groups. *Proceedings of the Association for Information Science and Technology*, 59(1), 469–473. <https://doi.org/10.1002/pra2.610>.
- Nuridin, L., & Saufa, A. F. (2020). Home libraries and their roles in social changes among rural communities in Indonesia. *Journal of Library & Information Technology*, 40(6). <https://www.researchgate.net/profile/L-Nuridin/publication/347653003>.
- Nyambura, W. M., & Muthee, D. (2022). Assessment of library services to children in rural areas: A case of Kenya National Library Service Kangema, Murang'a County, Kenya. *International Academic Journal of Social Sciences and Education*, 2(2), 469–526. <https://iajournals.org/index.php/IAJSE/article/view/1660>.
- Nyariki, D. M., & Amwata, D. A. (2019). The value of pastoralism in Kenya: *Application of total economic value approach*. *Pastoralism*, 9(1), 1-13. <https://link.springer.com/article/10.1186/s13570-019-0144-x>.
- Nyika, G. T. (2020). Use of ICTs for socio-economic development of marginalized communities in rural areas: Proposals for establishment of sectoral rural entrepreneurial networks. *Journal of Development and Communication Studies*, 7(1-2), 71–91. <https://doi.org/10.4314/jdcs.v7i1-2>.
- Ocran, T. K., Underwood, P. G., & Arthur, P. A. (2020). Strategies for successful implementation of mobile phone library services. *The Journal of Academic Librarianship*, 46(5), 102174. <https://doi.org/10.1016/j.acalib.2020.102174>.
- Ogbonna Dr, J. E. (2020). *The role of the public libraries in enriching the African rural information environment*. <https://digitalcommons.unl.edu/libphilprac/4513>.
- Okafor, K. (2020). Public library services in Nigeria: Challenges and strategies. *Library and Information Science Digest*, 13, 116–125. <https://www.lisdigest.org/index.php/lisd/article/view/152>.
- Okike, B. I., & Oyeniyi, E. W. (2019). Marketing library and information resources and services using social media platforms: the security question. *Library Hi Tech News*, 36(5), 7-10. <https://www.emerald.com/insight/content/doi/10.1108/LHTN-03-2019-0022/full/html>.
- Okonkwo, E. A., Cocodia, B., & Uba, E. E. (2022). Listening to the unheard and unseen: Information literacy perspectives of the rural bi/multilinguals in Nigeria.

- Okwu, E., & Oporum, A. C. (2021). Inadequate library services: A challenge to 21st century education in a developing economy. *British Journal of Library and Information Management*, 1(1), 39-44. <https://abjournals.org/bjlim/wp>.
- Omona, W. (2020). The roles of library and information services in achieving Sustainable Development Goals (SDGs) in Uganda. *Library Philosophy and Practice(e-publication)*. [links/60ef5ceffb568a7098ae748a/](https://doi.org/10.1177/01655515221118050).
- Onwubiko, E. C. (2021). Role of librarians and libraries in the realization of the United Nations sustainable development goals: An empirical study. *Library Philosophy and Practice (e-journal)*, 6497.
https://digitalcommons.unl.edu/cgi/viewcontent.cgi?params=/context/libphilprac/article/12383/&path_info=auto_convert.pdf.
- Oskar, H., Fernando, V., & Miquel, D. (2022) Public libraries engaging communities through technology and innovation: Insights from the Library Living Lab. *Public Library Quarterly*, 41(1),17-42.
<https://www.tandfonline.com/doi/full/10.1080/01616846.2020.1845047>.
- Palmer, M. (2022). Study of future public library trends & best practices. *Public Library Quarterly*, 41(1), 83–107. <https://doi.org/10.1080/01616846.2021.1932097>.
- Patterson, J. A. (2022). Nomad librarianship: outreach challenges and new horizons in the remote hospital library setting. *Journal of Hospital Librarianship*, 22(3), 227-236. <https://www.tandfonline.com/doi/full/10.1080/15323269.2022.2091399>.
- Pratiwi, E., & Heriyanto, H. (2022). Social inclusion-based library transformation program. *Library Philosophy and Practice (e-journal)*.
<https://digitalcommons.unl.edu/libphilprac/7295>.
- Qayyum, M. A., Afzal, W., & Mahony, L. (2020, March). *Evaluating public library community engagement and impact for sustainable information services*. International Conference on Information (pp. 579-587). Springer International Publishing. https://link.springer.com/chapter/10.1007/978-3-030-43687-2_48.
- Rahman, M. M. (2023). Sample size determination for survey research and non-probability sampling techniques: A review and set of recommendations. *Journal of Entrepreneurship, Business and Economics*, 11(1), 42-62.
<http://orcid.org/0000-0002-7414-8281>.
- Rajendran, P., & Ladan, A. (2020). Factors Affecting Provision of Library Services: A Survey of Rural Public Libraries in Northern Nigeria. *East African Scholars. Journals of Education, Humanities and Literature*, 2(7), 321-329.
<https://www.easpublisher.com/get-articles/1014>.

- Ramanujan, P., Bhattacharjea, S., & Alcott, B. (2022). A multi-stage approach to qualitative sampling within a mixed methods evaluation: Some reflections on purpose and process. *Canadian Journal of Program Evaluation*, 36(3), 355–364. <https://doi.org/10.3138/cjpe-2020-0088>.
- Rwotolonya, S. K. (2023). The role of public libraries in promoting digital literacy for community empowerment in western Uganda. *Kabale University Interdisciplinary Research Journal*, 2(2), 165–177. <https://kurj.kab.ac.ug/index.php/1/article/view/120>.
- Ryan, S. E., Evans, S. A., & Hawamdeh, S. (2023). *How public libraries build sustainable communities in the 21st century*. Emerald Publishing Limited.
- Sadare, O. O., Moothi, K., & Daramola, M. O. (2022). *The role of the library in actualizing United Nations sustainable development goals in South Africa. in academic libraries: reflecting on crisis, the fourth industrial revolution and the way forward*. Emerald Publishing Limited.
- Sangare, M., Coulibaly, Y. I., Coulibaly, S. Y., Dolo, H., Diabate, A. F., Atsou, K. M., & Diop, S. (2021). Factors hindering health care delivery in nomadic communities: a cross-sectional study in Timbuktu, Mali. *BMC public health*, 21, 1-8. <https://link.springer.com/article/10.1186/s12889-021-10481-w>.
- Şanlı, S. (2023). Sampling Methods and Appropriate Sample Size Determination: A Concise Overview. *Pamukkale University Journal of Social Sciences Institute*, 1(56), 357-375. <https://dergipark.org.tr/tr/download/article-file/2429735>.
- Sarafa, O. I., & Oyewole, S. (2023). *John Rawls on the theory of justice. In Classical theorists in the social sciences: From Western ideas to African realities*. Routledge.
- Shahzad, L., Shah, M., Saleem, M., Mansoor, A., Sharif, F., Tahir, A., & Ghafoor, G. (2021). Livelihood vulnerability index: A pragmatic assessment of climatic changes in flood-affected community of Jhok Reserve Forest, Punjab, Pakistan. *Environmental Earth Sciences*, 80(12), 1–16. <https://doi.org/10.1007/s12665-021-09848-6>.
- Sharief, O. A. E., Mudawi, M. S. E., & Mohamed, R. A. (2021). Indigenous knowledge in Sudan: Perceptions among Sudanese librarians. *IFLA journal*, 47(3), 361-374. <https://journals.sagepub.com/doi/abs/10.1177/03400352211013839>.
- Shekari, F., Ziaee, M., Faghihi, A., & Jomehpour, M. (2022). Nomadic livelihood resilience through tourism. *Annals of tourism research empirical insights*, 3(1), 100034. <https://www.sciencedirect.com/science/article/pii/S2666957922000027>.

- Shrestha, N. (2021). Factor analysis as a tool for survey analysis. *American journal of Applied Mathematics and statistics*, 9(1), 4-11. <https://doi.org/10.12691/ajams-9-1-2>.
- Siedlecki, S. L. (2020). Understanding descriptive research designs and methods. *Clinical Nurse Specialist*, 34(1), 8-12. <https://doi.org/10.1097/nur.0000000000000493>.
- Sikes, S. (2020). Rural public library outreach services and elder users: A case study of the Washington County (VA) Public Library. *Public Library Quarterly*, 39(4), 363-388. <https://www.tandfonline.com/doi/full/10.1080/01616846.2019.1659070>.
- Sime, T., Awelew, G., & Amenu, O. (2022). The Capability of Information Technology on Advance of Library and Information Science. *GSJ*, 10(2), 1035-1050. <https://www.researchgate.net/publication/365835384>.
- Strover, S., Whitacre, B., Rhinesmith, C., & Schrubbe, A. (2020). The digital inclusion role of rural libraries: social inequalities through space and place. *Media, Culture & Society*, 42(2), 242-259. <https://journals.sagepub.com/doi/abs/10.1177/0163443719853504>.
- Sukmawati, S. (2023). Development of quality instruments and data collection techniques. *Jurnal Pendidikan Dan Pengajaran Guru Sekolah Dasar (JPPGuseda)*, 6(1), 119-124.
- Summers, S. (2022). Participation, people, and place: The role of public libraries in fostering connection and cultural capital in disadvantaged communities. *Library Philosophy & Practice (e-journal)*. <https://digitalcommons.unl.edu/libphilprac/6615>.
- Sung, H. Y., & Bamkin, M. (2023). Social impact of mobile libraries on rural children in Taiwan: A qualitative content analysis. *Journal of Librarianship and Information Science*, 55(4), 921-934. <https://doi.org/10.1177/09610006221130989>.
- Taylor, S., & Woodhams, C. (2022). *Human resource management: People and organizations*. Kogan Page Publishers.
- Thanuskodi, S. (2019). *Information literacy: accessibility and skills among Indian LIS professionals*. <https://core.ac.uk/download/pdf/220153198.pdf>.
- Ugbala, C. P., Lawal, O. W., Olawale, G. S., & Oloniruha, E. A. (2022). *Application of Wilson's Theory of Information Seeking Behaviour to Public Library as a Source of Business*. <https://digitalcommons.unl.edu/libphilprac/6834>.
- Ugbala, C. P., Lawal, O. W., Olawale, G. S., & Oloniruha, E. A. (2022). Application of Wilson's Theory of Information Seeking Behaviour to Public Library as a Source of Business Information for SMEs in Nigeria.

- Van Haute, E. (2021). *Sampling techniques. Research Methods in the Social Sciences: An AZ of Key Concepts*. Oxford University Press.
- Vu, T. T. N. (2021). Understanding validity and reliability from qualitative and quantitative research traditions. *VNU Journal of Foreign Studies*, 37(3), 1–15. <https://www.researchgate.net/publication/361744082>.
- Wakkary, R. (2020). Nomadic practices: A posthuman theory for knowing design. *International Journal of Design*, 14(3), 117. <https://www.researchgate.net/publication/350615660>.
- Wickramarachchi, A. P. (2021). The social role and the responsibilities of public libraries and librarians in transforming society. *Sri Lanka Library Review*, 35(1), 13–25. https://www.slla.lk/images/stories/docs/activities/publications/sl_library_review/slrr_35_1/Article_No._1.pdf.
- Williams-Cockfield, K. C., & Mehra, B. (2023). *Introduction to section five: Sustainable communities and the role of the public library. In how public libraries build sustainable communities in the 21st century*. Emerald Publishing Limited. <https://doi.org/10.1108/9781803827492-019>.
- Wilson, K., Neylon, C., Montgomery, L., & Huang, C. K. (2019). Access to Academic Libraries: An Indicator of Openness? *Information Research: An International Electronic Journal*, 24(1). <https://eric.ed.gov/?id=EJ1210893>.
- Wojciechowska, M. D. (2021). The role of public libraries in the development of social capital in local communities—a theoretical study. *Library management*, 42(3), 184-196. 10.1108/LM-10-2020-0139.
- Yap, C. S., Tiew, F. N. H., & Ho, P. L. (2020). Information needs and information seeking behaviour of rural dwellers in Sarawak, Malaysia. *Malaysian Journal of Library and Information Science*, 25(2), 77-94. <https://doi.org/10.22452/mjlis.vol25no2.5>.
- Yasin, A. A., & Tadi, S. (2020). Assessing the challenges and opportunities of pastoralists' sustainable livelihoods: The case of YaballoWoreda of Borana Zone, Oromia. *Journal of Economics and Sustainable Development*, 11(5), 33–45. <https://iiste.org/Journals/index.php/JEDS/article/view/52016>.

APPENDICES

Appendix I. Introductory Letter

Dear respondent,

I am a Master's student in the Department of Information Science at the Kenya Methodist University (KeMU), pursuing a Master's Degree in Information Science. I am researching "THE ROLE OF PUBLIC LIBRARY IN IMPROVING THE LIVELIHOOD OF NOMADIC COMMUNITIES IN GARISSA COUNTY". This study is in partial fulfilment for the award of Master of Science in information science at the fore mentioned university. The study is purely for academic purposes, and any information collected for this study will not be used otherwise. I am kindly requesting you to be part of the study by filling in the questionnaire provided. Your participation will be highly appreciated, and i wish to thank you in advance.

Sincerely

A handwritten signature in black ink, appearing to read 'Abdi Yussuf Omar', with a stylized flourish at the end.

Abdi Yussuf Omar

Appendix II: Respondent's Consent Letter
Abdi Yussuf Omar
Kenya Methodist University
P.O. Box 267 – 60200.

Dear respondent,

I am writing to request for consent to participate in my study which will help me to actualize my academic research that investigates the role of public library in improving the livelihood of nomadic communities in Garissa County. The aim of study is to look at the role of public libraries in improving the livelihood of nomadic communities in Garissa County. The study will maintain confidentiality on the personal details of the respondents. To ensure this is done, the interviews and questionnaires will not have any sections requesting their names, telephone numbers or emails. Further the study will maintain privacy on the responses of the respondents hence secure the answered questionnaires in a safe place.

Procedure to be followed

The specific questions in the questionnaire and interview are organized into sections ranging from section A to C. Section A covers the biographical information of the sampled respondents. Sections B contain questions regarding the independent variables for library users, while section C contains the interview questions for heads of public libraries and sub county education officers. All sentiments in the questionnaire are in 5 points Likert scale. It takes approximately 10 to 15 minutes to complete the questionnaire and respond to interview session. The respondent is under no obligation to complete the questionnaire or to answer all questions presented or participate in the interview. If one comes across a question which one don't wish to answer, simply skip it.

I hope you will be willing to respond to the questions asked as library user as the responses are important to this study. As library head and sub county education director I hope you are willing to take part in the interview session as so as to answer to questions with regards to the variables of the study. Your feedback is highly valued in this study.

Discomforts and risks

In this study, there is no risks of participating in the research. The reputation of the participant will also not be injured. The respondent is welcome to discontinue participation in the study at any time, should one wish to do so due to discomfort. You may also stop the interview at any time. The interview may take about 30 minutes to complete.

Benefits

If you participate in this study, you will help us to strengthen the services and programs offer by the public libraries in Garissa County for the benefit of the local people livelihood who are mainly nomads.

Rewards

There is no reward for anyone who chooses to participate in the study.

Confidentiality

Your participation will remain strictly confidential. No name will be recorded on the questionnaire or attached to any of the data you provide. The data collection will be kept in a confidential location after collection and in future and, moreover, will not have anything to identify you.

Contact Information

Should you have questions regarding your participation, please contact me on abyaro77@gmail.com

you may also contact my research supervisor at paul.maku@kemu.ac.ke.

I am kindly asking you to sign the consent form (below) indicating agreement for you to participate in the study.

Participant's Statement

The above statement regarding my participation in the study is clear to me. I have been given a chance to ask questions and my questions have been answered to my satisfaction. My participation in this study is entirely voluntary. I understand that my records will be kept private and that I can leave the study at any time. I understand that I will not be victimized at my place of work whether I decide to leave the study or not and my decision will not affect the way I am treated at my work place.

Name of Participant.....Date.....

Signature.....

Investigator's Statement

I, the undersigned, have explained to the volunteer in a language s/he understands the procedures to be followed in the study and the risks and the benefits involved.

Name _____ of
Interviewer.....Date.....

Interviewer Signature.....

Appendix III: Questionnaire for Library Users

Do not write your name on the questionnaire. There are no right or wrong answers. Instead, kindly respond frankly, honestly and from your perspective. It may take 20 minutes to fill in the questionnaire; hence tick the appropriate response.

1. Please indicate your gender?

a) Male []

b) Female []

2. Education Level

a) PhD []

b) Masters []

c) Undergraduate []

d) Diploma []

e) Secondary []

3. Number of years worked

a) Less than 1 year []

b) 1-5 years []

c) 6-10 years []

d) 11-15 years []

e) More than 15 years []

4. Marital status

a) Single []

b) Married []

Section B

5. Determine the information needs of the nomadic communities in Garissa County

Indicate the extent to which public library user information needs of nomadic communities in Garissa County are provided. Respond by ticking the appropriate box whereby *VSE*=very small extent (1), *SE* = to a small extent (2), *ME* = to a moderate extent (3), *LE* = to large extent (4), *VLE* = to a very large extent (5).

No	Item	VSE	SE	ME	LE	VLE
1	The public library meets my information needs by availing information materials					
2	When I visit the library within my sub county, I'm able to access information on food and nutrition.					
3	The public library within the sub county provides information with regards to personal educational needs.					
4	The public library offers Information on animal health, market prices, and drought-resistant					

	crops.					
5	The public library within my sub county provides information on business.					
6	Public library users able to get a variety of medical information					
7	As a public library user, I'm able to access social welfare information.					
8	The nomad's need is able to get information on locating water sources, water purification methods, and sanitation practices.					
9	The public library provides information awareness about hygiene, waste disposal, and water conservation is crucial.					
10	The public library provides information about security threats, conflict resolution mechanisms, and legal rights is essential.					
11	The public library provides information on community-based approaches to conflict prevention and resolution can be effective.					

6. Examine the information sources and services provided by public libraries to nomadic communities in Garissa County

Indicate the extent to which information sources and services are accessible by nomadic communities in Garissa County. Respond by ticking the appropriate box whereby *VSE*=very small extent (1), *SE* = to a small extent (2), *ME* = to a moderate extent (3), *LE* = to large extent (4), *VLE* = to a very large extent (5).

No	Item	VSE	SE	ME	LE	VLE
1	The public library offers fiction Books such as novels, short stories, and poetry collections for leisure reading.					
2	The public library stocks non-Fiction Books covering a wide range of topics, from history and science to self-help and biographies.					
3	In the library textbooks on educational materials used for learning and reference.					
4	The library provides current affairs services through newspapers on current news, editorials, and feature articles and Magazines are specialized publications on various subjects, such as fashion, health, technology, and hobbies.					
5	The library provides encyclopedias offers comprehensive reference works covering a broad spectrum of knowledge.					
6	The library provides atlases and Maps offer geographical information.					
7	The library provides directories on the listings of organizations, businesses, and individuals.					
8	The library provides records and tapes with music and spoken-word recordings.					
9	The library equips the library with audio and video which offer educational programs, documentaries, and entertainment.					
10	The library provides online databases to facilitate access to scholarly articles, research papers, and					

	specialized information.					
11	The library provides blogs and personal websites are available where individuals share their experiences, opinions, and expertise on various topic+s.					
12	The library provides community bulletin Boards notices, announcements, and local events posted by community members.					
13	The library provides oral histories Interviews with local residents, capturing their memories and perspectives.					
14	The library provides local newsletters and zines Grassroots publications covering neighborhood happenings, art, culture, and activism.					
15	The library provides computers and internet services where users can access social media groups Online communities where people discuss shared interests, events, and local issues.					

7. Examine the utilization of public libraries services by nomadic communities in Garissa County

Indicate the extent to which the utilization of public library services helps to improve the livelihood of nomadic community in Garissa County. Respond by ticking the appropriate box whereby *VSE*=very small extent (1), *SE* = to a small extent (2), *ME* = to a moderate extent (3), *LE* = to large extent (4), *VLE* = to a very large extent (5).

No	Item	VSE	SE	ME	LE	VLE
1	Public library circulation services ensure that pastoralists have easy access to reading materials.					

2	Public library through the circulation enables access to information which is essential for making informed decisions about livestock management, health, and other aspects of their lives.					
3	Public library Initiatives like the Camel Library Service in the region provide a successful access to information via mobile library services on wheels.					
4	User registration allows community members to access library services effectively.					
5	Registered users can borrow books, use computers, attend workshops, and participate in various library programs.					
6	Registered users receive updates about library programs, events, and new acquisitions.					
7	For pastoralists, who often live in remote areas, computers bridge the gap by connecting them to global knowledge networks.					
8	Access to the internet allows the community members to explore topics related to livestock management, health, climate resilience, and sustainable practice					
9	Computers enable pastoralists to communicate with government agencies, NGOs, and other stakeholders.					
10	Pastoralists can explore new markets, sell their products, and diversify income sources					

8. Evaluate strategies that enhance community participation in public libraries programs aimed at livelihood improvement.

Indicate the extent to which strategies have been used to enhance community participation in public library programs aimed at livelihood improvement. Respond by ticking the appropriate box whereby *VSE=very small extent (1)*, *SE = to a small extent (2)*, *ME = to a moderate extent (3)*, *LE = to large extent (4)*, *VLE = to a very large extent (5)*.

No	Item	VSE	SE	ME	LE	VLE
1	The public library enables the local community in defining library activities and services.					
2	The library conducts custom training programs to share knowledge on sustainable farming and livestock management.					
3	The public library promotes community engagement by offering community conversations through safe spaces that create welcoming environments where residents can openly discuss livelihood concerns.					
4	The public library offers listening sessions to regularly engage with community members to understand their evolving needs.					
5	The public library provides education to nomadic children is challenging due to their mobility. Information on mobile schools, literacy programs, and vocational training can empower these communities.					
6	The public library offers digital literacy and access to educational resources are essential for both children and adults.					

7	The public libraries use book clubs as a catalyst for community engagement.					
8	The book clubs within the sub county often organize related events, such as author visits, book signings, or themed activities.					
9	The book clubs enable the public libraries within the area enhance the overall wellbeing of the community					
10	By reaching out beyond library walls, mobile book clubs engage a broader audience and create a sense of community cohesion.					

9. Livelihood of the nomadic community

Indicate the extent to which public libraries in Garissa County has impacted your livelihood. Respond by ticking the appropriate box whereby *VSE=very small extent (1)*, *SE = to a small extent (2)*, *ME = to a moderate extent (3)*, *LE = to large extent (4)*, *VLE = to a very large extent (5)*.

No	Item	VSE	SE	ME	LE	VLE
1	Libraries provide access to information on livestock management, health, market trends, and sustainable practices.					
2	By accessing books, journals, and digital resources, pastoralists can make informed decisions about their herds and livelihoods					
3	These services reach remote areas, ensuring that even those far from fixed library buildings can benefit from reading materials.					
4	Adaptability is key as pastoralists' movement patterns change mobile libraries pivot with these shifts, providing relevant resources					
5	Libraries offer literacy programs, vocational training, and digital literacy.					
6	Empowered individuals contribute to stronger communities and sustainable livelihood					
7	Libraries facilitate access to market information market interaction helps pastoralists sell their					

	livestock effectively.					
8	Libraries can promote alternative livelihoods, reducing dependence solely on animals					
9	Libraries contribute to the overall well-being of pastoralist communities					
10	The pastoralists through the library are able to get resilience is built through knowledge sharing, disaster preparedness, and collective action					

Appendix IV: Introduction Letter



KENYA METHODIST UNIVERSITY

P. O. Box 267 Meru - 60200, Kenya
Tel: 254-064-30301/31229/30367/31171

Fax: 254-64-30162
Email: deanrd@kemu.ac.ke

DIRECTORATE OF POSTGRADUATE STUDIES

Our Ref: KeMU/NACOSTI/ISK/03/2024

June 24, 2024

Commission Secretary,
National Commission for Science, Technology and innovations,
P.O. Box 30623-00100
NAIROBI.

Dear Sir/Madam,

RE: ABDI YUSSUF OMAR – (REG. NO. ISK-3-0525-1/2020)

This is to confirm that the above named person is a bona fide student of Kenya Methodist University, in the School of Science and Technology, Department of Information Science undertaking a Master's Degree in Information Science. He is conducting research on: "The Role of Public Library in Improving the Livelihood of Nomadic Communities in Garissa County".

We confirm that his research proposal has been presented and approved by the University.

In this regard, we are requesting your office to issue a research license to enable him collect data.

Any assistance accorded to him will be appreciated.

Yours sincerely,

Dr. John M. Muchiri (PhD)
Dean, Postgraduate Studies

Cc: Dean, SST
CoD, IS
Postgraduate Coordinator - IS
Supervisors

Appendix V: NACOSTI Research License

 REPUBLIC OF KENYA	 NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
RefNo: 473624	Date of Issue: 11/July/2024
RESEARCH LICENSE	
	
This is to Certify that Mr. Abdi Yussuf Omar of Kenya Methodist University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Garissa on the topic: THE ROLE OF PUBLIC LIBRARY IN IMPROVING THE LIVELIHOOD OF NOMADIC COMMUNITIES IN GARISSA COUNTY for the period ending : 11/July/2025.	
License No: NACOSTI/P/24/37578	
473624	
Applicant Identification Number	Director General
NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION	
Verification QR Code	
	
NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.	
See overleaf for conditions	