



MIDLANDS STATE UNIVERSITY
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**LOCAL AVAILABLE RESOURCES AND INDIGENOUS KNOWLEDGE, A TOOL TO
IMPROVE RURAL WOMEN LIVELIHOODS: THE CASE OF UMGUZA DISTRICT WARD
10, 13, 15, 16 AND 17.**

**A DISSERTATION SUBMITTED TO THE DEPARTMENT OF DEVELOPMENT STUDIES OF
MIDLANDS STATE UNIVERSITY IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR A BACHELOR OF ARTS HONOURS DEGREE IN DEVELOPMENT STUDIES.**

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DECLARATION

I Prilege Sibanda of registration number R132472P declare that, this research project, *Local resources and indigenous knowledge as a tool to improve rural women livelihoods: The case of Umguza District* is as a result of my work and all other sources used are duly acknowledged. It has not been submitted anywhere before for any degree purposes or examinations. It is submitted in partial fulfilment of the requirements for the Honours Degree in Development Studies, in the Faculty of Arts at Midlands State University.

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DEDICATIONS

I would like to dedicate this dissertation to all the rural women in Umguzu district.

ABBREVIATION

MWAGCD	Ministry of Women Affairs, Gender and Community development
NGO	Non-governmental organisation
EWF	Emthonjeni Women's Forum
CDO	Community Development Officer
WDO	Ward Development Officer
WDF	Women Development Fund
HOCIC	Hope for a Child in Christ
ISAL	Internal Lending and Savings

ABSTRACT

Among many other groups of people, women are one of the most vulnerable groups in the world especially in the rural areas of the developing countries, including Zimbabwe. Women constitute 70% of the rural poor. This study focused on how rural women in the community of Umguza District in Matabeleland North Province have used local resources and indigenous knowledge to improve their livelihoods and the challenges they have faced along the way. The objectives of the study were to assess the livelihood outlook of women in Umguza District, to find out how women have used local resources and indigenous knowledge to improve their livelihoods and to identify the challenges that these women have faced in the use of these local resources and indigenous knowledge. The researcher opted for qualitative research and used open ended questionnaires and in-depth interviews to collect data from the relevant respondents. 44 participants were interviewed and the researcher opted for purposive sampling to select these participants. The research findings revealed that women in Umguza district have used the available local resources and indigenous knowledge to generate income, boost their food security and agricultural production, improve their lives in the health, sanitation and hygiene, education and transport sector.

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CHAPTER 1: THE PROBLEM AND ITS SETTING

Introduction

This chapter aims at introducing the background of the study, statement of the research problem, the research aim, research objectives, research questions, and delimitations to the study, justification of the study and the organization of the study.

Introduction to the study

This research aims at assessing how women have used local resources and indigenous knowledge in Umguza district to improve their way of living. The research focuses on the women of Umguza District (ward 10, 13, 15, 16 and 17) in Matabeleland North province. The researcher obtained the information relevant to the study from the government ministries, Non-governmental organizations, community leaders and rural women representatives through the use of interviews and questionnaires. Local resources constitute natural resources and indigenous knowledge constitutes the knowledge that the community have towards using these resources valuably to improve livelihoods. However these women have also faced several challenges in using the indigenous knowledge and the local resources to improve their livelihoods and these will be discussed in the research findings in chapter four. Overall, this research provides information that can be useful to development practitioners, policy makers and many different organizations who aim at improving rural women livelihoods.

Background to the Study

Most developing countries are characterized by the increasing differences between the urban and rural communities. According to neo-classical theorists, development can be accelerated by concentrating investment on urban cities and that poverty in rural areas can be minimized by the benefits from urban development. With this, the developing countries have continued to witness imbalances between the urban and rural people. Rural areas in Zimbabwe are experiencing poverty, poor living conditions and over dependence on rain fed agriculture which is now affected by droughts and from a gendered perspective, the most vulnerable are women.

Problem statement

Women have less or no access to most resources unlike their male counterparts. This is so because of gender blind development policies, tradition, lack of inclusion and representation to decision making. Women are failing to cope with income shocks, they are food insecure, they continue to constitute the bulk of the rural poor yet they partake in a number of income generating projects.

Women have less or no access to land, credit, agricultural inputs, and technology, training, marketing and information services. They still remain in the same undesirable position in their communities. A gap therefore exist in developmental policies that are women insensitive in the community despite the fact that women should be empowered, this has not been carried to a logical conclusion. They live below the poverty line and therefore they fail to eliminate their distressed condition.

What is often overlooked in policy formulation is the increasing value of local resources which can help these poor rural women to provide for their own basic needs and even for

their families thereby improving their livelihoods. This study therefore focused on how rural women have used local resources and indigenous knowledge to improve their livelihoods thereby overcoming extreme cases of poverty.

Research aim

This research aimed at finding out how rural women in Umguza district ward 10, 13, 15, 16 and 17 have used local resources and indigenous knowledge in the community to improve their livelihoods.

Research objectives

- (i) To assess the livelihoods outlook of rural women in Umguza district
- (ii) To find out how women have harnessed local resources and indigenous knowledge to improve their livelihoods.
- (iii) To unearth challenges faced by these rural women in improving their livelihoods using local resources and indigenous knowledge.

Research questions

The main question which is sought to be answered in this research is how rural women have used the local available resources and indigenous knowledge to improve their livelihoods.

The answer to this question can only be obtained from answering the research questions below. Therefore this study aimed at answering the following questions:

- (i) What is the outlook of women livelihoods in Umguza district?
- (ii) How have women in Umguza used local resources and indigenous knowledge to improve their livelihoods?

- (iii) What are the challenges faced by the women in the use of local available resources and indigenous knowledge to improve their livelihoods?

Significance of the study

The findings from this research can assist the policy makers and planners to identify and formulate effective strategies for rural women towards improving their livelihoods through the utilization of local available resources and indigenous knowledge. The non-governmental organizations can also benefit from these research findings to improve their action plans and exposure to the field of gender specific programs. The development institutions also get valuable information about the opportunities and limitations of their organizations which help them to recognize their organizational set up and action plans. Furthermore this research also helps the academicians and researchers to add knowledge and supplement empirical evidence regarding different aspects of livelihood situation of rural women. All this help minimize the economic condition vulnerability of poor rural women.

Delimitation to the study

This study confined only to women of Umguza district and the research was concerned with finding out how women have used local resources and indigenous knowledge to improve their livelihoods. The researcher also reviewed existing literature on similar discipline and used different data gathering methods to obtain information. The study adopted qualitative research method where interview guides, open ended questionnaires, participant observation were used as data gathering tools. The study was carried out from August 2016 to November 2016. The researcher focused on the Umguza community participants who included the community leaders, rural women, non-governmental organisations targeting women in the

district and that is the Emthonjeni Women Forum and government institutions like the Ministry of Women Affairs, Gender and Community Development.

Organization of study

This research study is organised into five chapters followed by a reference section. The first chapter is the introduction of the study and it touches on the area of investigation, background of study, statement of the problem, research objectives, research questions, justification of study, theoretical framework, literature review, methodology, and delimitation of study, limitation of study and organisation of study. The second chapter is on literature review where the researcher presents the results of the previous research related to the study topic. Chapter three on research methodology where the researcher explains what research skills and methodologies she used to gather information and how the research was conducted. The fourth chapter is on data analysis, presentation and discussion. Chapter five is the last chapter and it summarises all that has been said in all chapters, draw conclusions and recommendations for future researchers.

CHAPTER 2: LITERATURE REVIEW

Introduction

Literature plays a crucial role in any research since it functions as a guiding principle when carrying out research. Literature review is both a summary and explanation of the complete and current state of knowledge on a limited topic as found in academic books and journals (Commons 2004). This chapter seeks to review the existing literature on the research topic so as to understand the developmental issues surrounding the poor rural women.

Global view on local resources and indigenous knowledge use to improve livelihoods

Indigenous knowledge is a basis for local level decision making in the agriculture, health, food preparation, education, natural resource management and use, and the host of other activities in rural communities like animal husbandry, ethnic veterinary medicine and poverty alleviation. It encompasses the skills, experience and insights of people applied to maintain and improve their livelihoods. Local resources are the social capital of the poor, the main asset to invest in the struggle for survival to produce food, provide shelter or achieve control of their lives (World Bank 1997).

According to Ogboma (2014), Indigenous knowledge is central to Africa's development in all ramifications especially in the rural communities. Africans are endowed with special knowledge with which human development is enhanced. The efficacy of this "special knowledge" cannot be over emphasized and this is best described as indigenous knowledge.. In Nigeria, individuals in rural communities especially women are endowed with indigenous knowledge of traditional medicine, land use and management, family healthcare, breeding of

food crop species, preservation of seeds and the domestication and use of wild edible plants (Olatokun and Ayanbode, 2009 cited in Ogboma 14). Women's pivotal role in sustainable development in rural communities is evident in their contributions to the family and society at large as wives and mothers. They engage in production and marketing of foodstuff to enhance the local economy.

Women, have been central to the production, processing and marketing of food. They are custodians of biodiversity and knowledgeable in land use and management, child delivery, family planning and health care. Women's contribution to the maintenance of the local economy is made possible through the use of their indigenous knowledge. As observed by Adebobola (2004) cited in Ogboma (2014), 86% of the rural women in Tonkerere Village in Ife Central local Government (South West Nigeria) are herb sellers, with the ability of detecting the medicinal value and viability of local herbs. In India, rural women were able to identify no fewer than 145 species of trees and their uses, while forestry expert were familiar with only 25 species (Shiva and Dankelmann, 2006 cited in Ogboma 2014). This is a reflection of indigenous knowledge inherent in rural women.

With the help of indigenous knowledge, women in Burkina Faso carefully collect the fruit, leaves and roots of native plants, like the bark baobab tree (*Adansonia digitata*), red sorrel leaves (*Hibiscus Sadderifa*) Kapok leaves (*Ceiba pentandra*) and tigernut tubers (*Cyperus esculentus* L) for use in diet of their families, supplementing the agricultural grain (Wole and Ayanbode 2009 cited in Ogboma 2014).

Rural women also use their indigenous knowledge to improve their livelihoods. Dirrar (2005) cited in Ogboma 2014, mentioned that two women groups operate community biogas plants (non-scientific in approach and nature) in Karnataka region of India. This is for the provision of tap water and light, to all the houses in the village. In Mali, rural women use indigenous

knowledge to produce *Jatropha Curcas* oil as raw material and fuel (Hennig, 2002 cited in Ogboma 2014). They use *Jatropha curcas* for medicine (seeds as a laxative, later to stop bleeding and against infection, leaves against malaria) and for soap production. *Jatropha* system also helps in erosion control, soil improvement as well as renewable energy.

Similarly to the literature above, the research findings revealed that women in Umguza district possess an enormous amount of knowledge about food production and processing, health, child rearing, breeding of food crop species, preservation of seeds and the domestication and use of wild edible plants. In the area of agriculture, rural women have used their indigenous knowledge to raise agricultural productivity. Rural women's use of indigenous knowledge in using oxen to plough land for farming has been one of the major activities carried out by the women in Umguza district.

Local resources provide the basis for problem solving strategies for local communities especially the poor. According to the World Development Report (1998/99), indigenous knowledge is the key to sustainable social and economic development.

Currently over 80% of the World's population depends on indigenous health care based on medical plants. Communities employ at least 20 000 plant species for medical and related purposes (Melchias, 2001). Central Africa is very rich in medical plant species; an example is Mount Cameroon, studies have shown that medical plants used in the region are as efficient as the imported western prescription medicine (Nkuinkeu, 1999).

In this regard, local resources and indigenous knowledge have played a pivotal role in improving women's lives especially those residing in rural communities. This research focused on finding out how rural women have used local resources and indigenous knowledge to improve their livelihoods in Umguza district; however unlike in other countries, the availability of local resources like medical plant species in Umguza is very

limited thereby disadvantaging women in their quest of improving their livelihoods and that of their families especially on the health sector.

A better understanding of local conditions including indigenous knowledge and practices could therefore help integrate global technologies to solve the problems facing local communities in the developing countries. The key factor is to involve those who possess the indigenous knowledge. For example, a study was carried out in 121 rural water projects design in 49 countries, 70% succeeded when the intended beneficiaries participated in the project design compared to the 10% success rate among programmes where they did not. Therefore the knowledge of local practices and the involvement of local communities can be a powerful tool for the effective adaptation of global knowledge of best international practices to the local setting.

In countries like Columbia and Rwanda, two or three varieties of beans considered by scientists to have the most potential had achieved only modest yields increases. They then invited women farmers who possessed valuable indigenous knowledge about bean cultivation to examine more than 20 bean varieties at the research stations and to take home and grow the two or three they thought most promising. The women farmers planted the new varieties using their own methods, the selections out performed those of the scientists by 60% to 90%.

Similarly from the literature above, the findings of this research revealed that women in Umguza district possess' valuable indigenous knowledge on crop cultivation especially legume plants like groundnuts and cow peas. To this end, these women have managed to produce high yields in groundnuts and cow bean cultivation using their traditional knowledge and methods of farming.

According to the Emeagwali (www.africanhistory.net), out of Africa the world has benefitted from plants such as the *African willow* (South Africa), the *hoodia* plant in Namibia and *iboga*

(Gabon and Cameroon) to treat diseases such as cancer, obesity and drug addiction. The WHO has acknowledged these contributions. The UNCED in its Political Declaration and Plan of Implementation at the Johannesburg Summit in 2002 also acknowledged the contribution of indigenous knowledge to the medical field.

However, in this research it was revealed that local resources particularly medical plant species like the *African willow* found in SA, *hoodia* found in Namibia and *iboga* found in Cameroon and Gabon to treat such diseases like cancer, drug addiction and obesity are not found in Umguza district. Instead the only medical plant species that are found in the area can only treat minor diseases like headaches, stomach aches, heart burn, *ingubhane* to mention but a few. This has therefore improved the livelihoods of Umguza rural women and their intended families to a lesser extent particularly in the health sector unlike in other countries. With this therefore one is tempted to say that the variability of climate as per country have contributed towards the differences in the availability of variety medial plant species in the district and this has been one of the major challenges that have been faced by the rural poor women in Umguza district as most of them can not afford the expensive decent health facilities.

The use of local resources and indigenous knowledge by the rural poor women in Africa

In Africa, local resources and indigenous knowledge are largely used by the rural poor communities to define their problems and seek solutions through local experiments particularly women. In countries like Kenya, much benefit was achieved with the British imposed soil conservation system involving terracing. After Kenya achieved independence, many local farmers extended their works with local women's groups which led to improved soil conservation and techniques being implemented by local people (Mc Neely et al. 1990).

Many countries in Africa have learned from recent development initiatives which sought to include the participation of local people particularly women in areas such as indigenous, low cost approaches to protecting and sustaining the use of common or local resources. The following are the examples of countries in Africa who have used indigenous knowledge.

(i) The Agro Forestry in Kenya

According to the International Council for Research (ICRAF 1983) research project in the Machikos District in Kenya, a team of social and ecological scientists went beyond alley cropping field trials to include community-wide activities. Based on a better understanding of the gender differences in local knowledge, drought or famine survival and soil management, the sharing of agroforestry knowledge and the use of wild plants as sources of food, fodder and medicine was facilitated (Rocheleau, 1991).

It has been noted in the research that women in Umuza district have played a pivotal role in soil conservation through the use of methods like weed keeping, ploughing across the steep and minimum cutting down of trees as they benefit from these trees in so many areas. Wild plants are kept for medical purposes and for the fact that they are the sources of wild fruits. The MoWAGCD has played an important role in ensuring the participation of women in community projects as they bear the indigenous knowledge and low cost approaches to protecting and sustaining the use of locally available resources.

(ii) The Bio-pesticides in Niger

According to the USAID funded project, although the leaves and seeds of *neem* (*azadirachta indica*) have been used for their insecticidal properties for years in India, traditional farmers in Niger had long observed the immunity of the *neem* tree to desert locust attack. Farmers in

Niger are now using *neem* products instead of dangerous and expensive imported chemicals (Radcliffe et al, 1991).

The findings of this research revealed that the majority of women in Umguza have benefited in their agricultural production and in projects like community gardening through the use of indigenous methods of controlling pests from attacking their plants. It was found out that these women use ashes to control pests in their community gardens than using modern chemicals which they consider harmful to their health. Certain wild plant species have also been used to control the pests through their strong smells which are not favourable to the pests.

(iii) Soil Regeneration in Rwanda

Many rural women in Rwanda use the agricultural benefits provided by mulches, animal and green manures and various control measures, traditional, extensive fallow systems have been gradually transformed into intensive farming systems in Central and Southern Rwanda. Techniques used includes, mulching, living crops and livestock, hillside terracing, valley floor fishponds or raised gardens and composting.

Similar to the literature above, most women in Umguza district have used cow, goat and chicken manure in crop cultivation to fertilise the soils and prevent soil moisture loss. Composting has also been used particularly in community gardening projects where these women grow different kind of vegetables.

Indigenous Knowledge Systems (IKS) in farming practices form a bed rock of a community's composite and collective wisdom which is passed from one generation to the other (Madebwe and Kabeta, 2005). IKS act as a community's armour against environmental shocks and manifests community's resourcefulness (ibid). Madebwe et al (2005) argue that IKS allow

local communities to solve local environmental problems using indigenous solutions which they have full control of. Wide range of indigenous agricultural land use practices by women farmers are based on generations of informal experience and experiments and intimate understanding of bio- physical and social environment (Mapara, 2009).

Madebwe et al (2005) noted that marginalisation of IKS has resulted in rapid loss of traditional seed varieties best suited to the prevailing agro-economic conditions. It has also led to the cultivation of unsuitable crops for marginal farming areas. Traditional ways of seed selection and preservation are not considered a priority after years of dependence on commercially produced high yielding varieties.

In this regard, the research findings revealed that women in Umguza district have survived through agricultural production and they have used several indigenous techniques to ensure that their crops are maintained. These include farming at the same time so as to prevent crop loss, keeping of weed to preserve moisture and as a pest control method. Women in Umguza have also managed to generate income through selling the produce they get from their production and this has been one of the strategies that have improved their livelihoods.

Local resources and indigenous knowledge use in Zimbabwe

In Zimbabwe the indigenous knowledge people developed some mechanisms that are still used in some rural areas to monitor their properties. They have also developed traditional ways of weather forecasting that helped them to plan their activities for at least two or three days in advance. This knowledge was very useful especially in summer and immediately after harvesting when the crops like finger millet which would be in need of thrashing and winnowing. Indigenous ways of knowing have also brought forth useful knowledge on medicine and health.

According to the Emeagwali (www.africanhistory.net), among the Shona people in Zimbabwe, plants like the *chiparurangoma*(*borreria dibrachiata*)was used as a form of treatment to treat people suffering from malaria. This kind of medicine was taken orally and one was usually healed within twenty four hours. It also states that the shrub called the *muveghonye*(*canthium huillense*) was used to treat and heal both human beings and livestock wounds. In most parts of the country especially in Matabeleland, *aloe* plant is used to treat people suffering from stomach pains, ring worms and as a preventative medicine against diseases that can affect chickens. Among other examples, in Manyika the *mumwahuku*(*cassia didymobotrya*) plant leaves are pounded and mixed with water to prevent chickens from being affected by *chitosi* (a type of poultry disease).

Altieri (1995) states that among the Manyika of Sanyadowa in Nyanga district in Zimbabwe women farmers leave out some weeds as a form of weed control and moisture control. These weeds are also used as food and medicine (1995:120). According to Zoufa et al cited in Altieri (1995:215), intercropping smoother crops of groundnuts, cowpeas, or melons with maize as the main crop was also a way of controlling weed and produced high yields as those natural methods are cleaner and safer compared to the use of herbicides because they have no negative impact on the environment. In places like Buhera where the cultivation of *mhunga* (bulrush, pearl millet) was a common practice, people made efforts to control pests, birds and baboons from eating the plants through planting at the same time during the planting periods (sharing the damage) as those who legged behind or too ahead of others risked reduced yields because of their timing.

According to Ranger (1999), most rural women in Inyanga use wetlands for growing crops like rice and other plants like yam, and bananas. He also observed that people settled around the Matopos (stony or rocky areas) for agricultural practices as the *vleis* are dry from May to July and from August to October water begins to run from the rocks, in summer. The people

grazed their livestock in these wetlands in the three dry months of the year. In August, pumpkins, green mealies, vegetables and rice were planted. It was in November that rain-fed cultivation began and the harvest of this crop will be in next August and it was during this season that the cattle were moved away to the dry land for summer grazing (Ranger 1999:24-5).

The Great Zimbabwe and Mutapa people used to grow finger millet, sorghum and rapoko for sadza or thick drink (mahewu). Other traditional food crops were peanuts, beans, pumpkins, groundnuts and wide varieties of vegetables (Mararike. 2001; Guruve et al, 2009) states that today sorghum is the third most important cereal crop in Zimbabwe and that it is principal food for many Zimbabwean predominantly those living in semi-rural regions for sadza, mahewu, beer and as fodder for livestock.

The research findings also revealed that the exclusion of local people and indigenous knowledge in decision making is one of the major challenges that have been faced by women in Umguza district. This has resulted in the failure of most projects being implemented in the communities considering the effects of climate change which has brought about less rainfall and high temperatures. These conditions are not suitable for community gardens, cattle rearing and maize cultivation and thus poor project implementation and targeting. There is need to consider local peoples knowledge in decision making because they possess indigenous knowledge in many aspects of life.

Global view on women's vulnerability to poverty

The majority of the world's poor are women and half of the world's poor live in the rural areas and depend on natural resources for survival (Angelsen, 1997). The rural development theorists assert that development programs and interventions are meant to improve the

livelihoods of the poor so that they reach their full potentials in life. It requires building up in people the confidence, skills, assets and freedom necessary to achieve this goal (Clerk 1995).

The Rural development and Gender analysis approach alludes that the majority of people in most third world countries live in rural areas and any development that does not prioritize the challenges of its majority is meaningless and not consistent with the theory of the basic needs which puts people's basic needs at the top of any development initiative. Women and children are the hardest hit when it comes to rural poverty and therefore any development intervention should pay special focus to these two groups (Rakolojane 2000). Land is the source of livelihood for most people in the third world countries where the majority of the population lives in the rural areas and yet the land issues have remained unresolved in most of the region (Okoth-Ogondo 1993).

It has long been recognised that women are the primary users and the potential stewards of many natural resources that provides the means for basic survival (Rio Declaration, 1992; UNCED, 1992, CBD, 1993; Declaration on World Food Security, 1996). Women collect firewood for energy, plants and herbs for medicine and utilize natural resources to support the economic stability of families and communities. Because the majority of the rural poor are women and because of their social roles and responsibilities, it require them to rely heavily on the goods and services that are provided by the natural world.

In this regard, the rural poor women in Umguza district have depended heavily on the natural environment for their socio-economic survival. They have managed to generate income through selling local resources like wild fruits and the produce they get from their agricultural production and community gardens.

The Zimbabwe National Gender Policy (2000:1) points out that while women constitutes over 52% of the total population of Zimbabwe; their participation in the economy is confined

largely to agricultural production for domestic consumption and labor intensive tasks essential for survival such as child bearing, fetching water and firewood. This portrays a situation where women are not involved in activities that are meant for empowerment and economic emancipation but rather dealing with immediate needs. This situation compromises the position of women, the negotiating power in the family as well as in the community in general.

Theoretical/Conceptual framework

The Basic Needs Theory is based on the assumption that development was not meant to develop things but men. The focus of development is on human beings rather than national economies and material things. This theory aims at improving livelihoods. To **improve** is to develop or increase in mental capacity by education or experience. It is to achieve or produce something better than. This theory has three main focuses, it is concerned with the satisfaction of minimum family requirements; food, shelter, clothing and basic household goods. The other focus area is the establishment of the basic social services; public transport, health, education and safe water. Finally it focuses on mass participation in decision making. This appears to be the best theory to rural development as rural people face a serious challenge when it comes to the three focus areas covered by the theory. In this case, the research focuses on **rural women** and these are women living in a geographic area that is located outside towns and cities.

The Sustainable Livelihoods Approach is underpinned by three insights. **Livelihood** is a means of securing the basic necessities. It is a means of making a living. It encompasses people's capabilities, assets, income, and activities required to secure the necessities of life. A livelihood is sustainable when it enables people to cope with and recover from shocks and

stresses and enhance their well-being and that of the future generation without undermining the natural environment or resource base. **Resources** are economic or productive factors required to accomplish an activity, or a means to undertake an enterprise and achieve desired outcomes. Resources are a source of aid or support; something resorted to in time of need. Livelihoods are therefore studied because they provide holistic information that can reveal how and why people survive or fail to survive difficult times so as to reduce vulnerability.

The first insight underpinning the Sustainable Livelihoods Approach is the realization that economic growth may be essential for poverty alleviation, there is no automatic relationship between the two since it all depends on the capabilities of the poor to take advantage of expanding economic opportunities. Secondly, the realization that poverty as conceived by the poor themselves is not just a question of low income but also includes bad health, illiteracy, lack of social services, limited choices as well as a state of vulnerability and feelings of powerlessness. Finally, the realization that the poor themselves often know their situation and needs to be involved in the poverty alleviation strategies (Turton 2000).

Conclusion

This chapter focused on reviewing the existing literature related to the use of local resources and indigenous knowledge to improve livelihoods of people around the globe and the theoretical framework surrounding the study. It has been proved therefore by many scholars that indigenous knowledge has played a pivotal role in agriculture, health, ensuring food security in many different parts of the world. Considering the fact that most rural women have no or less access to capital and technological resources, their vulnerability towards poverty, health implications, food insecurity hence poor standards of living have been minimized through the use of local resources they have in their communities. This has not

only been witnessed in Zimbabwe as a country, but also in Africa as a continent and the world as a whole. Despite the efforts made by the government, stakeholders and non-governmental organizations towards improving rural livelihoods, the communities particularly women have also played an important role in catering for their daily basic needs as portrayed in the above literature.

CHAPTER 3: RESEARCH METHODOLOGY

Introduction

Considering the fact that this research aimed at assessing how rural women in Umguza district have used the local resources and indigenous knowledge to improve their livelihoods, the researcher used the qualitative research method. This chapter presents the research methodologies that were used to gather information thereby fulfilling the research objectives and answering the research questions of this study. It also seeks to discuss how this study was carried out using what research tools. These include the research design, targeted population, sampling technique, and data gathering tools particularly questioners and interviews. These will be discussed further and in detail in the paragraphs below.

Nature of the study

Methodology can be defined as a way of extracting data for the purposes of analysing it (Parahoo 1997). Thompson (1998) “It is the science of methods with the use of technical tools to obtain data”. According to Rajasekar (2006) cited in Galbraith (2016), research methodology provides necessary training in choosing methods, materials, scientific tools and training in techniques relevant for the problem being researched on. This study used a qualitative methodology because it allowed the researcher to go deeper into issues of interest and explore issues related to the problem at hand. Primary research was also used in this study and it was accomplished through the use of various data gathering tools such as questionnaires and interviews. Secondary research was also used to compliment the primary research through the use of published literature, articles and journals. A detailed methodology of the study is discussed below.

Research design

“When constructing a building there is no point ordering materials or setting critical dates for completion of project stages until we know what sort of building is being constructed”, similarly a research needs a design before data collection or analysis can commence”. According to Macmillan and Schumacher (1993), a research design refers to a plan and structure of the investigation used to obtain evidence to answer research question and it describes the ways for conducting the study including when, from whom and under what conditions the data will be obtained.

Marshall and Rossman (1999), states that a research design details the overall design of the research process. This study sought to unearth how women in Umguza district have used indigenous knowledge on the local resources in the community to improve their livelihoods and the challenges that have been faced by these women in using the local resources and indigenous knowledge and thus it opted for explanatory research design.

Qualitative research design involves the examination and interpretation of the observations for the purposes of unearthing underlying meanings; it also uses the open ended questionnaires and interviews (Henning 2003). This research design took into account the feelings, attitude and general behaviour of the participants, their interpretations of what is right for their livelihoods, and their explanations on how they can overcome the challenges they are facing. Therefore this research design was to a larger extent relevant to this study as it required detailed explanations than just mere statistics.

The respondents managed to describe their livelihood status, express their feelings towards the challenges they face and how they have tried to improve their everyday living with the use of local resources and indigenous knowledge. These findings were acquired through the use of open ended questionnaires and interviews. One of the strengths of qualitative research

design is that it is based on real life experiences of the people and not on assumptions. This helped the researcher to capture even the untold information from the respondents through observing their non-verbal reactions.

To conclude, according to Best (1999), qualitative method is mostly preferred because the researcher is kept close to the respondents as well as their actions during the research process. Due to the adoption of this research design, the researcher managed to capture the views of the participants on how they have used local resources and indigenous knowledge to improve their livelihoods and the challenges they have faced.

Study area

This study was carried out in Umguza District ward 10, 13, 15, 16 and 17 that is (Sawmills, Teakdale, Nyamandlovu centre, Rangemore and Maraposa respectively), Matabeleland North province. According to the Ministry of Women Affairs, Gender and Community development, the district has a total population of approximately 73 314. Some parts of the district are along the watershed and the average rainfall of the district is 450-600mm per annum. The district lays along the natural region four and the temperatures range from 8.7-27.5 degrees Celsius.

Target population

Population can be understood as the total number of people who have similar characteristics. According to Parahoo (1997), population is defined as the total number of individuals, events, or organizations from which data can be collected. In this study, the sample of the respondents was drawn from Umguza district (ward 10, 13, 15, 16 and 17, the government institutions targeting women like MWAGCD, NGOs targeting women in the district that is

EWF, the community leaders, selected women respondents in the district as they are the ones who revealed the ideal situation on the ground. This was regarded as the rightful population for the researcher as the researcher got different views from different angles therefore making the findings richer.

Sampling technique

Sampling is a process of using a small number of people with similar characteristics to represent the whole population to be studied. According to Zimkund (2003) cited in Hofisi (2016), a sample is a representative that generalizes the whole targeted population because it is not possible to study the whole population due to factors like time, resources and distance among many others.

This study engaged in purposive sampling which is used when the one wants to target particular individuals and categories of individuals for investigation (Greenstein, 2003). Purposive sampling method is used to get the targeted population because the researcher had a specific purpose in her mind and that is to assess the livelihood status of women in Umguza district ward 10, 13, 15, 16 and 17 to find out how these women have used local resources and indigenous knowledge to improve their livelihoods and lastly to unearth the challenges that have been faced by these women in trying to improve their livelihoods. Purposive sampling enabled the researcher to select respondents from MWAGCD, EWF, Community leaders and women representatives, who possessed the information based on the purpose of the research and this resulted in the attainment of relevant answers to the research questions.

The main aim of purposive sampling technique is to focus on a particular population which is of interest to the researcher. This technique allows the researcher to interact with their respondents. Therefore the study purposively selected 5 wards out of the 19 wards of

Umguza district because the resources for the researcher to reach out to all the nineteen wards were limited and the key informants that were interviewed were also selected purposively.

In order to reach out to the marginalised groups in the community, in this case women, purposive sampling was used to identify the participants. I used my understanding that sampling methods in feminists researches are ethically chosen on the basis that population of interest are marginalised and often difficult to reach out (Liamputong, 2007 cited in Mukoni 2015). Mostly women who were 35years and above were selected as they were old enough and chances of them having lived the experiences of indigenous life were high.

Sample size

The researcher interviewed two employees from the MWAGCD, two again from EWF. All the councillors of the five wards selected were interviewed, two village heads and five women from each of the selected wards. These women were selected randomly from the women's representatives group. This therefore makes the total sample of 44 respondents.

Sample determination

The sample size was affected by a quite number of factors. In qualitative research, the question of sample size does not matter because any sample selected can represent the whole targeted population and this can help in the generalization of findings for the whole population as long as that particular population has similar characteristics which are relevant to the study.

Time was also one of the factors which affected the sample size; this is so in the sense that the population was bigger than the one selected hence the researcher could have spent weeks collecting the data.

Distance was also considered in the selection of the sample size. In most rural areas, the households are not very close to each other as compared to urban areas.

The researcher purposively selected only five wards of Umguza district because resources like transport and finance to reach out to all the nineteen wards of the district were very limited.

Data gathering methods

This section discusses on the tools that were used by the researcher as a way of gathering information concerning the use of local resources and indigenous knowledge by the poor rural women in Umguza district ward 10, 13, 15, 16 and 17. There are many different tools that are used in data collection and these are based on the nature of the research. In this research the researcher used the following research methods and tools: interviews and questionnaires particularly open ended face to face interviews and open ended questionnaires. The researcher also reviewed what other scholars wrote about the research topic in journals, dissertation topics, published articles and the internet.

Questionnaires

The main purpose of using a questionnaire was to obtain information and opinions about the livelihood status of rural women in Umguza, to find out how these women have improved their livelihoods using local resources and indigenous knowledge and to identify the

challenges that are faced by these women in improving their livelihoods using local resources and indigenous knowledge. A questionnaire is a method of data collection which consists of a series of questions designed to obtain factual information and or information about people's attitudes, experiences, values, opinions or beliefs about a particular subject issue (Watson and Hill, 2008).

Questionnaires are a convenient way of gathering information from a target population because they present questions uniformly, are an inexpensive way of gathering information (Walonick (2011). Jahoda (2008) is of the view that written questionnaires reduce interviewer's bias because there is uniform question presentation. It is therefore critical to bring out that the researcher used questionnaires as an advantage to obtain information from the selected respondents.

The researcher used open ended questionnaires as it is noted that they allow the participant to give full information concerning the subject that is being discussed. Marshall and Rossman (2006) are of the view that open ended questions require long explanations so they give a platform for the respondents to air out their views. They also save time in the sense that a lot of information can be collected within a short space of time. The questionnaires were distributed to participants who included the community development officers and ward coordinators from MWAGCD, non-governmental organisations respondents and women selected from the wards

The use of questionnaires also helped the researcher in reducing the manipulation of responses since they allowed the respondents to give honest and straight forward answers without anyone's influence. Questionnaires also allowed the respondents to answer questions in a more relaxed manner and gave room for them to think of the answers.

Interviews

The researcher used open ended interviews as a measure to obtain data from key informants. Chaleunvong (2009) defines an interview as a data collection technique that involves oral questioning of respondents either individually or as a group. More so, answers to the questions posed during an interview can be recorded by writing them down or by tape recording or a combination of both. Researchers conduct interviews when they are among other things, trying to learn about events and interactions that cannot be directly observed or attempting to gain an understanding of a communication event from the participant's perspectives (Lindlof, 2008).

As such, this research purposively used open ended interviews to assess the Umguza rural women livelihoods, find out how these women have used local resources and indigenous knowledge to improve their living standards and the challenges that they have encountered along the way. This method allowed the researcher to get further information from interviewees as these provided open ended question for respondents to freely express themselves albeit limited by space. It is crucial to also highlight that the same population targeted for interviews were also the same people that completed the questionnaires.

This type of interview allows the researcher to clarify ambiguous answers and when appropriate, seek follow up information (Bryman, 2004). Furthermore, this was also less time consuming as it provided instant responses unlike questionnaires where some respondents wanted to go and brainstorm then respond later. Interviews also gave the researcher a room to take note of the non-verbal cues of the respondents during the interview process.

The researcher was also able to change the language of the questionnaires in a quest to overcome language barriers. The researcher resorted to using IsiNdebele as most of the respondents were from the rural communities hence they could not understand English

clearly. The use of open ended interviews also allowed the researcher to construct new questions during the course of the of the interview process thereby bringing clarity to the researcher.

In this study the researcher interviewed the key informants and these included respondents from the MWAGCD (the CDO and the WADCO in particular), the respondents from EWF and the community leaders. Semi structured interviews were used and the researcher had the freedom to divert from the interview guide when necessary. This data gathering tool allowed the researcher to get richer information as it produced higher response rate and allowed a dialogue between the researcher and the respondent. The researcher also opted for telephone interviews for the respondents who were not easily reachable, the community leaders in particular so as to cut transport costs.

Data collection procedures

One cannot just think of going to carry out a research just like that, there are certain procedures that has to be followed before carrying out the research for it to be successful. In this regard, the researcher firstly got an authorization letter from the University to carry out the research. Secondly, the researcher was also given permission by the local authorities to carry out the research and in this case, the local authority was Umguza Rural District Council, down to the community leaders and the women respondents in the community.

Ethical considerations

Ethical consideration is an aspect of social research which cannot be ignored and has to be looked into. It is of great importance to bring out that the researcher had to gain trust of the participants that were interviewed and this was attained through assuring the participants of

their rights to privacy and confidentiality. The researcher therefore did not use the names of the participants in both questionnaires and interviews instead the respondents were named with alphabetical letters (participant A).

The researcher also followed the proper channels of seeking for permission first before interviewing anyone. The University Department letter was used as an introductory and also pointing out the objectives of why and what the researcher was researching on.

Power mapping is one of the key components that was observed by the researcher at all costs. This was achieved through following all the procedure of the community leadership hierarchy. Furthermore the researcher did not coerce the participants to partake if not comfortable, but this was done out of freewill. The researcher sought permission from her department to go and carry out her research.

All the respondents were assured that they were free to decline the invitation to participate in the interviews or discussions if they were not comfortable in taking part. No one was forced or manipulated through bribing to participate in the study.

Furthermore, photos and recording were done with the consent of the respondents and in this case the participants were also assured of privacy and confidentiality.

The respect for participants was achieved through respecting and protecting the rights of people involved in the research. The respondents had an autonomous right to decide to participate or not in the study. The consent of those researched on was obtained before they participated in the study. Fadden and Beauchamp (1986) allude that informed consent describes an interactive process in which individuals voluntarily agree to participate in a research study after the purpose, risks, benefits and alternatives have been thoroughly described and understood.

In this study the researcher administered an informed consent form as part of the process of obtaining participants' consent. In order for them to make well informed decisions, participants were given information on the purpose of the study, the process of the study as well as the implications of being part of it. The informed consent form also highlighted that participation in the study was on a voluntary basis and that participants have the right to withdraw from the study without any repercussions.

Beneficence means that researcher is responsible for protecting participants from harm and to maximize possible benefits (Wieger (2008). While the purpose of data collection was to benefit society, the researcher did not jeopardize the psychological wellbeing of individuals or put individuals at risk of social stigma and discrimination. In this study, no threatening, accusatory or invasive questions were imposed on the participants, participants were protected from negative consequences by ensuring the confidentiality of the information they gave.

Plagiarism was minimized through acknowledging all the sources that were used by the researcher and through the use of turnitin.

Limitations of the study

During the process of data collection the researcher encountered some challenges and these include transport costs. In overcoming this, the researcher used the connections that she established with other NGOs like the Emthonjeni Women's Forum during her period of work related learning, she travelled with them when they went out to the field to carry out her research.

Conclusion

The purpose of this chapter was to provide the research methods that were used in this research and to explain how the whole process of data gathering was done in this study. The researcher opted for qualitative research method. Data gathering tools like interviews and questionnaires were used in data collection. This chapter also highlighted the population that was used in the study and purposive sampling technique was used in selecting this population.

CHAPTER 4: DATA PRESENTATION, ANALYSIS AND INTERPRETATION

Introduction

This chapter seeks to presents the data obtained from the respondents, analyze it and interpret it. The data to be presented was gathered through the use of interviews, participant observation and questionnaires. This chapter will discuss the findings of the research on how rural women in Umguza district ward 10, 13, 15, 16 and 17 have used local resources and indigenous knowledge to improve their livelihoods and the challenges that they have faced along the way.

The livelihood outlook of women in Umguza

The livelihoods are determined by so many factors which include natural, human, social and physical resources/ capital. Natural capital has a biggest role to play on the livelihood of communities particularly women who are the most vulnerably group of people to poverty. Natural capital is the ownership of land and in this research; the research found out that most women in Umguza district have no ownership deeds of land. This is so because even their homes are registered on the names of their male counterparts even if they are dead. The land used for agricultural purpose, women neither have access nor control over it. Only widows whom their husbands died before they got resettled in Stanhope village have access to land few youths who inherited these from their deceased parents.

Women used to collect fruits, medicinal plants, house building materials from forests however all these have been affected by the changes in climate and the increasing population of which most of these forest lands have been under cultivation for the purposes of building new homes and establishing new farms. This has reduced the coping strategies of most

women and their families because they now have limited options to depend on for their survival.

Education or human capital which consists of skills knowledge and ability to labor is one of the livelihood input. Most women in the district are not educated hence they cannot take more action in community decision making and they undertake the unpaid economic duties. This is one of the findings on why these women have remained on the lowest part the economic. They are not motivated to partake in community developmental decision making processes because their ideas are deemed poor hence are not recognized. In Nyamandlovu ward 15, Maboleni village has only one secondary school and children are forced to travel very long distances to the school. One respondent said:

“Most of girl children in the community have stopped going to school on a daily basis because they are strained by travelling long distances to school and some have totally dropped out of school. They have no any other option besides married at early age and some having unwanted pregnancies because they cannot go to school”.

On the health sector, women and children are the most vulnerable to health complication. Ward 10, 13, 16 and 17 rely on one big hospital that is Nyamandlovu hospital because Redwood clinic burnt down last year 2015. Women from ward 17, Makondo village therefore travel about 20-40 km to the hospital for maternal health care and other serious diseases because the mobile clinic is situated in Bulawayo town and the ambulances operate from three. The same ambulance has to attend all the 19 wards of the Districts. The district does not have a mortuary, the health facilities are very poor hence the communities are forced to go to Mpilo hospital in Bulawayo. From a gendered perspective, women and children are the most threatened, this is because women have to take their children to Nyamandlovu hospital

when they got sick even at night because the mobile clinic has a time table/ schedule of reaching each and every ward; that is once in three weeks. One woman said’’

“It’s very hard for us to get information concerning our health (cervical, breast cancer) family planning, pre-natal care among many other health issues, even treatment on its own because the mobile clinic only comes once in three weeks and they only have one ambulance operating otherwise we travel 17-20km to Nyamandlovu hospital from Sea field village in ward 13 where we are sometimes further referred to Mpilo hospital”.

In terms of transport, shelter, water, energy and communication, women in Umguza district have been deprived of all that. The roads are very poor and there are no busses for moving people instead the communities rely on personal cars and combies which are also very limited. Thus most of the people use carts to travel to the nearest town that is Bulawayo. In ward 4 there is no electricity. Only 14 households have electricity out of 40 villages in ward 15 and there is no household that has a telephone facility instead they use cellphones. When planning women community meetings particularly with EWF, they use cellphones as a means of communication.

The community is also under threat of water shortages for domestic use and irrigation purposes. Their right to sanitation and hygiene is therefore affected. Women from ward 15 Redcliff villages 1, 2 and 3, Yeutop village and Steven scale village travel very long distances to water sources like wells and boreholes, approximately 4-5km to get water for cleaning, washing, bathing and cooking; of which there are only 3 boreholes for 40 villages. They also experience the drying up of irrigational crops because there are no dams in their

communities to water the gardens and farms. Very few people have wells in their homes. The community wells and boreholes are not properly functioning because they are not well managed, they need to be repaired. The villages also have no toilets, reason being that there is a rock terrain underground therefore they can't construct the toilets.

Financially, women in the District have less or no access to loans and credits. Most of them depend on the remittances sent by their children and relatives from the diaspora. For women to access the WDF from the MoWAGCD there are certain terms and conditions that they have to adhere to. For example the loans are for community development purposes; therefore women should have an ongoing project consisting of five members and above to access the fund. NGOs like HOCIC has helped women to form ISAL groups where they are contributing a dollar on every Wednesday so that anyone who is in need of money can borrow and return it at an agreed time with an interest charged. MoWAGCD have also helped women to engage on projects like bee-keeping, bag potato growing, community gardening, sewing, goat rearing, piggery, mining, road runner rearing among many others. This has been one of the major survival strategies for the majority of women in the district and it has to a greater extent contributed to the improvement of their livelihoods and that of their families too.

The researcher also found out that the sources of livelihood to women in Umguza district are limited. This makes them very vulnerable to the economic shades. Their vulnerability is further compounded by the fact that they do not own any asset, they depend heavily on their male counterparts for support, survival and decision making. Women's livelihood are seriously compromised because the socio-culture climate favors men compared to women, and this leads to what is known as feminization of poverty .According to Chant(2006) feminization of poverty means that women represent disproportionate percentage of the world's poor and that this share of poverty is linked with a rise incidence of female household

headship. Women face more barriers in improving their livelihood and rising above poverty much more than men do.

The research also found out that in instances where women are household heads, males from the extended family usually become a barrier to the administration of inheritance hence depriving the widows free reign over the estate. Women are not directly included in the administration of the estate and at the end of the day they lose what they also worked for before their spouse's death. This has further worsened the livelihood status of most women.

The use of local resources and indigenous knowledge by rural women in Umguza

Rural women in Umguza district have used various available local resources and indigenous knowledge in different sectors of life to improve their livelihoods. These sectors include the agriculture, health, sanitation and hygiene, food security and preservation, transport and income generation. Women have also used advocacy skills they were trained on by EWF to advocate for their right to be recognized. Community based ownership and social groups (*like amalima*) are one of the local resources that have benefited rural women in Umguza. These will be further discussed below.

Agricultural sector

Women have managed to produce high yields in the agriculture sector because they make use of goats and cow manure to boost the growth of their crops in their fields. This has been done in most areas where soils are poor and unfertile.

“The soils around here are very unfertile and sandy but however we have tried to apply the knowledge we have of using the cow and goat manure

and though to a lesser extent, this method has boosted our agricultural production during the rain seasons”.

Women are also engaged in community gardens and they have been using chicken manure than fertilizer in boosting the growth of their vegetable. Sometimes these vegetables get affected by insects which totally destroy them. Women have used fire ashes to kill the insects that attack the vegetables. This has made it possible for their families on a daily basis. The use of fertilizers in growing vegetables makes these vegetables have a bad taste when cooked and sometimes using pesticides to spray on vegetables to kill pests has affected many people who eats these vegetables ,they have suffered from stomach pains and sometimes running stomach. Most rural women are ignorant especially on giving themselves time to read the instruction written on the pesticides and this has made them to get ill. In trying to overcome this, these women are using fire ashes to destroy the pests that affect the vegetables.

Women are also using the produces from the previous yields as seeds to plant for the next season. These are coated using ash mixtures for long term use and are not easily affected by climatic changes and pests compared to these new commercial seeds. This is so because most of rural women cannot afford buying treated maize seeds due to lack of money. They therefore keep maize, groundnuts, roundnuts etc. so that they can use these as seeds for the next farming season. This has contributed towards the improvement in women’s livelihoods in the sense that even if they cannot afford to buy seeds from the stores, they can still farm and produce high yields on rainy seasons. The use of such local resources available at their homes has led to improved livelihood.

In their fields women construct temporary stone walls to hold the flowing water especially during the rain seasons so that it can be absorbed by crops rather than getting lost and causing soil erosion. Swamp areas in the fields has been used as a resource by the rural women to

plant crops like maize and rice which needs more water to grow. This has increased the variety of the food they take on daily basis. Instead of depending on sadza on a daily basis, they have an alternative of rice which they don't buy they grow for themselves. This rice is then ploughed, pounded then cooked. All this is done locally; there is no need to take the rice to the grinding mill which also requires money that they don't have. This has improved the livelihood of women through boosting their food security; even in times of drought women have planted maize in swamp areas thereby overcoming hunger and extreme food insecurity.

Sanitation and hygiene

During or after the rainy season when the rivers are still flowing and dams have a lot of water, there is usually a green *acacia albida* (*ubulembu*) that grows along the river pools and dams. Women do not clean that out but rather they preserve it for the purposes of preventing the contamination of water so that it remains safe for people, livestock and species living in water like fish. It is said that the *acacia albida* keeps the water clean and safe for domestic use like washing clothes, plates, bathing and cleaning. Women usually as they grew up, they were taught and they are teaching their children to bath using water flowing down the streams so that water kept in their homes is saved for other household purposes and not bathing. Using flowing water from the streams for bathing is done to prevent the contamination of wells.

Rural women in Umguza also use cow dung as a replacement of cobra which they do not afford to clean their houses floors. Cow dung is regarded safe and very clean for purposes of cleaning. Some women also use plan leaves like jatrova to polish their floors. This enables them to keep their homesteads clean and very presentable despite the fact that they cannot afford commercial cleaning detergents. They also use ashes and water for washing their

hands after using the toilet, when coming from funerals because not all of the households can afford buying soap.

Health sector

Both livestock and people are treated using traditional means when they get sick. Aloe plant is used by most households to treat stomach pains and to treat different diseases affecting chickens. This has been as effective as those medicines given in hospitals. The majority of women are engaged in rearing road runners in their homes which is also their source of income because they sell these chickens in towns when they are mature. When the hen hatches, the chickens are kept in wooden made fences so that they are not eaten by other species and whenever they are given water for drinking, women make sure that the water is added aloe juice in it to prevent the attack of diseases at an early age. Ashes and strong smelling trees have also been used as a pesticide to destroy pests from chicken habitats. Headaches are also treated using marula tree roots (*isihaqa*).

Food security and preservation

Traditionally, local communities utilized indigenous knowledge to preserve food for future use. This traditional way is a method of ensuring food security. Modern local communities like Umguza have experienced cultural assimilation, whereby indigenous knowledge has been consumed or submerged by foreign cultures and modernity. This has eroded local culture which used to be the backbone of the survival of rural people. Even though local communities had been hard hit by cultural assimilation, a residue of indigenous knowledge can still be found in rural communities like Umguza. Several ways food preservation was unearthed during the research.

In rural areas, women use indigenous knowledge to eradicate poverty in various ways and these include using groundnuts as a supplement for cooking oil. They are grilled, pounded then crushed to make peanut butter which they use to cook different kinds of relish. Groundnuts are easily cultivated in rural areas hence making it a vital local resource. They are harvested in surplus, dried up as a preservation method and kept in granaries or sacks. The research conducted in ward 10, 13, 15, 16 and 17 of Umguza district revealed that most women have become entrepreneurs given the current harsh economic situation in Zimbabwe. They are living by the law of the hyena which says “do not be choosy, eat what is available”. They have resorted to the utilization of the local available resources in order to survive and improve their standards of living.

Barter trade is still part of human conduct under the area studied. Through the use of interviews, the respondents revealed that they use various crops that they manage to harvest to get the ones which they didn't manage to harvest through exchange of the agricultural products. With this development, there is proof that women tend to utilize available local resources to feed their families. In this regard, local resources and indigenous knowledge are used by rural women to improve their livelihoods.

Animal fats are also used as a supplement for cooking oil. Animal fats are usually dried up in an airy place and preserved for future use. The use of animal fat for cooking has helped these rural women to channel the limited money towards other pressing issues. This has also proved the significance of indigenous knowledge of food preservation in this regard, animal fats, as a local resource to improve rural women livelihoods.

As one cannot expect to find refrigerators in rural areas, this challenge has not stopped rural women from using indigenous knowledge to preserve food. For example, fresh meat is dried up and preserved in a dried state (*biltong*). Relish is a major problem in rural areas and

women are the one responsible for cooking, it causes a headache for them. However indigenous knowledge of drying up meat helps them enhance their rural livelihoods.

Women also dry up indigenous vegetables (*umfushwa*) to ensure that they are food secure throughout. Some go to an extent of engaging into small scale businesses of selling those dried vegetables in the community, growth points and in urban areas. This has tended to improve their livelihoods together with those of their dependents. Some women have become bread winners especially the widowed.

The closer look in at the above shows that development is actually moving at a slow pace if not going backwards. People are surviving and maintaining their financial status using local resources and indigenous knowledge instead of greatly improving their livelihoods.

Transport sector

Transport is one of the major factors that are costly in a business, therefore making it a major challenges for women in rural areas especially those who are engaged in businesses. However, the use of local resources and indigenous knowledge tends to cut the cost down for women in businesses. The findings of this research revealed that local resources such as scotch carts, bicycles and domestic animals like donkeys are used to ferry people and goods. For example, ferrying agricultural produce from the fields. However transport is a big challenge for women who want to extent their markets to the growth points and urban areas.

Income generation

The research findings revealed that women in Umguza district have adopted and used various ways of generating income so that it helps them cover their needs and responsibilities.

Considering the fact that employment is very scarce in rural areas, therefore most rural women are self-employed. Women are engaged in the selling of indigenous fruits (*matohwe and umnyiye*), weaving of baskets, mats, wooden pastry boards and rollers, bowls made of reeds among many others. These rural women are also engaged in income generating projects which includes community gardens, chicken rearing particularly road runners, cattle and goat rearing, piggery, mining, sewing, beekeeping and bag potato growing among others. They have also formed ISAL groups where they contribute a dollar each on each and every Wednesdays. This income can then be borrowed by anyone in need of money and an interest is charged in return. One respondent said:

“we have greatly benefited from the ISAL groups that we have because we are now able to pay school fees for our children. This form of income has also benefited the whole community in the sense that they can afford some form of credit at any time any community member is in of need of money to cover his or her needs”.

Some women in Umguza district have also been actively engaged in tailoring and hair dressing as a way of generating income even though they do that at their homesteads because they don't have saloons and shops. This has also helped these rural women to curb their daily needs and to provide the little they can for their families from the income they get from sewing and hair dressing.

Challenges faced by Umguza women in using local resources and indigenous knowledge

Women have faced several different challenges in a quest to improve their livelihoods using local resources and indigenous knowledge and these will be further looked into in the paragraphs to follow.

One of the major challenges that have been faced by these rural women is the government's inability to resuscitate. Due to the economic meltdown of the country, the government is facing serious challenges thereby failing to make it up to its citizens. In this regard, the researcher found out that in ward 10, 13, 15, 16 and 17 of Umguza district there are few or no dams at all hence it has become difficult for the women to engage in irrigation schemes. Poor infrastructural development particularly roads, communication facilities, health and education facilities are poorly managed. There is need for these facilities to be improved for the sake of giving the community better or improved living standards.

Cultural assimilation or adoption is also one of the challenges to be taken into consideration that has been encountered by rural women in their use of local resources and indigenous knowledge to improve their livelihoods. This is so in the sense that most developing countries have adopted the Western culture of doing things because it is believed that it's the only way in which development can be achieved. There is the introduction of GMOs both in the form of food and agricultural seeds. What is only left is the residue of traditional foods and indigenous knowledge. This therefore makes it hard for rural women to fully improve their livelihoods because most of these commercial seeds cannot sustain the climatic conditions of nowadays compared to those traditional ones.

Women have also faced the challenges resulting from climate change. The effects of climate change have resulted in the shortages of rainfall, drought and famine, high temperatures to mention but a few. This has led to death of livestock, poverty, food insecurity, drying up of

river sources. Women are no longer producing enough or anything at all on agriculture and this has resulted in food insecurity. From a gendered perspective, the drying up of rivers affects mostly women because it is their duty to fetch water hence they are forced to travel very long distances to reach other sources of water like wells and boreholes. High temperatures have also resulted in the spread of diseases like malaria and heat rash among others. Women are also the most burdened because it is their duty to care for the sick family members considering the long distances they are to walk to the hospital for treatment of their children.

Knowledge erosion is one of the challenges that have been encountered by these rural women. This is in the sense that the elderly people who lived through the experiences of indigenous knowledge and practices have died and they are still dying leaving behind the new generation without any record or written document on the indigenous knowledge and practices they lived through that they can read for future use and reference.

The lack of willingness of many elderly people (particularly the herbalists) to share their knowledge to the younger generations so that they can take over and carry on upon the good work that they did before they die.

One of the challenges that have been faced by rural women in Umguza district is the fact that indigenous knowledge has not been properly mainstreamed into developments projects; it has not been given the rightful position in development initiatives.

Conclusion

In a nutshell, women in the studied area have used local resources and indigenous knowledge as a source to improve their livelihoods. They have used these local resources and indigenous knowledge to improve their livelihoods in the following spheres of life, agriculture, food

security and preservation, health, transport and income generation. However these women have also faced several challenges in their quest to improving their living standards using available local resources and indigenous knowledge and these includes the effects of climate change like experiences in high temperatures which have resulted in the spread of diseases, less or no rainfall which has led to alterations in agricultural production hence food insecurity, cultural assimilation and knowledge erosion as discussed above.

CHAPTER 5: CONCLUSIONS

Introduction

This chapter is the final chapter and it seeks to bring summary and conclusion of the study. It also seeks to bring out the recommendations obtained from the research findings towards overcoming the experiences women in Umguza district in their quest to improve their livelihoods using local resources and indigenous knowledge. In short, this chapter seeks to give an overview of the study.

Summary of the study

This research sought to find out how rural women in Umguza district have used local resources and indigenous knowledge to improve their livelihoods. It also sought to assess the livelihoods status of these rural women and finally it sought to unearth the challenges that they have encountered in their quest to improve their livelihoods using local resources and indigenous knowledge. The reviewed literature written by other scholars concerning women's livelihoods and the use of local resources and indigenous knowledge revealed that these have not only been used by a minority but rather it has also been used in the developed countries, Africa and Zimbabwe as a whole. The literature also revealed how these local resources and indigenous knowledge have been used around the globe.

The data gathering instruments that were used in this research to collect data includes the questionnaires and interviews. The researcher opted for purposive sampling technique to select the participants in carrying out this study and the sample size was determined by several factors such as transport, distance and time. The research population consisted of the respondents from MWGCD, EWF, community leaders and rural women. 44 respondents

were purposively selected by the researcher. It was noted from the research findings that the use of local resources and indigenous knowledge has contributed towards the improvement of rural women livelihoods in the sense that despite the absence of commercial resources they have managed to make a living out of the available traditional and local resources.

However these rural women have faced several challenges in using local resources and indigenous knowledge to improve their livelihoods and these includes lack of sustainability of projects, cultural assimilation, knowledge erosion and climate change among others. Women have however managed to make a living out of the use of local resources and indigenous knowledge in areas like food security and preservation, transport, health, agriculture and income generation.

Conclusions

To conclude, from the research findings, the researcher noticed that rural women in Umguza district ward 10, 13, 15, 16 and 17 have become entrepreneurs given the conditions of the economic meltdown of the country. They have resorted to the selling of these local resources so that they get income and barter exchange so that they can get those crops that they did not manage to get from their harvest. This is a proof that rural women in the district have utilized local resources and indigenous knowledge to boost their food security, income generation thereby enhancing their livelihoods. With this therefore the researcher is tempted to conclude and say that development is either moving slowly or backwards.

Recommendations

- The government should try by all means at its level best to improve rural infrastructure like roads, clinics, dams, schools and communication facilities that are used by the local people in the communities so as to improve their livelihoods. This will also help reduce school drop outs and unwanted or early pregnancies.
- Considering the effects of climate change that people are facing nowadays like low rainfall, drought and high temperatures, there is need for the construction of dams in the district for the purposes of irrigation. This will help the communities to boost their food security.
- NGOs should ensure the sustainability of the projects they implement particularly women centred projects so that these women will benefit from them respectively. Poor project targeting should be avoided as it leads to project failure.
- The policy makers should take into consideration the use of local resources and indigenous knowledge so that they can implement them in their planning.
- Children in schools should be educated on the use of indigenous knowledge and practices to avoid cultural assimilation and knowledge erosion.
- There is need to recognize and address these socio-economic, political and constitutional context through which indigenous knowledge and local resources are managed.
- The development process can never be complete without improving the status and livelihoods of the rural women who constitute the bulk of the rural poor.

Conclusion

The aim of this chapter was to present the research conclusions, summary of the study and recommendations to the study. One can therefore conclude and say that local resources and

indigenous knowledge has played a pivotal role towards the improvement of rural women's livelihoods in Umguza district particularly ward 10, 13, 15, 16 and 17 as revealed by the research findings presented in chapter four.

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INTERVIEW GUIDE.

Introduction

My name is Privilege Sibanda, a student at Midlands State University. I am carrying out a research on how can rural women use local available resources to improve their livelihoods in Ward 19 of Umguza District, Matabeleland North Province, Zimbabwe. Your contribution will help in completion of this study. The information you provide will only be used strictly for academic purposes.

Section A

Sex

Marital status

Designation

Organisation

Section B

1. What is the nature of women's livelihoods in Umguza district?
2. What is their income and economic status?
3. Who do you think are the most vulnerable?
4. What makes you think they are vulnerable?
5. In your department, what problems can you identify in relation to women's livelihoods?

6. How have women used local resources and indigenous knowledge to improve their livelihood in the district?
7. What are the challenges that have been faced by these rural women in their use of local resources and indigenous knowledge to improve their livelihoods?
8. What advice can you give to the policy makers and stakeholders towards the improvement of rural women's livelihoods?

Thank you for your cooperation

QUESTIONNAIRE

1. What is your employment status?

.....

2. Who is the bread winner in your household?

.....

3. How many are you in your household?

.....

4. How many girl children do you have?

.....

5. Do you have these and if so, how many?

Cattle.....

Goats.....

Donkeys

Road runners.....

Scotch carts.....

Bicycle.....

6. Where do you get water for domestic use?

.....

7. What distance do you walk to the water source?

.....

8. What is the source of water for your livestock?

.....

9. Is water available throughout the year in your community?

.....

10. Do you practice irrigation? If so what crops do you grow? If not, why?

.....
11. What do you eat on a daily basis?

.....
12. What are the other food alternatives that you rely on?

.....
13. Do you have relatives in the diaspora? If so, do they send you money?

.....
14. What are your means of transport?

.....
15. Do you have hospitals or clinics?

.....
16. Do you have schools? How many?

.....
17. How long is the distance to the school?

.....
18. What traditional foods do you have?

.....
19. How do you preserve these?

.....
20. Where do you get agricultural inputs like seeds?

.....
21. What is your source of income?

.....
22. Are you engaged in any projects? If so, state which ones?

23. Do you have any access to loans and credits? If so state which ones?

.....

24. How do you access these loans and credits?

.....

25. How do you relate or socialize with people in the community?

.....

Thank you for your cooperation.