

**COMPARATIVE ANALYSIS OF TRADITIONAL AND
MODERN HOUSES IN OMUTHIYA TOWN COUNCIL,
NAMIBIA**

Matheus Nghilalulwa

2017209145

Submitted in fulfilment of the requirements in respect of the master's degree

Master of Development Support

in the Centre for Development Support

in the Faculty of Economic and Management Sciences

at the University of the Free State

November 2024

Supervisors:

Dr Anita Venter

Dr Alex Kihehere Mukiga

Bloemfontein

DECLARATION

I, Matheus Nghilalulwa, declare that the Master's Degree research dissertation or interrelated, publishable manuscripts/published articles, or coursework Master's Degree mini-dissertation that I herewith submit for the Master's Degree qualification in DEVELOPMENT STUDIES at the University of the Free State is my independent work, and that I have not previously submitted it for a qualification at another institution of higher education.

.....

Matheus Nghilalulwa

Student no. 2017209145

12 November 2024

ACKNOWLEDGMENTS

First and foremost, I would like to thank the almighty God for protecting me during my studies. Secondly, I would like to express my gratitude to the Centre for Development support staff, and everyone who contributed to this research project.

However, I would like to single out the following:

- Dr Anita Venter and Dr Alex Kihehere Mukiga, thank you for your professional guidance, constructive discussion, and motivation to complete the study.
- Mr Mohlophehi Mngomezulu, thank you for your excellent administrative skills throughout the study. You are such an asset to the Centre for Development Support.
- Dr Deidré van Rooyen, thank you for motivating me not to quit.

Your collective invaluable contribution and teamwork were essential qualities for this research study.

I would also like to dedicate this work to my wife and children for being patient with me while undertaking my academic programme.

ABSTRACT

This mini-dissertation presents the findings of a research study which compares traditional and modern housing using livelihood assets (human, social, natural, physical and financial assets) in the Omuthiya Town Council. The study employed a descriptive study design and a quantitative approach with a literature review focused on the traditional housing before Germany colonised Namibia around the 18th century, during the South African apartheid era, and after Namibia gained independence in 1990. Namibian ethnic groups have their customs and norms regarding how things are done. Before colonisation, traditional housing was built using sustainable natural resources, and during the transformation, those who accepted the Western housing design and lifestyle lost their cultural identity. This study also presents the programmes addressing housing challenges after Namibia gained independence.

The study surveyed 64 respondents in Omuthiya town with experience living in modern and traditional housing and aged 18 years old and older. Questionnaire responses were collected on a Likert scale and were analysed to determine each statement's mean score per asset from the lowest to highest. The score of 4.14 on human assets indicates that modern housing provides better education and quality health care, while the lowest score of 2.06 indicates that modern houses provide fewer cultural opportunities. The score of 4.48 on financial assets represents modern housing with solid economic benefits regarding property value and access to essential utilities such as water and electricity. The score of 1.88 shows that modern housing has a disadvantage in financial cost compared with traditional housing.

The score of 4.40 on physical assets indicates good quality infrastructure perceived toward modern housing, such as quality and durability materials used in construction, and the score of 2.16 shows that the physical infrastructure of traditional housing is made of outdated materials compared to modern housing with modern amenities and materials. The score of 3.94 of natural assets indicates that traditional houses are built using environmentally sustainable materials, and the score of 2.90 shows that modern housing has a negative impact on the environment through pollution. The score of 4.14 on social assets had a positive impact on the local economic and job creation, such

as housing construction projects. At the same time, a score of 2.75 indicates that traditional housing has a less negative impact on the local economy and job creation.

Key terms: Financial; Human assets; Livelihood assets; Modern housing; Natural assets; Physical assets; Social assets; Traditional housing

TABLE OF CONTENTS

DECLARATION.....	i
ACKNOWLEDGMENTS.....	ii
ABSTRACT.....	iii
TABLE OF CONTENTS.....	v
LIST OF FIGURES.....	viii
LIST OF ABBREVIATIONS.....	ix
Chapter 1 INTRODUCTION.....	1
1.1 Introduction.....	1
1.2 Problem statement.....	2
1.3 Research question.....	3
1.4 Aims of the study.....	3
1.5 Objectives of the study.....	3
1.6 Methodology.....	4
1.7 Research approach.....	4
1.7.1 Data collection strategy.....	4
1.7.2 Sampling.....	5
1.7.3 Data analysis.....	6
1.8 Research ethics.....	6
1.9 Study limitations.....	7
1.10 Definition of concepts.....	7
1.11 Research methodology aspect.....	7
Chapter 2 HOUSING DEVELOPMENT IN NAMIBIA.....	8
2.1 Introduction.....	8
2.2 Background of Omuthiya Town Council.....	8
2.3 Timelines of housing development.....	10
2.3.1 Pre-colonial era.....	10
2.3.2 German colonisation.....	11
2.3.3 South Africa apartheid.....	11
2.3.4 Post-independence era.....	12
2.4 Housing themes.....	13
2.4.1 Traditional housing and material used in Namibia.....	14
2.4.2 Cultural significance of traditional housing.....	14

2.4.3	Colonialism and shift to modern housing	15
2.4.4	Current state of traditional housing	16
2.5	Namibia housing programme.....	18
2.5.1	Building Together Programme	18
2.5.2	National Housing Enterprises.....	19
2.5.3	Mass housing development programme	20
2.5.4	Shack Dwellers Federation of Namibia	20
2.5.5	Government employees rental housing.....	21
2.5.6	Private sector and international housing investment	22
2.6	Employment opportunities and gender inclusion in Namibia	22
2.6.1	Employment opportunities.....	22
2.6.2	Gender inclusion	23
2.6.3	Gender toward housing programme.....	24
2.7	Namibia’s education system	25
2.8	Environment impact of housing.....	25
2.9	Conclusion.....	26
Chapter 3 SUSTAINABLE LIVELIHOOD APPROACH AND HOUSING – AN ANALYSIS OF FIVE ASSETS.....		27
3.1	Introduction.....	27
3.2	Sustainable livelihood approach	27
3.3	Conceptual framework: The sustainable livelihood approach.....	28
3.4	The role of assets in housing.....	30
3.4.1	Human assets	30
3.4.2	Social assets.....	31
3.4.3	Natural assets	32
3.4.4	Physical assets	33
3.4.5	Financial assets	34
3.5	Sustainable livelihood in housing.....	35
3.6	Conclusion.....	36
Chapter 4 PRESENTATION OF FINDINGS ON MODERN VS. TRADITIONAL HOUSING IN NAMIBIA		Error! Bookmark not defined.
4.1	Introduction.....	37
4.2	Omuthiya town.....	37
4.3	Questionnaire section	37
4.3.1	Gender and age category	39

4.3.2	Marital status.....	40
4.3.3	Level of education.....	41
4.3.4	Living status.....	43
4.4	Five assets of sustainable livelihood.....	44
4.4.1	Human assets.....	44
4.4.2	Social assets.....	46
4.4.3	Natural assets.....	49
4.4.4	Physical assets.....	51
4.4.5	Financial assets.....	53
4.5	Conclusion.....	55
	Chapter 5 CONCLUSION, RECOMMENDATIONS AND LIMITATIONS.....	57
5.1	Introduction.....	57
5.2	Conclusion.....	57
5.3	Recommendation.....	58
5.4	Limitations.....	59
	LIST OF REFERENCES.....	60
	Appendix A INFORMED CONSENT OF THE PARTICIPANTS.....	68
	Appendix B CONSENT TO PARTICIPATE IN THIS STUDY.....	711
	Appendix C QUESTIONNAIRE.....	733
	Appendix D APPROVAL LETTER FROM OMUTHIYA TOWN COUNCIL.....	777
	Appendix E APPROVAL LETTER – HUMAN ETHICAL COMMITTEE.....	788
	Appendix F Confirmation of Language Editing.....	79

LIST OF FIGURES

Figure 2.1	Map of Namibia	9
Figure 2.2	Owambo traditional house.....	17
Figure 2.3	NHE house in Omuthiya town	20
Figure 2.4	SDFN houses in Omuthiya town	21
Figure 3.1	The sustainable livelihood framework	29
Figure 4.1	Aerial image of Omuthiya town	38
Figure 4.2:	Gender of study respondents	39
Figure 4.3	Gender of study respondents by percentage	40
Figure 4.4	Marital status.....	41
Figure 4.5	Level of education	42
Figure 4.6	Living status	43
Figure 4.7	Mean score of human assets	46
Figure 4.8	Social assets mean score	49
Figure 4.9	Natural assets	51
Figure 4.10	Physical assets mean score.....	53
Figure 4.11	Financial assets mean score.....	55

LIST OF ABBREVIATIONS

BTP	Build Together Programme
MHDP	Mass Housing Development Programme
NHEs	National Housing Enterprises
NPC	National Planning Commission
NSA	Namibia Statistics Agency
SDFN	Shack Dwellers Federation of Namibia

Chapter 1

INTRODUCTION

1.1 Introduction

Housing is an essential and basic need that determines people's social condition, quality of life, and welfare. The location, design, material used, environment, economic and social factors influence the lives of people, as well as their health and security, to achieve a sustainable livelihood (Golubchikov and Badyina, 2024). Serrat (2010) emphasised that housing connects society and the environment significantly. Housing construction consumes many natural resources, including land, water, energy, and building materials. At the same time, construction produces a lot of waste that leads to air and water pollution. Through modern material uses, housing construction contributes to environmental impacts and greenhouse gases that escalate climate change (Kudryashova et al., 2020).

Policies targeting sustainable housing, address the connection or interaction between sustainable livelihoods and housing (Golubchikov and Badyina, 2024). Sustainable housing development includes four dimensions of sustainability, namely environmental, social, cultural and economic dimensions. These four dimensions of sustainability influence ecological and climate change impacts, the durability of houses, economic connections, social and cultural aspects of housing, and the outcomes of housing on poverty alleviation, social development and quality of life. While sustainable housing, in most cases, is connected to wealth, sustainable housing must be inclusive and affordable to all. To address the problem of affordability, it is necessary to shift toward sustainable housing. Again, affordability is insufficient because affordable homes can only be sustainable if housing positively affects social life and the environment (Golubchikov and Badyina, 2024).

The world's urban population is "projected to increase from 3.5 billion in 2010 to 6.2 billion by 2050" (Golubchikov and Badyina, 2024:3). The most significant growth is expected to increase in developing countries at 94%. The towns and cities will face the challenges of housing and poverty. The urban population was projected as that nearly 828 million people lived in slums in 2010, most from developing countries (Maio,

2016). Given the estimated urban population growth, many people will need housing, forcing cities to expand or create new locations. Namibia is among the developing countries with high urbanisation, and towns cannot meet the communities' demands. Urbanisation has created a challenge toward traditional housing in Namibia. Nearly 50% of Namibia's population resides in traditional housing, 37% live in modern housing, and 14% live in other forms of improvised housing (Maritz, n.d). The Ovambo traditional housing is built in rondavel style made of traditional materials such as thatch for roofs, timber or clay for the walls and other materials, but nowadays, modern brick structures can be found in traditional homesteads (Remmert and Ndhlovu, 2018). Traditional housing is being removed to pave the way for modern housing. Nord (2022) and Remmert and Ndhlovu (2018) indicated that modern housing was introduced in Namibia around 1960 during the South African apartheid era. During apartheid, the government introduced laws that favoured white minorities to occupy urban town centres while new townships were created to accommodate black people. People were given one-bedroom houses in the form of a compound that was under the supervision of the white minorities. Modern housing was built in a Western-style using cement bricks for the walls and corrugated iron for the roofing. This mini-dissertation discusses the comparative of traditional to modern housing in the Omuthiya Town Council in Namibia. Although the study compared modern and traditional housing, the focus was more on people who have experience living in both traditional and modern housing but are currently living in modern housing. This chapter presents the study's problem statement, research question, aim and objectives. The chapter also presents the methodology used in the study, data analysis process, research ethics, limitations of the study, and definition of the concept, and it ends with a conclusion.

1.2 Problem statement

In Namibia, traditional houses are made from local materials such as mud or wooden huts with thatched roofs. The traditional housing construction style started long before colonisation and continued up to the 19th century to provide quality climate-suited houses. Traditional houses are constructed in a culturally appropriate design with locally available materials, depending on the tribe in Namibia, and have fewer adverse effects on the environment (Nord, 2022). Before Namibia gained independence in 1990, Omuthiya was a village with traditional houses, which is today called Omuthiya

Town Council. Omuthiya village was transformed into a town and proclaimed as Omuthiya Town Council in 2008. By 2018, Omuthiya had more than 5 000 inhabitants (Haidula, 2023). The social, economic, and cultural issues have set up the difference between traditional and modern housing in Omuthiya. Traditional housing is mainly formed on cultural and community cohesion and is now losing value from urbanisation in the form of modernisation. Modernisation comes with new developments, such as good infrastructure and security, but it is also associated with losing cultural heritage and family networks. From an economic point of view, traditional housing boosts the local community by creating employment from local materials used to construct traditional housing, in contrast with modern housing, where housing materials are imported. Modern housing is assumed to have the benefits of better education, health care and infrastructure compared to traditional housing (Remmert and Ndlovu, 2018). Although studies of housing types have been investigated in Namibia, no study exists that compares traditional and modern housing in a peri-urban area such as Omuthiya. This study therefore intended to provide an examination of the significance of the economic, social, physical, natural and environmental aspects of both traditional and modern housing.

1.3 Research question

How do sustainable livelihood assets benefit the traditional and modern housing in Omuthiya Town Council, Namibia?

1.4 Aims of the study

The study aimed to use the five asset categories of the sustainable livelihood approach to compare the benefits of living in traditional housing versus modern housing in Omuthiya Town Council, Namibia.

1.5 Objectives of the study

The objectives of the study were:

- To examine the social effects of living in traditional rather than modern housing, considering cultural preservation and social network issues.
- To investigate the economic impact of traditional and modern housing on local economies, job creation and household finances.

- To assess the impact of modern and traditional housing on education, basic infrastructure and health care.
- To compare infrastructure durability, safety features, and environmental sustainability of modern and traditional housing.

1.6 Methodology

This section discusses the research methodology, approach, data collection strategy and sampling technique.

1.7 Research approach

The research approach used in this study focused predominantly on case study design on quantitative research with pseudo-qualitative elements in the form of open questions. Bryman and Bell (2007) defined quantitative research as collecting numerical information and presenting the finding of relationships between theory and research as deductive, a prediction for a natural science approach and having an objective conception of social reality. Responses to the open-ended questions were used to support the quantitative data analysis

1.7.1 Data collection strategy

The researcher recruited research respondents using an in-person strategy, approached suitable respondents, and invited them to participate in this study. The researcher recruited respondents aged 18 years and older with experience living in modern and traditional housing. The erf numbers of the sampled houses were received from Omuthiya Town Council, and only one person from each sampled house participated in the study. The researcher explained the study objectives, potential risks and benefits, and respondents' rights through informed consent documents. This was done after the researcher selected the respondents from selected houses. The researcher adhered to the participants' recruitment process and fulfilled ethical guidelines and rules for human subject research, such as obtaining appropriate informed consent and safeguarding the confidentiality of the respondents. The eligibility screening assessment determined whether the respondents met the eligibility criteria of the study. The eligibility questions were: Were the respondents older than 18, and did the respondents have experience living in traditional *and*

modern houses? If the answer was yes and they agreed to participate, the researcher started with the data collection process.

The researcher developed a four-page questionnaire administered to selected respondents and asked them to answer questions in the questionnaire, the first section covering demographics and the second section covering information related to five sustainable livelihood assets. Creswell (2003) stated that questionnaires are a cost-effective and efficient way to gather verbal data from a large sample. The researcher explained the purpose of the study to the respondents. Questionnaires were set in English and translated into Oshikwanya, one of the local languages in Namibia. The study was paper-based and self-administered in each selected household. Before data collection, the researcher clarified that participation was voluntary and confidential. The researcher explained that consent and participation were agreed upon by filling in the relevant consent forms. All the respondents were adults aged 18 years and above, and no parental consent was therefore needed.

1.7.2 Sampling

Simple random sampling was used to select the study respondents. Simple random sampling was selected among other sampling techniques because it ensures high internal validity and reduces the impact of potential confounding variables. Lastly, it guarantees that the sample is chosen in an unbiased way. The researcher randomly sampled the households from the Excel Erven Register of the Omuthiya Town Council, as this list consists of occupied erven for Omuthiya Proper and Omuthiya Extensions 1 and 2. The Excel Erven Register consisted of 186 households, and 83 households were sampled, which formed the study sample. Although the study sample was 83 households, the researcher administered 75 questionnaires, and 64 households completed the questionnaire. The planned sample size of 83 respondents could not be reached due to several factors, such as respondents being unavailable in the sampled household during the data collection period; some respondents agreed to participate but later dropped out due to personal reasons, and because the response rate was voluntary, the expected rate can be lower despite initial agreement from the study respondents. The rationale for a mini-dissertation is to demonstrate the researcher's ability to conduct research and interpret results. Therefore, the sample size was not large enough to generalise the population, but it was valuable for

understanding the context of traditional housing compared to modern housing in the specific location, the Omuthiya Town Council.

1.7.3 Data analysis

Analysing data in descriptive quantitative research consists of numerical data examination and interpretation to get a clear understanding and summary of the features of populations. Data collected on the Likert scale was organised and prepared for analysis using Microsoft Excel and some components of Statistical Package for Social Sciences (SPSS). The responses of all the study respondents were recorded on the Likert scale items. The response categories were assigned a numerical value for analysis, for example: 1 = *strongly disagree*; 2 = *disagree*; 3 = *neither agree nor disagree*; 4 = *agree*; and 5 = *strongly agree*. To be consistent with a quantitative methodology, open-ended questions were coded according to themes. Data analysis with Excel provided the primary statistical function and performed descriptive analysis to calculate means and create charts and graphs.

1.8 Research ethics

The researcher followed the University of the Free State's ethical process. The researcher obtained ethical approval from the University's Research Ethics Committee/General Human Research Ethics Committee (GHREC) and the Omuthiya Town Council's Management Committee. The ethical application process consisted of the research proposal, study questionnaire, researcher's curriculum vitae, consent forms and all other relevant documents. After completing the application process, it was assessed in September 2023, reviewed again and approved for the fourth time on 23 October 2023. After the approval, the researcher started with fieldwork. The ethical process kept the researcher complying with ethical principles to protect the dignity and welfare of the research respondents. The research principles consist of voluntary participation, informed consent, anonymity, confidentiality, potential harm and communication of results. The respondents were given a chance to provide consent during data collection before participating in the study, and those who refused to consent did not participate. The nature of the study was explained to the respondents, including no remuneration offered to respondents and no penalties if respondents chose to withdraw.

1.9 Study limitations

The research identified the following study limitations:

- The research topic had limited relevant literature, indicating that the study area is relatively new and has yet to receive much attention from another researcher.
- The second limitation of the study was the scope of the mini-dissertation. The study included a smaller sample size, which made it challenging to attract comprehensive conclusions that apply to a large population. Omuthiya town had over 5 000 residents, and the study respondents were 64. Therefore, the findings of the study cannot be generalised.

1.10 Definition of concepts

- **Livelihoods:** “It consists of capabilities, assets (material and social resources) and activities required for a meaning of life” (Kollmair and Gamper, 2002:5).
- **Sustainable Livelihood Approach:** “It is a process of thinking and acting to improve the lives of poor and vulnerable people” (Kollmair and Gamper, 2002:3).
- **Morden Housing:** It refers to housing built with bricks, motors and concrete (Steinmentz, 2008).
- **Traditional housing:** It is built with earth materials such as mud and thatch. These skills have been transformed from generation to generation Steinmentz, 2008).

1.11 Research methodology aspect

The research used a case study design focused on a qualitative research approach. Simple random sampling was selected among other sampling techniques because it ensures high internal validity and reduces the impact of potential confounding variables. The study recruited research respondents using an in-person strategy, approached suitable respondents, and invited them to participate in this study Namibia.

Chapter 2

HOUSING DEVELOPMENT IN NAMIBIA

2.1 Introduction

This chapter presents the time of housing development in Namibia, particularly Omuthiya Town Council. The Germans started settling in Namibia in 1883 and began to be called German South West Africa. South Africa apartheid took over after the First World War I and started to be called South West Africa. Later, in 1990, it gained independence and became called Namibia. During these periods of colonisation, traditional housing has shifted by adopting European building styles.

2.2 Background of Housing Development in Omuthiya Town Council

Namibia's housing was vital for historical, economic, and social factors. Traditional housing was constructed from local materials such as wood, thatch, and mud, with climatic conditions and cultural practices.

Western housing designs were introduced in Namibia during colonial times and played a significant role in Namibia's modern housing development. This occurred during the German administration when European-style construction was introduced, with brick houses, formal brick houses, and formal town planning. After independence in 1990, Omuthiya village was proclaimed a town council, and after that, it shows this transformation of traditional to modern housing (Cheikhoussef and Embashu, 2013). This section introduced the reader to what Omuthiya Town Council is and where it is located. The figure shows Omuthiya town on the map, so the discussion of the city is also shown in the picture. Figure 2.1 shows a map of Namibia, with an arrow indicating the Omuthiya town on the map.



Figure 2.1 Map of Namibia (adapted from Google Maps)

Many residents in the Omuthiya Town Council are employed in different government sectors, such as agriculture, farming, vendors (open market sellers), and significant social and economic activities that provide job opportunities to Omuthiya residents. Most vendors reside in nearby villages, and the town is still surrounded by villages dominated by traditional housing. In contrast, open markets are well-known as a stopping point for most travellers to buy food. The new open market under construction is located on the B1 main road facing the Okaale Complex Shopping Centre. The second phase has cost the council N\$3 million (R3 million) and is expected to cater to nearly 500 vendors upon completion. Most vendors produce agricultural products and sell traditional goods beyond the redline (Nembwaya, 2023). According to Vatileni (2024), another development project in Omuthiya is the construction of a stormwater system. One challenge facing Omuthiya Town Council is the stagnant water during rainy seasons around shopping malls, roads and other areas. The council contracted Omalenga Construction CC at N\$1,3 million (R1,3 million). Vatileni (2023) further stated that Omuthiya Mayor, Johannes Ndeutapo, reported that the town lacked development due to an insufficient budget from the government.

Housing development in Omuthiya town was a challenge that was witnessed after the regional offices relocated from Tsumeb to Omuthiya town. In response to housing challenges, Omuthiya partnered with private and government institutions and community-based organisations to construct modern housing. Some organisations include National Housing Enterprises, Shack Dwellers Federation of Namibia (SDFN) and Kogoma Property Development (Petrus and Mosimane, 2018).

2.3 Timelines of housing development

This section presents the housing development during the pre-colonial era, German colonisation, South African apartheid and the post-independence era.

2.3.1 Pre-colonial era

Different ethnic groups live in Namibia and have different cultures, customs, and beliefs. Before Germany founded Namibia in 1883, each ethnic group lived in a different part of the country. For example, the Ovambo lived in the northern parts, the Kavango in the north-east, the Ovaherero in the central parts, the Himba in the north-west, and the Damara-Nama in the southern areas of Namibia (Steinmentz, 2008). Traditional housing was constructed using natural materials such as grass, stones, cattle dung, timber, branches and other natural materials available in Namibia. Traditional housing required fewer types of equipment during preparation and construction. One input required was fossil fuels, which depended on renewable energy for materials to grow and dry after harvesting. All the required materials for construction were available and cheap (Remmert and Ndhlove, 2018).

Traditional housing was constructed in communal areas, and skilled builders, normal older men, and community members with suitable skills and knowledge of traditional techniques were used and passed to younger generations (Friedman, 2007). Women also participated in activities such as plastering the wall and collecting the thatched grass. The Pre-colonial era in Namibia did not have formalised housing policies. The housing development was more informal, with land owned traditionally (communal land) by not Municipalities and allocated based on family ties. Finnish and German settlers promoted modern housing (Fujioka, 2005).

2.3.2 German colonisation

During the late 19th and early 20th centuries, Germany started colonising Namibia (German South West Africa) as its colonial territory (Nebe, 2021; Shigwedha, 2004). It started in 1883 after the Bremen Trading Company signed the indigenous treaty. Around 1890, Germany set up an army camp and crushed the tribe of Hendrick Witbooi between 1893 and 1897 in Damara land (Erichsen, 2023; Nebe, 2021; Steinmetz and Hell, 2006). Germany sheltered in southern and central Namibia as far as Waterberg, which was known as Ovaherero land. They started transferring cattle and land from Ovaherero through different legal methods. The Ovaherero lost their land and cattle, which led to violence and the war between the Ovaherero and the Germans which started on 12 January 1904.

After the war, the Germans started to control the Ovaherero and Damara ancestral land. Between 1904 and 1907, some Ovaherero were imprisoned and later started to work on the railways, fencing off the land and constructing buildings, including houses, in a Western design. One of the old buildings is a German Fortress called Alte Feste, which was built in 1889. This Alte Feste (Christ Church) still stands in Windhoek and combines political–military and spiritual–cultural design (Nebe, 2021; Van der Merwe, 1989). During the colonial period, housing development in Namibia was developed by German policies and later South African administration, where housing was racial segregation and economic exploitation. During this era, governments (German and South African) government/administration) established urban centres as administrative and economic activities (Erichsen, 2023; Nebe, 2021; Muller-Friedman, 2008). Between 1884 and 1915, the German government introduced a Western housing style in Windhoek, Swapo-mund and Luderity, while between 1915 and 1990, South African apartheid policies forced Indigenous communities to different townships. The housing promoted during these two periods was European-style brick housing (Modern housing) design (Nebe, 2021; Van der Merwe, 1989). South Africa apartheid

After Germany was defeated during World War I, it lost some of its colonies, including German South West Africa (Namibia). Great Britain started to control Namibia through its colony, South Africa after the League of Nations authorised Great Britain to oversee Namibia in 1915, and Namibia gained independence in 1990 (Nebe, 2023; Steinmetz and Hell, 2006). In 1948, after World War II, the South African

administration introduced apartheid programmes of racial segregation and discrimination in the form of employment, housing and school (Nebe, 2023; SA History, 2015; Van der Merwe, 1989). One of the apartheid programmes was the relocation of blacks from their ancestral land to a new designated homeland. South Africa passed laws such as the Bantu Authorities Act of 1951 and the Native Labour Regulations Act of 1953 to prohibit blacks from entering urban areas and to regulate the movement of black people. People from the northern part of Namibia had to go through contract labour that controls the movement of people from entering the urban areas without a pass (Friedman, 2007; Nebe, 2023; SA History, 2015).

Housings were separated between blacks and whites, and no blacks could enter the white locations without authorisation, forcing the apartheid administration to relocate blacks from living near white people (Remmert and Ndhlovu, 2018; SA History, 2015). In Windhoek, blacks were relocated from the old location to Katutura, which was designated for blacks. During relocation, the apartheid administration constructed houses in the Western housing style. One of the well-known housing units was single quarters, designed to accommodate single bachelor blacks, particularly those working in contract labour (Friedman, 2007; Remmert and Ndhlovu, 2018). Black Namibians were moved from their ancestral land and relocated to the designated homeland where they were expected to live in houses built in modern Western style and abandoned their traditional building housing style. This transformation of housing has lost the cultural identity of the Namibian people.

2.3.3 Post-independence era

When Namibia gained independence in 1990, apartheid policies were removed after the drafting and adoption of the new Constitution that protected human rights and granted protection to all citizens as stated in the Namibian Constitution, Act 16 (Muller-Friedman, 2008; Nebe, 2021; SA History, 2015). When South African apartheid took Over Namibia from Germany, it continued adopting the Western building style. It focused on housing segregation, where blacks were relocated from the township to a new location called Katutura in Windhoek (Remmert and Ndhlovu (2018). The policies focused on introducing more modern housing. The rural–urban migration movement of people has increased, which resulted in urbanisation. According to Friedman (2007) and Kuddus et al. (2020), urbanisation causes negative results such as overcrowding,

high unemployment, poverty, more informal settlements without or with limited municipal services, unhealthy conditions, and diseases. Urbanisation has resulted in the upstaging of informal settlements built on marginal land, including flood plains and steep slopes that increase the risk of natural disasters such as floods and fires. Some informal settlements were created illegally without municipal services and basic needs such as water.

The Namibian government has noticed a high number of rural–urban movements and has started to develop strategies to combat housing challenges. Friedman (2007) and Kuddus et al. (2020) pointed out that the government has worked with private, community-based organisations and local and regional institutions to solve housing challenges. Some of the legislation and laws were the National Housing Policy, which was developed in 1991 and reviewed in 2009, the Build Together Programme (BTP) which was established in 1992 and the National Housing Enterprises (NHEs) in 1993. All these programmes have adopted Western-style housing construction, which is modern housing. Steinmetz (2007) mentioned that housing strategies have seen the expansion of townships and the new proclamation of new towns, which resulted in high housing demands, and more were marked in Windhoek and Swakopmund compared to other towns.

Although strategies were formulated to solve housing challenges, some challenges that limited the construction of more houses were also noticed. According to Shigwedha (2004), the housing delivery was lower than the target. The target of NHEs was to construct 1 200 housing units per year, and it only managed to deliver less/more than 480 housing units, which was lower than the target. Remmert and Ndhlovu (2018) stated that in 2007, Namibia's housing backlog stood at 80 000, and in 2017, it stood at 300 000 houses.

2.4 Housing themes

This section presents the materials used to construct the traditional houses, the cultural significance of the traditional houses, colonialism, the shift to modern housing, and the current state of traditional housing in Namibia.

2.4.1 Traditional housing and material used in Namibia

Namibia has different tribes with different cultural identities and values. Traditional housing is constructed based on the cultural identity of the particular tribe, and the location is important to determine the types of materials used for housing construction (Fujioka, 2005; Maio et al., 2017). This section presents the material used to construct the traditional housing limited to the Owambo, Ovaherero, Himba, Damara-Nama and San tribes. Maio et al. (2017) and Falola (2008) stated that traditional housing is constructed from the available local materials that provide comfort and great design for each tribe in Namibia. Constructing housing using different natural materials makes the interior look different in terms of temperature, heat, absorption and moisture penetration.

All Namibian tribes, excluding whites, used traditional materials for their house construction. Falola (2008), Maio et al. (2017) and Tonjes (1996) mentioned that Ovambo communities had constructed their traditional huts in circle forms using wood or timber with grass to form roofing (thatched) and walls with wood or timber, available in northern Namibia. Friedman (2007) stated that the Ovaherero and Himba tribes are associated with cattle, goats and sheep, and their livelihood depends on animals. The Herero and Himba tribes used sticks or timber to form the round hut structure, which was covered with cow dung mixed with anti-hill sand to cover the whole structure (plastering). The Damara-Nama constructed their round huts using branches covered with mats and woven reeds. At the same time, the San community were more nomadic hunters than other communities, and they constructed simple structures with branches covered with grass to protect them from heat and cold (Fujioka, 2005). As Namibia started to engage other cultures, including colonialists, corrugated iron and drums were used to construct their houses. Since 1980, wealthy families have used bricks and mortar in the communities or villages (Fujioka, 2005; Maio et al., 2017; Tonjes, 1996).

2.4.2 Cultural significance of traditional housing

Namibia is a country with different ethnic groups. They speak different languages with different practices. Some of the dominant ethnic groups in Namibia are Ovambo and Ovaherero. These ethnic groups created a cultural identity in Namibia. Members from the same ethnicity share the same lifestyles, food, dining, settlement patterns and

more significantly, housing (Friedman, 2007; Maio et al., 2017). Since the 19th century, traditional housing has been shaped like round thatched and wall huts (Tonjes, 1996). Maio et al. (2017) and Shiweda and Nghitevelekwa (2019) further added that the Oshiwambo traditional homesteads are well known for their circular structure form that made up the homestead. It consists of kraals, with other huts for sleeping, pounding millet, storing goods and food and more. Inside the homestead, sections are separated by a wooden palisade or millet and a stalk fence. Different materials such as wood, thatch, mud bricks, and cow dung were used to construct the Owambo homesteads. Several researchers (Falola, 2005; Friedman, 2007; Fujioka, 2005; Tonjes, 1996) revealed that housing depends on different factors associated with culture and nature. The factors include materials available, geographical landscape, construction skills and security against wild animals. Traditional housing is very important to the cultural identity of each tribe and highlights customs and social, economic, and environmental adaptation. For example, in the Ovaherero tribe, a kraal is built next to their huts with wood and is regarded as providing support and strength in the construction of houses according to Ovaherero customs (Friedman, 2007).

2.4.3 Colonialism and shift to modern housing

Westerners have influenced Namibia's traditional housing architecture since they arrived in Namibia. Before colonialism, Namibians lived in a way that was based on their traditional lifestyle. Around the 19th century, Westerners arrived in Namibia with different aims, including trading, exploring, and missionaries, and became role models for Namibian communities (Friedman, 2007; Nord 2022). According to Nebe (2021) and Tonjes (1996), the first Finish missionaries arrived in Namibia in 1870 and did not only replace Namibian traditional religion with Christianity; however, they started constructing buildings in European-style architecture and continued during South African apartheid from 1915 to 1990. The settlers, explorers, and missionaries employed Namibians on their farms, mines, and households; their culture influenced Namibians to adopt European cultural living styles and Western building styles and lifestyles. Reunanen (2019); Shiweda and Nghitevelekwa (2019) and Tonjes (1996) added that one of the missionary's buildings could be traced back long ago in northern Namibia. The missionary church building in Olukonda village was constructed in a Western design in 1889 but used traditional materials, including timber with thatched roofs. It was inaugurated on 29 September 1889. Later, the missionaries started

constructing the churches in the same form as the one constructed in Olukunda and replaced the thatched roof with corrugated iron. It was done in northern Namibia and the different parts of Namibia where the Westerners settled.

Nebe (2021), SA History (2015) and Van Der Merwe (1989) stated that, between 1915 and 1990, when South Africa took over Namibia from Germany, the South African apartheid government constructed modern houses that attracted the Namibians, specifically those who worked for the West. The South African administration and missionaries relocated community members to pave the way for constructing schools and housing in Western architecture. After that, some communities lost their ancestral land and cultural identities, marking the birth of modern housing. One example outside Namibia is the South African government, which has constructed housing under the Reconstruction and Development Programme to replace traditional huts. The houses were supposed to include passive solar design features but were built without them, and no additional mechanical devices were needed in the houses. The beneficiaries who occupied the first project houses preferred traditional huts over houses built under the Reconstruction and Development Programme (Makaka and Meyer, 2005).

2.4.4 Current state of traditional housing

Around the 19th century, traditional architecture was associated with new designs using different natural local materials. Colonialism has transformed traditional life and cultural values to weaken the connection of tradition to modern architecture (Bredenoord, 2017; Maio et al., 2017; Shigwedha, 2004). Later, buildings in Namibia were dominated by modern designs built with imported materials and constructed with modern techniques. Namibia has experienced the abandonment of traditional housing to new towns, and modern housing has destroyed the large family houses and shifted to smaller nuclear units (Clapham, 2002; Nebe, 2021).

The introduction of Western design, including technology, resulted in traditional housing losing its value. Before the introduction of modern houses, traditional housing was decorated with clay walls. Today, it is replaced with technological paints, thatched roofs are replaced by corrugated iron, and wooden walls are replaced with bricks made out of cement (Indongo, 2015). Natarajan et al. (2022) and Bredenoord (2017) argued that traditional huts with local natural materials have provided thermally comfortable interior environments for many years. Moreover, the shift from grass roofs to iron

sheets has reduced the thermal performance needed to maintain the indoor environment at 18–25°C. Although modern housing has a positive impact in terms of process, construction, and style, some modern housing projects are not accepted by communities because they destroy the cultural and traditional practices of the communities (Clapham, 2002). Indongo (2015) pointed out that traditional houses promote privacy, while modern houses have resulted in high crime and sexual abuse due to the neglect of traditional values and customs. Figure 2.2 shows the Owambo traditional housing structure.



Figure 2.2 *Owambo traditional house (Source: Matheus)*

The construction of traditional houses uses local raw materials such as timber, thatch, sand, clay, and lime, which have low environmental effects compared to modern housing, which uses concrete and steel during construction (Bredenoord, 2017; Nord, 2022a/b; UN-Habitat, 2016). Some authors, Bredenoord (2017); Maio et al. 2017; Shiweda and Nghitevelekwa (2019); and Remmert and Ndhlovu (2018), indicated that local materials take less energy to harvest or produce and transport, reducing the carbon footprint. The design of traditional houses is aligned with the local climate, offers natural ventilation and insulation that prevents additional artificial heating and cooling and reduces environmental impact. Figure 2.2 shows Owambo traditional houses made of local materials such as thatch, timber and adobe bricks.

Although some research has indicated the benefits of traditional housing compared to modern housing, some have different opinions. Kudryashova et al. (2020) indicated

that today, adobe bricks are seen in rural areas but not in urban areas, and due to their vulnerability to water and rain, adobe bricks are now regarded as construction materials for poor communities. Dowling (2004) pointed out that adobe bricks in El Salvador offer sufficient insulation and can resist earthquakes when houses are built correctly. Another benefit of adobe bricks is that no cement is used, and less carbon dioxide (CO₂) is emitted.

2.5 Namibia housing programme

After Namibia gained independence in 1990, the government embarked on strategies to address housing challenges in the country. The most significant strategy was the National Housing Policy development, implemented in 1991 and reviewed in 2009 (National Planning Commission [NPC], 2024; Republic of Namibia, 2009). The NPC (2024) and Remmert and Ndhlovu (2018) stated that two important documents were established to curb the housing shortage. The first document was the National Development Plan (NDP) that oversaw the development project in Namibia. In 2017, it was estimated that Namibia had a 300 000 housing backlog. The second document was the Namibia Vision 2030, another strategy to provide housing, access to water and sanitation. The Namibian government has also established a programme that deals with housing delivery. Some of the programmes were the BTP, the NHEs, and the Mass Housing Development Programme (MHDP), which will be discussed in more detail in this section.

2.5.1 Building Together Programme

The BTP was designed as a self-help project targeting Namibia's low and low-middle-income population. The BTP focused on housing by receiving financial support from the government to support low-income groups in accessing and acquiring houses, and there are no documented figures on how many traditional houses were built/improved if it was done (NPC, 2024; Republic of Namibia, 2010). The programme started its operations in 1992/1993 with the target of rural and urban communities (NPC 2024; Simion, 2007). The BTP was designed under four pillars, namely urban and rural housing, social housing, single quarter transformation and informal settlement upgrading sub-programmes implemented in the country. The follow-up audit report of the Auditor-General (Republic of Namibia, 2010) stated that the programme benefits

the income group with a monthly salary of less than N\$3 000.00 and middle-income groups from disadvantaged communities living in shacks, backyards, and squatters and other middle-income groups who cannot access credit or loans from financial institutions.

Namibia's government started decentralising power to regional councils and local authorities in 1998. The BTP was decentralised in the same fiscal year (1998/1999), with the government responsible for allocating funds, providing technical support to regional and local authorities, and monitoring and evaluating the implementation of the BTP (NPC, 2024; Republic of Namibia, 2010; Simion, 2007). The BTP constructed 41 990 houses from 1992 until 2013, when it was absorbed by a mass housing project in 2013 (Remmert and Ndhlovu, 2018). During the BTP, the programme needed to reach its target by providing housing to needy Namibian citizens. According to the audit report of the Republic of Namibia (2010), the programme failed to collect loans paid out to the beneficiaries, with a total of N\$13 205 750 paid to 1 234 loan beneficiaries, where only 267 loan beneficiaries managed to pay their loans, with an amount of N\$1 361 000.00 that was paid in full, while 967 loan beneficiaries to the amount of N\$11 844 750.00 was written off with the main reasons of beneficiaries declared dead. Another challenge was after the decentralisation of the BTP, there were no designed staff responsible for the BTP programme.

2.5.2 National Housing Enterprises

The NHE is a government-owned entity under the Ministry of Regional and Local Government, Housing and Rural Development delegated to provide housing to low and middle-income populations. It is established under the National Housing Act 5 of 1993 (NHE, 2024; NPC, 2024; Remmert and Ndhlovu, 2018). NHE targeted beneficiaries with a monthly income of N\$5 000.00 to N\$20 000.00 per month or N\$300 000.00 monthly combined salary. The housing size for NHE differed, with a maximum house costing N\$550 000.00. The loan payment differed between 20 and 30 years, including the interest rate (NHE, 2024). The NHE (2024) and Weber and Mendelsohn (2017) indicated that, since the NHE was established in 1993, until 2016, it only constructed 18 304 houses, which was the lowest compared with the BTP, which constructed 41 990 houses from 1992 to 2013. In 2023, the NHE handed over 50 houses to the beneficiaries in Omuthiya town, while an additional 50 houses were

still under construction. Like other housing programmes, the NHE was facing challenges in acquiring land from local authorities and the funds to service the land to deliver houses in Namibia. Figure 2.3 below shows an NHE house in Omuthiya town.



Figure 2.3 NHE house in Omuthiya town (Source: Matheus)

2.5.3 Mass housing development programme

The MHDP was established in 2013, during his excellency, President Nghifikepunye Pohamba, with an estimated cost of N\$45 billion investment programme (NPC, 2024; Weber and Mendelsohn, 2017). As the NPC (2024) and Remmert and Ndlovu (2018) stated, the MHDP has absorbed the BTP to construct 185 000 affordable houses over the next ten years. During the implementation period, the project faced some challenges and stopped in 2015 after having constructed over 4 000 houses, which were very few and needed to meet the housing demand.

2.5.4 Shack Dwellers Federation of Namibia

The SDFN is a community-driven housing project established in 1998. The SDFN creates strategies for low and middle-income populations with skills development programmes for revenue generation and financial development, with main strategies focusing on housing delivery and skill advancement (SDFN, 2023). According to the NPC (2024), the SDFN (2023), Shack Dwellers Federation of Namibia (2022), and

Weber and Mendelsohn (2017), the saving group is the central core function of the SDFN and, in June 2022, it had 956 saving clubs with 30 000 club members, saved more than 39 million and constructed more than 7 224 housing units around the country, including the town of Omuthiia.

SDFN played a very important aspect in housing development by constructing affordable modern housing for low-income communities. It also used a grassroots approach where communities outsourced their building materials, the same way traditional housing was constructed (Remmert and Ndhlovu (2018). The SDFN (2023) and Remmert and Ndhlovu (2018) indicated that, like other housing programmes, the SDFN also faces challenges, such as the high dropout of its members due to economic and social challenges that affect the savings group. Figure 2.4 shows SFDN houses in Omuthiya town.



Figure 2.4 SDFN houses in Omuthiya town (Source: Matheus)

2.5.5 Government employees rental housing

The government supports the employees with housing provided by different ministries, offices, and agencies. The Office of the Prime Minister provides accommodation to San communities through relocation and settlement; the Ministry of Health and Social Services provides accommodation to low-income elders and staff accommodation working in housing; the Ministry of Environment provides accommodation to staff working in tourism sectors; and other ministries and agencies provide housing

depending on the needs of their staff members (NPC, 2024; Republic of Namibia, 2023).

2.5.6 Private sector and international housing investment

The private sector's participation is essential in modern and traditional housing to increase investment and financing options. Housing finance is one of the options for Namibians to acquire their housing properties. It is offered by five large banks that offer mortgage loans to employees and represent nearly 22% of housing in urban areas. The fund is mainly accessed by upper and middle-income groups because it is costly and is estimated to cost 14% of the property value. Private sectors also introduce eco-friendly construction materials to enhance modern housing over modern housing design (Republic of Namibia, 2023). For individuals (homebuilders), constructing new houses for themselves is another option for providing housing. Housing developers have become one of the fastest-growing options in housing development, where large companies construct houses through credit. It is done through public-private partnerships with local authorities to acquire land (NPC, 2024; Republic of Namibia, 2023).

2.6 Employment opportunities and gender inclusion in Namibia

2.6.1 Employment opportunities

According to a Labour Force Survey published by the Namibia Statistics Agency (NSA, 2019), Namibia had a population of 2.4 million, an increase from 2.3 million in 2016, with a growth rate of 0.3%. The labour force was standing at 1 090 153 in 2018 and 1 026 263 in 2016 with an increase of 63 885. The working population aged 15 years and older was 1 531 967 (63.5%), with an economically active population standing at 1 091 153 (71.2%) and an employed population standing at 725 742 (66.6%). A high employment rate in housing development leads to increased housing income by enabling the majority of Namibians to afford either modern or traditional housing, compared to a high unemployment rate that decreases purchasing power by limiting the ability of people/persons to buy/build houses (NPC, 2024).

In 2018, a total of 725 742 people, with 361 508 males and 364 234 females, were employed in Namibia. Among the age groups, 25–29 years (15.3%) and 30–34 years

(15.6%) dominated the employment sectors, compared to other age groups such as the 60–64 year group at 3%. The largest groups of employed people were in elementary occupations with 29.1%, skilled agricultural occupations made up 15.2%, services workers and sales with 14.6% and craft and related trade at 12.5%. The highest employment sectors in Namibia in 2018 were agricultural, forestry and fisheries, with 23%, with a 3% increase from 2016; real estate activities scored lowest with 0.1% employed (NSA, 2019).

A total of 44.8% of employees were employed in private companies, enterprises and cooperatives. The second highest was private households or individuals, with 24.5% of employees; 26.1% of employees were in government, including local authorities and state-owned enterprises. A community with the majority of employed people have access to finance, such as loans and housing schemes that increase the demand for modern housing in urban areas. Comparing gender, men dominated employment with 53.3%, while women were at 44.5% in private companies. The survey noticed a higher number of women employees in government, both in rural and urban areas, compared to men (NSA, 2019).

The Labour Force Survey published by the NSA (2019) further indicated that 51.8% of the employed population had completed junior and senior secondary school, making up the largest group of those employed. Those who completed primary school stood at 20.1%, those without formal education made up 11.8%, and those with tertiary education (certificates, diplomas, and degrees) made up 14.6%. According to Shikangala, (2005), the unemployment rate was the primary labour market that was used to measure employment participation and the creation of economic activities in the country. Low unemployment determines the country's ability to absorb working-age people, while high unemployment determines the country's ability to absorb the working-age group. Namibia's unemployment rate was 33.4, a slight reduction from 34% in 2016. Females comprised the majority group with 34.3%, compared to males with 32.5% (NSA, 2019).

2.6.2 Gender inclusion

The United Nations recognised housing as a fundamental human right in 1966. However, thousands of Namibians currently live in dangerous conditions that put their health at risk in informal settlements. One-third of these are homeless people,

including women (Angula, 2010). Before Namibia gained independence, women faced difficulties with equal rights in employment and land. The policies made it hard for women to acquire housing, and in some cultures, women and girls were mainly regarded as caring for the households. Women were disadvantaged in acquiring property, land, and resources needed for their livelihoods, such as looking after themselves and supporting their families. After independence, the government formulated strategies to combat gender inequality in employment, land, and housing, as the Namibian Constitution provided equality to all Namibians. One of the pieces of legislation was the formulation of the National Gender Policy in 2010, which protects women and grants them equal rights to employment as their counterpart men (Remmert and Ndhlovu, 2018).

2.6.3 Gender toward housing programme

The Namibian Constitution made provision for gender equality. It aligned with regional and international instruments, including the Beijing Declaration and Platform for Action, All Forms of Discrimination Against Women, and Agenda 2030 toward achieving gender equality (Remmert and Ndhlovu, 2018). The word *gender* was introduced in 1970 to provide understanding between men and women that are not biological and defined as a “social construct on culture-bound conversations, role and behaviours including contact between women and men and boys and girls” (Keulder, 1994:11).

In Namibia, before independence, land and housing were owned by men, especially in rural areas, compared to urban areas because the rights for women to inherit land/property limited their access to housing, mainly traditional. Despite the barriers addressed by the Communal Land Reform Act 2002 that gave women power the right to have and inherit land, there are still challenges in implementation in some communal communities. Housing inequality existed, and women were prohibited from participating in housing (Remmert and Ndhlovu, 2018). Keulder (1994) stated social-economic barriers also play a significant role among women in rural areas because of low salaries and few employment opportunities that limit their capacity to acquire modern housing.

One of the significant gender roles that still exists is that mothers maintain or build traditional housing structures (huts) in rural areas because they spend most of their

time in rural areas compared to modern housing, where men and women can acquire houses due to the balance of economic opportunities these days. Nowadays, women are equal to men and can take up any form of job previously designated for male categories, such as in the engineering sector. Compared to the past and present, domestic violence toward women is being reported compared to the past because of awareness in different ways.

2.7 Namibia's education system

Namibia's education system is classified into different phases of basic education, namely junior primary (junior primary, pre-primary and Grades 1–3), senior primary (Grades 4–7), junior secondary (Grades 8–9), senior secondary (Grades 10–12) (Jellens and Bobek, 2020; The Namibian, 2018). For the mini-dissertation, the discussion is limited to Grade 12 as a tertiary qualification and the questionnaire focused on Grade 12, which is the highest grade in Namibia. Grade 12 prepares the learner for higher education, and learners need to take much responsibility toward learning (National Institute for Educational Development, 2016). Upon completing Grade 12, learners get a certificate that is recognised internationally as Namibia Senior Secondary Certificate Advanced Subsidiary (NSSCAS) that provides a chance for admission at higher education institutions, Level 4 at Namibia Qualification Authority and as an entry requirement or job market, particularly government jobs. During Grade 12, learners take three to five subjects and one language subject. The higher education system in Namibia differs in the number of points needed for admission. The Namibia University of Science and Technology requires 25 points in five subjects with an E symbol in English. In comparison, the University of Namibia requires a minimum of 24 points in five subjects and a D in English (The Namibian, 2018; Jellens and Bobek, 2020).

2.8 Environment impact of housing

Certain factors such as land use, construction, energy efficiency, material, and waste produced play an essential role in the impact of housing on the environment. During housing construction, certain building materials, such as wood and steel, are needed, and they are extracted from natural resources and hurt the environment, such as deforestation (Maritz, n.d.). Activities during construction also cause damage to the

environment, such as soil erosion. Materials used in housing construction are one of the components that play a significant role in environmental impact. Land use also plays a significant role in environmental impact. Rapid urbanisation leads to the construction of many houses that destroy natural inhabitants, such as reducing wild animals and causing ecological damage such as vehicle emissions. Energy efficiency is needed in the houses for lighting, cooling and heating (Remmert and Ndhlovu, 2018).

According to Maritz (n.d.), mitigations were established to reduce negative environmental impact. Reducing carbon emissions can be mitigated by technological energy efficiency through insulation and solar panels. Some buildings are constructed from sustainable building materials such as brick and fencing walls with old tyres that can have a less negative impact on the environment. Houses are installed with evaporated cooling systems that require low energy; solar geysers are mainly used for washing, and eco-gas are used for cooking.

2.9 Conclusion

This chapter reviewed relevant books on housing in Namibia. Before Germany colonised Namibia, each Namibian ethnic group had its traditional housing designed and built with locally available materials. Later, German and Finnish missionaries and South African apartheid introduced modern buildings with Western designs and lifestyles. Modern housing has changed how Namibians live, forcing them to abandon traditional housing and adopt Western lifestyles. During South Africa's apartheid, Namibians were forced to move from specific locations and marked for white people. After Namibia gained independence, apartheid laws were removed, resulting in a housing shortage. The government introduced specific programmes to curb housing challenges, including establishing NHE, BTP and SDFN. The next chapter presents sustainable livelihood and housing, an analysis of five assets.

Chapter 3

SUSTAINABLE LIVELIHOOD APPROACH AND HOUSING – AN ANALYSIS OF FIVE ASSETS

3.1 Introduction

This chapter presents a sustainable livelihood approach to reduce poverty among poor communities. The sustainable livelihood approach includes assets, vulnerability, policies and institutions, livelihood strategies and livelihood outcomes in measuring the livelihood of the communities. This chapter focuses more on the role of assets (human, social, physical, natural and financial/economic) in housing and the impact of these assets on communities.

3.2 Sustainable livelihood approach

Sustainable livelihood was introduced by the Brundtland Commission on Environment and Development (1987) as the process of mitigating socio-economic and ecological challenges in society (cited by Azumah et al., 2023; Farrington et al., 2003; and Morse and McNamara, 2013). It became an academic and applied field, particularly in the Global South. Natarajan et al. (2022:3) described it as an “approach rather than a method, framework rather than a theory”. In 1992, during the United Nations Conference on Environmental and Development, the term was expanded to Agenda 21 and aimed to reach sustainable livelihood with the goal of poverty reduction (Golubchikov and Badyina, 2024, Mazibuko, 2013).

After the introduction of sustainable livelihood, it focused on rural areas where people depend on farming for living and mostly self-managing actions. In 1992, Robert Chambers and Gordon Conway formulated the definition of sustainable livelihood as “it consists of capabilities, assets such as store and resources, and activities needed for living; it is sustainable when it adapts from stress and shocks; balance its capabilities and assets and provide a sustainable change for the next generation which can gain livelihood local and international during short and long term” (cited by Morse and McNamara, 2013:21). Although this definition can be implemented at any level, it is mainly applied at the household level. Different livelihood components focus more

on assets in which people build up their living. Azumah et al. (2023) and Scoones (1998) described these components as shops (food and cash), resources (land, water and farm tools), and intangible resources such as morals that provide a chance to use or obtain information, employment or income.

3.3 Conceptual framework: The sustainable livelihood approach

The Sustainable Livelihood Framework (SLF) (see Figure 3.1) comprises the primary sustainable livelihood approach. It works as a tool to evaluate the poverty level among the communities (Kollmair and Gamper, 2014). The SLF comprises capital assets, vulnerability context, policies and institutions, livelihood strategies and livelihood outcomes (Azumah et al., 2023, Farrington et al. 2003, Golubchikov and Badyina 2024). Vulnerability deals with the insecurity among individuals, households and communities that face changes in their external environment. Vulnerability is divided into three components: shocks, such as illness, floods, drought, conflict, and diseases; seasonal, including prices and employment opportunities; and critical trends, such as demographic, economic, governance and environmental. These environmental factors can be caused by internal defencelessness and a lack of capabilities to cope with them (Farrington et al. 2003; Natarajan et al., 2022; Serrat, 2010). In their book *Sustainable livelihood approach: A critique of theory and practice*, Morse and McNamara (2013) gave examples of shocks, such as droughts and floods, which can hurt physical and natural assets in a short period, while stress can cause economic downfall resulting in the retrenchment of workers and leading to the high unemployment rate.

Policies, institutions, and processes are typically made by some institutions that are formal, informal and established. Formal government institutions create laws and legislation, while informal communities develop cultures, norms and beliefs (Serrat, 2010). According to Azumah et al. (2023), the institution's position can assist or block livelihood strategies that affect the livelihood outcome. Some of these policies affect access to assist poor communities, including land and housing; policies that affect natural assets, such as road construction in rural areas; and policies that change the value of assets occupied by poor communities, such as protected land (conservation).

According to Morse and McNamara (2013), Natarajan et al. (2022), and Serrat (2010) the main aim of the livelihood strategy is to achieve livelihood outcomes. Poor communities use different and challenging combinations of livelihood opportunities

and tasks to make assets to enhance their different needs. How they choose strategies differs from time to place and to people. Serrat (2010) gave an example of communities in rural areas that use agriculture, fishing, crafting and other natural means to meet their livelihood objectives. Moreover, communities in rural areas can participate in other activities and employment opportunities. In the words of Azumah et al. (2023) and Golubchikov and Badyina (2024), communities in urban areas meet their livelihood in different ways, such as through employment opportunities and self-employment. Livelihood strategies vary for individuals, households, and communities depending on age, gender, and public and financial position. These strategies can be evaluated on individual and household levels, and combined household strategies can have better opportunities to meet the livelihood than the individual.

Azumah et al. (2023) further indicated that livelihood outcomes are achieved when income is higher and sustained in rural communities. It also helps the communities to achieve self-esteem, health status, and improved food security. The communities achieve livelihood outcomes with more strategies to use sustainable natural resources Figure 3.1 shows the sustainable livelihood framework.

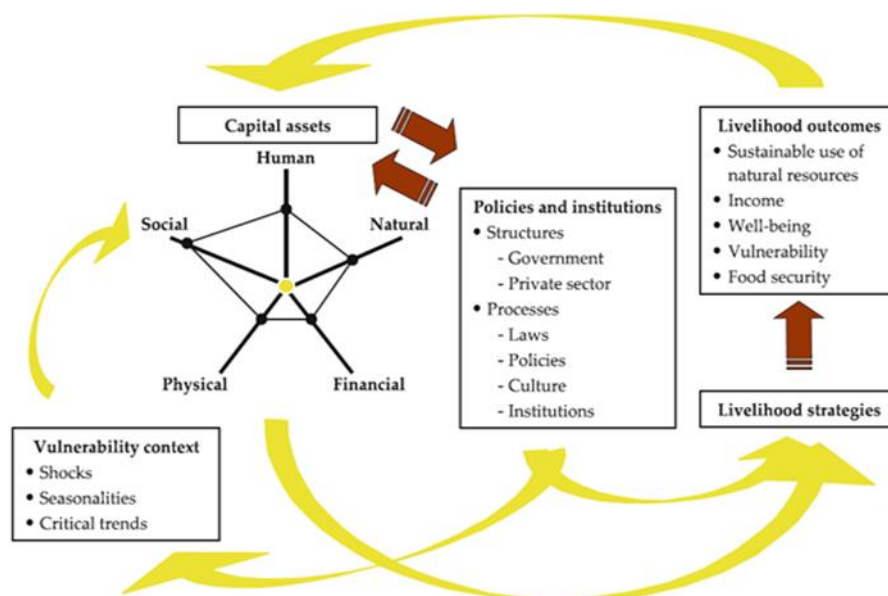


Figure 3.1 *The sustainable livelihood framework (Natarajan et al., 2022)*

The following section discusses the role of assets in housing.

3.4 The role of assets in housing

Assets are defined by Farrington et al. (2003), Natarajan et al. (2022), and Sati and Vangchhia (2017) as resources that people need to meet their livelihood objectives. These resources are human, social, natural, physical and financial. Kollmair and Gamper (2014) stated that livelihood assets are critical in housing in helping families and individuals achieve sustainable livelihood objectives. Assets appear in different forms. Some are tangible, such as income, while others are intangible, including skills and social networks. Golubchikov and Badyina (2024) and Serrat (2010) also indicated that employment is significant because income helps people acquire monthly mortgage payments while some can afford monthly rent. In addition, those with better education and skills development tend to acquire better employment opportunities with excellent salaries that will help them to have better housing choices and live better lives. Communities depend on these assets to make and maintain their livelihoods. When communities make their assets, they develop the capacity to handle changes to meet their needs and sustain basic needs (Serrat, 2010).

3.4.1 Human assets

The studies by Farrington et al. (2003) and Serrat (2010) defined human assets as the resources that are made up of skills, knowledge and the ability to perform a specific task, while Azumah et al. (2023) defined human assets as intangible assets not listed in the company balance sheet. Azumah et al. (2023) and Kollmair and Gamper (2002) suggested that assets are linked to each other to provide sustainable livelihood objectives. For example, financial assets depend on human assets regarding access to employment and earnings. Azumah et al. (2023) argued that labour as human assets cannot be equal, but employers can improve employees through investing in training.

As stated by Serrat (2010) and supported by Golubchikov and Badyina (2024), employees' values depend on human assets, skills, education and experiences. The total number of workers in the household determines the quantity, while the level of education, skills and health of household workers evaluates the quality of household livelihoods. This means that a household with a high quality and quantity of human assets can have a better livelihood than one without quality human assets. Research by Azumah et al. (2023), Serrat (2010), and Clapham (2002) further highlighted that

human assets such as skills, knowledge, and physical and mental ability symbolise the quality of households to meet livelihood needs. An empirical study conducted by Farrington et al. (2003) in India found that the household's income depends on that particular household's human assets. People with better education and skills tend to live a better livelihood in modern houses with water, electricity and sewage, which improve their livelihood. This aligns with the finding of Clapham (2002), who emphasised that better education has a positive impact on many people's lives, and social groups affect different social contexts. People with lower education are disadvantaged regarding health, housing, employment, and social and political engagement. In addition, other authors such as Galle (2020), Clapham (2002), Malik and Hassan (2019) and Serrat (2010), concluded that people with better education and skills have a relationship living in modern housing compared with those who lacked education and skills.

3.4.2 Social assets

The term *social assets* received much debate, and later, Kollmair and Gamper (2002) and Serrat (2010) defined it as the ability of formalised groups that are connected and network together with the ability to cooperate and increase people's trust in their system of rules, norms and sanctions. In most cases, social assets are determined and assessed through birth, age, and gender, and they can differ from household to household. Social assets can be employment in urban areas where modern housing development happens. When people reside near workplaces, it saves on the cost of transport and allows employees to participate in the labour market. Consistent with the findings of Bauer (2020), Serrat (2010) and the UN-Habitat (2019) economic growth in infrastructure development, such as modern housing development, creates job opportunities mostly during construction and real estate. Bauer added that communities within modern housing development could allow investors and businesses to create employment.

Malik and Hassan (2019), Natarajan et al. (2022) and the UN-Habitat (2019) pointed out that modern housing is linked to great technology, including communication, such as fast internet and mobile communication, which enhances telecommunication. This advanced development in modern housing is connected with recreational facilities such as libraries and internet cafes that promote skill and professional advancement

among the citizens living in modern housing, and it also links the friendships that promote job and education referrals. Although the transformation from traditional to modern housing has advantages, it also causes adverse effects on extended families by concentrating on nuclear families only. As Azumah et al. (2023), Galle (2020) and Serrat (2010) also pointed out, the shift from traditional to modern housing resulted in the separation of the elderly, who usually provide emotional support to each other. Communities in traditional housing support and comfort one another during difficult times. In contrast, modern housing lacks a neighbouring support system that is standard in traditional housing, and people live in isolation like strangers.

3.4.3 Natural assets

The concept of natural assets was first cited by Schumacher in 1973 (cited by Azumah et al., 2023:132). The term *natural asset* is more focused on the economic evaluation of ecosystems that hold non-living things that provide goods and services needed for living (Natarajan et al., 2022; UN-Habitat, 2019). However, Serrat (2010) argued that natural assets are made of land and what it produces, water and its resources, wildlife and environmental services. The literature review showed that the economy needs natural assets for sustainability (Azumah et al., 2023). In addition, natural assets provide benefits and goods, including food and wood, that humans have at any time. According to several researchers, such as Azumah et al., (2023), Morse and McNamara (2013) and the UN-Habitat (2016), some of these benefits can be compared to physical assets such as the factories that manufacture goods such as cars, just like the tree that produces fruit, and nature can be traced as a gift of life. In a world without natural assets, no goods and services will be produced. Serrat (2010) pointed out that natural assets are divided into intangible, such as air and biodiversity, and tangible, needed for production, including land, trees and water.

In traditional housing, natural assets are the materials needed to construct the houses, including stone, wood, clay and glass. These are the locally available materials that also save transportation costs for transporting the materials (Farrington et al., 2003; Galle, 2020). Traditional house construction materials have less cost compared to modern housing. According to Golubchikov and Badyina (2024), a study indicated that traditional housing requires manual labour compared to modern housing, which needs machinery at a cost. Furthermore, traditional housing is built with temperature

insulation that helps with natural cooling and heating (Kudryashova et al., 2020). Traditional housing is built in traditional styles with cultural identity and community pride (Bauer, 2020). In contrast, modern housing is built out of expensive materials with extra properties for heating and cooling (Kudryashova et al., 2020). Due to increasing urbanisation and scarcity of land to construct modern housing, the price of housing is increasing, which will disadvantage the low-income groups. On the other hand, modern housing comes with better infrastructure, such as roads, sewerage and other utilities. Overall, Bauer (2020) and Natarajan et al. (2022) demonstrated that combining modern housing services such as electricity, air conditioners, and plumbing increases the cost of modern housing due to high maintenance costs, which sometimes increases the monthly expenditure.

3.4.4 Physical assets

Research by Azumah (2023), Farrington et al. (2003) and Serrat (2010) indicated that physical assets are the subgroup of other assets, such as financial, human and social assets, while Kollmair and Gamper (2002) mentioned that physical assets are one of the three primary factors in the production of goods and services, supporting the tangible goods needed for production, cash and equipment. Kollmair and Gamper (2002) exemplified this with examples of physical assets such as roads, houses, bridges, buildings and many more. Building on this, Golubchikov and Badyina (2024) and the UH-Habitat (2019) stated that the primary role of physical assets is to assist communities in satisfying their critical basic needs with high productivity, lacking infrastructure, such as housing and goods needed for production, resulting in poverty. Poor infrastructure also leads to limited availability to the market, and in the absence of equipment for production, productivity cannot occur. Physical assets can support the livelihoods of physical households during production. Likewise, Natarajan et al. (2022) mentioned that quality and better infrastructure facilitate people to participate in high-paying employment that helps households meet their livelihood strategies.

As an example, a livelihood study in Zanzibar among fishermen whose nets and boats were damaged by whales and ships and the damaged road between the market and fishing points caused a significant physical asset in the livelihoods among Zanzibar communities (Azumah et al., 2023). This study indicated the importance of physical assets within the communities that need services and goods to obtain a sustainable

livelihood in comparing modern and traditional housing in the livelihood of the communities. In addition, Galle (2020) and the UN-Habitat (2019) indicated that traditional housing is constructed using manual labour and requires locally available materials such as stone, grass and timber, while modern housing is constructed out of expensive materials such as cement and bricks. Modern housing requires additional features such as water supply, sewage, and plumbing, which come with additional costs. In some cities, the land is dominated by wealthy and political groups who influence prices and make the process of acquiring land ownership challenging and time-consuming, which disadvantages the poor group to afford houses (Golubchikov and Badyina, 2024). Consequently, Farrington (2003) stated that this process results in poor people in the communities facing constraints and limited access to municipal utilities such as sanitation, garbage collection, public transport, street lights, drainage, and roads that improve their livelihoods.

3.4.5 Financial assets

Financial assets include cash, credits, and savings (Azumah et al. 2023; Natarajan et al., 2022; Serrat, 2010). In rural areas, people (communities), livestock and financial institutions are vital financial assets (Kollmair and Gamper, 2002). People with livestock in rural communities can depend on their livestock if an immediate shock happens. The empirical study conducted by Azumah et al. (2023) on the well-being of farmers has shown the relations between financial assets and livelihood outcomes among the farmers.

Malik and Hassan (2019) suggested that urban facilities increase the value of housing compared to traditional housing, while Farrington (2003) and Natarajan et al. (2022) argued that modern houses are expensive to construct. Furthermore, Clapham (2002) pointed out that urban infrastructure requires architects and engineers during construction, which influences the cost of building and makes it hard for people to access financial assets to acquire property to live a good life. Azumah et al. (2023) complemented the work of Malik and Hassan (2019) by stating that modern housing gains additional value converted in monetary terms compared to traditional houses, which require fewer cost materials and are hard to cover in monetary terms. Thus, Golubchikov and Badyina (2024) highlighted that urban infrastructure, including housing, is obtained at a high cost with high interest rates from financial institutions,

which some people find hard to pay. Overall, Azumah et al. (2023) concluded that the main challenges facing the urban population are the access to formal financial institutions to access credit, and only highly paid people in urban areas can access commercial financial institutions to acquire credit through loans.

3.5 Sustainable livelihood in housing

Housing is one of the most critical basic human needs and part of the right to adequate living standards. Access to proper adequate and affordable housing is essential to promote socially and economically diverse neighbourhoods in which communities have access to quality facilities, services, amenities and employment opportunities (Abera, 2024; Carnemolla and Skinner, 2021; UN-Habitat 2020). In addition, Olaniran et al. (2024) and the UN-Habitat (2019) pointed out that housing is vital for shelter and stability where residents have access to safe, secure and affordable housing that enables individuals or families to concentrate on adjusting their livelihood in the absence of stress, of inadequate shelter.

Housing is vital to a sustainable livelihood for the reasons identified by different researchers. First, economic empowerment reduces the financial difficulties in households and spares additional resources to invest in education, health care, and small businesses for income generation. Today, housing has become income-generation through home-based enterprises (Abera, 2024; Olaniran et al. 2024; UN-Habitat 2020). Second, environmental sustainability is vital during housing construction and maintenance and is essential to the environment. Using sustainable practices such as renewable energy, eco-friendly materials, and water conservation processes are good practices that minimise carbon footprint in the communities (Abera, 2024; Carnemolla and Skinner, 2021; UN-Habitat, 2012). Third, health and well-being in housing are vital to have access to clean water, sanitation and good ventilation that contribute to the well-being and health of the communities (World Health Organization, 2018). Health communities are always in an excellent position to participate in livelihood activities and contribute to the economic development of their residences (Carnemolla and Skinner, 2021; Olaniran et al., 2024).

Although it is essential to have housing to achieve a sustainable livelihood, many obstacles exist, particularly in low- and middle-income countries such as Namibia. Some of the challenges identified by Abera (2024), Olaniran et al. (2024), the UN-

Habitat (2019, 2020), and the World Health Organization (2018) are that affordable housing remains a challenge and rapid urbanisation is contributing to the housing shortage in cities and pushing poor people into slums; access to finance remains a significant challenge to low-income groups and particularly in rural areas due to lack of finance to build and upgrade their houses. There are no options for financing traditional housing due to many requirements, and policy and regulations are some regulatory frameworks that hinder sustainable housing development.

3.6 Conclusion

This chapter presented the vitality of the sustainable livelihood approach in compacting poverty among communities by concentrating on assets, vulnerability, and institutional frameworks. The chapter further discussed the role of assets (human, physical, social, natural, and financial) by focusing on the quality of life through housing. The study also discussed the need for policies and institutions to support asset building and vulnerabilities to achieve a sustainable livelihood. In examining this framework, developing a programme that enhances long-term economic and social stability is essential, specifically in limited resource settings. The next chapter will present the data analysis and presentation.

Chapter 4

PRESENTATION OF FINDINGS ON MODERN VS. TRADITIONAL HOUSING IN NAMIBIA.

4.1 Introduction

Chapters 2 and 3 discussed the housing history in the context of Namibia's housing development and housing in the sustainable livelihood approach. This chapter presents the findings and interpretation of the structured questionnaire conducted among 64 respondents in Omuthiya town, Namibia. The findings are presented in graphs to give a detailed visual presentation of the findings generated from the research study.

4.2 Omuthiya town

Figure 4.1 shows two aerial maps of Omuthiya, where the research study was conducted. The background of Omuthiya town was discussed in Chapter 2.

4.3 Questionnaire section

The questionnaire used to collect data was divided into two sections. The first section is a demographic section, which consists of the gender and age, marital status, education and living status of the respondents. The second section focuses on the five assets (human, social, natural, physical and financial assets) of the sustainable livelihood approach that were used to measure the housing livelihood outcome. All the questions were reviewed, and the findings are provided in the following sections.

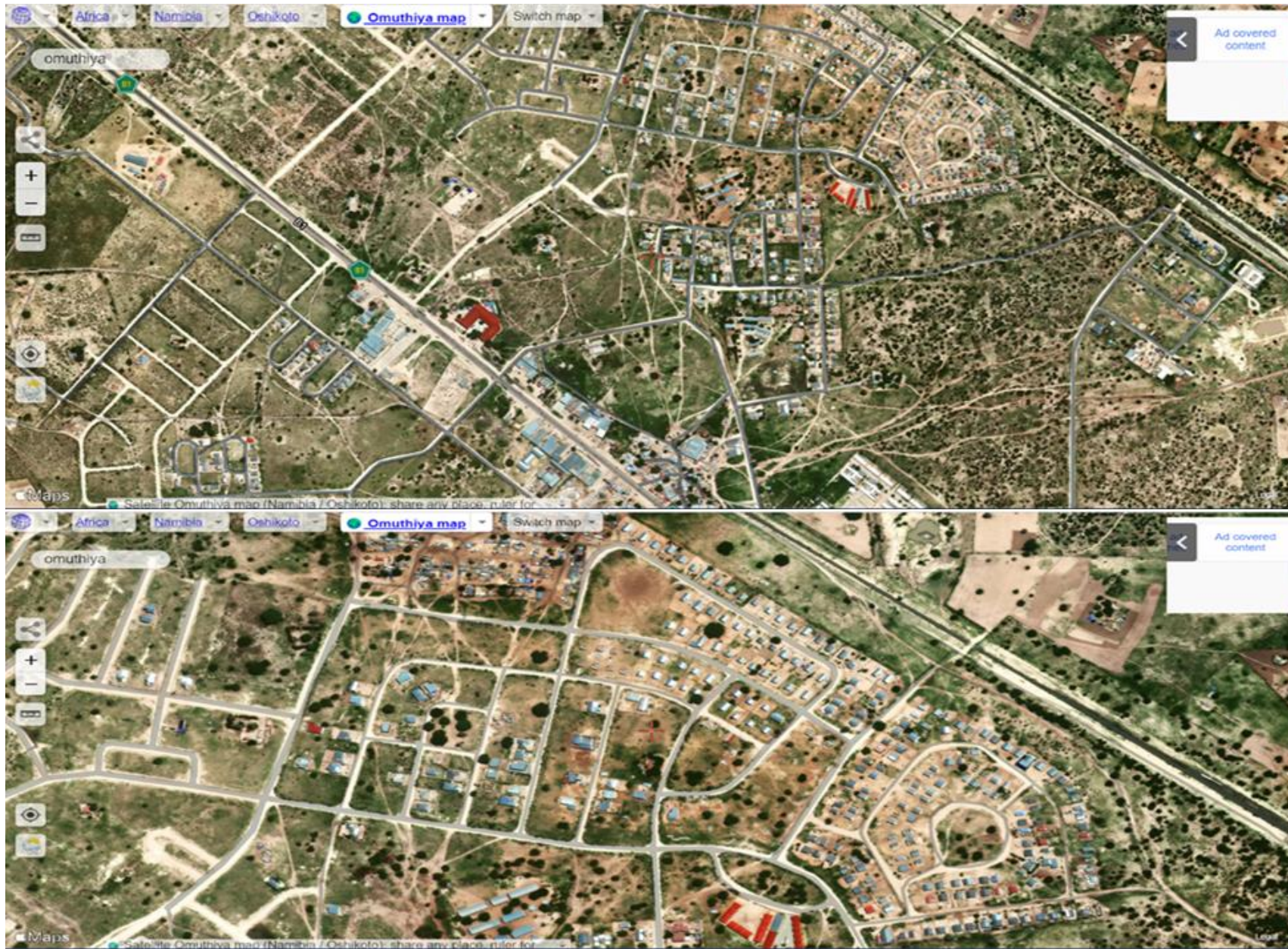


Figure 4.1 Aerial image of Omuthiya town (Source: Google Maps)

4.3.1 Gender and age category

The researcher distributed 75 questionnaires to respondents, and only 64 questionnaires were returned, giving an 85% response rate, and all analyses were based on 64 respondents. On gender distribution, 24 males (37%) and 40 females (63%) responded. Females comprised the majority of the respondents, and the response rate was broken down into age groups as indicated in Figure 4.2.

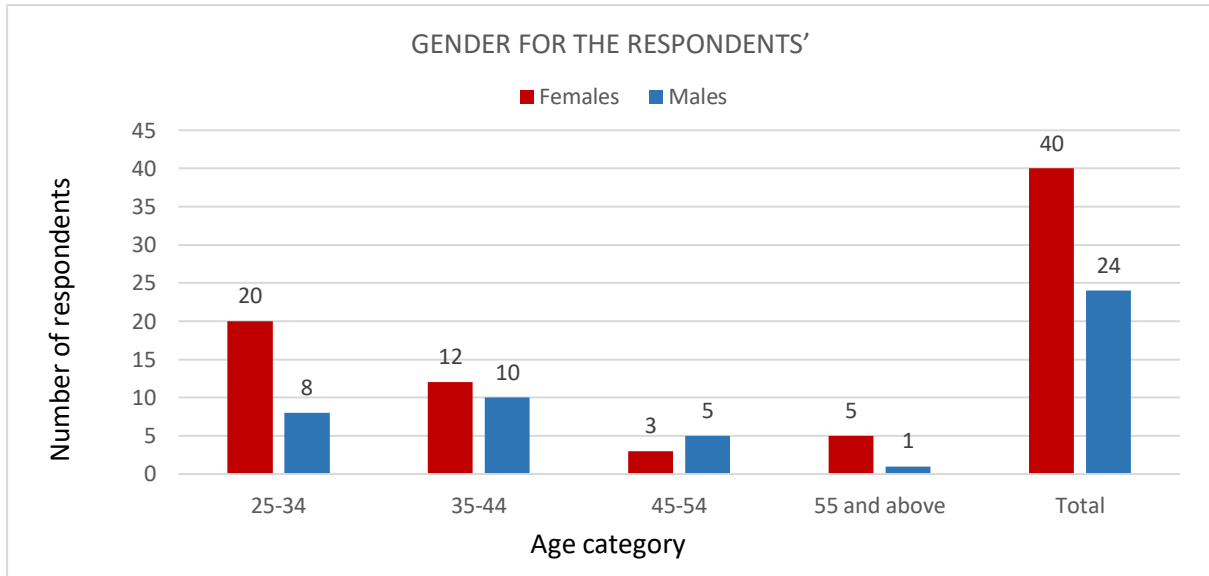


Figure 4.2: Gender of study respondents

The study was conducted in town (*houses ERF numbers sampled from the town council housing database*), and all houses were modern. Still, the participants had the experience of residing in modern and traditional housing. All 40 females and 20 males lived in modern housing during the study. It is significant in understanding the study sample size, age distribution, and the age group that represented the most among the respondents. Figure 4.3 shows the gender and age category.

By analysing the age groups, females dominated males, except among the 45–54 years old, where five males and three females were recorded. The findings also showed that many of the respondents were between 25 and 34 years old. A possible explanation for the young adults could be that younger adults have started working and are staying in town for a better living. Some were from different towns or villages and did not have any relatives in the villages.

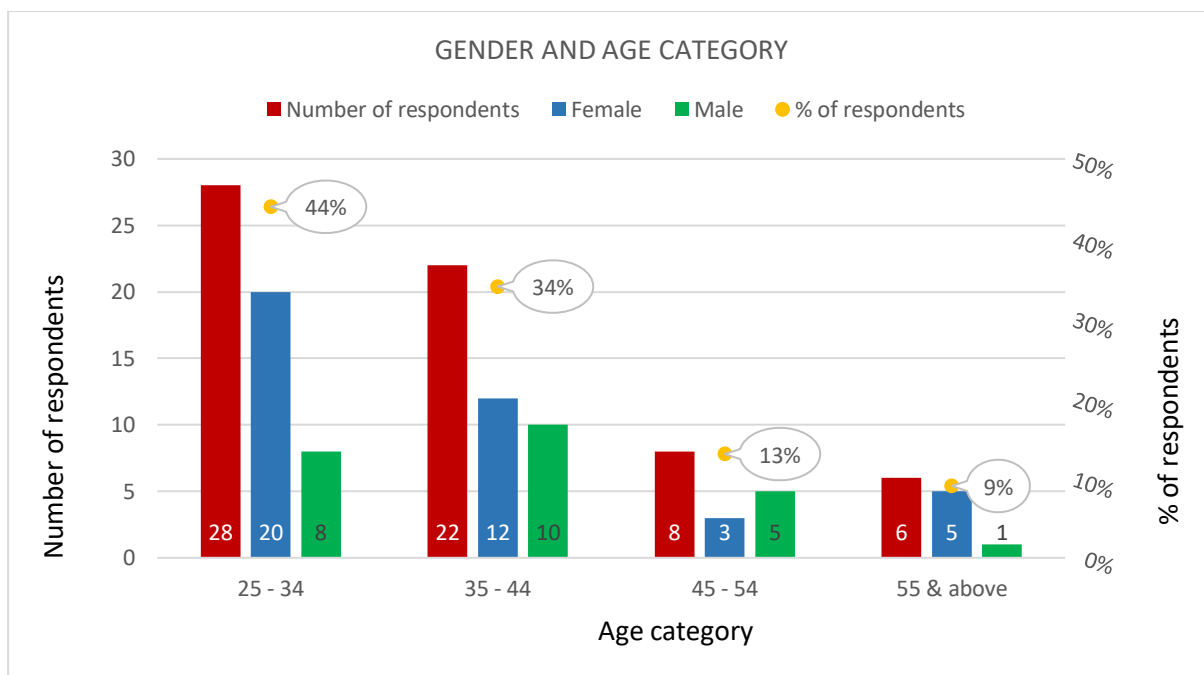


Figure 4.3 Gender of study respondents by percentage

The majority of the young adults worked in hospitals, clinics, regional offices, and retail shops. Other young adults worked in nearby schools and preferred living in town, compared to villages where schools are located, versus the older working age group who owned village houses and preferred to commute from village to town. The study's findings on demographics are supported by the same research conducted by Nakashwa and Kakwambi (2016) on gender, which found a higher number of females (21) than males (6). In my view, it indicates that females are more likely to stay at home and are more willing to participate in the studies than their male counterparts.

4.3.2 Marital status

Sixty-four respondents (24 males and 40 females) have completed the marital status question. As shown in Figure 4.4, 66% of the respondents (14 males and 28 females) were single, while 31% of the respondents (9 males and 11 females) were married. The other category comprised 3% (1 male and 1 female). The majority of the respondents were between the age of 25 and 34 years. A possible reason for this age group, which also made up a high number of single categories because most of the could be that the respondents were young and had just recently completed their tertiary education. Figure 4.4 shows the marital status of the study respondents in Omuthiya town.

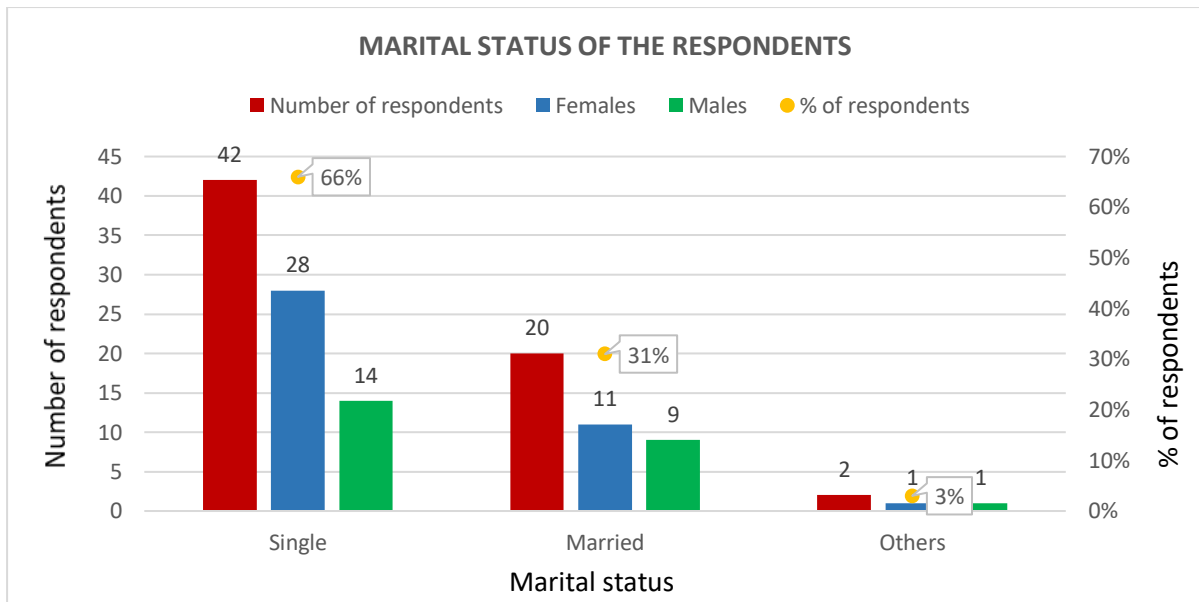


Figure 4.4 Marital status

In some situations, married couples have financial stability and can afford modern housing compared to unmarried couples with limited finances who cannot afford modern housing costs. Culture also plays a role in married couples being allocated land to build traditional housing, while single parents face barriers to acquiring houses because of social norms. Analysing the number of married and single respondents provides insight into understanding the proportion of marital status among the study respondents. During the data analysis, the number of single males was twice that of females, while the proportion of married males was almost equal to that of married females. The study is supported by a research study conducted by Nakashwa and Kakwambi (2016) that found the marital status of single respondents was twice (18) that of the married (8) respondents. This data is essential for policy formulation in housing development based on the outcome of married status and gender. The information can lead to further studies and help other researchers build on it.

4.3.3 Level of education

Determining the respondents' level of education was vital in the research study. Figure 4.5 represents the level of education of respondents in Omutiyya town.

Sixty-four respondents completed the question on level of education. A high percentage of 34.4 comprised ten males (42%) and 12 females (30%) who have obtained a degree. The second highest group (31,3%) were diploma holders,

consisting of 8 males (33%) and 12 females (30%). The high school and postgraduate holders each obtained 17%, the lowest percentage among all education levels as indicated in Figure 4.5.

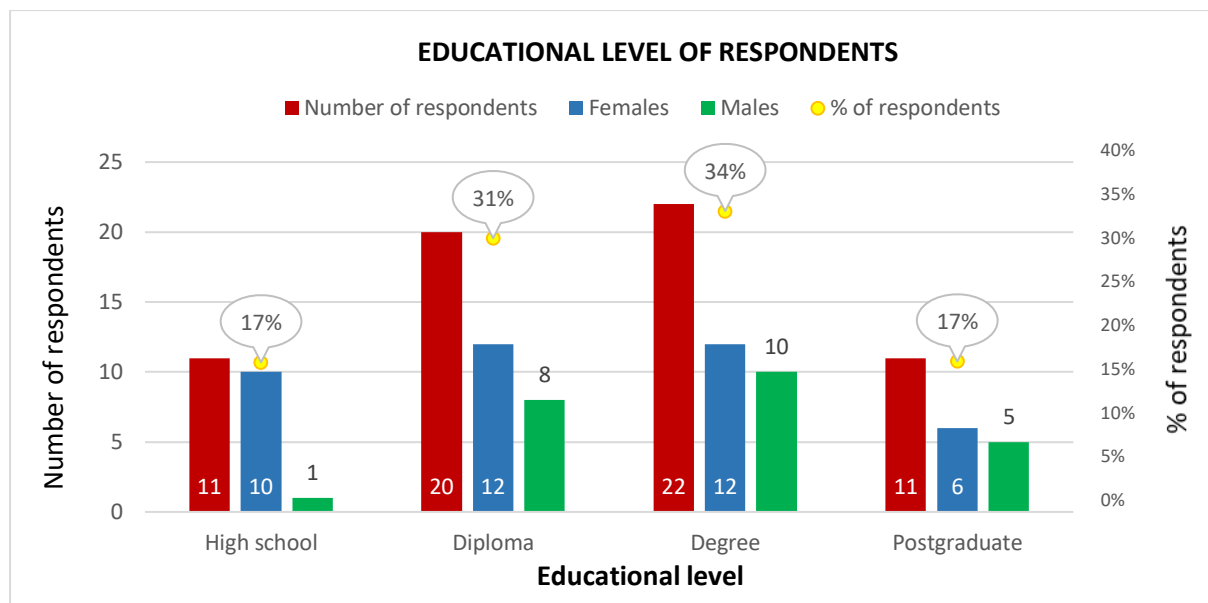


Figure 4.5 *Level of education*

The Labour Force Survey of 2018 (NSA, 2019) found that 20.2% of those who participated in the survey had high school, 8.2% had university certificates, diplomas or degrees, and 2.5% had postgraduate certificates, diplomas or degrees. People with higher education access better employment opportunities with higher income, which allows them to access modern housing. Most Namibians are completing high school (Grade 12), and only a few continue with further studies to complete university certificates, diplomas and degrees. Most of the respondents who participated in this study are those working and have obtained tertiary education. In comparing the findings of this study with the Labour Force Survey findings, there is a correlation between those who completed postgraduate studies in both surveys. It is essential to understand the level of education to guide the formulation of education policies and ensure that educational programmes are linked with the background of the communities. housing loans/mortgages for modern housing compared to people without or with a low education level. Educated people can also understand better housing terminologies such as zoning laws, housing policies and land ownership

4.3.4 Living status

The last question in the demographic section was on living status and was completed by 64 respondents. Figure 4.6 shows the living status of respondents in Omuthiya.

A high number of respondents, 59% of 14 males (58%) and 24 females (60%), were tenants. The second highest of 38%, nine males (38%) and 15 females (38%), were homeowners. The other categories received the lowest (3%), with one male (4%) and one female (3%), as illustrated in Figure 4.6.

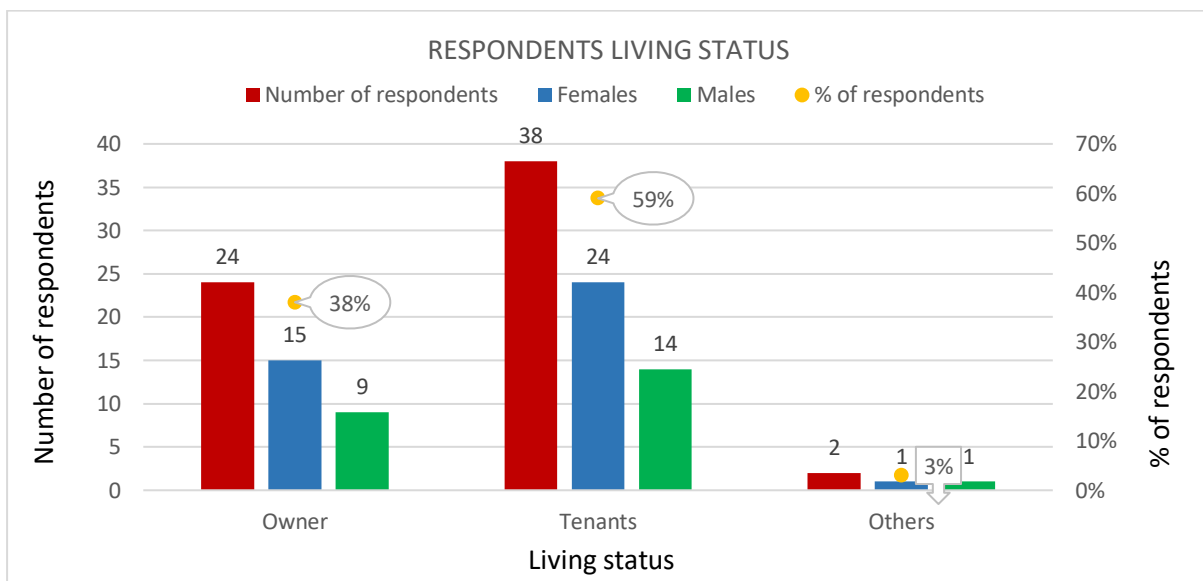


Figure 4.6 Living status

These findings showed that only 24 respondents owned houses in Omuthiya, and many are still to acquire their properties. In a study conducted by Hasanzadeh et al. (2019) on urban structure and actualisation of residential areas among a population of 3 403, 17% formed the study sample, and all participated. Most respondents were homeowners, with 64.2%, tenants 32.2%, and 4.6% occupying single households.

The homeowners indicated that people are acquiring housing property in town, and a high number of rentals indicated the unaffordability of housing in town or the town not making provision for the residents to acquire housing properties while traditional housing is usually owned in a communal entity. Remmert and Ndhlovu (2018) mentioned that some opportunities to reduce high rental rates are housing programmes such as developers constructing affordable housing for housing schemes, government housing assistance programmes, and first-time housing buyers

to motivate residents to own housing properties. It is significant for policymakers to use information that considers both rental and homeowners, which helps town laws and tax incentives to assist in affordable housing programmes.

4.4 Five assets of sustainable livelihood

This section discusses the second part of the study questionnaire and seeks the review and opinion of the respondents using five assets of the sustainable livelihood approach. The views and opinions were evaluated on the Likert scale from one to five (1 = *strongly disagree*, 2 = *disagree*, 3 = *neutral*, 4 = *agree*, and 5 = *strongly agree*). Each asset consists of five Likert scale statements and one open-ended question.

4.4.1 Human assets

Human assets are the first assets in the sustainable livelihood approach. It focuses on the skills, knowledge, resources, and development that human beings need to sustain their lives. The first statement of human assets was: “Modern housing provides better cultural opportunities than traditional housing.” This statement received a response from 63 out of 64 respondents and received the lowest mean score of 2.06. The respondents disagreed with the statement and perceived traditional housing to provide better cultural opportunities than modern housing. The respondents viewed modern housing as being built in a modern (Western style) and not associated with cultural ways. For example, the literature indicates that the Oshiwambo community’s traditional housing is circular or rectangular, with one well-known structure called Ombanda (Tonjes, 1996). In contrast, a modern house is one structure with different rooms, while a traditional house consists of different structures used for various purposes.

The second statement of human assets was: “Traditional housing promotes a stronger sense of community than modern housing.” Sixty-four respondents responded to this statement and received an average score of 3.86. This means the score showed that the respondents were in agreement with the statement and supported traditional houses in promoting a strong sense of community compared to modern housing. The third statement was: “Living in modern housing promotes access to health care services compared to traditional housing.” This statement received responses from 64 respondents and received a mean score of 3.92. This finding indicated that the

respondents supported the statement that modern housing promotes access to health care services. People living in rural areas (traditional housing) suffered due to lack of access to basic services. Their vulnerability can be high when seeking services such as school, medical care, water, electricity and, most of the time, transport for food insecurity. In the respondents' view, in Namibia, some communities still live more than 60 km away from health facilities or roads. These communities have different forms of access than those living in Omuthiya town, who were less than one or two kilometres from and to health care services.

The fourth statement was: "Modern housing provides better educational and skill development opportunities than traditional housing." This statement received a 98% response rate with a mean score of 3.95. The respondents agreed with the statement and supported better educational and skill development in modern housing compared to traditional housing. One of the respondents mentioned that "*modern housing provided access to better education, health centre and internet connection*". Cities/towns have recreational facilities and resources that promote education and skills development. Some of these facilities include libraries that are seen in some towns, including Omuthiya, compared to villages. In addition, qualified teachers and higher education institutions are found in towns. I believe this statement is correct because better schools are found in urban areas compared to rural areas. People with low education levels are at risk of disadvantages in housing policies. Sometimes, this is caused by factors such as insufficient knowledge of economic challenges. Clapham (2002) pointed out that to prevent exclusion, there must be education that provides financial literacy and develops strategies for employment and housing to provide training to avoid exclusion.

The fifth and last statement of human assets was: "Traditional housing offers better access to natural resources such as agricultural land than modern housing." Sixty-three respondents responded to this statement and received a mean score of 4.14, the highest average for human assets. The respondents agreed that traditional housing offers better access to natural resources. "In my view, I support the statement because agricultural land is only available in villages where you find traditional housing compared to where you find modern housing. In addition, all the traditional houses are surrounded by agricultural land where house member cultivates their food, and this

land is natural.” Figure 4.7 shows the mean score of human assets among the study respondents in Omuthiya town.

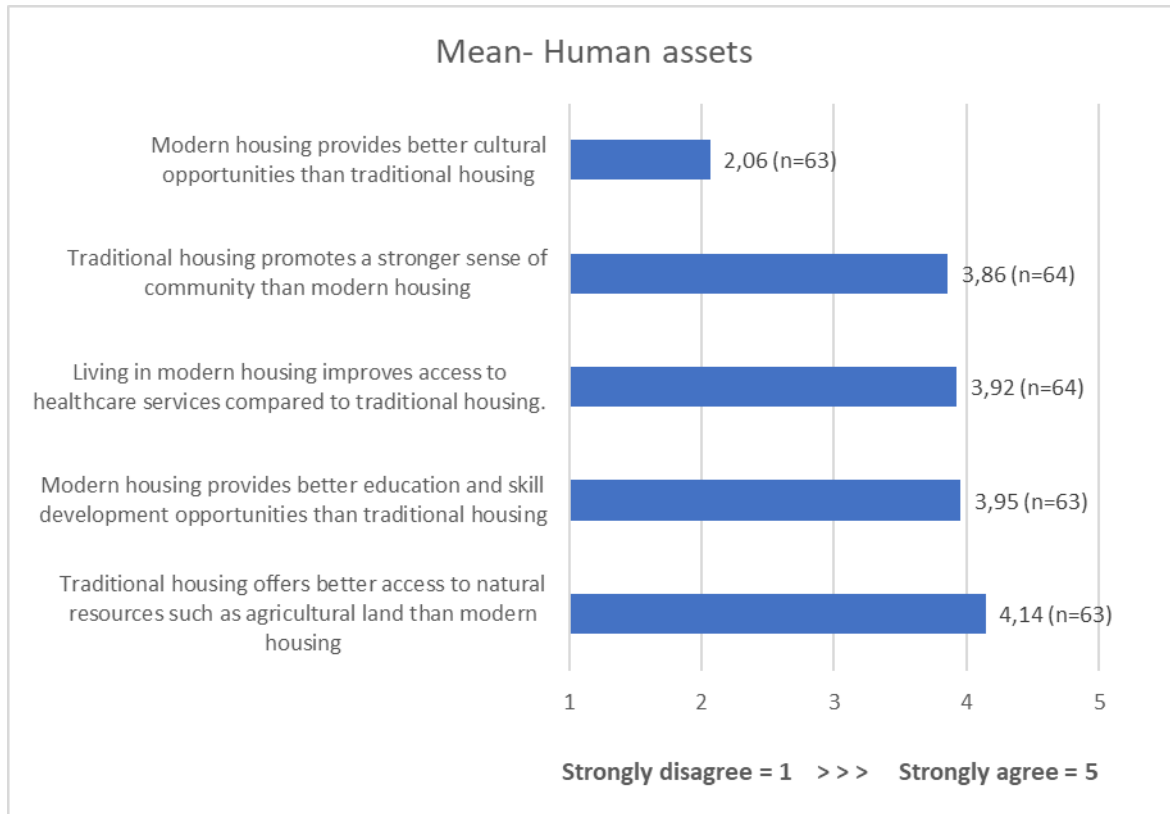


Figure 4.7 Mean score of human assets

Based on the statement, modern houses have better access to essential utilities such as water and electricity than traditional houses. Some of the respondents indicated that modern housing provides

“enough time to study with an internet connection (Wi-Fi), manage to study online because having access to the internet, exposed to newspaper and TV, where skill development is promoted and access to (ICT) is more prevalent in modern housing than in traditional housing”.

4.4.2 Social assets

Social assets consist of resources, development and economics, which people draw on their livelihood objectives. The first statement of social assets was: “Traditional housing has a positive impact on local economies and job creation.” This statement received a response from 64 respondents with a mean score of 2.75 and the lowest score. The respondents disagreed with the statement and perceived modern housing to have a positive impact on local economies and job creation more than traditional

housing. Traditional housing is being constructed using locally sourced materials such as wood, grass, bricks and stones that cannot create employment for local communities, unlike modern housing, where the construction sites will require many construction workers, from unskilled to skilled labourers. In towns/cities, there are hardware and building supply stores to supply building materials to contractors, and this process will impact economies by creating jobs. The second statement was: “Modern housing development involves community participation and consultation.” Sixty-four respondents completed the statement and received the second-lowest mean score of 2.94. The respondents disagreed with the statement that there is no community participation and consultation in modern housing development. Participation and consultation are done between the developer and local authority, and community needs and preferences are ignored. One of the respondents mentioned that:

“modern housing affects social interaction negatively as there is limited movement compared to traditional housing; it has reduced the community interaction as urban houses are mostly fenced off by boundary wall and limiting access to interact with neighbours; and there is a lower level of interaction in modern housing than in traditional housing.”

The third statement was: “Modern housing development meets the needs of vulnerable and marginalised groups such as women, children and the elderly.” This statement received responses from 63 respondents with a mean score of 3.47, which agreed with the statement that modern housing development meets the needs of vulnerable and marginalised groups. Modern housing is constructed by looking at the needs of all individuals. Housing for people with a disability, for example, is built with features that will help them meet livelihood objectives. Some of these features include corridors for wheelchairs, step-free entrances and accessible bathrooms. Safety and security measures, such as secure entry systems and surveillance cameras, are also incorporated in modern housing to increase safety. In Namibia, most stakeholders are town councils, the Ministry of Urban and Rural Development, the developers and the Quantity Surveyor.

The fourth statement was: “Traditional housing development involves community participation and consultation.” Sixty-three respondents responded with a mean score of 3.78. The respondents agreed that traditional housing development involves community participation and consultation. Consultation helps developers know what

and how the community amenities and features improve the housing and quality of life. In modern housing development, the community is not involved but only involves relevant stakeholders. In traditional housing development, the stakeholder involves the village committee, traditional authority, and other relevant stakeholders who must meet and agree on the development.

The last statement of social assets was: “Modern housing development has a positive impact on local economics and job creation.” Sixty-four respondents responded to this statement and received a mean score of 4.14, the highest score in social assets. The respondents have agreed that modern housing development has a positive impact on local economies and job creation. The respondents viewed this statement as saying that local communities are recruited during housing development and that building materials are taken from local building supplies. One respondent has shown the positive impact of modern housing by responding that

“living in modern houses helped me to have excellent social interaction”.

In contrast, one respondent has seen the negative impact of modern housing by saying that

“living in modern housing has more peer pressure from others”.

Modern housing construction requires steel, concrete, glass and other fixtures and fittings. This process requires multiple team players in the economy, including manufacturing and transportation, and creates jobs. For example, most unskilled labourers were recruited during NHE housing construction in Omuthiya town. Building hardware stores such as Built It benefited because the contractor purchased building materials from the Built It shop. Figure 4.8 shows the participants’ responses to social assets in Omuthiya town.

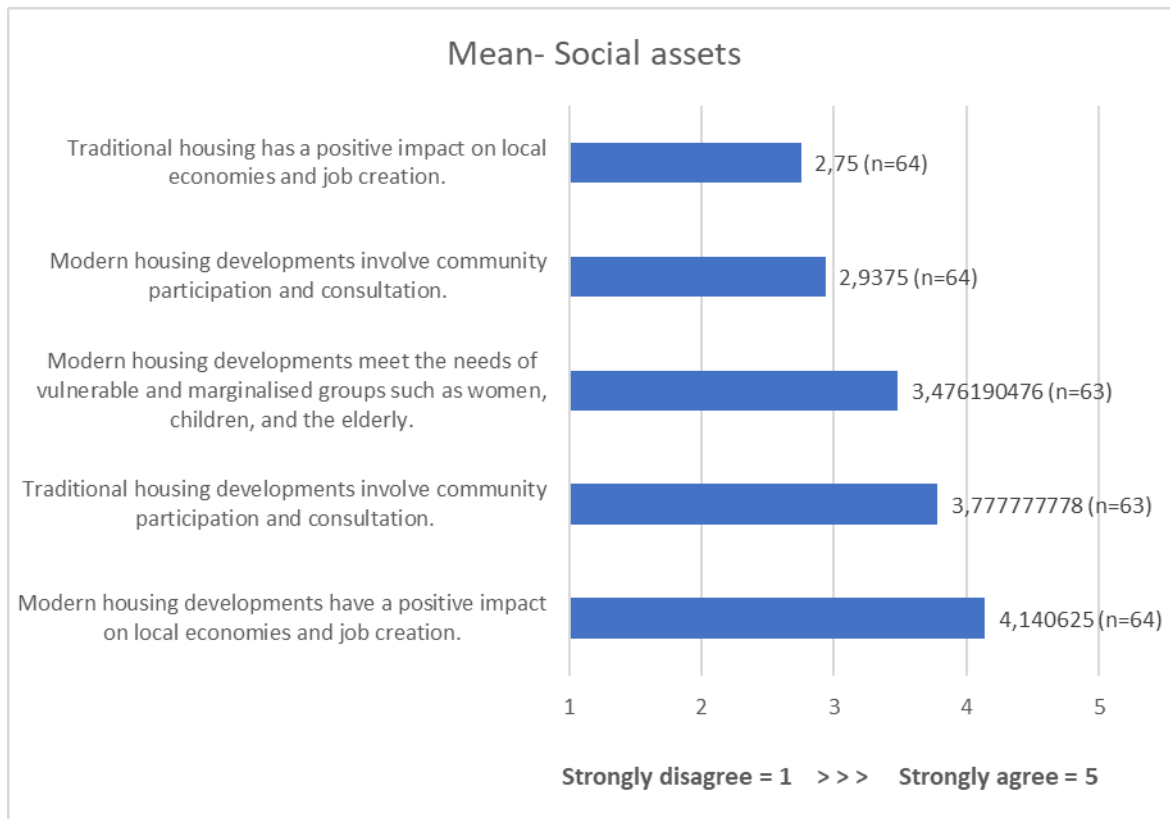


Figure 4.8 Social assets mean score

4.4.3 Natural assets

Natural assets focus on land, water, and the environment that people need to access to achieve sustainable livelihood objectives. The first statement was: “Modern houses are built using environmentally sustainable materials.” Sixty-three respondents answered this statement and received the lowest mean score of 2.90. The respondents disagreed and perceived traditional houses built with environmentally sustainable materials rather than modern housing. The second statement was: “Modern houses contribute less to environmental pollution and degradation than traditional houses.” Sixty-four respondents completed this statement and received the second-lowest mean score of 3.05. Respondents were neutral, meaning they neither disagreed nor agreed with the statement. This statement received a neutral mean score of 3.05. The respondents needed to know the difference between traditional and modern houses, which contribute less to environmental pollution and degradation. In my view, there is a need for a study to prove which one contributes more between modern and traditional.

The third statement was: "Traditional houses have better access to natural resources such as clean water and fertile land than modern houses." The statement received a response from 62 respondents with a mean score of 3.10. The respondents were also neutral with the statement. Traditional houses have better access to natural resources such as fertile land. However, not all traditional houses have clean water, while modern houses have clean water but not fertile land due to the size of the erven and some modern houses are built in rocky areas. One respondent stated that:

"Traditional houses use less water."

The fourth statement was: "Modern houses have better access to natural resources such as clean water and fertile land compared to traditional houses." Sixty-three respondents completed this statement and received a mean score of 3.35, the second highest. The respondents slightly agreed with the statement. One respondent mentioned that:

"modern houses should plant trees within them".

In my view, they perceived clear water as water found in town and sometimes this water went through a purification process that made it unnatural. The fifth and last statement of natural assets was: "Traditional houses are built using environmentally sustainable materials." Sixty-three respondents completed this statement with the highest mean score of 3.93. Some respondents have indicated that:

"traditional housing uses natural materials that can be grown and are sustainable; traditional housing is designed to suit their climate and geography; traditional housing uses natural resources, as they are cheaper and designed to prevent the rooms from being destroyed by animals".

The respondents agreed with the statement. I believe this study's findings and relevant literature support traditional houses more than modern houses in environmentally sustainable materials. Modern houses are built from imported materials such as cement, steel and concrete. In contrast, traditional houses are built with locally available materials, such as thatch (grass) and wood that are environmentally sustainable. Figure 4.9 shows the mean score of natural assets among the study respondents in Omuthiya town.

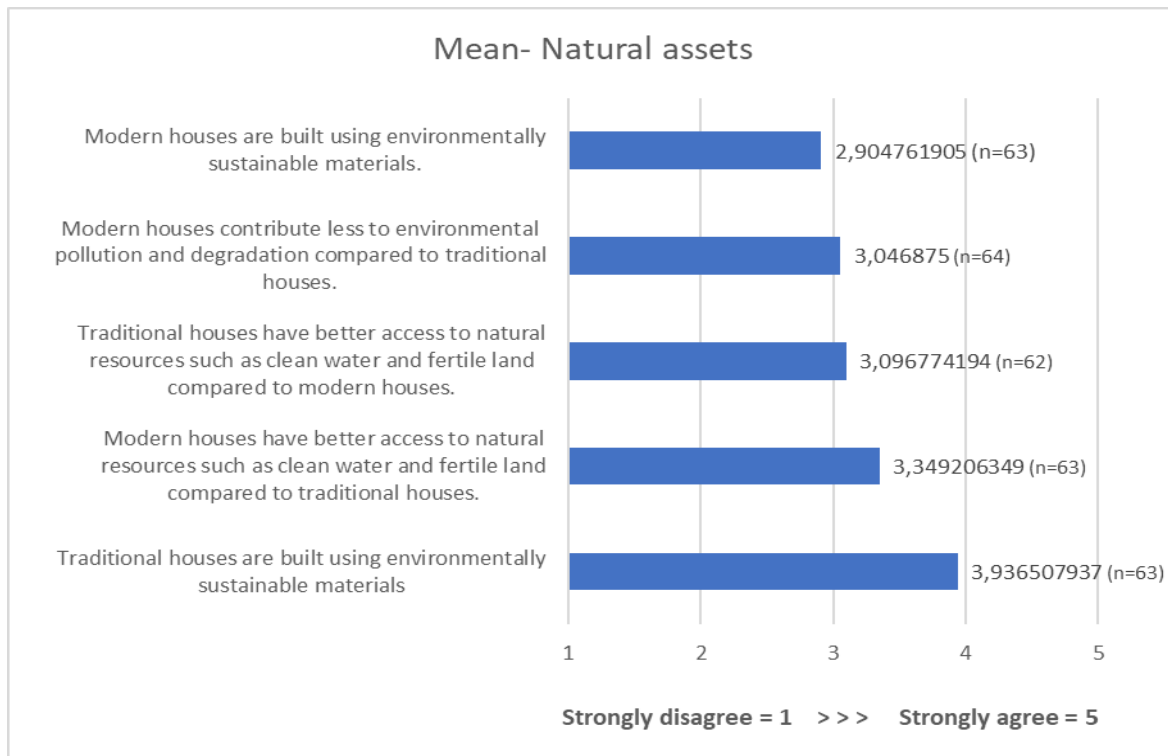


Figure 4.9 Natural assets

4.4.4 Physical assets

Physical assets refer to physical infrastructure such as roads and transport, and tools and technology that involve equipment for production. The first statement was: “Modern houses are more accessible to low-income households than traditional houses.” This statement received the lowest average score of 2.16, and the respondents disagreed. Modern houses in Namibia are expensive, and the middle working class cannot afford to acquire houses. Namibia’s government have implemented measures to address housing, such as the MHDP and National Housing Enterprises and the low-income group still cannot afford to buy modern housing compared to traditional housing.

The second statement was: “Traditional houses have better structural durability and safety features than modern houses.” This statement received a second-lowest mean score of 2.36. The respondents disagreed with the statement because traditional houses are made of less durable materials, such as grass and wood that can last for a few years, compared to modern houses that use high-durability materials, such as cement and steel. In my view, traditional houses use materials with less durability that are environmentally sustainable and cheaper, while modern houses use costly high-

durability materials. The third statement was: "Modern houses have better access to transportation and communication infrastructure than traditional houses." This statement was completed by 64 respondents with a mean score of 4.22, with respondents agreeing with the statement. They believed streets in towns connect houses with or without tarred roads more than village houses, where someone has to walk a long distance to access transport. Communication services are primarily available in town, although villages have cell phone connections these days.

The fourth statement was: "Traditional houses have lower maintenance and repair costs compared to modern houses." Sixty-four respondents agreed with a mean score of 4.31, with respondents agreeing with the statement. The respondents agreed that traditional housing materials are cheaper because they are locally available and environmentally sustainable compared to modern housing materials that require transportation. One participant mentioned that:

"the traditional house is better than the modern one because there are trees where you can stay in winter, and in summer, you can stay around the fire".

Traditional houses are less costly in terms of materials and labour. The materials required for maintenance are sustainable and available locally, sometimes without any cost. Modern houses that require skilled personnel to repair materials and labour costs are also required.

The last statement of physical assets was: "Modern houses have better access to basic utilities such as water and electricity than traditional houses." This was the last statement on physical assets, and it received fewer respondents (63) than other statements, with a higher mean score of 4.40, with respondents agreeing with the statement. All modern houses are generally connected to water pipes due to toilets requiring water for flushing and electricity for cooking and lighting. The respondents knew that not all traditional houses have water and electricity, but those living in town have access to water and electricity. The respondents expressed that

"the modern house is more durable to live in during summer or winter because you can use air conditioning to make it hot or cold".

Figure 4.10 shows the mean score of physical assets among the research respondents in Omuthiya town.

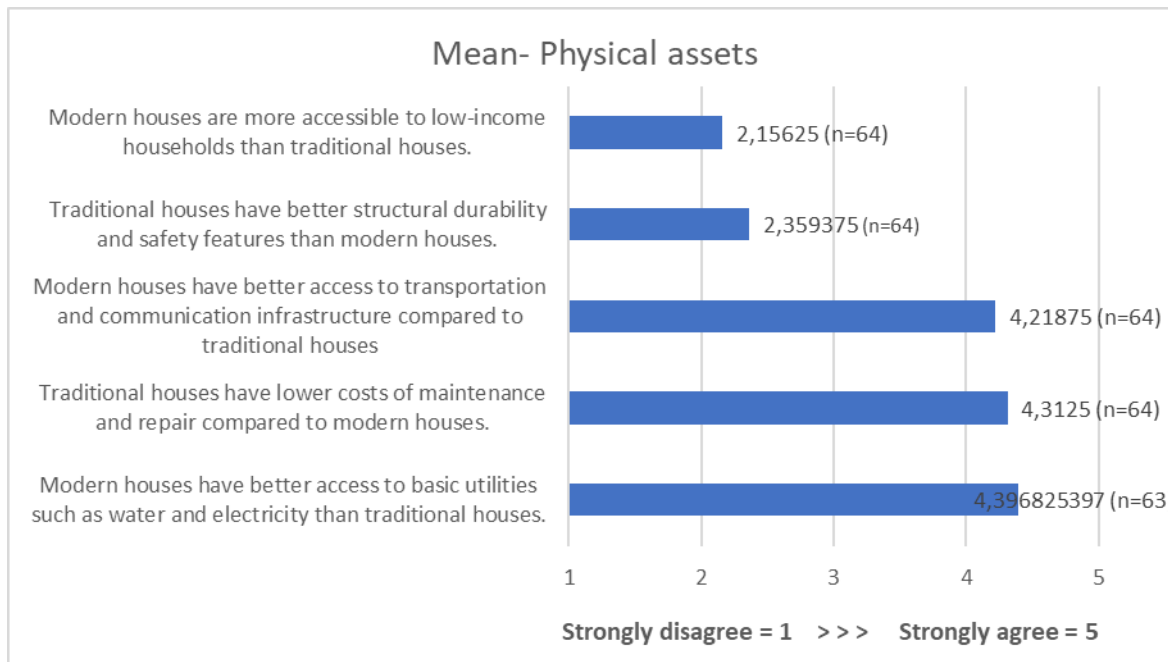


Figure 4.10 Physical assets mean score

Some respondents under physical assets mentioned the following:

“Traditional housing is more comfortable because of its naturally regulating weather. Modern houses are more durable to live in during summer or winter because you can use air conditioning to make them hot or cold. Modern buildings are comfortable because they are made of bricks, while traditional houses are made from natural materials. Modern houses are more comfortable to live in since they have cooler temperatures during summer and warmer temperatures during winter, unlike traditional dwellings.”

4.4.5 Financial assets

Financial capital or assets are the last assets of sustainable livelihood and refer to money in the form of savings, credit and debt that help people achieve livelihood objectives. The first statement was: “Modern houses are more affordable and accessible to low-income households than traditional houses”, and 64 respondents responded to this statement. It received the lowest average score of 1.88, with the respondents strongly disagreeing with the statement. Modern housing is more affordable and accessible to low-income households than traditional houses. The statement received the lowest mean score of 1.88. Modern houses are not affordable to lower-income groups in Namibia. Mostly, low-income groups such as cleaners in Namibia’s government and other organisations cannot afford to buy a house because

of the cost associated with constructing modern houses. The salary for low-income groups cannot allow them to qualify for a house loan from institutions. The government implemented programmes targeting the low-income group, but the housing being constructed under these programmes is still not affordable to low-income groups. The second statement was: "Living in modern housing increases job opportunities compared to traditional housing." The statement was completed by 63 respondents and received a mean score of 3.32, with respondents slightly agreeing with the statement.

The third statement was: "Residents in modern housing have better access to financial services linked to houses such as credit and savings than traditional housing." Sixty-four respondents completed the statement and received the third-lowest score of 3.84, and The respondents agreed with the statement. The fourth statement was: "Traditional housing promotes self-sufficiency and reduces the need for financial assistance more than modern housing." The statement was completed by 64 respondents and received an average score of 4.03 in favour of agreeing with the statement. One participant indicated:

"In traditional houses, you can generate income through farming or gardening, whereas in modern homes, you can't."

The last and fifth statement was: "Living in modern housing leads to a higher cost than traditional housing." Sixty-four respondents, with the highest mean score of 4.48, agreed with this statement. The respondents agreed with this due to the high cost associated with modern housing. One respondent mentioned: "I think modern housing is expensive because you need money to buy materials used to construct the house." Other respondents stated that:

"The cost of owning and living in modern housing is unbearable compared to traditional housing.

If you lose work, you cannot afford to live in a modern house as the bill is high.

Modern houses have water, electricity, and food that must be bought or paid for, and in modern housing, one uses electricity for cooking.

In contrast, one uses firewood in traditional housing, which is freely obtainable or cheaply."

Modern houses require monthly essential services such as refuse and sewage fees and monthly water and electricity usage. Maintenance of modern houses is also high compared to traditional houses, which are built using environmentally sustainable

materials, and there are no monthly costs like modern houses. Figure 4.11 shows the mean score of financial assets among the respondents in Omuthiya town.

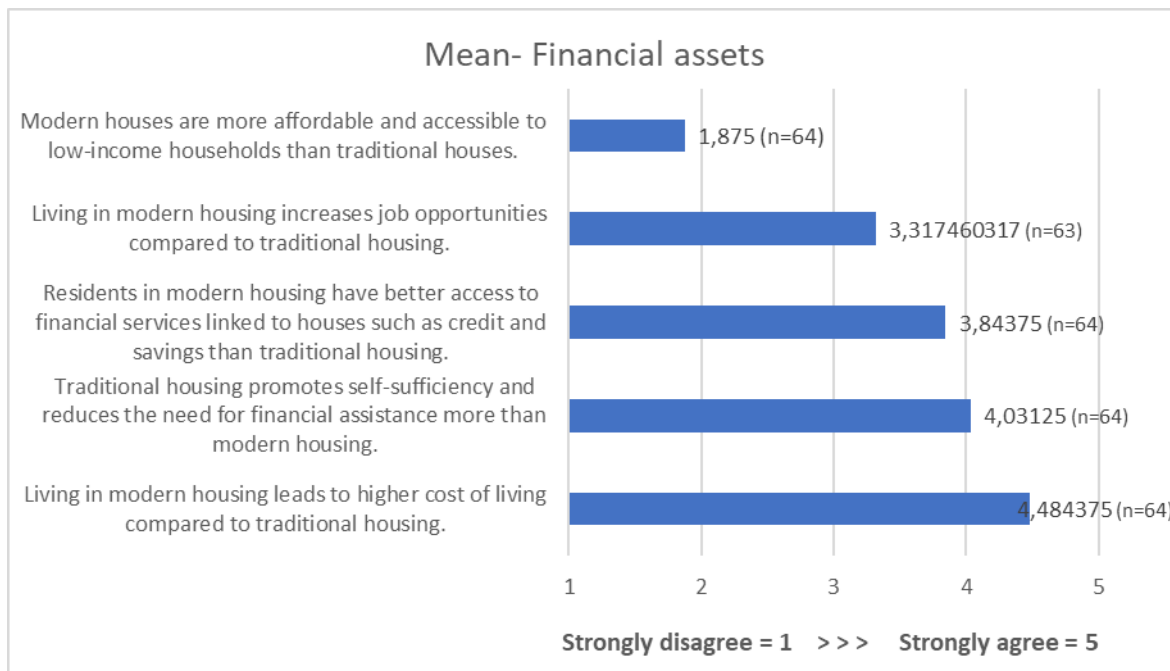


Figure 4.11 Financial assets mean score

Another impact of living in modern houses, as mentioned by respondents, includes the following:

“In modern housing, one uses electricity for cooking, whereas in traditional housing, one uses firewood, which is freely obtainable or cheap.

Living in modern houses creates job opportunities, unlike living in conventional homes.

However, living in a modern house is more expensive than living in a traditional house.”

4.5 Conclusion

This chapter presented the findings from the study. The study respondents were 64 (24 males and 40 females). Among the age group, the majority of respondents were between the age of 25 and 34 years, represented by 8 males and 20 females, while the lowest was among the age of 55 years and older, with one male and five females. The study noticed more respondents among the single respondents, 14 males and 28 females. Regarding living status, most respondents were tenants, with 59% (14 females and 24 females).

Regarding human assets, the statement that traditional housing offers better access to material resources such as agricultural land, than modern housing, obtained the highest mean score of 4.14 in favour of supporting the statement. The second statement was that modern housing development has a positive impact on the local economy, and job creation has obtained a mean score of 4.14 under social assets. Regarding natural assets, the highest mean score of 3.94 was under the statement that traditional houses are built using environmentally sustainable materials. The fourth asset was physical assets, with the highest mean score of 4.39, obtained under the statement that modern housing has better access to essential utilities such as water and electricity than traditional houses. The last asset was financial, where the highest mean score of 4.48 was obtained under the statement that living in modern houses leads to a higher cost than traditional houses. The next chapter discusses the conclusion and recommendations.

Chapter 5

CONCLUSION, RECOMMENDATIONS AND LIMITATIONS

5.1 Introduction

This chapter presents the main results from the data analysis. It also discusses the recommendations based on the study objectives and findings, and the last section discusses study limitations.

5.2 Conclusion

A comparative analysis of traditional and modern house studies was conducted in the Omuthiya Town Council. The study's main aim was to use five asset categories of the sustainable livelihood approach to compare the benefits of living in traditional housing versus modern housing in Omuthiya town, supported by the study objectives. Sixty-four (24 males and 40 females) respondents, aged 25 and above, participated in the study and had experience living in both modern and traditional housing. The study evaluated the livelihood of these respondents using five assets. On human assets, the respondents perceived that traditional housing offers better access to natural resources such as agricultural land than modern housing. In contrast, modern housing provides better education and skills development opportunities than conventional housing. Regarding social assets, modern housing developments had a positive impact on local economies and job creation, while traditional housing developments involved community participation and consultation.

The study further found that traditional houses are built using environmentally sustainable materials on natural assets. Modern houses have better access to natural resources such as clean water and fertile land than traditional houses. Regarding physical assets, people perceive traditional houses as built by using environmentally sustainable materials. In contrast, modern houses have better access to natural resources such as clean water and fertile land than traditional houses. Regarding physical assets, modern houses have better access to essential utilities such as water and electricity than traditional houses. In contrast, traditional houses have lower maintenance and repair costs than modern homes. Living in modern housing leads to

a higher cost of living than in traditional housing. In contrast, traditional housing promotes self-sufficiency and reduces the need for financial assistance more than modern housing.

5.3 Recommendation

This section presents the recommendations for designing housing policies in Namibia and for broader efforts to promote sustainable livelihoods and well-being in the country. From the study findings, the researcher provides the following recommendations:

- **Promote modern housing for better services:** The study found that modern housing offers better access to education, health, skills development, information communication, and technology, critical human assets for livelihoods. The study recommends that housing policies concentrate on expanding modern housing, especially in rural areas with limited services.
- **Incorporate cultural design in modern housing:** Traditional houses give a vital sense of cultural preservation, as the study respondents prefer traditional houses to promote cultural opportunities. Policymakers should incorporate cultural design in modern housing development to enhance cultural preservation while improving conditions to maintain cultural heritage in the community.
- **Enhance social integration in modern housing:** Modern housing provides different amenities, including technologies, but social isolation is not due to factors such as boundary walls that prevent or reduce interaction. The study recommends that town planners and developers include designs that foster social interaction, such as packs, open spaces, and communal spaces on every street.
- **Modern housing promotes economic growth:** The study findings indicated that modern housing influences local economic and job creation. To take this advantage, local authorities and housing developers should source labour and building materials from locals for employment and economic growth that enhances the livelihoods of community members. In addition, skills

development in construction will promote a sustainable workforce in future projects.

5.4 Limitations

The research topic has limited relevant literature, indicating that the study area is relatively new and has yet to receive much attention from schools. There is a need to repeat the study to broaden and enlarge the information on the relevant topic.

The second limitation of the study was the scope of the mini-dissertation. The study included a smaller sample size, which makes it challenging to attract comprehensive conclusions that apply to a large population. Omuthiya town has over 5 000 residents, and the study respondents were 64. Therefore, the findings of the study cannot be generalised. Future researchers need to increase the number of respondents to evaluate the findings from the small sample with a significant sample of study respondents.

LIST OF REFERENCES

- Abera, Y.A. 2024. Sustainable building materials: A comprehensive study on eco-friendly alternatives for construction. *Composites and Advanced Materials*, 33.
<https://doi.org/10.1177/26349833241255957>
- Angula, M.N. 2010. *Gender and climate change: Namibia case study*. Heinrich Böll Stiftung, South Africa. https://www.boell.de/sites/default/files/assets/boell.de/images/download_de/ecology/Namibia.pdf
- Azumah, O.K., Muchwa, S.A. and Charles, E. 2023. Influence of livelihood assets on the livelihood outcomes of smallholder farmers in the Bawku East district of northern Ghana. *Open Journal of Social Sciences*, 11:129-144.
<https://doi.org/10.4236/jss.2023.115011>
- Bauer, C. 2020. *Modern housing*. University of Minnesota Press.
- Bredenoord, J. 2017. Sustainable building materials for low-cost housing and the challenges facing their technological developments: Examples and lessons regarding bamboo, earth-block technologies, building blocks of recycled materials, and improved concrete panels. *Journal of Architectural Engineering Technology*, 6(1): article 1000187.
<https://doi.org/10.4172/2168-9717.1000187>
- Bryman, A. and Bell, E. 2007. *Business research methods*. 2nd edition. New York: Oxford University Press.
- Bryman, A. 2012. *Social research methods*. 4th edition. New York: Oxford University Press.
- Carnemolla, P. and Skinner, V. 2021. Outcomes associated with providing secure, stable, and permanent housing for people who have been homeless: an international scoping review. *Journal of Planning Literature*, 36(4):508-525.
<https://doi.org/10.1177/08854122211012911>
- Cheikhyoussef, A. and Embashu, W. 2013. Ethnobotanical knowledge on indigenous fruits in Ohangwena and Oshikoto regions in northern Namibia. *Journal of Ethnobiology and Ethnomedicine*, 9, article 34. <https://doi.org/10.1186/1746-4269-9-34>
- Clapham, D. 2002. Housing pathways: A post-modern analytical framework. *Housing, Theory and Society*, 19(2):57-68. <https://doi.org/10.1080/140360902760385565>

- Creswell, J.W. 2003. *Research design: Qualitative, quantitative and mixed methods approaches* (2nd ed). Thousand Oaks, CA: Sage Publications. <https://www.scirp.org/reference/referencespapers?referenceid=1903634>.
- Dowling, D.M. (2004). Adobe housing in El Salvador: Earthquake performance and seismic improvement. In: Rose, W.I., Bommer, J.J., López, D.L., Carr, M.J. and Major, J.J. (Eds.), *Natural hazards in El Salvador*. GeoScienceWorld. <https://doi.org/10.1130/0-8137-2375-2.281>
- Erichsen, C. 2023. German–Herero conflict of 1904–07 | African history. [online] *Encyclopedia Britannica*. Available at: <https://www.britannica.com/topic/German-Herero-conflict-of-1904-1907>
- Falola, T. 2008. *The power of African cultures*. University Rochester Press. <https://www.jstor.org/stable/10.7722/j.ctt1bh2m2w>
- Farrington, J., Ramasut, T. and Walker, J. 2003. *Sustainable livelihoods approaches in urban areas: General lessons, with Illustrations from Indian cases*. Working Paper 162. Overseas Development Institute, London. <https://www.files.ethz.ch/isn/100411/wp162.pdf>
- Friedman, J.T. 2007. Cultivating ambiguity in (post-)colonial Namibia: Reflections on ‘history’ and conflict in Kaokoland. *The Cambridge Journal of Anthropology*, 27(2):57-76. <https://www.jstor.org/stable/23820814>
- Fujioka, Y. 2005. Vegetation changes and use of palms as a building material by Ovambo agro-pastoralists in north-central Namibia. *African Study Monographs*. Supplementary issue, 30:89-105. <http://repository.kulib.kyoto-u.ac.jp/dspace/handle/2433/68458>
- Galle, P. 2020. Christopher Alexander’s battle for beauty in a world turning ugly: The inception of a science of architecture? *She Ji: The Journal of Design, Economics, and Innovation*, 6(3):345-375. <https://doi.org/10.1016/j.sheji.2020.03.002>
- Golubchikov, O. and Badyina, A. 2024. Sustainable housing for sustainable cities. A policy framework for development *countries*. United Nations Human Settlement Programme (UN-Habitat). UNON, Publishing Services Section, Nairobi. <https://unhabitat.org/sites/default/files/download-manager-files/Sustainable%20Housing%20for%20Sustainable%20Cities.pdf>
- Haidula, T. 2023. NHE delivers houses in Omuthiya: Minister to hand over 140 houses. *Namibian Sun*, 22 November. <https://www.namibiansun.com/infrastructure/nhe-delivers-houses-in-omuthiya2023-11-22> [Accessed 12 March 2024].

- Hasanzadeh, K., Kyttä, M. and Brown, G. 2019. Beyond housing preferences: Urban structure and actualisation of residential area preferences. *Urban Science*, 3(1), article 21. <https://doi.org/10.3390/urbansci3010021>
- Indongo, N. 2015. The effect of urbanisation on housing conditions in Namibia. *International Journal of Humanities Social Sciences and Education*,2(7):1-8. <https://www.arcjournals.org/pdfs/ijhsse/v2-i7/1.pdf>
- Jellenz, M., Bobek, V. and Horvat, T. 2020. Impact of education on sustainable economic development in emerging markets – The case of Namibia’s tertiary education system and its economy. *Sustainability*, 12(21), article 8814. <https://doi.org/10.3390/su12218814>
- Kakwambi, J.N.N. (2016). *Evaluating the self-help housing programme in Namibia: The case of build together programme in Okahao town*. Master’s dissertation, University of the Free State, Bloemfontein, South Africa. <https://scholar.ufs.ac.za/server/api/core/bitstreams/27525fef-2ff1-414d-baa8-fc8210c0de81/content>
- Keulder, C. 1994. *Urban women and self-help housing in Namibia: A case study of Saamstaan Housing Cooperative*. NEPRU Working Paper No. 42. *International Seminar on Gender, Urbanisation and Environment*, Mazingira Institute in Nairobi, 13-16 June 1994. The Namibian Economic, Policy Research Unit, Windhoek. http://dna.nust.na/landconference/nepru_docs/urban_women_and_self_help_housing_in_Namibia.pdf
- Kollmair, M and St Gamper, J. 2002. The Sustainable Livelihoods Approach. Input paper for the integrated training course of NCCR North-South Aeschirried, Switzerland. Development Study Group, University of Zurich. https://www.humanitarianlibrary.org/sites/default/files/2014/02/SLA_Gamper_Kollmair.pdf
- Kuddus, Md A., Tynan, E. and McBryde, E. 2020. Urbanization: A problem for the rich and the poor? *Public Health Reviews*, 41, article 1. <https://doi.org/10.1186/s40985-019-0116-0>
- Kudryashova, I., Martynenko, A. and Remizova, O. 2020. August. The influence of traditional architecture on the design of social housing by masters of modernism. In *IOP Conference Series: Materials Science and Engineering*, 907(1), article 012004. IOP Publishing. <https://doi.org/10.1088/1757-899X/907/1/012004>
- Maio, R., Martin, E., Sojkowski, J. and Ferreira, T.M. 2017. Namibia’s vernacular architecture: Insights towards the sustainable development of local communities. *Ge-conservación*, 1(11):63-70. <https://www.researchgate.net/publication/318208165Namibia> [Accessed 7 Aug. 2024].

- Makaka, G. and Meyer, E. 2005. Temperature stability of traditional and low-cost modern housing in the Eastern Cape, South Africa. *Journal of Building Physics*, 30(1):71-86. <https://doi.org/10.1177/1744259106065674>
- Malik, S. and Hassan, K.A.K. 2019. An investigation of house designs in Lahore: Transformation of residential architecture from traditional to modern. *Journal of Design and Built Environment*, 19(1):49-59. <https://doi.org/10.22452/jdbe.vol19no1.5>
- Maritz, N. (n.d.). *Lessons in building sustainably in a developing country*. The Habitat Research and Development Centre, Namibia. SB042. https://www.irbnet.de/daten/iconda/CIB_DC23125.pdf
- Mazibuko, S. 2013. Understanding underdevelopment through the sustainable livelihoods approach. *Community Development*, 44(2):173-187. <https://doi.org/10.1080/15575330.2012.683798>
- Morse, S. and McNamara, N. 2013. *Sustainable livelihood approach. A critical analysis of theory and practice*. London: Springer. <https://doi.org/10.1007/978-94-007-6268-8>.
- Müller-Friedman, F. 2007. Toward a (post) apartheid architecture? A view from Namibia. *Planning Perspectives*, 23(1):29-48. <https://doi.org/10.1080/02665430701738008>
- Natarajan, N., Newsham, A., Rigg, J. and Suhardiman, D. 2022. A sustainable livelihood framework for the 21st century. *World Development*, 155, article 105898. <https://doi.org/10.1016/j.worlddev.2022.105898>
- National Institute for Education Development. 2016. *The National Curriculum for Basic Education*. Ministry of Education, Arts and Culture, Windhoek. https://www.nied.edu.na/assets/documents/05Policies/NationalCurriculumGuide/National_Curriculum_Basic_Education_2016.pdf
- National Planning Commission of Namibia. 2024. *Housing sector programme*. <https://www.npc.gov.na/national-plans/programmes/programmes-housing-sector/>
- Nebe, C. 2021. Namibia: A timeline of Germany's brutal colonial history. In Focus: Politics (22 September). <https://www.dw.com/en/namibia-a-timeline-of-germanys-brutal-colonial-history/a-57729985> [Accessed 05 Sept. 2024].
- Nembwaya, H. 2023. New open markets at Omuthiya nearing completion. *The Namibian*, 12 June. <https://www.namibian.com.na/new-open-markets-at-omuthiya-nearing-completion/> [Accessed 05 Jul. 2024].
- NHE (National Housing Enterprise). 2024. *News - National Housing Enterprise*. Available at: <https://www.nhe.com.na/news/> [Accessed 20 Jan. 2024].

- Nord, C. 2022a. Family houses – building an intergenerational space in post-apartheid Namibia. *Canadian Journal of African Studies/Revue canadienne des études africaines*, 56(2):427-451. <https://doi.org/10.1080/00083968.2021.1938618>
- Nord, C. 2022b. Post-colonial architecture: deterritorialisation of apartheid township housing and mass-housing. *The Journal of Architecture*, 27(1):71-93. <https://doi.org/10.1080/13602365.2022.2054015>
- NSA (Namibia Statistic Agency). 2019. Namibia labour force survey 2018 Report. Namibia Statistic Agency, Windhoek. <https://www.ilo.org/surveyLib/index.php/catalog/6860/download/41794>
- Olaniran, T.O., Musvoto, G.G. and Aule, T.T. 2024. Potentials for adopting sustainable mixed-income housing in African cities: A bibliometric and systematic review. *Urban, Planning and Transport Research*, 12(1), article 2405195. <https://doi.org/10.1080/21650020.2024.2405195>
- Petrus, J.N.N. and Mosimane, A.W. 2018. Community understanding, perceptions and involvement in tourism development in King Nehale Conservancy, Namibia. *Journal for Studies in Humanities and Social Sciences*, 17(2):23-41. <https://journals.unam.edu.na/index.php/JSHSS/article/view/1089>
- Remmert, D. and Ndhlovu, P. 2018. *Housing in Namibia: Rights, challenges and opportunities*. Institute for Public Policy Research. https://ippr.org.na/wp-content/uploads/2018/03/IPPR_HousingBook_PRINT.pdf
- Republic of Namibia. 2009. Namibia national housing policy. Ministry of Regional and Local Government, Housing and Rural Development, Windhoek; Namibia. https://www.ohchr.org/sites/default/files/Documents/Issues/Housing/sub-nationalgovernments/201114_Response_Namibia2.pdf
- Republic of Namibia. 2010. Follow-up performance audit report of the Auditor-General on the Ministry of Regional and Local Government, Housing and Rural Development-Build Together Programme. For the finance year 2006-2008. Windhoek, Namibia. <https://oag.gov.na/performance-audit-reports>.
- Republic of Namibia. 2023. Namibia National Housing Policy (Second Revision). Ministry of Regional and Local Government, Housing and Rural Development, Windhoek; Namibia. <https://illh.nust.na/sites/default/files/National%20Housing%20Policy-2023%20Revision-Cabinet%20Submission-27%20September%202023-FINAL.pdf>

Reunanen, M. 2019. Behind the MEMORY of the Finnish Missionary in Namibia. *Intertwined Histories – 150 Years of Finnish–Namibian Relations* (19 November).

<https://sites.utu.fi/intertwined-histories/behind-the-memory-of-the-finnish-missionary-in-namibia> [Accessed 15 Sept 2024].

SA History Online. 2015. The Namibian struggle for independence – 1966 – 1990 – a historical background. *South African History Online*. <https://www.sahistory.org.za/article/namibian-struggle-independence-1966-1990-historical-background> [Accessed 15 Sept 2024].

Sati, V.P. and Vangchhia. L. 2017. Introduction. In: *A sustainable livelihood approach to poverty reduction*. Springer Briefs in Environmental Science. Springer, Cham. https://doi.org/10.1007/978-3-319-45623-2_1

Scoones, I. 1998. *Sustainable rural livelihoods: A framework for analysis*. IDS, Working Paper 72, IDS, Brighton, UK.

<https://www.scirp.org/reference/referencespapers?referenceid=1587483> [Accessed 9 Sep. 2024].

SDFN (Shack Dwellers Federation of Namibia). 2023. Annual Report, July 2021 – June 2022. Namibia Housing Action Group (NHAG) Trust, Windhoek.

<https://www.shackdwellersnamibia.com/>.

SDFN (Shack Dwellers Federation of Namibia) supported by Namibia Housing Action Group [NHAG] Trust. (2022). Annual Report, July 2022 – June 2023.

<https://www.shackdwellersnamibia.com/assets/img/SDFN%20NHAG%20Annual%20Reports/2022-2023%20Annual%20Report%20of%20SDFN%20%20NHAG.pdf> [Accessed 7 Nov. 2024].

Serrat, O. 2010. *The sustainable livelihoods approach*. In: *Knowledge solutions: Tools, methods, and approaches to drive organizational performance*. Singapore: Springer. https://doi.org/10.1007/978-981-10-0983-9_5

Shigwedha, V. 2004. The pre-colonial costumes of the Aawambo significant changes under Colonialism and the construction of post-colonial identity. Master's dissertation, University of Namibia. <http://hdl.handle.net/11070/1492>

Shikangala, R.N. 2005. Challenges of delivering low-income housing: A case study of the build together programme of Namibia. Master's dissertation, University of KwaZulu-Natal. <http://hdl.handle.net/10413/2145>

Shiweda, N and Nghitevelekwa, R. 2019. The architectural designs of Finnish missions in North-Central Namibia, 19 November. *Intertwined Histories – 150 Years of Finnish–*

Namibian Relations. <https://sites.utu.fi/intertwined-histories/the-architectural-designs-of-finnish-missions-in-north-central-namibia/> [Accessed 6 Jul. 2024].

Simion, N.T. 2007. Namibia National Housing Programme – “Build Together”. Assessment of the effectiveness of the programme. [online] Available at: https://www.lth.se/fileadmin/hdm/alumni/papers/SDD_2007_242a/Naomi_Simion_Namibia.pdf.

Steinmetz, G. 2007. *The devil's handwriting: Precoloniality and the German colonial state in Qingdao, Samoa, and South-West Africa*. University of Chicago Press. <https://doi.org/10.7208/chicago/9780226772448.001.0001>

Steinmetz, G. and Hell, J. 2006. The visual archive of Colonialism: Germany and Namibia. *Public Culture*, 18(1):147-184. <https://doi.org/10.1215/08992363-18-1-147>

The Namibian. 2018. ‘Big Five’ challenges in school education. *The Namibian*, 24 August. <https://www.namibian.com.na/big-five-challenges-in-school-education/> [Accessed 20 Sept. 2023].

Tonjes, H. 1996. *Ovamboland country people, Mission with particular reference to the biggest tribe the Kwanyama*. Transl Peter Reiner. Windhoek: Namibia Scientific Society. <https://openlibrary.org/books/OL342691M/Ovamboland>.

UN-Habitat. 2012. *Sustainable housing for sustainable cities: A policy framework for developing countries*. Nairobi, Kenya. <https://unhabitat.org/sites/default/files/download-manager-files/Sustainable%20Housing%20for%20Sustainable%20Cities.pdf>

UN-Habitat. 2016. *World Cities Report 2016. Urbanization and development – Emerging futures*. Nairobi, Kenya. <https://doi.org/10.18356/d201a997-en>

UN-Habitat. 2019. *The global housing affordability challenge. A more comprehensive understanding of the housing sector*. Urban Data Digest, Version 2. https://unhabitat.org/sites/default/files/2020/06/urban_data_digest_the_global_housing_affordability_challenge.pdf

UN-Habitat. 2020. *Addressing the housing affordability challenge: A shared responsibility*. Nairobi, Kenya. <https://unhabitat.org/news/31-oct-2020/addressing-the-housing-affordability-challenge-a-shared-responsibility>

Van der Merwe, I.J. 1989. The urban structure of South West Africa/Namibia viewed within a Third-World Framework. In *Geography Research Forum*, Vol. 9, Special issue: International Aspects of Rural and Urban Metropolitan Systems, pp. 109-126. <https://grf.bgu.ac.il/index.php/GRF/article/view/64/60>

Vatileni, E. 2023. Omuthiya mayor slams Govt over poor development at town. [online] *The Namibian*, 29 August. <https://www.namibian.com.na/omuthiya-mayor-slams-govt-over-poor-development-at-town/> [Accessed 05 Jul. 2024].

Vatileni, E. 2024. Omuthiya invests N\$1,3m in stormwater infrastructure. *The Namibian*, 21 February. <https://www.namibian.com.na/omuthiya-invests-n13m-in-stormwater-infrastructure/> [Accessed 05 Jul. 2024].

Weber, B. and Mendelsohn, J. 2017. *Informal settlements in Namibia: Their nature and growth. Exploring ways to make Namibian urban development more socially just and inclusive*. Development Workshop Namibia.

<https://www.raison.com.na/sites/default/files/Informal-Settlements-in-Namibia-Book-Web.pdf>

World Health Organization. 2018. Housing impacts health: New WHO guidelines on housing and health. <https://www.who.int/news/item/26-11-2018-housing-impacts-health-new-who-guidelines-on-housing-and-health>

Appendix A

INFORMED CONSENT OF THE PARTICIPANTS

Research study information leaflet and consent form

Date

15 November 2023

Title of the research project

A comparative analysis of traditional and modern houses in Omuthiya Town Council, Namibia

Principle investigator / researcher(s) name(s) and contact number(s):

Matheus Nghilalulwa 2017209145 +264 81 215 3901

Faculty and Department:

Faculty of Economic and Management Sciences

Department of Development Support

Study leader(s) name and contact number:

Dr Anita Venter (UFS staff member)

+27(0)51 401 3731

What is the aim / purpose of the study?

Explain the aim of the study and why you are conducting the study?

The study aims to use the five asset categories of the Sustainable Livelihood Approach (SLA) to compare the benefits of living in traditional housing versus modern housing in Omuthiya town council, Namibia. Considering these asset categories, the researcher will conduct this study to understand the implications of living in traditional or modern housing. Such a study will help inform decision-making processes, urban planning, and development strategies to enhance the overall well-being and livelihoods of residents in Omuthiya town, Namibia.

Who is doing the research?

Identify yourself and explain whom you work for and/or why you are doing the project.

Matheus Nghilalulwa, a University of Free State student, will conduct the research. The researcher will gain a comprehensive understanding of the benefits and drawbacks of living in traditional housing versus modern housing, considering multiple dimensions of sustainable livelihoods. This knowledge will help inform policy and decision-making processes related to housing and development in Omuthiya town, Namibia.

Has the study received ethical approval?

This study has received approval from the Research Ethics Committee of UFS. A copy of the approval letter can be obtained from the researcher.

Approval number: USF-HSD2023/1473

Why are you invited to take part in this research project?

The researcher will choose 18 and old years' participants with experience living in traditional and modern housing, and these age groups will consent for themselves. The lists of houses will be obtained from Omuthiya town council office. The houses' Erf numbers will be randomly sampled, and 83 participants will be sampled for the study.

What is the nature of participation in this study?

Participation in a questionnaire study will be a voluntary and informed process requiring individuals to respond to a series of questions. The questionnaire will consist rating scale and open-ended questions. The questionnaires will take between 15 to 20 minutes. Participants will be people between 18 and older who have experience living in traditional and modern houses.

Can the participants withdraw from the study?

Your participation in this study is voluntary, and there is no penalty or loss of benefit for non-participation. Being in this study is voluntary, and you are under no obligation to consent to participation. If you decide to participate, you will be given this information sheet to keep and asked to sign a written consent form. You are free to withdraw before signing consent, and it will not be possible to withdraw once you received or submitted the questionnaire.

What are the potential benefits of taking part in this study?

There are no known direct benefits to you from participating in this study. However, it is hoped that information gained from this study will help to understand the benefit of living in traditional housing versus modern housing in Omuthiya town in Namibia.

What is the anticipated inconvenience of taking part in this study?

The researcher will try to minimise any inconvenience and ensure that the research process is as efficient as possible and that the participants can withdraw at any time if they do not have the time. The researcher will ensure that there is no loss of privacy or confidentiality. Only the researcher and supervisor will have access to the data on password-protected devices.

Will what I say be kept confidential?

Your identity in this study will be treated as confidential, information such as your name will not be recorded anywhere, and no one can connect you to the answers you give. Your answer will be given a fictitious code number or a pseudonym, and you will be referred to in this way in the data, any publications, or other research reporting methods, such as conference proceedings. Identify who will have access to the data (transcriber/external coder) and maintain confidentiality by signing a confidentiality agreement. Your answers may be reviewed by people responsible for ensuring that research is done correctly, including the transcriber, external coder, and members of the Research Ethics Committee. Otherwise, records that identify you will be available only to people working on the study unless you give permission for other people to see the records. Participants' anonymous data may be used for other purposes, e.g. research reports, journal articles, conference presentations, etc. However, the study may be submitted for publication, but individual participants will not be identifiable in such a report.

How will the information be stored and ultimately destroyed?

The researcher will store hard copies of your answers for five years in a locked cupboard/filing cabinet at home for future research or academic purposes; electronic information will be stored on a password-protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. After five years, hard copies will be shredded, and electronic copies will be permanently deleted from the computer's hard drive through a relevant software program.

Will I receive payment or any incentives for participating in this study?

There is no financial or otherwise compensation for your participation in this research study.

How will the participant be informed of the findings / results of the study?

If you would like to be informed of the final research findings, please contact Matheus Nghilalulwa (researcher) at +264 81 215 3901 or [mnguilalulwa@gmail.com](mailto:mnghilalulwa@gmail.com). Should you have concerns about how the research has been conducted, you may contact Dr Anita Venter (research supervisor) at +27(0)51 401 3731 or ventera@ufs.ac.za.

Thank you for taking the time to read this information sheet and for participating in this study.

Appendix B

CONSENT TO PARTICIPATE IN THIS STUDY

I, the undersigned,

(participant's full names to be included), (the "Participant")

confirm that I voluntarily agree to participate in the research study referred to as the

_____ (the "Study") in relation to

_____ and which Study is being conducted by

(insert the name of the researcher), (the "**Researcher**").

I, the undersigned Participant, further confirm that–

1. the Researcher has explained the nature, procedure, potential benefits and anticipated inconvenience of my participation in the Study;
2. I have read (or had explained to me) and understood the Study as explained in the attached information sheet;
3. I have had sufficient opportunity to ask questions and am prepared to participate in the Study;
4. I understand that my participation in the Study is entirely voluntary and that I am free to withdraw at any time without penalty (if applicable);
5. I voluntarily provide the UFS and the Researcher with my personal information and consent to the UFS and the Researcher collecting, disclosing and processing my personal information in order to conduct the Study and any related activities in relation thereto;
6. I hereby acknowledge and confirm that I understand the purpose for which the UFS and the Researcher may collect, store, use, delete, destroy, outsource, transfer or otherwise process, as the context and circumstances may require and as contemplated in terms of POPIA, my personal information as set out herein;
7. I am aware that the findings of the Study will be anonymously processed into a research report, journal publications and/or conference proceedings and that my personal information will be aggregated and deidentified at such stage;

8. I also give the UFS permission to share, without notification, the collected data with other researchers at the UFS or other Higher Education Institutions. This permission is dependent on the same principles of ethical research practices, anonymity/confidentiality, safekeeping of information, and other issues listed above applying.

I, the Participant, agree to the recording of the <insert specific data collection method>.

Full Name of Participant: _____

Signature of Participant: _____ Date: _____

Full Name(s) of Researcher(s): _____

Signature of Researcher: _____ Date: _____

Appendix C

QUESTIONNAIRE

DEMOGRAPHICS

(Instructions: please complete this section by ticking the appropriate answer)

1. What is your gender?

Male	
Female	
Prefer not to answer	
Others – please specify	

2. What is your age?

18 - 24 years old	
25 - 34 years old	
35 – 44 years old	
45 – 54 years old	
55 above years old	

3. What is your marital status?

Single	
Married	
Divorced	
Widowed	
Others	

4. What is your education level?

High school	
Diploma	
Degree	
Postgraduate	

5. What is your living status?

Owner	
Tenants	
Lease	
Subtenants	
Others- please specify	

Please indicate your level of agreement or disagreement with these statements on a scale of Strongly Disagree to Strongly Agree. (Mark with X)

A. Human assets		Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
	Modern housing provides better education and skill development opportunities than traditional housing					
	Living in modern housing improves access to healthcare services compared to traditional housing.					
	Modern housing provides better cultural opportunities than traditional housing					
	Traditional housing offers better access to natural resources such as agricultural land than modern housing					
	Traditional housing promotes a stronger sense of community than modern housing					
	Please provide any additional comments or thoughts on how living in modern housing has impacted your education, skills development, culture and overall well-being					

Please indicate your level of agreement or disagreement with these statements on a scale of Strongly Disagree to Strongly Agree. (Mark with X)

B. Social assets		Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
	Modern housing developments involve community participation and consultation.					
	Traditional housing developments involve community participation and consultation.					
	Modern housing developments have a positive impact on local economies and job creation.					
	Traditional housing has a positive impact on local economies and job creation.					
	Modern housing developments meet the needs of vulnerable and marginalised groups such as women, children, and the elderly.					
	In what ways has living in modern housing affected your sense of community and social interactions compared to traditional housing?					

C. Natural assets

C. Natural assets		Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
	Modern houses are built using environmentally sustainable materials.					
	Traditional houses are built using environmentally sustainable materials.					
	Modern houses contribute less to environmental pollution and degradation compared to traditional houses.					
	Traditional houses have better access to natural resources such as clean water and fertile land compared to modern houses.					
	Modern houses have better access to natural resources such as clean water and fertile land compared to traditional houses.					
	How do traditional housing designs incorporate natural materials to promote sustainable living practices, and what can modern housing learn from these designs?					

D. Physical assets		Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
	Modern houses have better access to basic utilities such as water and electricity than traditional houses.					
	Traditional houses have better structural durability and safety features than modern houses.					
	Modern houses have better access to transportation and communication infrastructure compared to traditional houses.					
	Modern houses are more accessible to low-income households than traditional houses.					
	Traditional houses have lower costs of maintenance and repair compared to modern houses.					

	Explain which house, traditional or modern is more comfortable to live in, in terms of temperature during winter and summer
--	---

E. Financial assets		Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree	
	Modern houses are more affordable and accessible to low-income households than traditional houses.						
	Residents in modern housing have better access to financial services linked to houses such as credit and savings than traditional housing.						
	Living in modern housing increases job opportunities compared to traditional housing.						
	Living in modern housing leads to higher cost of living compared to traditional housing.						
	Traditional housing promotes self-sufficiency and reduces the need for financial assistance more than modern housing.						
	Can you share any personal experiences or observations on the economic benefits or challenges of living in modern housing versus traditional housing?						

Appendix D

APPROVAL LETTER FROM OMUTHIYA TOWN COUNCIL



OMUTHIYA TOWN COUNCIL

Tel: (065)244700
Fax: (065) 244730

P. O. Box 19262
Omuthiya
NAMIBIA

OFFICE OF THE CHIEF EXECUTIVE

Enquiries: J. Erkkison

Our Ref:
Your Ref:

2 October 2023

Mr. Matheus Nghilalulwa
PO Box 19541
Omuthiya
Namibia

SUBJECT: REQUEST TO CONDUCT RESEARCH IN OMUTHIYA TOWN IN THE OSHIKOTO REGION

We have the pleasure to inform you that, the Management Committee meeting held 26 September 2023 have approved your request to undertake an academic research in Omuthiya Town Council with the topic "A comparative Analysis of Traditional and Morden House in Omuthiya Town Council in Namibia".


However, the Council have set the following conditions:

That you enter into an agreement with the Council to share a copy of your final reseach findings with the appropriate Department: Technical Services, Planing and Environmental Health, Section: planning for development purposes.

We trust that you will find the above in order. My Office will gladly assist you should you need any further clarity in this regard.

Thank you.

Yours Sincerely


SIMON P NGHILONDO
CHIEF EXECUTIVE OFFICER (ACTING)



Appendix E

APPROVAL LETTER – HUMAN ETHICAL COMMITTEE



GENERAL/HUMAN RESEARCH ETHICS COMMITTEE (GHREC)

23-Oct-2023

Dear Mr N/A Nghilalulwa

Application Approved

Research Project Title:

A comparative analysis of traditional and modern houses in Omuthiya Town Council, Namibia

Ethical Clearance number:

UFS-HSD2023/1473

We are pleased to inform you that your application for ethical clearance has been approved. Your ethical clearance is valid for twelve (12) months from the date of issue. We request that any changes that may take place during the course of your study/research project be submitted to the ethics office to ensure ethical transparency. Furthermore, you are requested to submit the final report of your study/research project to the ethics office. Should you require more time to complete this research, please apply for an extension. Thank you for submitting your proposal for ethical clearance; we wish you the best of luck and success with your research.

Yours sincerely

Dr Adri Du Plessis

Chairperson: General/Human Research Ethics Committee

Digitally
signed by Dr
Adri du Plessis
Date:
2023.10.23
18:17:16
+02'00'

205 Nelson Mandela
Drive
Park West
Bloemfontein 9301
South Africa

P.O. Box 339
Bloemfontein 9300
Tel: +27 (0)51 401
9337
duplessisA@ufs.ac.za
www.ufs.ac.za



Appendix F

Confirmation of Language Editing



PO Box 38917
Langenhovenpark, Bloemfontein 9330

082 635 0214
technicalediting.dora@gmail.com

9 November 2024

CONFIRMATION OF EDITING AND PROOFREADING

I hereby confirm that I have done the proofreading and technical editing for the following master's dissertation:

Student: Matheus Ngilalulwa
Student number: 2017209145
Title: Comparative analysis of traditional and modern houses in Omuthiya Town Council, Namib
Degree: Master of Development Support
University: Centre for Development Support Faculty of Economic and Management Sciences, University of the Free State

Technical formatting included the layout on an MS Word template that I created specifically for this thesis. Technical editing focused on the correct use of citations, style and formatting. I also checked that the references mentioned in the reference list are cited in the text. I also ensured that dates and author names in the text matched those in the list of references, and notified the student of missing references that still needed to be added. I checked all acronyms and abbreviations for consistent use in the text.

Language editing focused on punctuation, spelling, vocabulary, sentence structure and grammar. I tried to retain the student's writing style while making sure that the student's intended meaning was not altered during the editing process. All amendments were marked with the Microsoft Word Track Changes feature. I also left comments for issues that the student needed to check or revise. The student, therefore, had the option to accept or reject the suggestions and recommended changes to the document.

I have more than 40 years of experience in typing, editing, and proofreading for postgraduate students from universities all over South Africa and also abroad. I gained experience during the years I was typing student dissertations and theses and while working at different departments at the UFS. I also assisted in compiling a document on technical layout and referencing methods and have presented guest lectures on referencing methods and technical layout issues to postgraduate students at the UFS. In the past couple of years, I have also proofread six books for publication, plus several journal articles.

Disclaimer: The ultimate responsibility for accepting or rejecting the amendments and recommendations made using track changes rests with the student. The editor cannot be held responsible for any changes in terms of the format and style due to subsequent additions or deletions to the document, or any language issues that may have emerged as a result of subsequent amendments to the text.

Yours sincerely

A handwritten signature in black ink, appearing to read 'D.M.', enclosed within a light blue oval shape.

Dorathea (Dora) du Plessis
Technical & Language Editor