Evaluation of Water Service Delivery Challenges Faced by Sekhukhune District Municipality in Limpopo Province, South Africa

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2022

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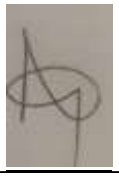

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Abstract

Despite a legal framework that includes progressive policies and a constitutional right to adequate water, South Africa's low-income rural areas still have major problems with the delivery of water services. An assessment of the service delivery challenges was conducted to understand the factors that contributed to the observed discrepancies between ambitious guidelines and disappointing water services in the Sekhukhune District Municipality in South Africa.

This study used exploratory qualitative research design to explore water service delivery challenges at Sekhukhune District Municipality (SDM). A purposive sampling strategy was used to collect and analyse data from the SDM population. Face-to-face interview questions posed 14 participants involving a municipal manager, district committee members, infrastructure water services, and community members. The key findings show that inadequate monitoring of water infrastructure and projects by unskilled municipal officials represent challenges of water services at the SDM. This study proposes the provision of technical, financial, and human resources to enhance water service delivery.

Keywords: water, service delivery, monitoring, infrastructure, projects

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List of Acronyms

AG Auditor General

COGHSTA - Corporate Governance of House of Traditional Affairs

COGTA - Department of Corporate Governance and Traditional Affairs

DWA - Department of Water Affairs

DWARF - Department of Water Affairs and Forestry

DWS - Department of Water and Sanitation

IDP - Integrated Development Plan

ILGM - Institute for Local Government Management of SA

IWS - Infrastructure Water Services

RDP- Reconstruction and Development Programme

SA - South Africa

SDM - Sekhukhune District Municipality

NDP - National Development Plan

NGO - Non-Governmental Organisation

NT - National Treasury

NWA – National Water Act

WHO - World Health Organisation

WSA - Water Service Act

WSMP - Water Service Master Plan

CHAPTER 1

INTRODUCTION

1.1 Introduction

Research findings by Harris (2019) affirm the significance of resource infrastructures for water services in South Africa where the discourse connected with the human right to water has forged specific prospects. Harris (2019) points out that water quality and satisfaction in South Africa are linked statistically to trust in the government and although there are indicators of access to water that appear to meet expectations, there is ongoing disenfranchisement and contestation.

According to Aiyetan and Das (2021), several developing nations including South Africa are experiencing challenges in the infrastructure of water service delivery notwithstanding the efforts of provincial and national governments. Agencies of water utilities are facing severe challenges in providing water infrastructure projects competently and require strategic involvement to improve the situation (Aiyetan & Das, 2021).

A study of the four phases of community water service delivery (project identification, project planning and financing, project implementation, and operation and maintenance) in the Sekhukhune District Municipality confirms “how in several instances the quality and level of services delivered has been compromised by rent-seeking and the lack of capacity both within the department and among the hired consultants and contractors (Hofstetter, Bolding & Van Koppen, 2020:858).

Hofstetter *et al*. (2021) believe principally that these two issues are the indicators of the fundamental mechanisms of gatekeeping and patronage preventing the improvement of access to end-users. Hofstetter *et al*. (2021:858) argue that there is a necessity to involve in practice “that moves towards a public service delivery approach which strengthens collective action and co-investment by end-users through making them active contributors and co-owners of rural water infrastructure”. The researcher contends that the current water service delivery system in Sekhukhune district municipality is weakened by community members, and municipal officials and the misallocation of funds to ineffectual private service providers.

1.2 Background of the Study

Authorities lack the methods to efficiently consult communities and the capacity to use community-generated evidence and data in water service delivery and resource management, despite the normative support for hands-on water governance (Hove *et al*., 2019). South Africa possesses a complicated water governance landscape with ongoing challenges and considerable successes in attaining equitable, adequate, and sustainable water governance and access (Beck *et al*., 2016). Water distribution and supply schemes “were historically created to serve predominantly white populations during colonial and apartheid eras” in South Africa (Beck *et al*., 2016:1).

The lack of efficient and adequate infrastructure in the context of South Africa in recent years has been recognised as a limitation for socioeconomic development in various parts

of the population (Aiyetan & Das, 2021). Aiyetan and Das (2021) suggest that the main consequences of deprived project provision were poor socio-economic benefits to society, poor fund utilisation and quality of work, cost overruns, and delays in project completion.

Hofstetter *et al*. (2020) discuss at length the three prevailing discourses on the poor quality of service provision in rural South Africa. The first discourse asserts that the apartheid and post-apartheid government failed to improve the technical capability at municipal levels to enable them to construct and operate water and sanitation services (Hofstetter *et al*., 2020).

The second discourse stresses crippling levels of state capture and rent-seeking in the process of tender, leading to the delivery of incomplete or faulty water infrastructure in the villages, and self-enrichment (Hofstetter *et al*., 2020). The final discourse concentrates on the neoliberal approach preferred by the state to provide public water service, resulting in the commodification of water and unequal access (Hofstetter *et al*., 2020).

Hofstetter, Van Koppen and Bolding (2021:259) identified the field of "support services for self-supply and potential applications of these lessons in conventional public service delivery" to be investigated. The approach of self-supply by community members could assist in the evaluation of support services to enable self-supply structures to overcome the concerns associated with water quality, equality, and coverage to fulfil the national service standards in South Africa (Hofstetter *et al*., 2021). Hofstetter *et al*. (2021) view collaboration between users and municipalities as a practical path to improving community service delivery.

Municipalities are required to develop an Integrated Development Plan (IDP) which includes land and property development. This plan should meet the requirements of the socio-economic development of the country. The IDP and Local Government legislation will guide municipalities in their quest to attain the service delivery objectives. Therefore, SDM should ensure that water services are delivered to the communities. Moreover, it is noted that there is a backlog of water service delivery due to poor infrastructure maintenance and rehabilitation, and poor administration.

The Municipal Structures Act (Act 117 of 1998) focuses on various structures for local government and mechanisms for service delivery. It determines the functions to be performed and municipal structures in line with capacity requirements and the Municipal Systems Act (Act 32 of 2000) regulates the internal system and functioning of a municipality. Furthermore, it provides for a comprehensive range of service delivery mechanisms through which municipalities may provide municipal services.

Municipalities should enter partnerships with other organisations for improvement in water services delivery. Examples include municipal-public, municipal-community partnerships and municipal-private partnerships. As such, SDM is also entrusted with a constitutional obligation to provide services to its communities. Both national and provincial best practices are drawn upon to determine how effective the delivery of services to the communities can be improved. The Municipal Structures Act 117 of 1998 focuses on various structures for local government and mechanisms of service delivery. The said Act determines the functions to be performed by the municipality and the municipal structures

in line with the capacity requirements. As mentioned earlier, municipalities are categorised into three groups, namely A, B and C. Category A includes the metropolitan municipalities, category B, the 232 local municipalities, and category C, the 46 district municipalities in South Africa.

The Sekhukhune District Municipality is a Category C municipality that was established in December 2000. The district was a cross-border municipality until early 2006 when Limpopo and Mpumalanga straddled the municipality through the demarcation processes. The district comprises four local municipalities, namely Elias Motsoaledi (formerly Groblersdal local municipality), Ephraim Mogale Local municipality (formerly the Marble Hall municipality), Fetakgomo-Tubatse (so named after the amalgamation processes of merging Fetakgomo and Tubatse local municipalities) and Makhuduthamaga.

Figure 1 below shows the percentage of the population growth of SDM an average of 1.1% per annum from 1996 to 2016. According to the Stats South Africa (SSA) 2016 survey, the population of the district now stands at 1,169 762. This statistic reconciles with the population growth of 2011 at 1 076 840, 2001 at 967 185 as well as 1996, at 914 492. In general, the population in the district increases due to factors such as people migrating from other provinces who are employed in the district, especially in the mining sectors.

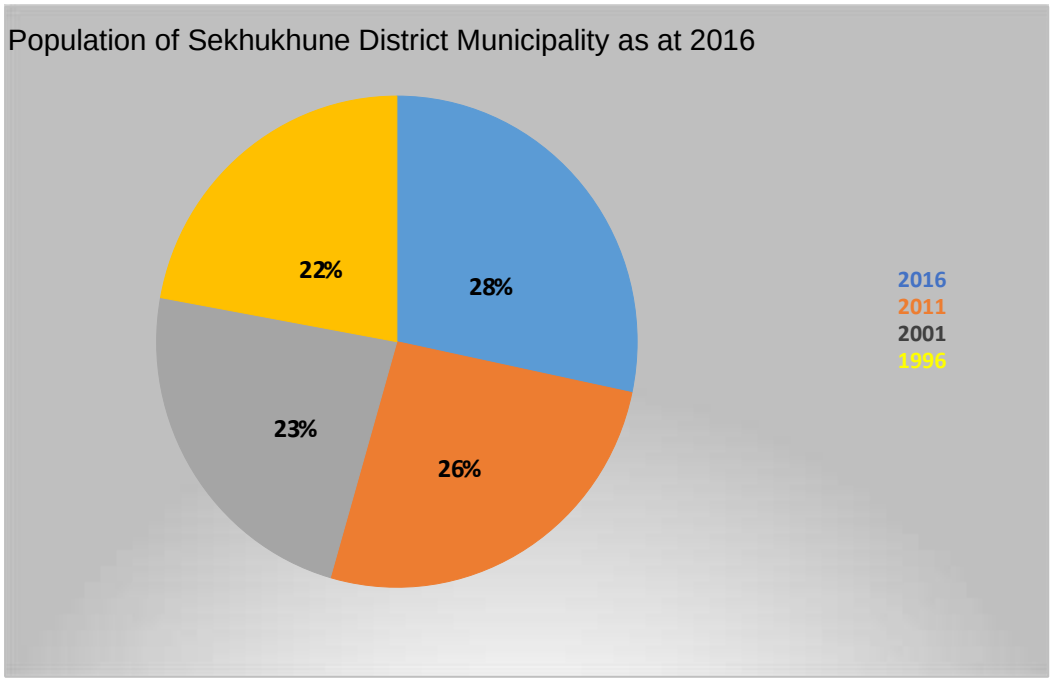

Figure 1: Population statistics of SDM (Source: SDM, 2018)

This topic has been worth investigating because it explains the weaknesses that the SDM is experiencing. Therefore, the study suggests measures to address the obstacles to efficient water service delivery in the municipality. Furthermore, this study will improve the policies in the municipalities. In addition, the population statistics indicate the need for closer relationships and effective communication between municipal officials and community members to form a central feature of human understanding and cooperation. Moreover, this study contributes to the scholarly literature on service delivery, particularly within the SDM.

1. 2.1 Implication in population growth in the SDM

The population growth trends indicate that more people migrate to the Fetakgomo Tubatse and Elias Motsoaledi local municipalities. Therefore, the district municipality should allocate more resources and services to this region to ensure that the local municipalities are supplied with adequate consumable water. However, the Ephraim Mogale and Makhuduthamaga municipalities also need assistance so that the population, which could increase by 1% per annum during the next 10 years, is supplied with basic water.

The basic service delivery analysis was from a variety of sources including Statistics SA, the communities within the SDM through public consultations, internal departmental inputs, and the comments from the Auditor General's reports. The SDM is a Water Service Authority (WSA) and Water Service Provider (WSP). It has 740 villages that should be supplied with basic water services from 43 schemes. The scarcity of water is a major problem because it affects the lives of the community members. The delivery of water in SDM remains a challenge. However, during the first five years of existence of the municipality, the total number of households without access to clean water has dropped from 35, 9% to 6%. The overall reduction in the number of households receiving water fell below 42%.

1. 2.1.1 Accessibility to piped water

About 25% (65 530) of the households in the SDM do not have access to piped water while approximately 75% (198 272) of the households in the district have access to piped water in the yard or communal taps but are not provided as expected. Most people without access to potable water are in Elias Motsoaledi, Fetakgomo-Tubatse and Makhuduthamaga municipalities. It is noted that there are still villages that use electric motor pumps to pump water. The highest number of electric motor pumps used to pump water is recorded in the Fetakgomo-Tubatse and Makhuduthamaga local municipalities where there are 33 motor pumps in each municipality. The Fetakgomo local municipality has 15 pumps, Elias Motsoaledi has 13 and Ephraim Mogale has 2 electric water pumps. These motor pumps are old, very slow and not easy to maintain because their parts need to be bought from abroad. Thus, water cannot be supplied or delivered, resulting in the community members suffering because of the broken water pumps.

One implication regarding the operations and maintenance programme is that SDM should maintain the electric motor pumps while stabilising the water supply in areas where there are diesel engines. Therefore, SDM should provide more electric motor pumps because they are more effective than diesel ones. The other implication is that the district municipality should analyse how many households are not having a water supply. Therefore, there is a need to focus on making sure that there is a regular supply of water in areas where the supply is irregular by assessing the problems.

The 2017/18 IDP states that community members of 429 villages receive water from boreholes, 189 from water from rivers, wells, and fountains; 190 from reservoirs (water treatment works) and 83 are supplied by tankers. It is noted that the Fetakgomo-Tubatse local municipality has the highest number (160) of villages that receive water from boreholes compared to Makhuduthamaga, where 110 villages receive water. Therefore, it is reckoned that 702 of 957 villages source water from the municipal system. This action would reduce the

number of water tankers needing to be sent to the communities. However, there is an indication that 255 villages in the SDM obtain water from other systems such as water pits and rivers. The implication is that many community members walk long distances to fetch water. Thus, there is a need to intensify a programme to install yard connections to the municipal water supply.

The most pressing challenges that delay the supply of water to the communities within the SDM are the lack of water sources, budget constraints, boreholes that are contaminated, theft of pumps, vandalism of the water pumps, illegal connections, and extensions of settlements. The internal systems and functionality of the municipalities are regulated by the Municipal Systems Act 32 of 2000. Moreover, the municipalities can enter partnerships with Water Boards, non-governmental organisations (NGOs) or community-based organisations to support the operation of functions. Therefore, the municipalities should develop an IDP to highlight the overall framework of development and coordinate the work of local and other spheres of government legislation in a coherent plan to improve the quality of life for the people in a specific area.

The Cooperative Governance and Traditional Affairs (COGTA) should also develop a plan to remedy the problems focusing on governance, financial management, infrastructure, and political interventions. The said plan should have a long-term objective to address major infrastructure and investment in the SDM. Most households in SA have access to tap water whereas others are fetching water from springs, streams, rivers, and dams. The national government has stipulated that each household must have access to a minimum quantity of potable water, that is, 25 litres per person per day per household. In 2017, 82% of the community members of SDM had access to water but the number of households increased. This has led to protest marches in many areas of the country owing to poor delivery of water services.

Most municipalities lost almost a third of their water supply through leakage, commercial losses such as theft and unbilled water supply service. The challenge in the service delivery of water to communities are issues of governance and accountability. As such, there is a need for good governance and technical capacity to improve the water supply to the community members. In the SDM, the IDP provides municipal services, seeks to alleviate poverty, enhance local economic development, eradicate unemployment, and promote the process of reconstruction and development. The plans include land and property development and must meet the requirements of certain departments in terms of social-economic development.

This research concentrated on water services as the basic needs of the communities in the SDM. The 2017/2018 IDP of SDM indicates that there was a backlog in the water supply. Therefore, the research concentrated on water supply. It further indicates that the backlog of water provision since 2012 affects 90 590 households. The annual target is to supply water to 5000 households over five years. Thus, 25 000 households would have access to water service.

The topic has been worth the investigation because it has clarified the challenges, weaknesses, and remedial actions to address the challenges hindering the service delivery of water in the local sphere of government, especially the SDM. This study will improve the implementation of policies in the municipalities as well as strong communication and

cooperation between the municipal officials and the community members. Furthermore, the researcher believes that the study adds to the scholarly literature on service delivery. Moreover, this study will be critical to municipal officials, academic students, and various stakeholders regarding water services.

The Department of Water Affairs and Forestry (DWAF) focuses on dams and bulk water for commercial and agricultural. Since the advent of democracy in 1994, the government has implemented the Reconstruction and Development Programme (RDP). It is noted that water service delivery is a common problem globally. The researcher also recognised that the general problem in the municipalities is the lack of service delivery in water supply which led to service delivery protests.

It is noted that service delivery in the South African government is challenged to sustain the development of basic service needs like water delivery to the communities. Additionally, in the Water Service Act 1997 (Act 108 of 1997), the basic service of a water supply is described as "the minimum standard of water supply services necessary for the reliable supply of a sufficient quality and quantity of water to households, including informal households to support life and personal hygiene".

The SDM is one of the nodal points, yet it does not have sufficient water sources, as indicated by former President Jacob Zuma in 2011. Nonetheless, the municipality constructed the de Hoop dam situated in the Fetakgomo-Tubatse local municipality and augmented it with the Riverside and Flag-Boshielo dams which, nonetheless, are unable to overcome the challenges of water services within the municipality. Thus, protest marches are experienced in the municipality for failing to meet the needs and expectations of the community members. According to the IDP 2017/18 financial year report, the SDM community members complained about the shortage of water supply.

1.2.2 Challenges of water service delivery in the SDM

Challenges facing the municipality in terms of addressing the delivery of a basic supply of water to the communities of the SDM are the lack of skilled employees of the Infrastructure and Water Services (IWS), theft and vandalism of projects and poor monitoring of water projects. Burke (2005) also indicated that the lack of delivery of water services to community members results in service delivery protests. The statement by Burke (2005) is supported by the Constitution of the Republic of South Africa Act 108 of 1996 which asserts that water supply to communities is a need. The said constitution aims to protect human rights, and dignity and to promote democratic governance.

Water supply is an issue raised by the community members during the SDM IDP consultations of the 2017/18 financial year. Considering that the SDM is a Water Service Authority (WSA) and a Water Service Provider (WSP), it must deliver water to the households within the district. Unfortunately, the SDM is unable to reduce the water backlog in its area because of a lack of municipal water supply and boreholes that are dry. Furthermore, the SDM IDP of the 2017/18 financial year indicated that the provision of a basic water supply should be a priority in terms of the National Framework. As such, the SDM developed a Water Development Plan (WDP) to address the backlog of water supply which was adopted by the council in the 2018 financial year. A ten-year plan was initiated to address the estimated backlog of an adequate water

supply to 1.4 million households and basic sanitation to 2.1 million households. The project planned to supply water to meet social needs and support economic growth. Moreover, this plan will provide new infrastructure, rehabilitation and upgrading of the infrastructure.

1.2.3 Importance of water

Water is the life and health of the environment. Without it, people, and plants most certainly cannot survive. Furthermore, it maintains the nature of our heritage. Moreover, the shortage of water in SA is mostly caused by unreliable rainfall. Adequate water supply infrastructure is required to meet the demands of agriculture and industry. The local government is responsible for supplying clean water to the communities, especially as considered a need for human life. The National Water Act (NWA) 36 of 1998, should provide support for Water Programme which states that “No person may unlawfully or intentionally or negligently commit any act or omission”. The importance of the programme is to maximise the water supply.

SDM is situated in remote areas of the Limpopo province. As stated in the SDM 2017/18 IDP report, a strategy was recommended to provide water to the communities. The SDM is a water-scarce area owing to droughts where 40% of the communities receive tapped water, 60% do not have any pipe connection and 70% have no yard water connection. Most of the community members rely on boreholes that may be contaminated due to pit toilets and the practice of backyard burials in rural areas. Lack of commitment, competencies, and skills of the employees of the SDM influence the basic delivery of services in the organisations.

1.2.4 Research context

South Africa’s constitution, which was updated in 2012, states that the local government aims to provide a democratic and accountable government to local communities and encourage the involvement of communities and community organisations to participate publicly in ensuring that the aims are fulfilled. Besides accountability, the constitution also emphasises the need for local government to be transparent and to ensure that financial and human resources are available to achieve authentic public participation.

In this scenario, the community members of the SDM protest in different forms such as police confrontations, forcing municipal representatives to resign, marching, mass meetings, submission of memoranda and petitions, processions, chasing unpopular residents out of villages and townships, election boycotts, road blockades, construction of barriers, burning of tyres, destruction of properties and looting when they are not satisfied with the delivery of basic services. In this research, the SDM should ensure that the infrastructure for delivering water in rural areas is sustained and improved. Craythorne (2012) indicates that a good understanding of political management is vital for improving municipal service delivery and for well-rounded local governance.

It is noted that since 1994, the democratic development of South Africa was resolute to craft a steady local government system which is constitutionalised in terms of Chapter 7 of the Constitution of the Republic of South Africa Act 108 of 1996. The politicians of the local bureaucracy should ensure that the executive leadership of the municipalities share political ideology and vision to facilitate local development programmes. Therefore, there

should be an understanding of the ideal local political interface for efficient and effective service delivery and to ensure good governance.

Moreover, it was indicated in the latest municipal IDP report for the 2017/18 financial year of the SDM that there is a lack of bulk water supply, reservoirs, and reticulation services. Thus, the community members ultimately rely on wells for water. This challenge has affected the lives of the community members. The crux of the problem is the source of water, as experienced by the community members of the SDM. As mentioned earlier, the community members require water for drinking, bathing, cleaning, washing, cooking, feeding livestock, irrigation, and farming. The problem lies in the supply of water by the municipal officials and the residents who are supplied with water after one or two weeks.

The SDM officials should consider service delivery in the context of local government to enhance the quality of life and provide municipal goods, benefits, activities, and satisfaction. In addition, the officials of the SDM should regard the municipalities as the custodians of public funds. Consequently, it should be noted that the officials of SDM are tasked with the utilisation of the resources to address the basic service needs of the local communities, notably infrastructure, water, electricity, refuse removal and spatial development effectively and efficiently. Therefore, they should ensure that service delivery, which is the responsibility of the municipality, is addressed. Protest marches since the beginning of the 1994 local government dispensation are viewed as an expression of grassroots needs. Protests are against the poor quality of service delivery and related issues. The communities use these protests as strategies to express dissatisfaction with poor service delivery.

1.3 Problem statement

A good research problem should address an existing gap in knowledge and lead to further research. According to Fisher (2014), a problem statement can be described as a pure and precise description of the problems which need to be solved by a problem-solving team. Fisher (2014) adds that a research problem is utilised in research tasks as a statement that traces the issues which are addressed by the research.

It is noted that the community members of the SDM need a supply of potable water to meet their basic needs such as drinking, cooking, and cleaning, for their livestock and housing projects. Essentially, water is a need for the SDM community members to sustain their lives. Thus, the SDM as a water authority must provide such. It is noted that the SDM should adhere to its maintenance plan for the water infrastructure. Unfortunately, the SDM has failed to assess their infrastructure of water services to inform their plans and budgets.

In this study, a description of an existing issue that needs to be addressed has been outlined. Nonetheless, it is noted that it provides the context of the research study and generates the questions that the research aims to answer. Moreover, a research problem is a statement about an area of concern, a condition to be improved, a difficulty to be eliminated or a troubling question that exists in literature, theory or in practice that points to the need for meaningful understanding and deliberate investigation.

Water is an essential requirement for life and a critical source of social and economic development. As stated in the National Development Plan of South Africa, by 2020, all the

citizens of South Africa will have access to sufficient water and hygienic sanitation to live healthy and dignified lives; hence the SDM community members go on strike when they do not receive such services.

According to Gardener (2013), South Africa is a water-scarce country. As such, the management of the usage of water should be monitored. According to Vincent (2014), the risks related to water issues are predicted to increase in the future. Therefore, South Africa must manage the impact of hydrological extremes through transboundary agreements. Thus, the infrastructure must be managed considering the changing climate.

South Africa's rainfall has always been variable and unpredictable, and it remains one of the larger risks to rain-fed agriculture. South Africa is ranked as the 30th driest country in the world. Moreover, it is a highly water-stressed country with extreme climate and rainfall fluctuation (WRI, 2015). As of 1 January 2020, the population of SA was estimated to be 57 224 906. This is an increase of 1.08% (611,986 people) compared to the population of 56, 612,920 in 2019. According to the WIR 2019, approximately 15 million people do not receive adequate water.

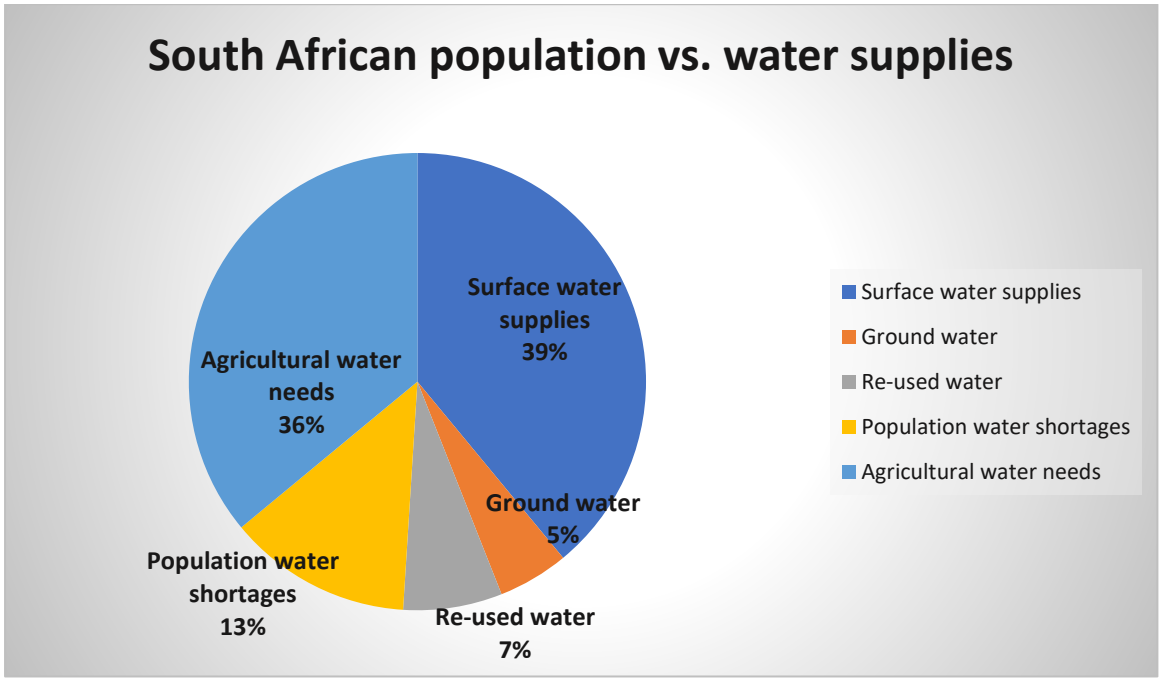

Figure 2: South African population versus water supply (Source: SDM, 2018)

Water supply is a major problem in South Africa. It has been confirmed to be a water-scarce country with an extreme climate and fluctuating rainfall. According to the IDP report of the SDM 2017/18 financial year, the SA usage typically comprises 77% surface water, 9% groundwater and 14% re-use of return flows. In this regard, management of the SA water resources involves catchment management, river systems, water storage, water abstraction and return flow management. Integrated management techniques are required to ensure that water is both protected and utilised to its full potential.

Recent studies have shown that the African supplies from groundwater have not been negatively affected yet. As temperature changes increase, more evaporation occurs on the

surface of the land, while more intense storms can be expected simultaneously. An increase in rainfall over shorter periods produces greater recharge than gentle and slow rain. This same effect may see greater river flows. Only 30% of the river and underground water is being used in South Africa now. Currently, only 8% of rainfall has been found to run into rivers to be used or deposited into dams. If rainfall increases and becomes more intense, this percentage will also increase**.**

In SA, temperatures and rainfall have always varied dramatically. Farmers are complaining of longer dry spells during the rainy seasons, indicating the effects of climate change. South Africa is vulnerable to the impacts of climate change because of its high level of poverty, inequality, and reliance on natural resources. Rising temperatures are one of the trends that forecasters confidently and correctly predict. Moreover, it is not certain what the effect of temperature increases will be on water availability and access which could directly impact agriculture, a sector on which 70% of the population is dependent.

According to National Water Resource Strategy for South Africa (2002) “water gives life, waters the field crops and stock of the farmers in the rural areas, provides recreation, supports the generation of the electricity and supports our natural heritage”. Moreover, the population of the world increased to 277 million. A variety of challenges is experienced in various areas, some of which may appear to be similar. However, underlying problems are often dissimilar. Each problem must be understood and addressed based on its unique circumstances.

The National Water Resource Strategy for South Africa (2002) has focused on the evidence that South Africa is faced with a severe water shortage and is not confronting the issue. The strategy further stresses the fact that the degree of dissatisfaction of the community members suggests that there is a misconception regarding how water is provided and the necessity for an adequate and reliable supply plan. The crucial point for water security is for the government and its citizens to comprehend and properly manage the resources of the country.

Greater pressure will be placed on the sewage systems of the cities and towns as the African continent becomes more urbanised. Challenges occur in ensuring the security of water supply to the cities and towns while battling with semi-arid regions with variable climates. Many urban areas have been relying on surface water retrieved from dams and rivers. However, the years of low rainfall have witnessed an increasing strain on these resources.

New explorations in urban design that integrate sustainable drainage systems and stormwater infrastructure indicate new approaches to water management. However, the implementation of these plans has been slow due to contractor and governmental constraints which limit the capability to adopt the new approaches and financially fund such projects. The water crisis challenge was ranked by the World Economic Forum (WEF) as the third-highest risk for doing business in SA in 2017 and it is one of the top risks globally. Based on population and economic growth projections, the water demand in South Africa is estimated to be 17.7 billion m^3 in 2030. It should be considered that not all areas will be covered because of climate change which is dramatically reducing the water supply. The communities in Sekhukhune have experienced an inadequate supply of potable water to meet their basic needs.

1.4 Purpose

The assessment of water service delivery challenges in the communities of Sekhukhune will assist the researcher to understand water management in the area. According to Richard and Elwood (2005), this assessment of water service delivery was intended to guide the investigation, describe the expected outcomes, and explain the means for collecting data. The authors further explain that the research purpose can be defined as the report of the reasons the research is being conducted (Richard & Elwood, 2005). The main aim of the research purpose was to identify or describe a concept or to explain or predict a situation or solution to a situation which indicates the type of study to be conducted.

The SDM is declared to be a source of water supply to the local municipalities. It has partnered with the local municipalities, community members and other stakeholders through a coordinated framework by fostering active community involvement and enhancing sound intergovernmental relations through good governance practices. Unfortunately, the SDM as a water supplier fails to deliver water to the community members. Therefore, the researcher found it worthy to assess the issues which hinder the service supply. This study highlighted the challenges of water service delivery at the Sekhukhune District Municipality in the context of accessing water services. The researcher plans to understand issues connected to water supply in households at a local scale to propose guidelines for water service management systems.

1.4.1 Research Objectives

The objectives of this study are as follows:

i. To determine factors that contribute to poor water service delivery in the SDM.
ii. To analyse the extent to which community members are affected by inadequate municipal water service delivery.
iii. To develop guidelines for the municipality to augment water service delivery.

1.4.2 Research Questions

The research questions for this study are as follows:

i. What are the factors contributing to poor water service delivery in the SDM?
ii. How can community members be provided with adequate municipal water services?
iii. How can municipal guidelines be developed to augment water service delivery in the SDM?

1.4.3 Research Philosophy

Research philosophy is a term that relates to a system of assumptions and beliefs regarding the development of knowledge by answering a precise problem in a specific organisation (Saunders, Lewis & Thornhill, 2009). Researchers need to develop the skill of reflexivity in understanding their research philosophy by questioning themselves about their assumptions and beliefs (Saunders *et al*., 2009).

Research philosophy "relates to the development of knowledge and the nature of that knowledge" in a particular field (Saunders *et al*., 2009:107). Zakauskas, Vveinhardt and Andriukaitiene (2018:111) explain that the "scientific research philosophy is a system of the researcher's thought, following which new, reliable knowledge about the research object is obtained". It refers to "the basis of research, which involves the choice of research strategy, formulation of the problem, data collection, processing, and analysis" (Zakauskas *et al*., 2018:111).

Saunders *et al*. (2009) point out that altogether research philosophies make ontological epistemological and axiological types of assumption. According to Saunders *et al*. (2009), each research philosophy encompasses essential differences that influence how the researcher thinks about the research procedure. Ontology is a division of philosophy that is connected "with the nature of social phenomena as entities" (Saunders *et al*., 2009:128).

In addition, it comprises the researcher's assumptions about the nature of reality and the world (Saunders *et al*., 2009). Ontological assumptions that researchers make determine what research phenomena and objects they focus on, and how they view and approach them (Saunders *et al*., 2009). Epistemology denotes assumptions about knowledge (how researchers know what they say they know, what constitutes legitimate, valid, and acceptable knowledge, and how researchers can converse knowledge to fellow human beings (Saunders *et al*., 2009).

Furthermore, Saunders *et al*. (2009) state that epistemological assumptions that researchers make shape what kind of contribution to knowledge researchers can make because of their study. Axiology denotes the role of values and ethics within the research procedure incorporating questions about how researchers handle their values and those of research participants (Saunders *et al*., 2009).

1.4.3.1 Ontological and epistemological assumption

The researcher adopts a relativist ontological assumption because "social reality is in essence relativist and may be explored only in a limited way by attempting to understand it form the point of view of the individuals who experienced it" (Slawecki, 2018:13). Relativism is a subjectivism approach emphasising the importance of personal experience in the formation of social reality (Slawecki, 2018). To understand individuals and the way they act, the researcher intends to come closer to the subjects under investigation, capture, and describe how individuals produce their distinctive worlds by remaining free as the main creator of social reality (Slawecki, 2018). This investigation is grounded "on an acceptance of the relativist nature of the world and strives to provide the most complete possible description of the analysed phenomena in order to explore them in depth" (Slawecki, 2018:18).

The interpretive epistemological assumption is adopted by the researcher because it corresponds to the humanist approach entrenched in the theory of cognition and the subjectivist vision of social nature (Slawecki, 2018). The researcher assumes the interpretive perspective to understand reality in the form that it is perceived by its social actors or participants (Slawecki, 2018). This perspective seeks explanations by referring to the beliefs, ideas, consciousness, and experiences of individuals constructing and reconstructing their actions (Slawecki, 2018). Slawecki (2018:19) explains that "the social reality is treated as a continuously emerging and changing social process created by individuals; it is a creation of human minds, a network of assumptions and intersubjectively shared meanings". The researcher focuses on daily life to try to understand and interpret the social phenomena that take place in the surroundings (Slawecki, 2018). The researcher seeks explanations regarding how the world is formed through the daily activities of participants or social actors (Slawecki, 2018).

1.4 Research Methodology

Research methodology represents a means "to systematically solve the research problem" and it is "understood as a science of how research is done scientifically" (Kothari, 1990:8). Research methodology signifies a "science of studying how research is done scientifically" to "systematically solve the research problem by logically adopting various steps" (Patel & Patel, 2019:48). The research methodology guides the researcher to the discovery of challenges connected with water service delivery in this investigation.

The methodology enables the researcher to understand the process of scientific inquiry and its products (Patel & Patel, 2019). Scholars understand research methods as the techniques or methods used for conducting research (Kothari, 1990). According to Kothari (1990), research techniques refer to the instruments and behaviour used in executing research procedures such as recording data, techniques of processing data and making observations.

Kothari (1990) further clarifies that research methods refer to the instruments and behaviour used in constructing and selecting research techniques. Research methodology describes the research procedure whereas the research method intends to find answers to research questions (Kale & Jayanth, 2019). The researcher assumes a qualitative research approach to explore and understand the meaning groups or individuals attribute to a social or human problem (Creswell & Creswell, 2018). This research process encompasses emerging procedures and questions, data gathered in the setting of participants, analysis of data building inductively from specifics to general themes, and researchers constructing explanations of the meaning of the data (Creswell & Creswell, 2018:4). The researcher engages in this type of investigation to strengthen the way of seeing "research that honours an inductive style, a focus on individual meaning, and the importance of reporting the complexity of the situation" (Creswell & Creswell, 2018:4). The qualitative approach is rooted in the philosophy of empiricism, follows an unstructured, open, and flexible approach to the investigation (Kumar, 2014). According to Kumar (2014:14), "it aims to explore diversity rather than to quantify, emphasises the description and narration of feelings, perceptions and experiences rather than their measurement". Kumar (2014:14) adds that it "communicates findings in a descriptive and narrative rather than the analytical manner, placing no or less emphasis on generalisations".

A research design is an essential step in providing a path to the research problem because it serves as the overall strategy dealing with the aspects of comprehensive design from the type

of study to the approach of data collection and analysis (Kale & Jayanth, 2019). Schindler (2019:71) defines the research design as “a blueprint for fulfilling research objectives”. According to Sekaran and Bougie (2016), exploratory research depends on qualitative approaches to gathering data such as focus groups, interviews or informal discussions with managers, employees, and consumers. The researcher adopts an “exploratory research whose purpose is to examine a little understood issue or phenomenon and to develop preliminary ideas about it and move toward refined research questions” (Neuman, 2014:38). According to Barbie (2011:95), exploratory studies are conducted to “(1) to satisfy the researcher’s curiosity and desire for better understanding (2) to test the feasibility of undertaking a more extensive study, and (3) to develop the methods to be employed in any subsequent study”. The researcher explores the challenges of water service delivery at the SDM.

1.4.1 Sampling strategy

A non-probability sampling strategy of purposive selection consisting of a non-random selection of participants is used to collect qualitative data. To purposefully select participants “means that qualitative researchers select individuals who will best help them understand the research problem and the research questions” (Creswell & Creswell, 2018:249). The method of non-probability sampling is used because the results of this study need not be generalised to a larger population in exploratory qualitative studies (Pascoe, 2014). The researcher purposefully selects Municipal Managers, Directors of Infrastructure Water Services, Ward Committee Members, and Community Members for inclusion in the sample and to ensure that each element fits with the population parameters.

1.4.2 Data Collection

The researcher follows the qualitative data collection method to deal “with the underlying qualities of subjective experiences and the meanings associated with phenomena” (Strydom & Bezuidenhout, 2014:173). In-depth interviews are utilised to enable the researcher to pose questions to research participants to learn more about their opinions, beliefs, and views about water service delivery challenges (Strydom & Bezuidenhout, 2014). In-depth interviews allow the researcher to collect data based on open-ended questions as a form of conversation (Strydom & Bezuidenhout, 2014).

1.4.3 Data Analysis

Qualitative data analysis involves “non-numeric data or data that have not been quantified and can be a product of all research strategies” ranging from a shortlist of answers to open-ended questions such as in-depth interviews (Saunders *et al*., 2016:480). The researcher follows a qualitative data analysis method to transform data into findings by immersing in the data, identifying and describing the dormant and evident patterns of meaning developing from the data collected (Bezuidenhout & Cronje, 2014). The researcher uses thematic analysis of data to discover, interpret and report clusters and patterns of meaning (Spencer, Ritchie, Ormston, O’Connor & Barnard, 2014). The researcher works systematically through texts to identify topics for integration into key themes to address the general research question (Spencer *et al*., 2014).

1.5 Theoretical framework

A theoretical framework refers to the guide for research or a blueprint used by researchers for their research inquiry (Adom, Hussein & Agyem, 2018). Adom *et al*. (2018) point out that it involves a framework based on the prevailing theory in a field of investigation reflecting the hypothesis of a study. According to Grant and Osanloo (2014:12), "a theoretical framework is the foundation from which all knowledge is constructed (metaphorically and literally) for a research study". A theoretical framework describes the passage of research and grounds it on conjectural concepts (Adom *et al*., 2018). Grant and Osanloo (2014:12) add that it offers "a grounding base, or an anchor, for the literature review, and most importantly, the methods and analysis". It is intended to make research results acceptable and meaningful to the theoretical constructs in the study field and safeguards generalisability (Adom *et al*., 2018). It helps in inspiring research while safeguarding the extension of knowledge by offering both impetus and direction to the research inquiry (Adom *et al*., 2018). It functions "as the structure and support for the rationale of the study, the problem statement, the purpose, the significance, and the research questions" (Grant & Osanloo, 2014:12).

There has been a growing focus on utilising the public-private partnership model to plan, construct, fund, operate and preserve innovative water facilities or renovate prevailing projects (Carpintero & Petersen, 2016). Ruiters and Matjie (2016:291) argue that "countries like South Africa have no choice but to look at innovative approaches, such as public-private partnerships (PPP) models, to ensure that they eliminate their water infrastructure backlogs". Ruiters and Matjie (2016) acknowledge that the government of South Africa recognises that innovative delivery models such as the PPP model, are needed to bridge the infrastructure delivery gap to spread access to water services to communities. Ruiters and Matjie (2016) put forward the argument that productive and efficient water infrastructure are essential inputs for all industries and therefore vital for competitiveness, productivity, efficiency, and economic growth. Obosi (2017) explains that a PPP arrangement concerns collaboration among the private and public sectors in delivering public goods. PPP can be described as an arrangement between one or more private partners and the government within the context of providing infrastructure services (Carpintero & Petersen, 2016). Obosi (2016) believes that PPPs enable community organisations and the private sector to play roles in enhancing water service delivery.

Ruiters and Matjie (2016) state that municipalities have the status of water services authority but are confronting numerous challenges such as the absence of technical, planning and organisation skills, inadequate financial resources, and lack of maintenance and operation in ageing and dilapidating water service infrastructure. Ruiters and Matjie (2016) recommend lasting growth and water services revitalisation planning across the provinces, using the capability in the private and public sectors to supervise the accomplishment of water services infrastructure through PPP financing models. PPPs are vital because they enable the implementation of infrastructure projects in developing nations and the benefits of these projects are better in developing nations where public financing cannot meet the demand for infrastructure development (Njeru & Maingi, 2021). Utilising the PPP model instead of the traditional procurement approach minimisation of cost overruns and time delays (Carpintero & Petersen, 2016). Carpintero and Petersen (2016) further accept that the PPP model is not a solution but ought to be used with thought.

Pusok (2016) theorises that governments play a significant role in the competency of PPPs by defining the institutional framework and overseeing the implementation of policies. However, Pusok (2016) cautions that both the private and public sectors can undermine the

expected benefits of PPPs by suggesting that private interests should not prescribe the terms of the partnerships for PPPs to achieve the anticipated benefits. Carpintero and Petersen (2016) suggest that additional research including more countries and service areas is warranted to expand the knowledge concerning the downsides and benefits of utilising the PPP model to provide local infrastructure services. The PPPs were therefore used as the primary theory that underpinned this study.

The municipalities have the status of water services authority but are confronting numerous challenges such as the absence of technical, planning and organisation skills, inadequate financial resources, and lack of maintenance and operation in ageing and dilapidating water service infrastructure.

The PPPs were therefore used as the primary theory that underpinned this study. The inductive reasoning was adopted to define the theory-based effort of clarifying service delivery challenges by a cause. In this context, there has been a growing focus on utilising the public-private partnership (PPP) model to plan, construct, fund, operate and preserve innovative water facilities or renovate prevailing projects to improve water service supply. Institutions like Lepelle Waters was engaged, and the Memorandum of understanding was signed to learn good practices.

1.6 Significance of the Study

Anthony (2010) mentioned that the “significance of the study is written as part of the introduction section of a thesis”. The significance of the study provides details to the reader on how and what the study will contribute and who will benefit from it. It also includes an explanation of the importance of the work as well as its potential benefits Anthony, (2010). The SDM is a water authority referred to in this study. Valued research based on the evidence regarding the factors that influence poor service delivery (water) in the district is indicated. Moreover, remedial actions to address the challenges are outlined so that services may be delivered optimally.

In addition, the study will guide the administration or employees to draft policies that will bond the community members, the service providers, and the employees for better implementation of the processes to ensure that water is supplied effectively. Moreover, technical challenges are experienced regarding water supply in the SDM. Consequently, it is noted that irregular water supply exerts a negative impact on needy households who rely on the potable water supply because they do not have money to buy water.

Furthermore, Anthony (2010) indicated that “the significance of the reports includes adequate information on various aspects of the business”. The skills and knowledge of the SDM officials are communicated through reports which assist in the decision-making of a permanent solution to deliver water effectively to community members. In this study, the annual and Auditor General reports were consulted to identify the challenges to water service delivery. It should be noted that generated information is required in developmental studies.

1.7 Delimitation and the Scope of the Study

According to Rivera (2019), the delimitations of a study are those characteristics that arise from the limitations of the scope of the study (defining the boundaries) and the conscious

exclusionary and inclusionary decisions made during the development of the study plan. The study was limited by the size of the model, the available time participants had and the geographic area.

Rivera (2019) further indicated that the delimitation of the study is the description of the scope of the study, and it explains why definite aspects of a subject were chosen and why others were excluded. Rivera (2019) further explains that delimitation is sometimes called a “boundary condition” which specifies a region beyond which a theory or hypothesis is either changed or embraced. For example, in this field of study, a theory of motivation may fail to apply among gathering line employees because their performance is limited by the pace of the gathering line, thus imposing a boundary condition on the theory.

The scope of this study is limited to the district municipality of Sekhukhune incorporating the local municipalities of Makhuduthamaga, Elias Motsoaledi, Fetakgomo-Tubatse and Ephraim Mogale. The research participants involve Municipal Managers, Directors of Infrastructure Water Services, Ward Committee Members, and Community Members.

1.8 Research Plan

The Research Plan for this study follows:

Chapter 1 – Introduction.

This chapter provides an overview of the whole study.

Chapter 2 – A literature review.

The current body of knowledge concerning service delivery is examined, critiqued, and discussed.

Chapter 3 - Research design and research methodology.

This chapter elaborates on the research design and methodology for conducting this investigation.

Chapter 4 – Research findings and discussion.

This chapter includes the analysis of data collected and the discussion of research findings.

Chapter 5 - Conclusion and Recommendations.

The conclusion is drawn based on the implications of the results concerning the research, aim, objectives, questions, and hypotheses of the investigation.

1.9 Conclusion

This chapter presented the introduction, background to the study, research context, problem statement, research purpose, objectives and questions, research philosophy, methodology,

sampling strategy, data collection methods and analysis, theoretical framework, the significance of the study, and the delimitation and scope of the study.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

The researcher reviewed the literature of the two dominant discourses on the poor quality of water service provision in rural South Africa in this chapter (Hofstetter *et al*., 2020). The two prevailing discourses involve the building and operation of basic water and sanitation services and the delivery of incomplete or faulty water infrastructure at the level of villages (Hofstetter *et al*., 2020). The researcher also reviewed the literature on water service delivery challenges and their impact at the local government level in South Africa to identify ways to lessen such challenges in Sekhukhune District Municipality.

2.2 Building and operation of basic water and sanitation services

Many citizens in rural South Africa still depend on their infrastructure and initiatives to access water despite the speedy extension of public service provision since the end of apartheid (Hofstetter *et al*., 2021). The findings of research by Pilusa and Kanyane (2020) highlight the underperformance of human resources and institutional capacity within the Limpopo provincial Water Service Authorities towards the delivery of water and sanitation to residents. Violent service delivery protests taking place in the province indicate a deficiency of access to basic services by citizens (Pilusa & Kanyane, 2020). The Minister of Water and Sanitation initiated innovative institutional forums for water and sanitation in 2015 in response to service delivery protests, but the benefits remain meagre in Sekhukhune district municipality it has been executed in a top-down approach while facing a shortage of funds (Hofstetter *et al*., 2020).

The low points of citizen approval with municipal service delivery are the result of both the unsatisfactory quantity and quality provisions associated with insufficient public contribution (Masiya, Davids & Mangai, 2021). Municipalities are categorised by capacity and fiscal constraints and "also serve as pools of patronage of local power to a small elite of local politicians" (Koelble & Siddle, 2014:1130). Kanyane (2014) argues that service delivery challenges and problems are a direct manifestation or consequence of poor planning, municipal capacity constraints and weak governance, among others. Need for technical capacity and strong governance is necessary to improve municipal service provision (Kanyane, 2014).

Kanyane (2014) points out that the major objective of solving municipal service distribution challenges is to focus on professional know-how unrestricted from party politics and to effectively evaluate and monitor service delivery. The government at the local level cannot meet most elementary demands of constituents but the non-existence of national control and oversight permits patronage politics (Koelble & Siddle, 2014).

Dissatisfaction with service distribution is more prevalent among the black majority populations (Masiya *et al*., 2021). According to Masiya *et al*. (2021), discontent with service delivery is influenced by factors such as uneven access to services, overstated and unfulfilled political promises, relative deprivation, and apartheid disparities. Frustration is further compounded by the absence of responsiveness by councillors and officials including high

levels of poverty, provision of substandard services and unclear channels of communication (Masiya *et al*., 2021).

Water security challenges linked to water service delivery in South African households are noticeably multi-scaled, and intractable, comprising many elements and actors without a single solution (Weaver *et al.*, 2017). A 2018 report by the South African Human Rights Commission (SAHRC) reveals that corruption and sluggish economic development resulted in low levels of service delivery to poor and remote regions (SAHRC, 2018). The report indicates that "poor people are the least likely to have access to a reliable and safe water supply and decent sanitation services and are less able to secure appropriate redress for the violations of such basic rights" (SAHRC, 2018:8). This failure to recognise fundamental rights in such populations serves to prolong and establish cycles of inequality and poverty in the country (SAHRC, 2018).

2.3 Delivery of water infrastructure

Water infrastructure comprises water treatment plants, pumps, pipes, canals, levees, and dams (Crow-Miller, Webber & Molle, 2017). Infrastructure is regarded as the mainstay of a nation to stimulate socio-economic growth for many developing countries such as South Africa. (Aiyetan & Das, 2021). Water infrastructure delivery is of supreme importance and the scarcity of water in many South African areas is being experienced because water is one of the scarcest commodities for people (Aiyetan & Das, 2021). Water infrastructure projects in South Africa suffer from challenges of cost overruns, conflict, and delay despite the determinations of the governments at provincial and national levels (Aiyetan & Das, 2021).

The fundamental water rights of a large South African population are still far from certain after considerable investment in infrastructure since the end of apartheid more than 28 years ago (Marcatelli & Buscher, 2019). According to Marcatelli and Buscher (2019), residents are expected to contribute to the operating expenses of water services and to the capital expenses of constructing new water infrastructure. Marcatelli and Buscher (2019:768) argue that "the state will not upgrade the water infrastructure of the poor because it cannot recover any costs from them".

A study by Dithebe *et al*. (2019) reveals that apparent challenges in deferring the delivery of water infrastructure resources in South Africa involve insufficient municipal revenues, high credit risk, high fiscal deficits, and lack of accountability and transparency. Dithebe *et al*. (2019) recommend that the difficulties of water infrastructure are prioritised according to national impediments, private blockages, policy and legislation limitations, municipal challenges, and equity limitations. Disorganisation concerning all spheres of government must be eliminated for the delivery of infrastructure development and upkeep (Dithebe *et al*., 2019).

Crow-Miller *et al*. (2017) claim that the level of private-sector involvement in the place of water infrastructure and the level of opposition to such projects by native populations has changed in recent times. Dithebe *et al*. (2019) suggest that opposition towards private involvement should be eradicated through awareness programmes carried out by the central administration. A centralised mandate and stakeholder dialogue among all participants in water infrastructure development must be expressively encouraged to remove any irregularity (Dithebe *et al*., 2019).

Communities need to take over the operation, administration, and management of the water infrastructure to make end-user management maintainable (Hofstetter *et al*., 2020). Hofstetter *et al*. (2020:857) imply that "construction that is led by end-users also creates capacities within communities for initiating and implementing future extensions and improvements of water infrastructure". Hofstetter *et al*. (2020) trust that capacity-building can result in a formal appreciation of different forms of water infrastructure co-ownership and co-investment.

Hofstetter *et al*. (2020:858) argue that several forms of indirect co-management and co-investment by end-users of countryside water infrastructure depend on some forms of cost recovery and other "elements of the commodification of water services are thus required". Hofstetter *et al*. (2020:858) suggest that "there is a need to engage in a process that moves towards a public service delivery approach" because the current water service provision in Sekhukhune is noticeably weakened "by public officials' misallocation of funds to (incompetent) private contractors".

2.3.1 Water service delivery challenges

The spread of service delivery protests seen regularly in the media makes it imperative to explore the fundamental relationship between the number of protests and the level of services provided by local municipalities in South Africa (Morudu, 2017). South Africa has experienced continuing community protests the central and local government in connection with numerous issues involving water, housing, bridges, and roads (Beyers, 2015). These protests indicate that service delivery challenges impact communities negatively because "many citizens have become impatient with the failure to deliver on promises made" (Beyers, 2015:123). Morudu (2017) understands protests to be associated with inadequate delivery of basic services at the level of a local municipality.

Weaver *et al*. (2017) state that water service delivery signifies the challenge of transformation and improvement towards a more ecologically and socially just situation. Water service delivery can be viewed usefully as a complicated social-ecological system and household water security issues connected to service delivery in South Africa are recognisably multi-scaled, and intractable, involving many elements and actors without a single solution (Weaver *et al*., 2017).

Weaver *et al*. (2019) point out that to attain developmental goals such as sustainable, efficient, and equitable water resource management, human capacity growth in innovation and knowledge is essential in South Africa. Most of the South African population consists of economically and socially disadvantaged people, residing in areas that experience an absence of water-related knowledge capacity and low household water security (Weaver *et al*., 2019). Weaver *et al*. (2019) contend that a unified method of water resource management necessitates the meaningful contribution of water stakeholders in the processes of management. Weaver *et al*. (2019) believes that civil society organisations campaigning for practices to address water service delivery problems are well-placed to foster active citizenship around water challenges and community capacity development.

The findings of a case study conducted by Beyers (2016) at the local municipality in Sekhukhune District of Limpopo Province identified areas consisting of tension between councillors and bureaucrats, public participation, curbing corruption, free basic services, and

municipalities' role in job creation for further research to improve service delivery in South Africa. Conflicts between senior municipal administrative office bearers (the mayor and municipal manager) and politicians are common in South Africa (Beyers, 2016). A legal requirement of all district and local municipalities is public participation that provides content and meaning to programmes and planning (Beyers, 2016). According to Beyers (2016:175), communities feel disconnected and alienated "from decision-making processes and are thus disempowered".

According to Weaver *et* al. (2019), public participation in the governance of water processes is an essential component in fulfilling the developmental principles of the National Water Act comprising efficiency, sustainability, and equity. In Limpopo Province, corruption is problematic because both administrators and politicians are thought to be corrupt in the employment of staff and awarding of tenders (Beyers, 2016). The lack of relevant infrastructure is the main challenge in rural municipalities for the delivery of free basic services including concerns about unemployment (Beyers, 2016).

South Africa is viewed as the driest water-scarce country in the world and its rate of economic development is related to water security (Meissner, 2018). Insufficient access to sanitation and safe drinking water, flooding, supply variability, increasing water stress, and water pollution levels are slowing economic growth (Meissner, 2018). Meissner (2018:17) describes water security as a condition "of mind based on context-specific (i.e., localised, and individualised) perceptions held by an individual of water-related threats and how it influences individuals and their natural surroundings". A study on the people's insights into the apparent state of water security in Sekhukhune discovered that water security "depends on the biophysical environment, their interaction with water resources, as well as their relations with other people in the communities and further afield" (Meissner, 2018:126).

According to Reddy (2016), service delivery is the facilitation of public activities and relates to both tangible and intangible public goods and services. Reddy (2016) further indicated that local government can be defined as a form of public administration that can be applied to a diverse range of contexts, it exists as the lowest form of administration and behaves as a governing tool in the application procedures of local governments, unionisations, and alterations to limitations. Moreover, it serves to aid local government elections, referenda, powers, and procedures for the development of the community.

It is considered that the SDM is an area with a proud history, with majestic mountains, lush valleys, and meandering rivers, it is rich in minerals such as chrome. The area in this municipality is adorned with more than 2200 indigenous species of plants.

Furthermore, the municipality forms part of the government and exists as a legal body that plays an essential role in the systems of governmental relationships and organisations. Additionally, providing for national and provincial dynamics of government implies that the affairs of the local citizens are to be constitutionally attended to by the local government in power (The Constitution of the Republic of South Africa, 1996:153).

As outlined in the Constitution of the Republic of South Africa, there are three spheres of government that are interconnected. The Constitution provides the social-economic development of communities. It also states that the local government is mandated with the responsibility to provide services to the community in a stable manner and to guide economic

and social development (The Constitution of the Republic of South Africa, 1996:152). The different spheres of cooperative structures in the South African government enhance the local government with capabilities. Furthermore, it provides services directed at attaining a healthy socio-economic and political environment.

The delivery of services constitutes a rigorous effort in the three circles of government, namely the provincial, national, and local spheres. As such, the government in the local sphere bears the responsibility of providing for the high expectations of previously disadvantaged groups.

Research has revealed that there should be a prioritisation to provide basic service needs to communities. Nonetheless, an increase in the number of protests revealed that the communities are not satisfied with the efforts made by the local government over the past few years. The study has revealed that 32% of protests occurred owing to dissatisfaction with the quality of the deliveries.

2.3.2 Broad Context/ Conceptual Framework

According to Curry (2008), a broader context is an important task for the historian. In this research, the questions that were asked impacted the subject at hand. In the framework of this research, the broad context furnishes the reader with an outline of the situation, a background picture from where the information is extracted and what or who is involved. In this study, the broad context represents the synthesis of the literature in explaining a phenomenon and maps out the required actions.

2.4 Literature Details

The purpose of the literature review is to analyse previous research relating to the study to identify the areas in which there is a shortage of knowledge, new developments, and trends in the respective field of study. In this research, the context of the study was based on the existing legislative, theoretical and conceptual perspectives which apply to water service delivery. The study also outlined the research methods and techniques employed and the interviews that were conducted to collect data.

Furthermore, in this scenario, the study investigated the basic service delivery to the communities, especially relating to water challenges in the Sekhukhune District Municipality (SDM) which comprises five (5) local municipalities and is situated in the Limpopo Province. The study assessed the responses of the community members and the officials responsible for the water service supply in the SDM. Moreover, it was found that the water sources within the district municipality are the Flag Boshielo, De Hoop, Vergelegen, and Nkadimeng dams, as well as the Marishane water scheme.

The problem statement is outlined and entails the aims of the research. There is evidence that there are challenges regarding the water supply in the SDM, which emanate from dry water sources, unskilled and uncommitted officials, illegal connections, and incomplete projects by contractors. Furthermore, the literature review provides an overview of the sound scholarship in an approachable, disciplined manner through analysis of tendencies and considerations. Based on the review, the researcher explains how the study is expected to make its contributions to curbing the challenges of service delivery in the SDM.

While reviewing the literature to analyse the service delivery of the SDM, the researcher was confronted with the decision to adopt either a thematic (specific ideas about the problem) or a chronological approach, beginning with the earliest research. This literature review includes both approaches.

A recent study on the service delivery and living conditions of South Africans found a need to analyse water service delivery to poor households. The following documents, among others, were referred to for data collection based on the available information: the Water Service Act; Consolidated Audit report by the AG of SA 2017/18 financial year, the Municipal Annual performance report, Municipal IDP 2017/18 financial year and the Constitution of SA.

It was noted that the delivery of safe drinking water in South Africa depends on whether there are adequate water sources. In most rural areas, water is collected from rivers, wells and ponds. This is unfortunate because this source of water is often untreated, contains faecal matter and has a bad microbiological quality which is not safe for human consumption.

In this study, the SDM, as the water authority, ensures that the water is treated before consumption. Furthermore, the SDM ensures that it develops flexible strategies that will assist with the effective and efficient use of services to be delivered. Moreover, the officials of the municipality advise the communities that to achieve equitable water management and distribution to communities, the government and stakeholders can use river basin management.

In the SDM, dams and reservoirs are built for the storage of water to increase the supply of water to meet the demands of a growing population.

2.4.1 Legal and Policy Mandate

2.4.1.1 Sustainable Development Goal

According to Gardener (2013), basic delivery of water services affects more than 45 per cent of people globally and the threat of an increase in shortages is projected owing to the rise of global warming. In this study, it is recognised that many people across the globe receive only a limited water supply. If the freshwater supplies become depleted, the community members should rely on unconventional sources for survival.
Furthermore, it is noted that, in the SDM, universal access to affordable and safe drinking water requires investment in sustainable infrastructure, sanitation facilities and hygienic measures. Moreover, it is necessary to protect natural resources such as rainforests, wetlands, mountains, and rivers for the goal to be achieved.

2.4.1.2 The Constitution of the Republic of South Africa 108, 1996

The Constitution of the Republic of South Africa (section 27(1) (b) reassures the rights of its citizens to have access to water. As stated in Section 27 (2) of the said Constitution, the state is liable to take reasonable legislative and other measures, within its capacity, to realise each right. Parliament is responsible for promulgating laws that provide measures and mechanisms to ensure that the rights are enjoyed by citizens.

According to the IDP held by the SDM, the municipalities have limited resources to service the vast number of rights of their citizens. To service the rights mentioned above, the local

government must use the available resources, which the researcher views as being limited. However, constitutions do not empower service providers to exert greater effort to service the said rights.

Furthermore, it is recognised that the limitation of resources should be considered in terms of societal needs. Thus, it is necessary to determine whether those who are mandated to service these rights realise what they are and whether they can provide alternative mechanisms with which to supply the water.

When assessing basic human rights, it is understood that progressive realisation of the rights will require step-by-step implementation thereof according to their level of priority. However, it is recognised that the progressive realisation of rights has been largely neglected by societies, but this can be changed in the future. In addition, Section 151 (1) of the Constitution of the Republic of South Africa indicates that a local circle of government and Section 152 (1) (b) sets out the objectives for the local circle responsible for the provision of sustainable services to their respective communities.

The provisions above ensure that the local government has the mandate to supply water services and other basic human rights services to the communities. Service providers must realise the importance of delivering unremitting services.

Looking at the current strikes and community protests in the SDM, the service of water delivery must be provided and sustained. Furthermore, cooperation between municipal officials and community members should be strengthened to eliminate unrest.

2.4.1.3 Water Services Act 108, 1997

The Water Service Act was endorsed in 1997 to give effect to Section 27 of the constitution and grant water service institutions the powers to realise the Act in terms of Section 3 (2) (Constitution of the Republic of South Africa, 1996:25). The SDM performed an analysis of the possible tariffs to sustain the services provided and the standardisation thereof to ensure equilibrium between the consumers and service providers.

The main aim of the act is to ensure that there is access to basic water supplies in terms of Section 2(a) of the Water Services Act. Setting national standards and norms for tariffs in the context of water services is also an important goal because they will provide the minimum standards that must be met, and the financial costs of the services will be provided. Section 2(c) of the WSA entails the adoption and preparation of water development services plans by the water services authorities. This section also recognises the requirements in the guidelines to ensure that projects are completed. For compliance purposes, it is advised that the respective water service provider has a credible water services development plan to effectively identify the challenges encountered in the water services sector. Moreover, the plan should be assessed for credibility to satisfy the development agenda of the area analysed.

Section 5 of the WSA 107, 1997 states that in the case where water service providers are incapable of supplying the required customer need, the first choice must be given to aid the basic sanitation and water suppliers should. It was established in the SDM that municipal water service providers should adhere to the acts above.

2.4.1.4 Water Service Master Plan (WSMP)

Section 2 of the Water Service Act states that established water services authorities must create a master plan for water services. In May 2014, the SDM developed and adopted such a plan. In this study, it is noted that the SDM ensured that the WSMP involved the technical networks and engineering, aligned systems, associated infrastructures and schemes which contain the entire network of the water supply. This plan is consistent with the strategic path of the SDM and is under the strategic path of the DWAF.

Consequently, the SDM ensured that the plan identified the bulk water service infrastructure requirements which inform the status of the services and allow for the planning of consistent delivery of services. Furthermore, the plan was implemented in the municipality to support future developments and economic growth. In this scenario, the SDM also ensured that the master plan of the bulk water services included the water service planning to source adequate and consumable water, as well as its treatment and distribution to the community members effectively. Frequent updates to this plan assisted in providing references for future infrastructure development plans. Boreholes, pumps, water pump stations, distribution pumps, water purification pumps and water sources were visited for observation purposes.

2.5 Conclusion

The literature reviewed in this chapter involves the prevailing discourses about the building and operation of basic water and sanitation services and the delivery of incomplete or faulty water infrastructure at the level of villages. Literature on water service delivery challenges and their impact at the local government level in South Africa was reviewed to find ways of lessening such challenges in Sekhukhune District Municipality.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the study area, population, and applied methods of research. The location of the SDM in Limpopo province is described. Water service delivery in the SDM and the analytic techniques employed in the adopted approach to analyse the effect of water service delivery are also outlined. This chapter also presents the characteristics the population and data sampling method and size, the study area, the research methodology, as well as the data collection, analysis methods, delimitations of the study and ethical considerations.

The methodology is simply a means by which data is collected and analysed and it is used to establish the research method and to differentiate the procedures to garner data, perform calculations and analyse the data. There are two types of methodologies utilised during a research project, namely, quantitative, and qualitative methods (Saunders, 2012).

The research methodology was used as a procedure or technique to identify, select, process, and analyse information about a topic. In this section, the overall validity and reliability of the study is critically evaluated. In this study, the research methodology was systematically used to solve the research problems. As such, it is regarded as a study executed scientifically. Moreover, it was regarded as essential in the procedure to describe and evaluate the research as well as make predictions in this regard.

In this scenario, the qualitative method was employed to understand the beliefs, experiences, attitudes, behaviours, and interactions of the people to gain an understanding of the underlying reasons, opinions, and individual motivations regarding water service to gain insight into the problem or help to develop ideas. The qualitative method answers questions about the complex nature of a phenomenon, usually to describe and understand the phenomenon from the participant's point of view. Subsequently, the data were analysed to establish themes from the descriptions offered by the participants in their language. These approaches are further discussed below.

3.1.1 Qualitative Research

In this study, qualitative research involves an interpretive, naturalistic approach. Moreover, the researcher studied the information in their natural settings, attempting to make sense of, or to interpret, the phenomenon in terms of the meaning of the contributions of the participants. The qualitative study focuses on understanding the beliefs, experiences, attitudes, behaviour, and interactions of the people. Harwell (2011) also confirmed that the focus of the qualitative method falls on discovering and understanding the experiences, perspectives, and thoughts of the participants.

Following the interpretation of Denzin and Lincoln (2005) in this study, the researcher defended the integrity of the study by various means, for example, by establishing trustworthiness, credibility, applicability, and consistency.

Credibility

In this research, credibility can be defined as the criteria for evaluating the truth value of the internal validity of qualitative research. In addition, the qualitative study is credible when the results are presented with adequate descriptions of context that are recognisable to people who could share the experience. For example, where the research questions are answered appropriately in several ways such as through interviews). As advised by Saunders (2011), the researcher ensured that the extracts of data and the interpretations thereof are not dissimilar.

Applicability

This study was applicable because the SDM officials agreed with the findings. In addition, the SDM considers that this criterion of applicability has been met because the findings are relevant to the situation. In terms of the above statement, it is expected that saturation is reported when the criteria for recognising its achievement are applied and consistency with the theoretical context is attained.

Consistency

Maximum variation of phenomenon for illumination should be discouraged to fulfil the limited research expectations. For example, negative cases or instances that do not fit the emerging interpretation or theory should actively be sought or explored). Qualitative researchers seldom sustain verification of the process and theoretical findings through the utilisation of approval from the other team members (Mason, 2018). Consistency of the results refers to the criterion of assessing reliability. As such, it does not mean that the same results would necessarily be found in another context but may have the same data with other patterns.

3.2 The Research Design

The exploratory qualitative research design assists the researcher to learn about the challenges of service delivery. Exploratory studies represent a valuable way to pose open questions for the discovery of what is occurring and obtain insights concerning challenges of service delivery (Saunders, 2011). According to Saunders (2011), exploratory studies are useful when researchers wish to clarify their understanding of a phenomenon, issue or problem when they are not certain of its precise nature. The advantage of exploratory research is that it is adaptable and flexible to change the direction resulting from appearing new data and occurring new insights (Saunders, 2011).

3.2.1 Locating the research participants

According to Jaison (2018), the phenomenon dictates the method including the type of participants. In this study, purposive sampling was guided by Mason (2018), considered to be a kind of non-probability sampling which identified the primary participants.

In this study, permission to conduct research in the SDM was obtained from the municipal manager. In this context, as clarified by Neuman (2000) a ‘gatekeeper’ is someone with the formal or informal authority to control access to a site. In this scenario, the municipal manager was regarded as the gatekeeper in this phenomenon.

The purpose, procedures and confidentiality were outlined at the beginning of the interview. Mason (2018) further indicated that deception might prevent insights, whereas honesty which is coupled with confidentiality reduces suspicion and promotes sincere responses. In this research, the informed consent form was explained to the participants at the beginning of each interview. It was further explained that participation was voluntary. The participants signed the voluntary forms but those who did not wish to participate were not coerced to do so. Lastly, data collection interviews continued until sufficient information from the participants was garnered.

3.2.2. Data and storage

Permission to participate in the study was sought and granted by the interviewees. Each participant was given an interview form to complete. The forms were completed chronologically. Keywords and statements were noted to summarise the transcribed notes effectively.

The researcher gathered and summarised the field notes so that the research could be reconciled and validated. Mason (2018) indicated that this implies that the researcher must take notes accurately when interviewing each participant but without judgemental evaluation. In this regard, notes were written on the forms provided. A theoretical and analytical approach was adopted. Moreover, the notes involved interpretation as part of the analysis rather than the data collection. The notes were stored as secondary data for the qualitative research.

Therefore, the researcher must prevent the data from being prematurely dispensed or subjected to bias. Ultimately, hard copies of the following documents were filed: A request letter to conduct research in the organisation of the SDM, a voluntary participation consent form, an informed consent form, an interview form for the ward committees, an interview form for the municipal manager and an interview form for the municipal officials (see Appendix D). Any notes made during the data analysis process and draft transcription and analysis of the interview were presented to the participants for validation, the confirmation of correctness and/or commentary by the participants concerning the transcripts and analyses of the interviews.

In this instance, the community members raised their concern about the SDM municipal offices which are situated at the far end of the region. The initial agreement was that the offices should be situated in the centre of the region so that they can be accessed by all the community members. Moreover, the district is working with community members and key stakeholders to ensure a better understanding of the delay of the land issue.

3.3 Research Philosophy

The relativist ontological assumption embraces the existence of locally constructed and reconstructed social realities (Slawecki, 2018). Relativism adopts the presence of numerous social worlds operating outside individual minds and researchers cannot be separated from their values and beliefs (Slawecki, 2018). Slawecki (2018:23) explains that “as realities exist only in human minds and social worlds keep being constructed and reconstructed, the only way of learning about them is to refer to the subjective experience, opinions, beliefs, and values of their creators”. Saunders, Lewis, and Thornhill (2019:801) state that relativism

concerns the “subjectivist approach to knowledge that recognises knowledge is historically situated and that social facts are social constructions agreed on by people rather than existing independently”.

The interpretive epistemological assumption is “concerned with the way humans attempt to make sense of the world around them” (Saunders *et al*., 2019:801). Qualitative research “is interpretive because researchers need to make sense of the subjective and socially constructed meanings expressed about the phenomenon being studied” (Saunders *et al*., 2019:179). Saunders *et al*. (2019) describe this type of research as naturalistic because researchers must function in a research context or natural setting to establish participation and trust, access to in-depth understanding and meanings.

3.4 Population and sampling strategy

The population of the study comprises community members, ward committees and municipal officials. According to Tesch (2013), population sampling can be described as the procedure of extracting a smaller group of subjects which are derived from the entire population, this group must hold a sufficient representation of the entire population and must be large enough to guarantee accurate statistical analysis. According to Saunders (2011), the logic and power of purposeful sampling lie in selecting information for an in-depth study. The researcher used judgement and knowledge of the participants and the environment to select the sample of participants. It is noted that it would often be illogical to study an entire population when conducting a survey (Saunders 2011). Tesch (2013) further explained that sampling can be described as the method that enables the collection of data concerning a population without needing to analyse every individual.

The researcher used semi-structured interviews to substantiate data emerging from various sources. It was also deliberated that sampling seldom extends for a long time and usually requires participants to answer a set of predetermined questions. The researcher employed purposive sampling in a qualitative manner whereby the participants were selected according to pre-selected criteria relevant to a particular research question. Furthermore, the researcher ensured that purposive sampling was employed, which is described as a type of non-probability sampling based on the identified purpose of the study as well as the judgement of the researcher.

The population comprised the following characteristics: the first group consisted of municipal officials who are qualified engineers, plumbers and artisans, and the other group consisted of ward committee members who possess knowledge of the delivery services to the communities. All the groups were sourced from the Sekhukhune District Municipality. Permission was granted by the acting municipal manager of Sekhukhune District municipality to conduct this research. Sekhukhune District Municipality (SDM) is a rural municipality which covers 13 528 km2. The municipality is surrounded by four local municipalities, which are: - namely Fetakgomo Tubatse in the eastern area, Elias Motsoaledi in the southern area, Ephraim Mogale in the western area and Makhuduthamaga on the northern side. The SDM consists of 51 councillors as representatives of the local municipalities which are divided into 31 wards. Burgersfort, Groblersdal, Marble Hall, Ohrighstad, Roossenekal, Schuinsdraai Nature Reserve and Steelpoort are the towns situated in this district. The main economic sectors represented in the district are community services, mining, trade, financial services, and various businesses; while agriculture and tourism are the two main economic drivers.

3.5 Sampling Strategies

In this study, the selection of the location of the population was based on factors such as accessibility to the researcher and available financial resources for the study as the study is funded by the researcher. The population comprised community members in the SDM. Selective or purposeful sampling was applied to the study of the group of community members. The advantage of using a purposive sampling strategy is that the collection of data using an informant group is less time-consuming and less costly while it is a practical means to collect data when the population is large, highlighted Mason (2018). In addition, the sampling was among approximately eight participants which comprise officials working with water and a mix of community members in terms of gender, age, and level of education. Furthermore, participants were recruited and selected specifically because they could illuminate the phenomenon as related to the study.

Furthermore, the sampling was selected based on the characteristics of a population and the objective of the study because it saves time and money. The researcher selected the participants based on their exact characteristics. In addition, the purposeful sampling assisted the researcher to interact with the participants, namely the municipal officials, ward councillors and municipal workers. Additionally, probability purposive sampling was adopted whereby the participants were identified based on their knowledge and skills. The researcher desired purposive sampling to search for the opinions which assisted in responding to the questions raised in the study. This sampling method is supported by Greener (2008) who advised that "this kind of sampling strategy is used in special situations where the sampling is performed with intention".

As advised by Hans *et al.* (2004), purpose sampling was selected in this study "to enable the researcher to select participants according to the list of specific criteria". Therefore, in this study, the sampling interval was set for ten participants who are officials in the IWS department, twenty committee members and twenty councillors. Moreover, the researcher ensured that the maximum information would be acquired by ward committee members of the SDM from officials who work in the Water Services department as well as the community members (see table 1). The participants who were selected to offer information were solicited from those who are responsible for providing water. Purposeful selection is possessing knowledge of the subject. In this study, the officials of the SDM were included because they possess knowledge and expertise regarding water supply services and experience. The inclusion of the community members was crucial because they are the recipients of the services of water, adults and have been staying there for several years.

A sample of 14 participants involved 1 SDM Municipal Manager, 5 Directors of Infrastructure Water Services from SDM and 4 Local Municipalities, 4 Ward Committee Members, and 4 community members from 4 Local Municipalities. In this instance, each municipality is divided into clusters (number of villages combined) whereby there are representatives (indunas) who are the leaders of such clusters. In this regard, each induna addresses his/her community members regarding challenges of the services of municipal services and elect one person to act as a representative of such a cluster. The researcher focused on interviewing one representative per each cluster.

3.6 Organisational Culture

In this study, culture is expressed as the way the workplace or environment controls the employees and the stakeholder. The study will inform the behaviour of the employees and stakeholders of the SDM and the way they react to the challenges of delivering basic water services. In this study, the purpose of culture is to foster internal integration and to work as a team to improve performance in delivering services to community members.

In the above scenario, the behaviour of the employees of the SDM contributed to the effectiveness of the organisation which may exert a bad or good impact on the society it serves. Moreover, the behaviours of employees will affect the interaction between the customers and the stakeholders. The employees must be innovative in generating profitable growth opportunities and improving the competence of the organisation.

To appraise the culture of Sekhukhune community members in this regard, the managers of the SDM should venture beyond measuring the results of innovation and assess the employees' skills, processes, and culture. Furthermore, the researcher also noted that for any transformation to be successful, all aspects of the organisational culture should be conducive to the projected outcome. In addition, the organisation's culture should be transformed for sustainability.

Related to the studies, Arnold (2005) indicated that organisational culture refers to the distinctive norms, beliefs, principles, and ways of behaving that combine to give each organisation its distinct character. In the view of Arnold (2005), the researcher believes that employing new people would improve the services which would lead to adaptive behaviour by the existing employees within the organisation, thus leading to new belief systems while improving the performance of the employees and profitability.

The researcher applied the following frameworks as prescribed by Martins and Martins (2003) regarding the way the four organisational cultures are compared to each other. Furthermore, the researcher ensured that the SDM municipal officials and the community members exchange information on common ground as a collective to deliver services to the communities.

The SDM encourages employees to take risks and leaders are viewed as innovative thinkers and businesspersons. The organisation is driven by experimental ideas, emphasizing individual ingenuity and freedom. The SDM also embraces the market culture which is rooted in the concepts of competition and the achievement of solid results. In the SDM, the focus falls on goal-oriented tasks while the leaders who represent the political bodies focus on common goals to achieve success profitably.

In the SDM, the hierarchy culture is based on organisation and control. The workplace environment of the officials has stringent institutionalised processes as guiding tools. The management of the SDM is rooted in structured coordination and surveillance to ensure that there is no disruption in the process of delivering water to the communities.

Studies reveal that it is not often that an organisation possesses an equal amount of the four cultural types as there is often no sole prevailing type. Nonetheless, in the SDM, probably, departments within the organisation exhibit subdominant qualities, that is, the accounting

department exhibits hierarchical and controls cultures, and the developmental teams exhibit adhocracy and creativity cultures.

In this study, the type of culture of SDM influences financial growth, internal growth, level of risk-taking and innovation. Awadh and Saad (2013) further support the views by reporting findings that the strength of the culture of the organisation will compare with its economic performance. They further explained that culture is necessary for effective performance and that the stronger the culture, the more effective the organisation.

Not fitting into the organisational culture may alienate employees, decrease their motivation, and negatively affect their overall attitude towards the development of the organisation. Moreover, norms, values and beliefs have a strong effect on the performance and sustainability of the organisation. In this study, the community members and the SDM officials are encouraged to participate in the public participation processes so that they be satisfied with the service rendered by the municipality to the communities.

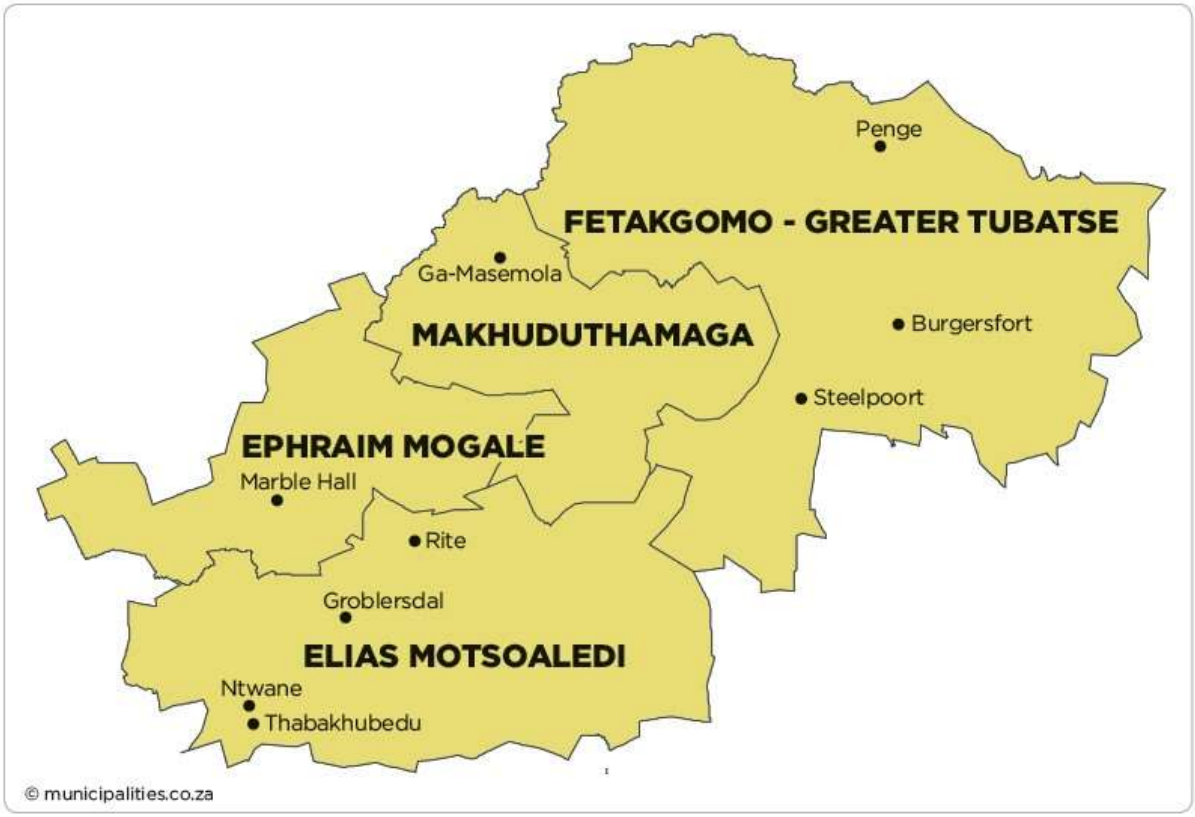

Figure 3: Geographic map of SDM (Source: Google Maps, 2020)

3.7 Data Collection Instruments

The structured face-to-face interview questions assisted the researcher to engage in a purposeful conversation with the research participants. The researcher posed concise and unambiguous questions and listened attentively to the participants talking about the challenges of water service delivery. The researcher explored points of interest to clarity and confirm meanings. The interviews began with a predetermined list of themes related to the challenges of water service delivery to direct the conduct of interviews. Face-to-face interviews enabled the researcher to meet participants and provided opportunities to build rapport and

allayed concerns that participants may have had about sharing data. Face-to-face interviews encouraged open discussion resulting in rich data and free from bias.

3.7.1 Respect

According to Ellemer *et al.* (2004), when a person is respected by others, this conveys that the individual is valued by them and is included in the purpose of being together. In this study, employees of SDM who feel respected by other members tend to engage psychologically and behaviourally with the team and they perform better in their workplace. The researcher also considered the importance of measuring respect in the workplace to the extent to which municipal officials and community members who are experienced with a good sense of self-awareness and feelings of being respected when they are allowed to voice their views or are heard or listened to.

3.7.2 Dignity

Dignity is concerned with how people feel, think, and behave concerning the worth or value of themselves and others. It is important to treat someone as a human being with dignity and in a respectful manner. In the context of this research, dignity refers to the delivery of services to community members in a dignified manner. An impediment of not being heard constitutes uncompromising psychological biases that affect members of the argument. Moreover, people see each other as being motivated by self-interest and ideology, unwilling to hear or recognise the truth. In this study, the researcher ensured that the feelings of the people, their thinking and behaviours are regarded as worthy by respectfully approaching them so that they respond to the questions. The researcher was bound to listen attentively when garnering data from the participants.

3.7.3 Consultation

Effective consultation will result in informed decisions. Moreover, it actively involves seeking the opinions of interested and affected groups and its main objective is to gather information. In this study, being consulted refers to the extent to which a person's opinion is sought about matters that directly affect him/her. In this regard, public consultation with the communities was conducted through a programme of the IDP processes for the SDM (see Annexure D). In addition, the questionnaire for the participants formed a part of the consultation process (see Annexure C).

3.7.4 Obtaining Feedback

Obtaining feedback is conceptualised as information provided by a person regarding aspects of one's performance or understanding. In this study, it was important for the researcher to attend to the feedback of the participant when collecting data. In this scenario, it was also crucial for the researcher to consider that some people who are responsible for assessing the merit of an idea would look at how the idea would impact their work and suppress the idea if it does not suit them.

3.7.5 Having a Voice

In this context, participants were granted a voice to allow them to address issues or problems with management and to find expression in grievance procedures. In SDM, the community members could voice their opinions only if their municipality fails to deliver services to them. According to Heen and Stone (2014), it is crucial to assist people to express their views because it would increase the sense of achievement of the researcher. Moreover, not all organisations allow community members to raise their voices. In the SDM, the employees are inspired through recognition, respect, and meaningful creative opportunities for others to express their voices.

In this study, four components which assisted the community members of SDM to raise their voices are outlined. Firstly, the community members collectively raised their voices about a countervailing source of power to management through public participation. In the context of this research, the employees and the community members were allowed to raise their concerns concerning service delivery and they were assured that their suggestions would be heard.

3.7.6 Self

The construct of self refers to positive self-assessment and self-responsiveness. It also indicates the strong and weak points of an individual in dealing with issues. According to McNeal (2014), the self is an idea of the self that is constructed from the beliefs one holds about oneself and the responses of others, whereas Shaffer (2008) describes the self as a self-perception which reflects the way the individual views himself/herself and the way others view the individual

In this study, the SDM ensured that information is exchanged between the participants and that communication was open, which aids the connection between people, supports personal development, and sustains growth. The SDM employees also practised open conversation and sharing of information with the communities**.** In this context, self-regard refers to the extent to which the community members and the SDM officials react after expressing their feelings about the service delivery of water.

In this study, the SDM views its employees as the only developers of value in their organisation. Others view their organisations as assets of value creation that employees can then use to improve themselves and the organisation. From another perspective, the SDM regards all the employees as assets that need to be valued because when they share and apply knowledge in a larger sense the focus will fall on improving existing processes, products, and services or developing others. Therefore, the self can be perceived as a symbolic view of other people for personal assessments, making other people seem inseparable from the self.

3.7.7 Corporate Citizenship

The analysis of the corporate citizenship construct relates to information shared concerning employees and the community members of the SDM and a willingness to contribute to the success of water service delivery to the community members of Sekhukhune. This study refers to the willingness of the employees of the SDM and the community members to engage in and take responsibility for ensuring that the information they provide concerning basic service

delivery of water will add value and change the lives of all. In addition, the corporate citizenship of the SDM between the officials of the municipality and the community members will encourage them to take personal authority over a situation, act with goodwill and conscientiousness and be accountable.

3.7.8 Conscientiousness

Conscientiousness is one of the broad traits of the five-factor model, which is linked to determination, or a will to achieve, efficiency and organised, and to complete tasks thoroughly. According to Roberts (2009), conscientiousness is the quality of wishing to do one's work or duty well and thoroughly. Construct conscientiousness refers to a person working to his/her ability. In this study, when considering the factor of openness and experience, it was noted that most of the municipal officials of the SDM who work in the infrastructure and water services department are not committed and do not possess skills and qualifications related to their duties. Therefore, the municipal officials of the SDM should be encouraged to be highly diligent, hardworking, organised, and complete tasks thoroughly. Low conscientiousness will affect the effectiveness of delivering basic services to the communities.

3.7.9 Extra-role behaviour

Ben-Hur and Kinley (2015) argued that an important facet of employee performance is extra-role behaviour which refers to the tasks performed by the employees that aid in the organisational effectiveness, but which do not form part of the formal duties of the employees. Ben-Hur and Kinley (2015) maintained that job performance refers to the level to which an employee successfully fulfils the factors included in the job description. Furthermore, this attribute is one of the main outcomes studied in organisational behaviour. Relating to the study and the comment of Ben-Hur and Kinley, managers of the SDM must assess, monitor, and control the duties as performed by officials who are in the field to ensure that the water projects are completed to a high standard.

3.7.10 Willingness to commit

Dhar and Lain (2009) defined commitment as the entirety of adopted normative force to behave in a way that satisfies organisational needs. In this study, commitment is influenced by both the personal predispositions of the municipal officials of the SDM and the organisational interventions. The officials of the municipality must be committed to their work so that the SDM can deliver water services to the community members.

3.7.11 Trustworthiness

The nature of the biographical information that was supplied in this research is a matter of debate. Andes (2012) and Howell (2012) describe 'trustworthy' as being something that can be believed. They further indicated that trustworthy is the ability to keep promises and be honest and principled while never inappropriately betraying confidence. In this study, trustworthiness was transferable, credible, dependable, and conformable because it allowed the researcher to describe the virtue of qualitative terms outside the parameters that are typically applied in quantitative research. This qualitative study report included a description of the vital practice. There was transparency in the purpose of the research whereby how it

was conducted was outlined. Denzin and Lincoln (2005) also acknowledged that the term 'qualitative research' means different things to different people. In addition, qualitative research is a situated activity that locates the observer in the world and consists of interpretive material practices that render the world visible and transformed.

Credibility was pursued by using a variety of procedures and information from the field of water service delivery to repetitively determine certain patterns (Stahl & King, 2020). The Supervisor assigned to the Researcher read and reacted to field notes to create a tacit reality, convey a sense of self-credibility, and provide feedback and insider analysis for the study (Stahl & King, 2020). The researcher ensured transferability in trustworthiness by stipulating and describing in detail influential contributors in the original study (Stahl & King, 2020). The researcher attempted to come closer to the subjective reality of qualitative research by relying on constructs such as precision in the research practice (Stahl & King, 2020).

3.7.12 Assumptions and Limitations

It was assumed that all the participants were suitably qualified to participate in the study since they are all exposed to the challenges of basic service delivery in the SDM. It was also assumed that the survey questions were answered truthfully, honestly, and accurately to the best of their ability based on their skills and experience in delivering water. A limitation or potential weakness of the study was that self-reported data are usually limited by the fact that they can rarely be independently verified. Self-reported data contained several sources, and this was a limitation of the study. It can be said that the research was limited by the amount of information offered by the municipal officials, ward committees and ward councillors. This research study excluded the extensive research on fraud as a variable in SDM water service delivery.

3.8 Data Analysis

According to Reddy (2011), data analysis is the process of systematically applying statistical or logical techniques to describe and illustrate, condense, recapitulate, and evaluate the data collected. Furthermore, it can be regarded as an essential component of ensuring data integrity in the accurate and appropriate analysis of the research findings. Jaison (2018) concurred with Reddy (2011) that the goal of qualitative data analysis is to uncover emerging themes, concepts, insight and understanding. The researcher used thematic analysis as a general approach to analysing qualitative data to understand factors underpinning water service delivery challenges. As an interpretivist, the researcher used thematic analysis to explore different interpretations of water service delivery challenges. The purpose of thematic analysis is to search for patterns or themes involving the coding of qualitative data.

3.9 Ethical Considerations

According to Deckop (2006), ethics can be described as the set of morals and values which are standardised by individuals or groups. Deckop (2006) further explained that the principles of ethics are the rules and expectations regarding conduct. Ethical standards aim to ensure that no suffering is to be experienced because of the research activities. The following principles were applied to this study:

i. Ethical clearance was obtained from the Da Vinci Research Ethics Committee.
ii. Informed consent and voluntary participation consent form were provided and translated where necessary.
iii. All the participants were asked to sign these forms to confirm voluntary participation. The researcher explained to the participants the purpose and nature of the study.

It was emphasised that participation in the study was completely voluntary and that they may withdraw participation at any moment and respect for individual human rights and group committees was shown. Permission was sought from the Municipal Managers before conducting the study. The ethics of justice, fairness and objectiveness were demonstrated whereby human dignity was honoured. Furthermore, it was ensured that the involved persons were not exposed to any intentions and motives that were not directly related to the research project, its methodology and its goals.

i. The research goals were also elucidated and followed procedures to maintain respect for the participants. After completion of the research, the stakeholders and participants will be provided with outcome reports of the research that was undertaken.
ii. The participants have the right to self-determination as well as the right to participate or withdraw participation at any time, withhold information or ask for clarification about the purpose of the study without any penalties in response to the participant.
iii. Documents have been and will be safeguarded and have strict private limitations. Confidentiality as well as the identities and information of the participants have been and will be maintained.

The researcher was dedicated to generating understanding throughout the data collection process, sustaining professionalism, respecting all views, and approaching every participant as being exceptional and valuable. Furthermore, consent was obtained from all the participants in the study. (See Annexure B).

3.10 Conclusion

The purpose of this study was identified in Sekhukhune district municipality which is situated in Limpopo province and proposed measures to mitigate the challenges encountered in the service delivery of water. The poor water service supply in this district is affecting the health of the community members of the SDM. This warrants a generation of knowledge in the field of developmental studies. The community members are involuntarily drinking contaminated water from the wells, rivers, ponds, and any other source of water. The research methodology, research population, instruments and data collection were outlined and defined in this chapter.

3.11 Summary

Sekhukhune District Municipality in Limpopo province was identified as a case study. The situation of poor water services exerts a negative influence on the hygiene of the SDM community members. In addition, the community members drink contaminated water from the fountains, wells, and rivers. In this chapter, the research methodology, specified procedures, data collection and research population were identified. Samples of the questionnaire were collected, and the methodology was applied.

CHAPTER 4

FINDINGS

4.1 Introduction

In this chapter, the researcher outlines the findings after assessing the challenges of the supply of water services to the communities of the SDM and data was analysed. Biographic information of the participants in both graphic and tabular form was gathered. Data were analysed by considering the responses of each participant in the SDM (both municipal workers and community members). Analysis was presented by the SDM municipal workers and community members. The research participants and respondents were interviewed and surveyed according to their marital status, educational level, and age group. The analysis detected an understanding of how the water was delivered to the communities. The challenges and possible solutions were discussed to overcome the water problems in the SDM. Subsequently, the findings were presented so that the municipality could find a better way to deliver water services.

4.2 Demographic

The biographical factors such as gender, age, education and occupation, and number of years that the community members had lived in the SDM were addressed when collecting data.

4.2.1 Gender of the Respondents

Five households were interviewed, and the number of participants was recognised. Gender was also considered when sampling.

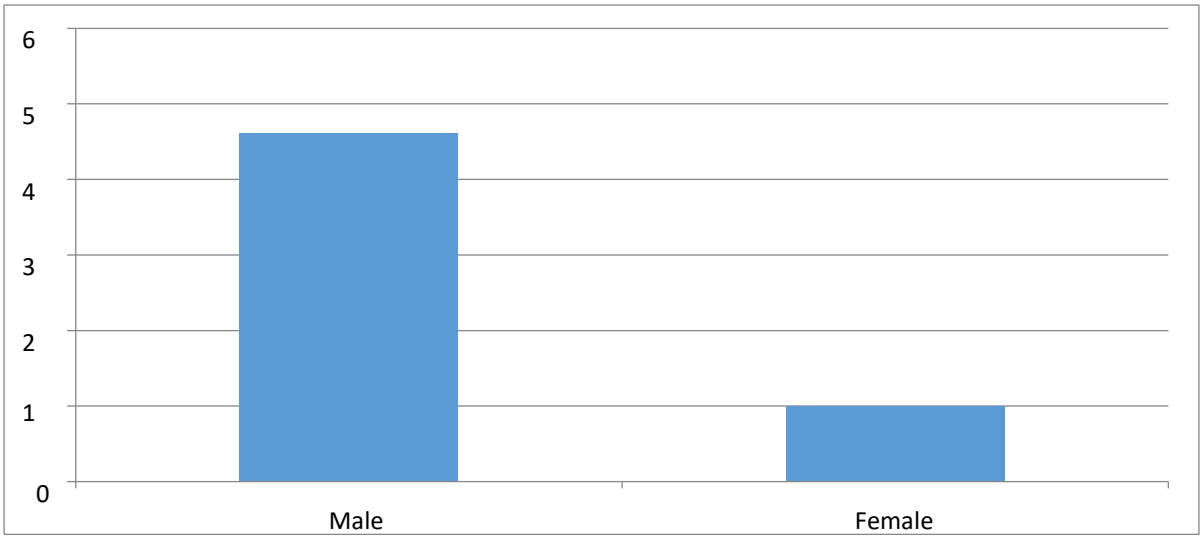

Figure 4: Water service delivery in five households

Figure 4 assisted in identifying which gender suffers most due to lack of water. The researcher identified the gender of the respondents to analyse as stated in Figure 4.1. In a sample of five households, four respondents were males while the remaining one was female.

4.2.2 Age of the respondents

Various age groups of the respondents were sampled.

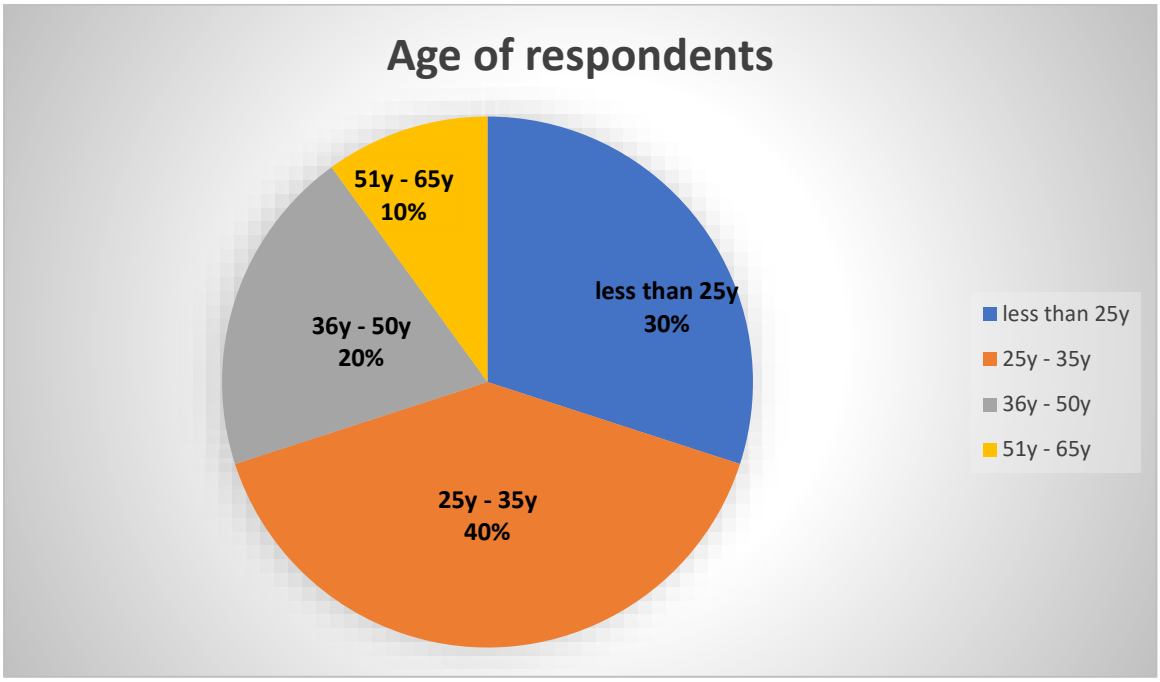

Figure 5: Age of respondents

Figure 5 indicates the age of the respondents. It is analysed that two of the respondents are less than 25 years old while two respondents are between 25 and 35 years. One of the respondents is between 36 and 50 years. The remaining one was aged between 51 and 65 years.

4.2.3 Education of the respondents

The educational level of the respondents was analysed as indicated in Figure 6.

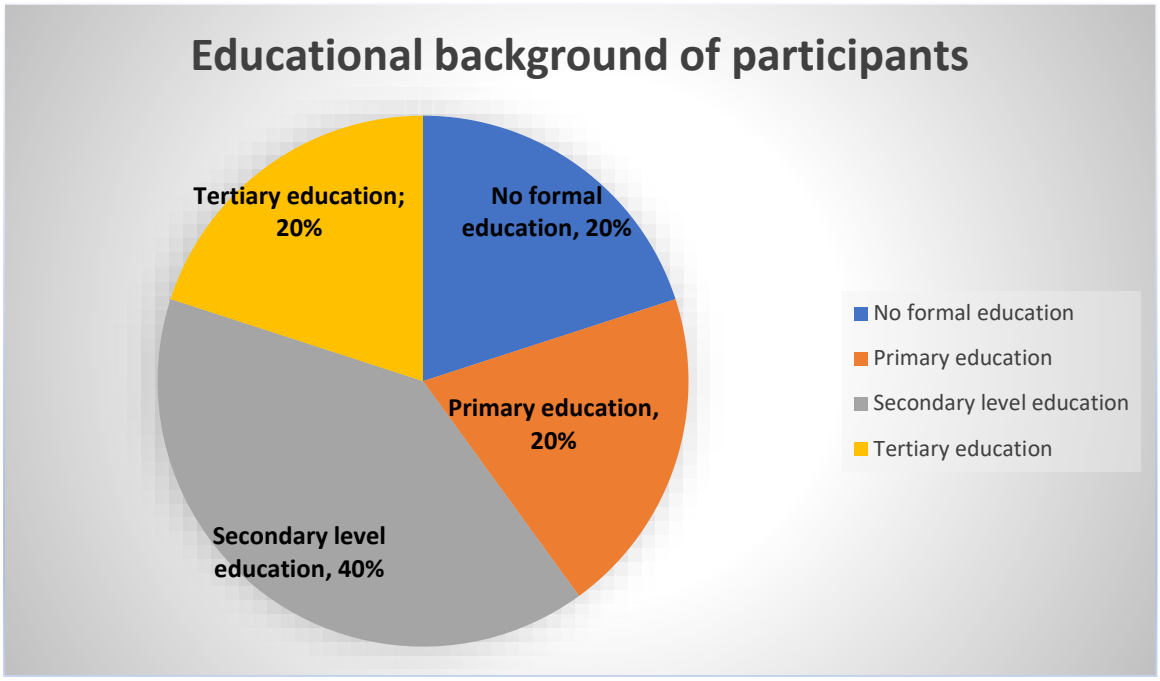

Figure 6: Educational level

In a sample of the respondents, 1 respondent did not go to school at all. One of the respondents had primary education, and a total of two had achieved a secondary educational level. The last one achieved tertiary education.

4.2.4 Years of respondents who live in SDM villages

The table below indicates the number of years in which the respondents had been living in the SDM for some time.

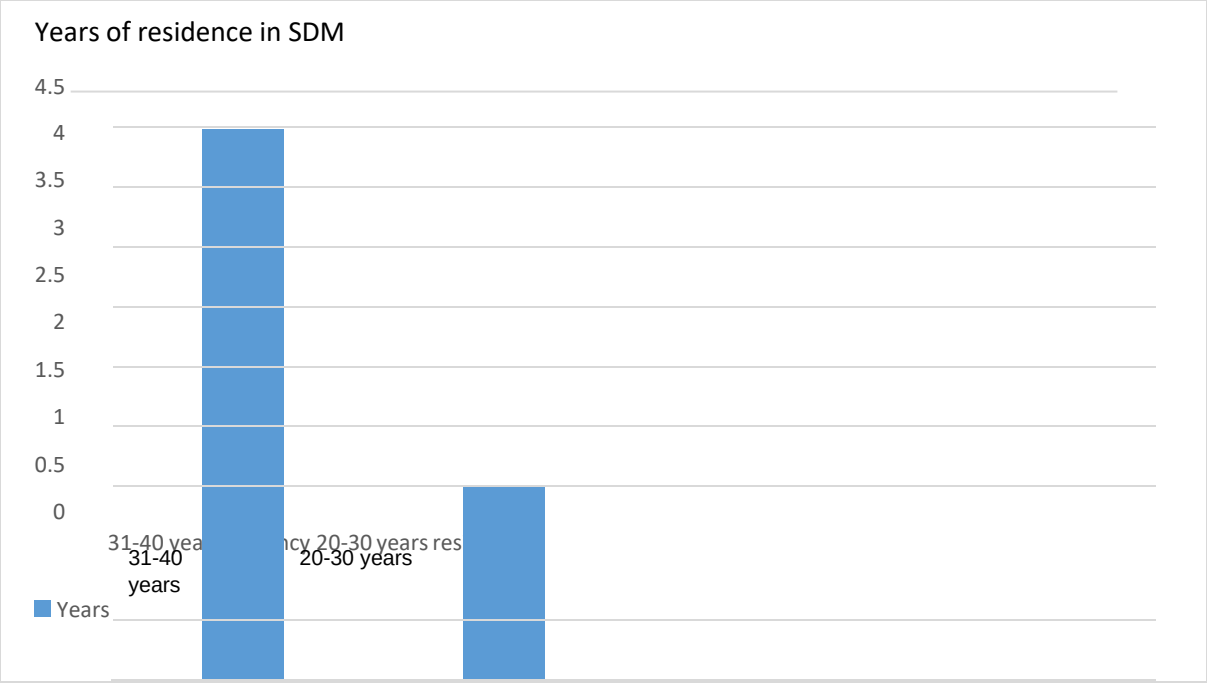

Figure 7: Years of residence

Years of residents assisted the researcher to gather more information on the historical challenges of the service delivery of water in the SDM

Most of the respondents (four) live in the SDM for 31 to 40 years while a small proportion of one lived for 20-30 years.

4.2.5 Marital status of respondents

Table 3 below indicates the marital status of the respondents who stayed in SDM during the 2017 and 2018 years.

Table 13: Marital status

Marital status		Frequency	Percentage	Valid per cent	Cumulative per cent
Single		1	20.0	20.0	10.0
Unmarried		1	20.0	20.0	40.0
Married		2	20.0	30.0	30.0
Divorced		1	20.0	20.0	5.0
Total		5	80.00	90.0	85.0

Observing and identifying the marital status of respondents will assist to justify the movement of the community members due to marriage and the rising and dropping of population numbers.

In the sample of five respondents, one is single, one is unmarried, two respondents are married, and only one was divorced.

4.2.6 Full-time or non-permanent residents

Residents may be permanent or non-permanent when the community members move from one place to the other because of employment or studies. Table 4 presents the trends in the SDM.

Table 24: Permanent and non-permanent residents

Respondents	Frequency	Per cent	Valid per cent	Cumulative per cent
Yes	4	20	40	40.0
No	1	40	20	30.0
Total	5	60.0	60.0	70.0

The majority of four which count at 80% of respondents were full-time residents and one which counts at 20% were non-permanent residents (figure 4.6).

4.2.6.1 The number of respondents per family

The number of respondents per family aided to participate in the questionnaire process for data analysis. With information from family members, a united voice for change is possible.

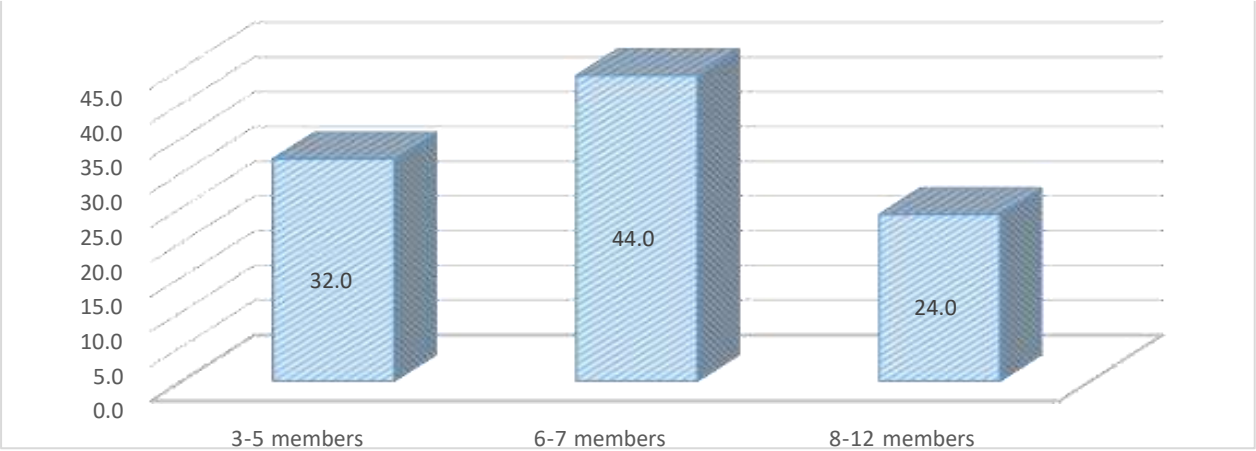

Figure 8: Participants per family

The community members have large family members ranging from 6-7 people living in one household. They constitute 44% of the respondents while 32% of the members in the households consist of between three and five. Only 24% of the family have the largest number of 8-12 members. (Figure 4.7).

4.2.7 Source of Water

SDM community members obtain water from many sources like rivers, boreholes, rainfall, and pipelines.

4.2.7.1 Poor Maintenance and operations

Municipalities are tasked to develop and maintain infrastructure in delivering water services to the communities, but SDM faces a serious backlog at such. It is noted that the boreholes, reservoirs, pumps, reticulation pipes and street taps are poorly maintained in the SDM. The maintenance problem ranges from leakages due to damage, ageing pipelines and those that have been stolen. As a result, there will be much water loss during the maintenance period. The SDM implemented the Water Services Maintenance Plan Strategy in which the plans are developed, responsible employees are attached to the project for accountability, and a time frame for completion for such projects is indicated.

4.2.7.2 Poor implementation of water services by-laws

The SDM has connected water meter readers in the villages. Unfortunately, there is no billing or revenue collected because of the poor billing machine/service. Moreover, there are illegal connections which affect the water in the pipelines, either to or from the reservoirs.

Furthermore, it is noted that there are illegal connections to the bulk pipeline from the Riverside to Jane Furse hospital pump station in the Makhuduthamaga Local municipality which result in the water not reaching the reservoirs of the hospital and most of the villages in the district municipality.

4.2.7.3 Theft, vandalism, and ageing water infrastructure

Ageing of infrastructure is a severe problem where the bursting of pipes and water leakage are experienced in the SDM. It is further recognised that there are reports of theft of copper cables and vandalism of water infrastructure on unfinished projects. Nonetheless, the WSMP determined that the replacement and repairs of the infrastructure should be performed before any supply of water to reduce the risk of water loss.

4.2.7.4 Lack of sources of water

Protest marches in response to a lack of water supply are experienced in the SDM due to poor service delivery. Moreover, it is noted that in his opening address of the De Hoop Dam in 2014, former president Jacob Zuma mentioned that the dam would change the lives of the SDM communities and the Limpopo province at large. Unfortunately, the SDM has only thirteen sources of water and schemes whereby 50% of the treated water is produced and supplied to 40% of the Sekhukhune communities. The SDM is also an agricultural hub where 40% of the area is designated for farming. Thus, much water is needed to support such farming projects and communities.

4.2.7.5 Lack of monitoring of projects

There is a lack of monitoring and oversight of contractors, poor planning and quality of workmanship which lead to delays of completion in SDM projects. Targets regarding timeframes to complete projects remain unmet or seriously delayed. Furthermore, it is noted

that due to the poor monitoring of projects, the municipality is forced to reappoint service providers on the same project to finish the project.

In this instance, more money is spent to pay the service providers to finalise the redundant projects. This happen when the service providers recognised that the IWS personnel lacked skills and were not committed to their work of monitoring the projects.

4.2.7.6 Lack of political leadership

As per Municipal Structures Act 32 of 2000, the main duties of councillors (Section 79), who are the representatives of the local municipalities, should oversee the executive (Section 80) duties. Unfortunately, it is recognised that the councillors of the SDM fail to perform their duties due to poor planning of the travel budget. Thus, delays in the monitoring of projects are experienced. It is necessary to monitor the projects to fast-track them.

4.2.7.7 Lack of administrative leadership

It can be said that municipal employees lack the skills and knowledge which are necessary to perform core operational functions.

It is considered that the senior managers of the SDM do not lead by example. It appears that senior managers are unaware of the challenges that most of the staff members face. In addition, the senior managers are not willing to consider changing processes and procedures. Moreover, it was noted that the employees are not empowered to make decisions and take risks while the managers do not listen to their input. In addition, it can be stated that inadequate skills resulted in the absence of oversight by officials and councillors.

4.3 Primary Research Findings

Poy and Laura (2013) explain that primary research is defined as a methodology used by researchers to collect data directly rather than depending on the data collected from other researchers. Poy and Laura (2013) further indicate that primary research addresses a certain problem which requires in-depth analysis and explains the findings from both primary and secondary research.

4.3.1 Factors that Influence Water Service Delivery Challenges

4.3.1.1 Do you receive water daily?

The findings from the one-on-one interviews indicate that 80% of the participants say that they do not receive water every day and 20 % say that they do receive water.

The following extracts from the interviews with the participants support this claim.

> *No, we do not get water in my area, we have water difficulties, and we only get water from wells and streams.* (Ward committee member, 16 July 2019)

> *There is no water at all, we are struggling to get water because the SDM is no longer caring for its people* (Water committee member, 16 July 2019)

To be honest, the answer is a "No" because as SDM we supply water with water tankers, and they are not enough. (Manager: Operations and Maintenance.18 July 2019)

No, we struggled to get water daily. This is the third month without getting potable water. Our government is too corrupt. (Ward committee member, 18 July 2019)

No, we get water once a week particularly on Wednesday, so we are struggling as community members, some residents are pushing wheelbarrows to the nearest well or ponds to get water to drink. (Ward committee member, 18 July 2019)

The perceptions of the participants are that the SDM is a rural municipality that does not have the means to collect revenue and depends on revenue allocated by the National and Provincial Treasury departments, respectively. Indeed, it could be concluded that the SDM is a municipality that delivers services to its community members free of charge and provides water at RDP standards.

The interpretation is that the SDM is a rural municipality and is declared a nodal point. The SDM consists of local municipalities that are completely rural and therefore are not required to pay for services. In 2001, the former president of the Republic of South Africa indicated that the Sekhukhune District and its local municipalities are declared a focal point for development and thus need to be supported financially to deliver services because of its position in the deeply rural areas.

In 2010, the bylaw regarding water provisioning was drafted to allow residents to pay for the services they receive as residents. The political leadership and the municipal senior managers are not willing to implement this water service bylaw promulgated in 2010.

4.3.1.2 Are the responsible people doing enough to ensure water availability?

The one-on-one interviews indicate that the responsible people are not doing enough to provide water services in the district. Of the 21 participants interviewed, 80 % do not trust the municipal officials responsible for delivering water services to the municipality while 20 % are only a little satisfied.

The following extracts from the responses of the participants support this finding.

No, the community members are not satisfied because there is a mentality of entitlement from the community where they think they must get water 24/7 on daily basis. (Water Official, 22 July 2019)

No, I do not believe that the municipal officials know their job because the entire area of the district is waterless, and our communities are angry. (Ward councillor, 22 July 2019)

Some municipal officials are trying their best and the challenge is the water sources that are running dry week in and week out due to unreliable rainwater. (Ward councillor, 22 July 2019)

The municipal officials are not caring for us, this is the fourth week without a water supply, and the whole of the Makhuduthamaga local municipality is dry because their boreholes are not functioning at all. (Water Committee member, 23 July 2019)

The extracts suggest mixed feelings regarding the role of the municipal officials who are involved in water provisioning. However, most of the participants agree that the officials are not doing their work effectively. In some areas, community members complain about the unavailability of water pump operators.

The water service master plan should have been implemented by the municipal officials dealing with water services to ensure that the water service problem in the entire municipal district is addressed.

4.3.1.3 Is the municipality providing enough water to all the villages in the SDM villages?

The answers of the participants vary. Many of the participants say that the municipality does not provide enough water to the residents while the minority agreed that the municipality does provide sufficient water. While there are two conflicting responses, the reality is that there is not enough water supplied by the municipality to the end-users, namely the community members.

The following extracts from the interviews with the participants indicate that the water supply is indeed inadequate.

No, the municipality does not provide enough water to us, we are struggling to get water because there is no coordinated reticulation infrastructure. (Water Committee member, 23 July 2019)

There is not enough water. Moreover, we drink it with animals and fear contracting bacteria. (Ward Committee member, 22 July 2019)

The Institution is experiencing some breakdowns in some water pump machines and our personnel is busy working hard to solve the problem. (Water Official, 22 July 2019)

We can say water is a national crisis and as the municipality, we know that there is a challenge of water in case there is cut off or mechanical break-down, we use our water tankers to supply water to the affected areas so that our people do not struggle daily and walk long distances to fetch water.

We drilled boreholes in some areas because we want to augment the little water sources we have in the municipality. (Water Official, 23 July 2019)

Therefore, it is true that there is an inadequate water supply in SDM, as such, it should be used sparingly. The Integrated Development Plan (IDP) states that all the villages in and around the SDM should be supplied with potable water; however, the reality differs from the plan. The community members are struggling to obtain water because even if the municipality drills water boreholes for these areas, it is insufficient under the ground.

The water master plan also acknowledges that the SDM is an area characterised by high mountains and a notably high-altitude plateau known as the Nebo plateau, with a lush valley and meandering rivers at the lower altitudes.

4.3.1.4 Main water problems that the municipality is facing in different villages.

The participants indicated that there are numerous water service delivery challenges in most, if not all, of the villages in the municipality. They further indicated that many of the problems emanated from the personnel, the poor infrastructure, and budgetary constraints. Some of the issues that are prevalent in their respective places are cited below.

> *The municipality must employ young and skilled officials in the water and sanitation department because the current ones are not skilled and are too old to drive around and fix water problems in our villages.* (Ward councillor, 18 July 2019)
>
> *The issue is the shoddy incomplete water projects by the contractors.* (Water committee member, 18 July 2019)
>
> *There is a lack of maintenance from the municipality, and it is found that a lot of water is not counted because of water leakages through old, dilapidated infrastructure that needs to be replaced* (Official: Operations and Maintenance, 18 July 2019)
>
> *The mushrooming of new settlements that are not planned for also causes a problem in water provisioning because they illegally tamper with the main line water pipes or water connections.* (Water Official, 19 July 2019)
>
> *The reason for non-operational water pump machines is because of theft and vandalism of the infrastructure by our communities.* (Water committee member, 19 July 2019)
>
> *The municipality has promised to install water tanks and be supplied by water trucks, but deliveries have been erratic. We drink dirty water with the animals. We can't do anything but rely on unclear water sources that had led to a rise in diarrhoea. Community members drink dirty water with animals.* (Water committee member, 19 July 2019)

Municipal officials and councillors were interviewed, including the municipal officials, water committees, ward councillors and ward committees, confirm that maintenance, theft, illegal connections, and lack of water resources are the reasons why the area faces this challenge of poor water provision.

The water committee members confirm that there are leaking pipes that have been unattended for an unbearably long period. The municipal officials confirmed that they do not have systems to monitor and detect bursts and or leaking pipes.

The perceptions of the participants concerning the water problems experienced in the SDM are genuine and need to be addressed. Indeed, a lack of rainfall results in some of the dams not having sufficient water which would exert a negative impact on the lives of all the community members.

Water is a scarce resource and catalytic in economic development and must therefore be conserved always. The Department of Water and Sanitation issued circulars appealing to water users in the province to continue using water sparingly and to adhere to water restrictions imposed by their respective municipalities.

The community members of Makhuduthamaga, Ephraim Mogale, Fetakgomo-Tubatse local municipalities emphasised that they are not satisfied with the way they receive water from the SDM. They complained about the poor water services in their area and the poor maintenance of the water service infrastructure in the municipality. The reality is that both the municipal officials and the community members agree that there are serious water service challenges due to insufficient water sources which, in any case, are very dry.

The other reason for the shortage of water is that the budget is constrained because the municipality is 100% rural and does not collect any revenue. In addition, the personnel in the IWS unit lack the skills to carry out their day-to-day work.

4.4 Assessing community satisfaction regarding the Municipal Water Delivery Services

4.4.1 Are you experiencing water cuts in the area?

The interviews revealed that 60% of the participants are experiencing water cuts in their respective places and 40% indicate that there is a complete shortage of water let alone the water cuts. The following responses of the participants during the interviews support this statement.

> *Yes, there is a water cut-off in our area especially when SDM is repairing and maintaining its systems. The personnel take a longer time than expected to fix the problem.* (Ward committee member, 20 July 2019)

> *We normally do water cut-offs as and when we do the replacement of pipes. This occurs when the pump machines are broken and when there is a leakage which needs fixing. The community members are informed before time about the fixing process. We normally issue notices and media statements to alert the end users about the water cut-offs and we also have a turnaround time to resolve each problem or challenge.* (Water Official, 20 July 2019)

> *I cannot say there is a cut-off because we do not have reticulation. We only rely on the ponds and boreholes that were there.* (Water committee member, 20 July 2019)

> *Sometimes we take a month without getting water and are only told that they are waiting for a delivery of a water pipe or valve from the service provider*. (The water forum member, 20 July 2019)

In summary, it can be said that the SDM does cut off the water supply and the participants agree with one voice that they experience water cuts in the municipality. This normally happens when the municipality repairs some of the pipes when they need to replace a pump above ground or a submerged pump for a borehole.

The municipality is also aware of some of the water cuts and while other cuts occur, some of the cables have been stolen. However, communications are issued to the public as and when a challenge is presented.

In terms of the IDP of the municipality, the turnaround time for attending to minor challenges is three days or less. In some instances, serious breakdowns may take several months to rectify. In such an event, the SDM has a contingency plan to relieve communities by sending water trucks to the affected areas.

4.4.2 Satisfaction of water services delivery to the community members

Participants expressed dissatisfaction regarding the water provisioning because both the officials and community members echoed the same sentiments because they all witness a general problem regarding water in the municipality and the country. All the participants agree that water is a problem in the SDM, which is the reason they are not satisfied with the water provisioning.

The following extracts from the interviews with the participants support the aforesaid.

> *Argues that hence they have this many schemes of water in the SDM, still, there is a shortage of water because the very same schemes are too dry because there is no rain to fill the schemes or dams.* (Ward councillor, 18 July 2019)

> *The water is not enough, there are lots of illegal connections, the established water response team is not functional, no equipping of the borehole at Madibong village.* (Ward committee member, 22 July 2019)

> *The municipality provides water services at Makhuduthamaga local municipality area using these schemes and boreholes which are the main sources of water in SDM, and they are not sufficient to cater to the community.* (Water official, 23 July 2019)

Both groups of participants (the officials and ward committees) acknowledged this national crisis, and their wish is to see the municipality exploring all the water schemes around the SDM area to supply adequate water. It is suggested that it is necessary to unlock the De Hoop dam water and to commission the pipelines from Ga-Malekane to the Jane Furse reservoir.

Under the municipal laws that categorically indicate that no one must disturb the municipal pipeline connection and that any breach of that law must be reported to the law enforcement agency or regulation officer, it is vital that these illegal connections that interrupt the provision of water be made known and stopped because much of the water goes to waste, which is unaccounted for.

4.5 Suggestions by the Participants to Improve the Water Services Delivery

4.5.1 What should be done to improve the water service delivery?

The findings of both the interviewed groups highlight that the SDM municipality should prioritise areas such as budget constraints, increasing the capacity of the dams and

reservoirs, skilling the personnel, improving the monitoring system, and unlocking the De Hoop dam for water delivery to the communities.

> *The major challenge for water service authorities is not lacking or shortage of funds, but rather a lack of capacity to manage the utilization of the available funds.* (Ward councillor, 23 July 2019)

> *Improve the level of communication between relevant stakeholders or authorities, this includes Ephraim Mogale Municipality, Lepelle Northern Water, and the ward committee.* (SDM Water Board member, 20 July 2019)

> *The municipality must recruit qualified personnel to accelerate service delivery in Makhuduthamaga local municipality.* (The water forum member, 22 July 2019)

> *The institution must create a war room on service delivery and meet every week to track challenges and fix the possible ones with immediate effect.* (Ward committee member, 22 July 2019)

> *The municipality should install telemetry to detect water loss or leakages as and when there is a breakdown or leakages on the reticulation system. We must encourage the community members to pay for the services they receive from the municipality so that the institution can improve on revenue collection to sustain services*. (Water Official, 23 July 2019)

On 29 September 2010, the Sekhukhune District Municipality had its water and sanitation by-law gazetted in the Provincial Gazette Extraordinary no. 1844.

Section 88(1) of the bylaw stipulated that water services provided by the municipality must be paid for by the consumer at the prescribed fees for the category of the service provided.

Furthermore, it should be noted that the SDM is a rural municipality, and most of the residents depend on grants for survival and most indigents live here. Many indigent people live here. The people rely on free government basic services and do not have water meter readers connected to their households. They receive water from the communal stand as per the RDP standards. The municipal officials also confirm that the SDM area is completely rural and dominated by indigent beneficiaries.

4.5.1.1 Water provisioning

The municipal officials confirm that the Sekhukhune District Municipality has the following water sources or schemes:

Boreholes were drilled by the municipality to augment the schemes.

> *De Hoop dam was recently built to bring relief to the struggling water supply in the entire district including the water supply to the Makhuduthamaga local municipality.* (Community member, 22 July 2019)

4.5.1.2. Illegal connections

Both the Municipal officials and community members acknowledged that illegal connections in the area hamper the water supply and the only solution is to legalise them and install meters in every household so that they pay for the service.

> *The municipality is not performing well in terms of water provisioning, and this has caused the community to organize itself and connect pipes from the main water pipeline to their household*s. (Ward councillor, 22 July 2019)

The ward councillor of ward 19 confirmed that their main challenge is managing the illegal connections in the ward.

Less water will reach other parts of the municipality. This exerts a negative impact on the other villages because more water is lost and unaccounted for. Some of the villagers obtain water from alternative sources such as the streams in the valleys.

> One participant indicated that in M*ashabela, Machacha, Mohwelere and Phushulang villages (*Community member, 22 July 2019*) we are not getting water as expected. We rely on ponds and sometimes water from the rain. (*Community member, 22 July 2019)

4.5.2 Secondary Findings

Cermak and Fegus (2014) define secondary research as an analysis and interpretation of primary research. In this study, secondary research assisted with the collection of primary research that is relevant to the topic as well as the interpretation of the primary data.

Qualitative face-to-face interviews were employed, which assisted in obtaining the descriptive data that allowed the participants to construct their knowledge and social reality. However, a distinction was drawn between the data derived from the documents and the literature review.

Furthermore, the presentation of the results followed that of two or more primary research articles and the two separate sets of findings inform the reader.

The secondary data in this study took the form of reference documents regarding the research topic and observations. The data collection techniques enabled the researcher to focus on all types of written communications that may shed light on the research phenomenon.

4.5.3 Thematic results

Thematic analysis is defined by Maguire and Delahunt (2017) as a process and it is used to identify themes or patterns within qualitative data such as interviews or transcripts. In this instance, the researcher examines the data to identify themes which are common, topics, patterns, and ideas. Maguire and Delahunt (2017) explain that its goal is to find themes, that is, patterns in the data that are interesting or important to address something about a concern or research. In this study, a thematic approach was employed to assist in analysing the data that had been gathered. The main themes implemented for water service delivery systems were the strategies, performance, and obstacles. Groups to develop these themes were organised with the relevant stakeholders.

4.5.4 Delivery system

Not all the respondents (municipal officials and community members) indicated which type of water service system was being employed by the SDM because of their direct responses.

4.5.5 Effectiveness

In this study, the subtheme indicated the effectiveness with which the municipality delivers water to the community of the SDM. Most respondents mentioned that the provision of water is ineffective. The personnel of the municipality and the DWA also confirmed that. The delivery of water service was perceived to be ineffective by the community members because the municipality takes two weeks to provide them with water.

The five community members interviewed indicated that the delivery of water service to the SDM was not effective because the residents' spent days without water. Based on the responses from the community members, water service delivery is a problem to be addressed.

Therefore, water must be delivered daily to the villagers for cooking, drinking, cleaning, ablutions, and watering their gardens. In addition, one of the community members indicated that all his stock died due to the shortage of water in the SDM.

One community member criticised the municipality for taking too long to deliver water to them. Furthermore, the community member blamed the municipality for sabotaging their progress and that their vegetables cannot thrive because there is no water delivery.

Based on what the community members have said and the observations of the researcher in the SDM. It can be said that it is observed that the pattern of the delivery of water to the community members is critical.

The researcher found that there are areas that receive water every two weeks and others only every five weeks. The ward committee members confirmed to her that it was a trend of the municipality not to deliver water to the community members always.

The municipal manager also agreed that the delivery of water within the SDM was irregular due to the shortage of transport. He stressed that the municipality was facing a massive problem regarding the delivery of water because their trucks are dysfunctional.

The respondents either "strongly disagreed and agreed": "Is water service delivery effective at the SDM?" The municipal manager responded: "*Yes, it is effective because we do not deliver water regularly, but we make sure that people get water regularly",* Respondent 1, a community member, said "*No, not at all*", and Respondent 2 said that "*it is not effective"* and respondents 3, 4 and 5 stated that "the water service is ineffective.

Five municipal officials claimed that the "*water [service] is effective*", three ward committee members indicated "*it is not effective*" and one argues "*yes, it is effective*".

In this scenario, the municipal manager and officials might not reveal the truth for fear of victimisation because they want to protect their jobs. Moreover, the community members and ward committees told the truth because of the lived experiences in their residential areas as community leaders.

4.5.6 Process

In this study, the SDM followed the water delivery processes to supply water. Most of the respondents mentioned that the water delivery process changes.

The municipal officials indicated that the processes of water service delivery are ineffective because the water is delivered as bulk water supply, running pipes and trucks.

The researcher found that the process of water delivery is ineffective because the municipality delivers water after two or three weeks. The SDM comprise rural villages and farms unfortunately, the farmers lose their crops because of the inadequate supply of water.

4.5.7 Delivery performance

The delivery performance was divided into three subthemes, namely, satisfactory, obstacles and strategies. These themes were more important to the community members since they address water service delivery. The satisfactory subtheme was more focused on the pattern of water service delivery. It is not worthy that this subtheme had mixed answers among the municipal servants and community members. The obstacle theme focused on capacity in terms of skills and operating equipment to deliver water within the SDM.

According to the community members, the performance of the municipality is not satisfactory. The community members of the SDM highlighted that there is no improvement in their lives because water is delivered once after two weeks.

4.5.8 Satisfaction

This subtheme related to where the respondents resided and the delivery of water to them. The researcher found that the community members said that the performance was poor whereas the municipal disagreed with the statement.

The municipal officials “disagree” with the notion of poor performance, but the community members mentioned that “the performance of the municipality in delivering water is not satisfactory”. However, the officials argue that “the municipality is doing its best and that the community members are supplied with adequate water”.

The researcher interviewed the respondents to find how water is supplied in the area and it was found that the process of water delivery is very slow. Community members must travel long distances to fetch water, and some depend on water from wells and fountains. The ward committee members also alluded that the water services are not satisfactory to the SDM community members. One of the municipal officials stressed that the municipality was doing its best to deliver water. However, the delivery was not satisfactory.

4.5.9 Obstacles

This subtheme shows that the SDM was constrained in executing water services efficiently. The municipality and the ward committees strongly agreed that there is no water in the

SDM. It was found that there is old infrastructure and little budget to address the water demand. The community members cited obstacles such as lack of commitment and nepotism as contributory factors to the ineffective water service delivery. They alluded that "the municipal manager advanced the project in certain areas prematurely in preference to the designated areas because he wanted to satisfy some of the mayoral committee members of the SDM". Unfortunately, the municipal manager and the officials denied such allegations.

The municipal manager mentioned that there is a shortage of skilled officials in the IWS and that they do have an adequate budget. He further highlighted that the national government would provide them with skilled personnel to assist with water delivery projects.

4.5.10 Strategies

The municipal manager responded "*yes, there are strategies because water is delivered every two weeks",* whilst the community members had different responses. All the municipal officials claimed that "the strategies do exist, but the community members indicated that" there are no strategies for effective water service delivery". They even indicated that, according to the IDP, there was an inadequate budget for water in the SDM.

One of the participants indicated that "the SDM was not delivering quality water and the municipal officials denied this and mentioned that they do supply water to the community members as well as the animals with the limited budget they have".

4.5.11 Constraints

The municipal manager argued that" they recruit the best personnel and budget for the water service delivery programmes whilst the community members claim that they draw water from wells, fountains, and other villages". The municipal officials also indicated that "there is a need for an adequate budget and a clean audit".

Furthermore, the municipal manager argued that "the problem of the shortage of funds and a lack of personnel will be solved by recruiting the best personnel". One of the community members indicated that "the constraints that existed in the delivery of water services ranged from lack of commitment to nepotism". One of the villagers indicated that" the municipal officials were not committed to solving the problems relating to water services delivery".

Another community member indicated that the other villages had enough water supplied by the SDM. However, the municipal manager denied the allegations.

4.6. Conclusion

The discussions were presented as data collection instruments and aligned with the research objectives. The factors which influence water service delivery to the SDM community members were measured through variables and indicators. It is recommended that the water projects that are available in the SDM should be refurbished to improve the water service delivery to the communities.

Furthermore, the analysed data yielded a picture of the service delivery in the SDM. It is depicted in strategizing in dealing with water service delivery in the communities of the SDM as well as the constraints encountered in dealing with them.

Community members and the municipal officials of the SDM were able to highlight their challenges regarding the delivery of water. The themes that have been outlined assisted in the remedying of water delivery services in the SDM.

The next chapter discusses the findings of the open-ended questions.

CHAPTER 5

DISCUSSIONS OF THE FINDINGS

5.1 Introduction

In this chapter, the researcher defined the discussions with the stakeholders, the community members and the municipal officials about the challenges encountered regarding the service delivery of water. Public participation and communication are vital for any organisation to succeed. Engaging in such activities thus enables the SDM to make informed and integrated decisions regarding the sustainability of the proposed interventions.

Furthermore, there are recommendations for policy review relating to water service delivery by municipalities in South Africa regarding the SDM in this chapter. It is presented in five sections. Section 5.1 summarises the study, while section 5.2. represents the key findings of the study and section 5.3 furnishes the recommendations based on the findings of the study.

In this study, a thematic approach was applied to answer research questions. The primary objective of the study is to assess the factors which influence the poor delivery of water service to the communities in the SDM. Therefore, interviews were conducted to collect data from the participants.

It is recognised that the study deals with the final interpretation of the information in the challenge of service delivery in the SDM. The primary objective of the research is to determine the factors that influence water service delivery and assess them in the district municipality.

It was discovered that operational challenges exist in the SDM. The community members must rely on boreholes, rivers and streams for water and may even buy water for their survival. Moreover, the satisfaction of the community members regarding the service delivery of water and electricity was assessed.

In addition, the factors that influence water service delivery to the community members are outlined in this study. The researcher also sought to establish whether the community members are satisfied with the delivery of water to them and the possible measures that could be taken to improve the state of water service delivery in the municipality.

It was found that the water sources in the district are the Nkadimeng, Flag Boshielo, De Hoop and Vergelegen dams; boreholes, and the Marishane water schemes and should be maintained and refurbished. Ultimately, the data were interpreted, and the findings were presented using texts and textual quotes consisting of ideas and words from the participants.

5.2 Findings of the Study

It is observed that very few studies have been carried out to analyse the effectiveness of water service delivery in South Africa. Nevertheless, a variety of responses regarding water service delivery in the SDM were found. The biographical information of the participants was used to examine the goals of the study. The results were presented in both graphic and tabular form.

The data were examined by analysing the responses of each of the participants who were interviewed.

The research was based on the responses of the SDM community members, the municipal managers, ward committee members and municipal officials. In addition, there is an indication that there is a problem regarding water service delivery, which concurred with the responses of the officials and the ward committee members.

The study found that the problem is very severe. The community members of the SDM indicated that they often spent more than three weeks without water. As a result, their livestock, hygiene, health, and watering of their plants were affected. The municipal manager stressed that the problem was very severe because the community members felt that they are neglected, and their dignity is being violated.

In this study, it is found that the community members are often not supplied with water for more than two weeks and therefore they are not able to feed their livestock or water their gardens sufficiently. Furthermore, they indicated that there is no water to drink, cook, or clean and they are vulnerable to diseases caused by the lack of hygiene.

The study also found that the municipal manager; municipal officials and the SDM community members indicate that they suffer because of the poor water service delivery.

The researcher found that there was no permanent solution to the problem of water service delivery in the SDM. This was evident when the municipal manager indicated that they relied on only trucks to supply the community members with water every two or three weeks.

The municipal officials concurred with the municipal manager that they have a permanent solution because of budget constraints. They further indicate that they have temporary solutions to deliver water using trucks every two weeks so that residents and their livestock can survive. The officials from the Department of Water Affairs also concurred with their municipal counterparts that there was no permanent solution regarding the supply of water in the SDM. They indicated that the Department of Water Affairs did not have a budget to supply water to the SDM.

The community members of the SDM also stated that “there was no permanent solution to this problem”. They emphasised that “they relied only on water supplied by the trucks that delivered water from the municipalities, fountains, boreholes and wells”. The community members, the municipal officials and the municipal manager perceived the supply of water by the trucks to be ineffective.

Furthermore, the study indicated that effectiveness embraces aspects of service linked to the outcomes of the programme. For example, the ineffectiveness of water service delivery in the SDM is an unavoidable problem that demands attention because water is life.

According to the National Water Resource Strategy for South Africa (2002), water gives life because it waters the crops of farmers and provides life to plants and animals to embrace our heritage, people also need water to live healthy lives. Reliable, safe drinking water, water for

sanitation and hygiene as well as growing crops are critical to alleviating poverty in South Africa.

Rural development and urban renewal depend on water to achieve their goals (National Water Resource Strategy for South Africa, 2002). As such, the local government is charged with the responsibility of supplying clean water to communities. In this scenario, the SDM should be liable to deliver such a service.

Unfortunately, the municipal manager and the officials recognised the ineffective delivery due to a lack of human resources because of the budget allocated to them by the Department of Local Government and Traditional Affairs. They argued that the budget was too limited to include the delivery of water for the SDM community members.

In the analysis of the data, performance was significant to the community members since this theme affected the water service delivery. It is noteworthy that this is the first or primary subtheme.

The other subtheme was on the capacity and equipment of the SDM. The performance of the SDM was not satisfactory at all. The community members of the SDM argued that the municipality is not delivering service to them.

As indicated earlier, the researcher found that the municipality would wait up to three weeks before delivering water to the community members. This indicated that the performance is weak and not satisfactory.

Approximately 70% of the community members are supplied with water supply. Almost 60% of the community members do not have tap water and 75% have no yard connection. Most of the community members depend on water from the boreholes which are contaminated by yard burials and pit toilets.

The municipal officials cited old infrastructure and a minimum budget as obstacles. Furthermore, the municipal manager argued that there are strategies in place evidenced by the delivery of water every two weeks. However, the community members who were interviewed hold different views. The performance of the municipality is measured according to how the municipality achieves its targets concerning the delivery of services such as delivering water to the communities. Unfortunately, the municipality fails to deliver water services**.**

Based on the findings of the researcher at the SDM, it can be said that “there is a challenge regarding water service delivery in the SDM because the community members are still sharing water with animals, and they rely on wells, fountains and boreholes”. The community members are forced to buy water from those who have boreholes because they cannot stay without water.

There is also a prevalence of diseases such as cholera attributed to a lack of freshwater caused by poor water maintenance within the SDM. It is imperative to ensure that people have water for a healthy life. It is noteworthy that, globally people are concerned about the quality

of drinking water. Thus, access to safe drinking water has steadily and substantially improved over the last decade in almost every part of the world.

Moreover, the municipal manager indicated that skilled personnel had been recruited and that the funds had been allocated for the water service delivery.

The researcher found that the municipality is not under-staffed because there are technicians, engineers, field workers and people who are very skilful to deliver water services effectively. This finding also suggests the possibility of fraud in managing the budgets for water service delivery. However, this implication falls beyond the scope of this research and therefore any further discussion has not been included in the study.

5.3 Issues which Disrupt Service Delivery in the SDM

5.3.1 Determining Factors that Impact Water Service Delivery in the Municipality

The findings are that the community members of the SDM are not supplied with water as expected; few villages receive water once a week while most receive water only every two to three weeks. The community relies on water from the rivers and streams because the municipality fails to deliver water to them. No water pipes are connected to the households. They rely on the standpipes erected at a 200m distance from the households. The SDM applies an RDP standard which indicates that water should be supplied at a minimum of 25 litres per person per day.

Poor monitoring of the infrastructure within the SDM hampers the service delivery of water. The lack of maintenance, poorly skilled personnel to attend to critical water problems and poor communication should be addressed by the municipality.

5.3.2 Assessing Community Satisfaction on Municipal Service Delivery

The community members of the SDM experience water cuts because of the water leakages in old pipes and stolen cables as well as technical problems at the plants and water treatment works. The community is dissatisfied with the water cuts because it takes a long time to restore the water supply. The turnaround time to restore the water supply is always unknown which leads to anger within the community who then march to the municipal offices to demand water.

In addition, both the community members and the municipal officials of the SDM are dissatisfied with the illegal connections in the vicinity. It is noted that the illegal connections cause great loss of water and delays in refilling the reservoirs. Furthermore, the community members complained about the personnel being lazy and unskilled.

5.3.3 Improving the State of the Water Services Delivery in the Local Municipality

The municipality should prioritise the allocation of the budget for projects and align them with the needs of the communities, which may reduce the number of communal riots or marches. The municipality should employ qualified personnel who are skilled to deliver basic services to the communities. The municipality should also improve their turnaround time when they deliver water to the communities.

The participants were advised that the municipality should improve the communication channels and establish water operations. Therefore, SDM should establish water management committees within the different areas to support the operations. The SDM should also address the theft of the water infrastructure by strengthening the services of the security personnel within the organisation for the safety of the properties of the institution. The unskilled and uncommitted officials also caused deterioration and further delay of the service delivery.

As mentioned earlier, the findings from the interviews and the literature indicate that challenges relating to the water services in the SDM are caused by the intermittent supply of water to the communities which causes the communities to rise in anger and act violently

5.4 The Findings of the Interviews and the Literature Review

The following factors contribute to the ineffectiveness of service delivery in the SDM**.**

5.4.1 Water Service Authority

In this study, it was found that SDM is the Water Service Authority designated by the Department of Water Service in the Limpopo Province. Moreover, the SDM failed to deliver water services to the local municipality as designated.

5.4.2 Illegal Connections

The SDM and DWS are faced with the challenge of community members connecting water pipes and electricity illegally. Thus, most of the water supply is undetectable and unaccounted for due to illegal connections.

5.4.3 Theft and Vandalism

Water pipes are stolen mostly during riots or marches, and some are vandalised by angry community members. Theft and vandalism become habitual activities when the communities demonstrate their dissatisfaction.

5.4.4 Corruption and Nepotism of Municipal Officials

It was noted that some of the officials who drive the water tankers sell municipal water to the community members. Furthermore, these drivers deliver water to the sections where their relatives and friends live, leaving other community members to suffer.

5.4.5 Inconsistent Water Supply

On the one hand, there is a shortage of water in the municipalities because of inadequate rainfall which causes the water sources to dry up. Because electricity is required to pump the water, ESKOM which is the national power utility should be contracted to increase the capacity of the power for energy for the effective pumping of water to all the households. ESKOM should also be contacted to upgrade the capacity of the energy supply for the water treatment and electricity plants.

5.5 Conclusion

The primary objective of the study was achieved by employing a different kind of methodologies. The research was based on four research questions which were all about the effectiveness of water service delivery in the SDM. Questions included were: What constitutes the water delivery system? What strategies are being implemented? How are the strategies working? and what are the obstacles to delivery?

Questions were answered by respondents, and it was found that the system used for water service delivery to be disagreeable. There were negative responses from the rural dwellers while those of the municipal workers were affirmative. The respondents showed negative responses to all the subthemes of this question.

Other questions focused on obstacles to the service delivery of water. None of the respondents among the civil servants indicated that the infrastructure and a minimal budget in the SDM hamper the effectiveness of the delivery of water service.

Moreover, it was noted that the strategies implemented in the municipality to address water service are ineffective; for example, delivering water using water tankers to the affected areas. However, there are constraints with water services in the SDM for example, inadequate budget for training personnel on how to manage water delivery projects.

There is no effect of water services delivery in the SDM as the community members must wait for a period of two to three weeks for water supply. Alternatively, the community members fetch water from the wells, buy water from those who have boreholes or walk long distances.

It is recommended that the municipality procure sufficient water tankers to supply water to the community members of the SDM. Furthermore, the De Hoop dam should be connected to the pipes so that adequate purified water can be made available for human consumption.

It is noted that there are many boreholes without connected infrastructure all over the district. These boreholes should be developed and connected to a water system so that water can be effectively distributed within the district. It will then be advised that water tankering be used as an alternative means to substitute the delivery of water to the community members.

The district should cooperate with Lepelle Northern Water to ensure that the schemes such as the De Hoop, Flag Boshielo, Mooihoek, Moutse Bulk and Nkadimeng schemes be in a contract of supplying water.

There is a need for public education or awareness programmes among community members regarding water conservation and management. Moreover, regular monitoring of water sources and their quality should be maintained. Furthermore, the SDM should maintain the water supply systems as well as the water meter reader to avoid loss of water.

Chapter one indicated the background on the effectiveness of water service delivery, definitions of the concepts, problem statements, objectives, and the research questions. The study aimed to determine the effectiveness of SDM water service delivery.

Chapter Two reviewed the status of the water service delivery in the communities, the need for effective service delivery, the sustainability of the water service delivery, factors that determine the ineffectiveness of the delivery of the water service, the poor management of the water supply and the effects of ineffective water service delivery.

Chapter Three reviewed both the qualitative methodology adopted in the study to conduct the thematic analysis and to address the research questions presented in Chapter one. Descriptive statistics were used to analyse the demographic information and the results were presented in Chapter Four. The statistics and subthemes were analysed concerning the effectiveness of the municipal water service delivery in the Sekhukhune District Municipality.

Chapter Five reported the analysis and the subthemes which were applied to the effectiveness of water service delivery in the Sekhukhune District Municipality. Chapter Six concludes the study and makes recommendations to assist with improving the water service in the SDM.

CHAPTER 6

CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

In this chapter, the researcher assesses the delivery of water in the Sekhukhune District Municipality (SDM) to improve the services to the communities. This chapter presented the conclusion and recommendations which will assist the municipality or academics to research services that should be provided by the local spheres of government**.**

The primary objective of the study was to determine the factors that influence water delivery challenges. The study focused on assessing the service delivery challenges faced by the SDM which is situated in Limpopo province, South Africa.

The challenges of water supply have negatively influenced the residents of the SDM. The residents ultimately buy water while some rely on boreholes, rivers, wells, and streams for survival. Unfortunately, the water from these sources is utilised without being purified which is hazardous to their health.

6.2 Summary of the Findings

The Sekhukhune District Municipality was accorded the status of a water services authority with effect from July 2013. Before 1994, DWS was responsible for the provision of water within the SDM. The process of transferring water infrastructure assets from the DWS to the SDM was conducted whereby assets such as the IWS Operations and Maintenance manuals were received.

The water and sanitation infrastructure components were dilapidated. The designs were not adequate for authorities to deal with the issue of water-balancing. Moreover, yard connections were present, but no water meter readers had been installed in the households. Furthermore, the projects had been implemented without inflow and outflow meters to quantify the water supply.

It is noted that the SDM is experiencing a huge non-revenue water distribution that cannot be managed and traced owing to an uninstalled water meter reader. There was no indigent register which meant that the free water allowed for the indigent population could not be recorded. In addition, a poor response time to attend to the operations and maintenance as well as breakdowns of the water infrastructure was found.

6.2.1 Lack of Water in the SDM

Water is a basic need but unfortunately, it is very scarce throughout the country. It was found that the SDM is experiencing difficulties in supplying water to the communities. Thus, there was a need to research the issues of water to make possible recommendations and find solutions to the challenges. The recommendations and solutions will assist the municipality to overcome such predicaments.

6.2.2 Lack of Monitoring of Infrastructure and Projects

The municipal officials and participants confirmed the lack of monitoring of projects. Subsequently, this costs the municipality extra money to finalise such projects because the service providers do not focus on the time frame to complete the projects when they notice that the officials are negligent. Moreover, they ultimately abandon the projects.

6.2.3 Unskilled Municipal Official Workers

Lack of skilled, competent, and committed personnel in the municipality cause delays in the service delivery to the communities. The Department of Infrastructure and Water Services is found to be at the core of service delivery. Therefore, it is crucial to ensure that competent personnel are recruited to deliver services to the communities.

6.2.4 Lack of Communication

Communication is vital in every organisation. Poor communication can foster negative performance. The poor communication in SDM as a service delivery organisation might spark riots if the community members are not informed or updated about the basic service delivery within the municipality.

6.2.5 Summary of Contributions

The SDM has a backlog in the provision of water services. The Integrated Development Plan was implemented to overcome the backlog. It is envisaged that a lack of funds to ensure the delivery of water will pose constraints on the ability to address this backlog. The researcher observed that “the municipality constantly underestimates its budget for water supply”. Furthermore, the researcher highlights that private service providers for the maintenance of the water infrastructure should be outsourced for the improvement of service delivery in the municipality.

Water abuse is a challenge which is encountered by the SDM because there are many illegal connections in the municipal region.

The supply of water by the SDM is improving slowly through water tinkering services, yet there is inconsistency because households are not provided with water always. Privatisation of the services could be an option to sustain the delivery of water services. Moreover, development within the SDM is hindered by the non-payment of service bills.

Public participation consultations on water services delivery are important because community members are afforded the opportunities to raise their views and suggestions which will improve the water service supply.

An ineffective supply of water affects the health of the community members of SDM. Therefore, purified water should be delivered to the community members so that they may no longer be exposed to water-borne diseases. The assessment of the challenges that were identified indicates that the community members of the SDM would be supplied with adequate and consumable purified water if the recommendations could be implemented. The strategies

applied for water service delivery problems be reviewed to address the water problem. An adequate budget should be allocated for water service suppliers. The municipality should employ skilled technicians and engineers to sustain the services of delivering in the SDM.

Theft of water infrastructure, the refurbishment of the existing structure, and the reduction of water that is unaccounted for must be addressed. Furthermore, the SDM should invest in the operation and maintenance systems of the water infrastructure. Moreover, the municipality should ensure that the boreholes and water sources such as wells and boreholes are installed. Revenue collection should be embraced by ensuring that the water metres function.

Communities of the SDM are demanding prepaid meter installations because there is no water supply. The community members have hope that the prepaid water meters reader system will safe usage of water.

6.2.6. Limitations

The limitations of the study are those characteristics of design or methodology that impact or influence the interpretation of the findings of the research. The current researcher noted the importance of the limitations because they provide a better understanding of placing the research findings in context, interpreting the validity of the scientific work, and attributing integrity to the conclusions of the published research. Furthermore, the researcher considered the possible research limitations that could affect the study but identified those that had the greater potential impact on the quality of the findings and the ability to answer the research questions.

In the SDM, the research study was limited to the challenges of delivery services faced by the community members and its five local municipalities. Qualitative method was employed to collect the data. In line with Nathan (2017), the qualitative approach evolved as recognition of the uniqueness and meaningfulness of human behaviour grew. In this scenario, the emphasis of this approach forms the core of the research and determines it.

The researcher assumed that all the participants were suitably qualified to participate in the study because they are community members of the SDM. It was also assumed that the participants answered the questions truthfully and accurately in the surveys, their responses were based on their personal experience, and they responded honestly and to the best of their ability.

A further limitation of the potential weakness of the study was that self-reported data were usually limited to the fact that they can rarely be independently verified. The research was also limited by the amount of information provided by the community members of the SDM. The interviews were limited to the municipal officials, the ward committee members, and the community members.

6.3 Recommendations

This research highlighted the challenges encountered in the provision of water services. Therefore, it is anticipated that the recommendations outlined will improve the efficiency of the water supply in the SDM.

The SDM, as the water authority of the entire district, should ensure that it delivers and supplies sufficient purified water for human consumption to its communities. During the assessment, it was realised that the district should upgrade the water plants and the purification systems.

Furthermore, there should be a reticulation system and connection of the boreholes that are available in the district. It should be ensured that the projects and infrastructure, maintenance of water supply and awareness of water consumption in the district be monitored to curb the challenges. Moreover, skilled personnel should be recruited for the IWS department.

6.4 Provision of resources

Provision of technical, financial, and human resources be prioritised to enhance service delivery. The national and provincial governments should be consulted for the provision of funds to procure water meter readers and replace the ageing infrastructure.

6.5 Monitoring of Water Services

It is recognised that there are illegal connections and water is not used sparingly and is not paid for. While the water by-laws have been approved by the municipality, they are habitually violated. Prepaid water meter readers should be installed in the households and the indigent be catered for.

Moreover, there should be two-way communication between the municipality and the public to lead to strengthening participatory democracy. The developmental interventions should be sustained.

6.6. Maintaining Infrastructure

The municipality should ensure that the old infrastructure is replaced. Quality material must be used as it lasts longer.

6.7 Return on Investment

The realisation of effective water management and services indicates an understanding of reliable water planning and availability of water resources cutting across the spheres of government and economic sectors. Water resources and services incorporate a dependable water supply for efficient agricultural water use and to meet the needs of communities and the protection of natural water resources. Communities will have affordable and consistent access to adequate safe water and clean sanitation.

Hygiene services, water and sanitation are vital to human health if safely managed. The implementation of enhanced water resources management ensures equitable and sustainable distribution of water to meet requirements. Global health depends on universal access to water, sanitation, and hygiene. Investment in water infrastructure will eradicate diseases attributed to unsafe water, poor hygiene, and inadequate sanitation practices. Improving water quality is necessary to protect the ecosystem and human health.

The researcher acquired useful knowledge concerning prioritisation of the provision of financial, technical, and human resources to enhance water service delivery from the emerging themes of data collected. The implementation of the proposed interventions will result in consultations between the SDM, community, provincial, and national governments for the provision of funding to procure water resources. A two-way communication between the community and municipality will ensure proper monitoring of water services through the strengthening of participatory democracy principles and the sustainability of developmental interventions. Maintenance of infrastructure by municipal officials will guarantee the replacement of old infrastructure with quality materials.

I have realised that communication is important in solving problems. Furthermore, I observed that interrelating and collaborating with other entities bear positive results as more knowledge and better practices are achieved. When interviewing the participants, I noticed that I must practice being patient and be attentive to gather the required information effectively.

The knowledge which I attained assists in improving the service delivery in the municipality to an extent that the community members of Sekhukhune started to receive safe and clean water. I recognised that it is important to take care of the municipal infrastructure and assist the municipal employees. I further realised that my inputs in meetings are positive since I started the research and my performance at the workplace have improved.

6.8 TIPS Managerial Leadership Framework

The TIPS Managerial Leadership Framework consists of managing technology, innovation, people, and systems in the workplace. Managing technology implies the tools used by businesses to gain competitive advantage, managing innovation refers to how businesses stimulate and capitalise on the process of ideation, and managing people concerns the interface of humans (DaVinci Business School, 2019). Systems thinking concentrates on the synthesis of performance and organisational activities to solve unique problems (DaVinci Business School, 2019).

The managerial leadership competencies incorporated in this study involve the facilitation of conversations for community members to participate in decisions affecting their daily lives. This implies that relevant stakeholders must be involved in problem-probing processes of water service delivery. The involvement of relevant stakeholders has the advantages of effective communication, informed decision-making, a higher level of trust, and commitment to action.

The emphasis on applying a public-private partnership (PPP) model for planning, constructing, funding, operating, and preserving novel facilities of water or the renovation of prevailing projects is aligned to the integration of innovation and systemic constructs to enable the total of parts to become more than the whole (The Da Vinci Institute, 2020). The engagement of

tasks takes place when the systems thinking interlink exists between the management of individuals' competencies and practices and managing innovation (The Da Vinci Institute, 2020). The emergence of agility occurs when there is a system thinking interlink between the management of technology competencies and practices and management of innovation in the workplace (The Da Vinci Institute, 2020). Innovative approaches such as the PPP models ensure that poor municipalities can eliminate their water infrastructure backlogs and bridge provision gaps to spread access to water services to communities in need.

Management of people: Managing people played an important role as the performance of the employees must be managed so that they can be effective and their performance on their daily activities can improve. Employees should be trained as and when there is a need. Our organisation provides job rotation for employees to develop themselves, as such, there is a willingness to collaborate across organisational units within our organisation. Furthermore, I noticed that there will be positive results and good production if employees are capacitated in team building programmes and focus on functional responsibilities such as finance, project management and personal leadership,

Innovation: I recognised that in life we must be innovative and creative. This will assist in adapting the circumstances and transform in parallel with the situations. Our organisation has processes for replacing outdated knowledge and use new knowledge to solve new problems. Since I registered for this qualification, I am capable to solve issues at the workplace easily in an incremental innovation vigilant manner and ensure that I leverage or adapt fundamental technology.

Management of System: I adapt effectively with the systems at my workplace and ensure that the aims and objectives of the organisation may be successfully fulfilled. I noticed that being honest, hardworking, and complying with the organisation's systems to achieve the goals, objectives and targets must be taken into consideration to achieve what is expected.

Selecting and recruiting skilled employees play an important role in the effectiveness and productivity of the organisation**,** as such recruitment processes should always be followed without concession because unqualified employees decrease the performance and the productivity of the organisations**.**

In our organisation policies are adopted as the guiding procedure. Our organisation provides IT support for collaborative work regardless of time and place, communication, and systematic storage of information. The administrative systems are formed in the municipality to coordinate and control economic activities. The system also constitutes a particular kind of political, financial, cultural, integration and reinforcement to the communities

6.9 Conclusion

SDM being the water authority to all the community members of the Sekhukhune region, should ensure that there is the continuous maintenance of water infrastructure, the monitoring of new and old water projects is strengthened. Awareness campaigns are conducted regularly to sensitise the community members about caring for the water infrastructures and how to save water.

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APPENDICES

Appendix A: Formal request to conduct research at Sekhukhune District Municipality

P. O. Box 1593
GROBLERSDAL
0473

10 January 2020

The Acting Municipal Manager
Sekhukhune District Municipality
GROBLERSDAL
0470

Dear Sir

REQUEST FOR PERMISSION TO CONDUCT RESEARCH AT SEKHUKHUNE DISTRICT MUNICIPALITY

I, Madiseng Makololo Agnes, ID No 7005260377082 am hereby requesting permission to conduct research at the Sekhukhune District Municipality institution. I am an employee in the district municipality, attached to the Office of the Speaker and holding a Committee Coordinator position.

I am a registered Masters student at The da Vinci Institute for Technology Management (Pty) Ltd, student number 7566 and hereby wish to research challenges in service delivery in the Sekhukhune District Municipality. I noticed that there is a lack of basic service delivery in the whole district and if I can conduct thorough research there can be positive sustainable solutions. My topic is “Evaluation of the service delivery challenges faced by Sekhukhune District Municipality”.

Your positive response will be appreciated

Regards

_____

Madiseng Makololo Agnes

082 319 1515

Appendix B: Interviewing Participants

Both ward committees and municipal officials were introduced to the research and the purpose of the interview was outlined. It was further explained that the purpose of the interview was to gain information on their satisfaction with the services rendered regarding the water supply provided by the district municipality. Moreover, it was explained to the participants that the information they would provide would be kept confidential and they could withdraw from participation at any moment if they did not feel comfortable with continuing the interview.

Appendix B1: Informed Consent Form

Name of University: Da Vinci Institute of Management and Technology

Name of Assignment: Dissertation.

Interview for evaluating service delivery challenges faced by Sekhukhune District Municipality

1. I agree to be interviewed for the purpose of the student assignment named above**.**
2. The purpose and nature of the interview were explained to me, and I have read the information sheet provided by the student
3. I agreed that the interview be electronically recorded
4. Any questions that I asked about the purpose and nature of the interview and assignment have been answered.
5. Choose a), b), or c):

a) I agree that my name may be used for the assignment only and not for publication; b) I understand that the student may wish to use the publication later and my name may be used;

c) I understand that I can withdraw to participate at any time.

----------Signature of researcher

----------Signature of participant

Date

Appendix B2: Voluntary participation consent form

Evaluation of the water service delivery challenges faced by Sekhukhune District Municipality

Consent to take part in research

- I …… voluntarily agree to participate in this research study
- I understand that I can withdraw permission to use data from my interview within two weeks after the interview, in which case the material will be deleted.
- I understand that even if I agree to participate now, I can withdraw at any time or refuse to answer any question without any consequences of any kind.
- I have the purpose and nature of the study explained to me in writing and I have had the opportunity to ask questions about the study.
- I understand that I will not benefit directly from participating in this research.
- I understand that all information I provide for this study will be treated as confidential.
- I understand that in any report on the results of this research my identity will remain anonymous.
- I understand that signed consent forms will be retained and kept safe until the results of the dissertation are confirmed by the exam board,

Name, degree, affiliation, and contact details of the researcher

Signature of research participant ----------

Signature of research ----------

Date

I believe the participant is giving informed consent to participate in this study

----------Signature of researcher

Appendix B3: Interview Form for Ward Committee Members

Name of the local municipality _____

Biographical information

1. Age: ……..…
2. Gender: ……
3. Educational Level: ……..

Water service delivery challenges

4. Who is responsible for water services delivery in SDM?

   ……

5. Are the responsible people ensuring that the community members are supplied with water?

   ……

6. Are there communal standpipes next to the households?

   ……

7. Do you receive water daily?

   ……

8. If you do not receive water daily. Why?

   ……

9. How many litres of water do you receive per day?

   ……

10. Is the water supplied enough for the household?

    ……

11. Do you pay for municipal services like water, sewerage, and electricity?

    ……

Satisfaction of community members on water services

1. Are you satisfied with the water service delivery?

   ……

2. Are you experiencing water cut-off in the area?

   ……

3. How is the water cut addressed?

   ……

Appendix B4: Interview Questions for Municipal Officials

Name of the local municipality _____

Qualifications of the operational workers in the IWS department

1. How many officials are qualified artisans?

……..…

2. How many officials are qualified pump operators?

……..…… ……

3. How many officials are qualified engineers?

…..…… …….

4. How many officials are qualified technicians?

……..……

5. How many officials are qualified groundsmen?

……

6. Water service delivery challenges

……

7. Who are the responsible officials to report to and who ensures that the work on delivering basic water service is performed and fast-tracked?

……

8. Are the community members satisfied with the water service delivery?

……

9. What are the main problems which the municipality is facing in terms of water delivery services?

……

10. What are the remedial actions which are in place to improve water service delivery in the SDM?

……

11. Are there water cuts in other areas in the district municipality and how are they addressed?

……

12. Are water forums established to report any faults to the municipality?

……

Appendix C: Interview Guide with the Municipal Manager

1. For how long were you appointed municipal manager of SDM?

……

2. Have you attempted to solve the problem of lack of water?

……

……

3. Is there a budget for water service delivery?

……

……

4. Is the national department aware of the lack of water in SDM?

……

5. Do you have any plans to curb the problem?

……

……

Appendix D: Interview with the Municipal Manager

1. Are you addressing the problem of water delivery in the SDM?

   ……..

2. How are you addressing it?

   ……

   ……

   ……..

3. What are the challenges when the municipality addresses the issue?

   ……..

   ……..

   ……..

   ……

4. Is that enough? Do you think the community members can survive without an adequate water supply?

   ……..

   ……..

5. What are the strategies in place?

   ……..

   ……..

   ……..

6. Do you think the municipality is doing enough in addressing the problem?

   ……..

7. When will the problem be resolved?

   ……

Appendix E : SDM IDP Consultation form

SDM 2017/2018

IDP Consultation form

Scriber Recording Form (One for each speaker)

Speaker			
Ward		**Village/Town(ship)**	
Municipality	**Ephraim Mogale**	**Venue**	**Elandskraal Village**
Date/Time	**17 September 2017**		

Comments

Scriber	**Madiseng Agnes**

Appendix F: Bathopele Principles

What is Batho Pele?

The term Batho Pele means 'People First'. In this context, Batho Pele means putting other people first before considering your own needs/yourself. How? By identifying small but important things that can immediately improve the quality of service you provide to your customer.

1. Consultation

We can only assume to know what our customers want. The only way we can find out for certain is by asking them. This can be done through surveys, questionnaires, meetings, suggestion boxes, imbizos and by talking to our customers. It's important to report back to customers so they know what to expect, and to our staff so they know what is expected from us.

2. Service Standards

Citizens should be told about the level and quality of the services they receive. If possible they should be allowed to choose the service they want. The standards we set are the tools we can use to measure our performance, and therefore need to be realistic depending on available resources. We should also be able to measure these standards so that everyone can see if they are being met.

3. Access

There is much more involved when referring to access. It means making it easy for our customers to benefit from the services we provide. Easy access can be made possible by having wheelchair ramps, disabled parking bays, and taking our services out to the community. Staff attitude may determine how approachable your component/directorate/department is.

4. Courtesy

We must be polite and friendly to our customers. Customers should be treated with respect and consideration. We must always be willing to assist. Telephone etiquette is vital. All our correspondence must be respectful.

5. Information

Citizens should be given full accurate information about the public services they are entitled to receive. Information is about reaching all our customers to make sure they are well informed about the services our department provides. This may be done in several ways-for examples through newspapers, radio, posters and leaflets. It's important to remember that different customers have different needs and they do not all speak the same language.

6. Openness and Transparency

We should be open about our day-to-day activities, how much our departments receive, and how that money is spent. This information should be available to the public. Annual reports, strategic plans, service commitment charters, etc must be made available to the public.
We should tell our customers where to complain and how to do it.

7. Redress

Redress is making it easy for people to tell us if they are unhappy with our service. We should train staff to deal with complaints in a friendly, helpful manner. An apology, full explanation and effective, a speedy remedy should be offered when the promised standards of service have not been delivered. When complaints are made, we must give our customers a sympathetic ear.
Have positive Responses to complaints.

8. Value for Money

We need to make the best use of available resources. Avoid wastage of time, money, and other resources. It also means eliminating waste, fraud and corruption and finding new ways of improving services at little or no cost.

9. Encouraging Innovation and Rewarding Excellence

Innovation: using new ways of doing things Encourage partnerships with different sectors to improve service delivery. Rewarding Excellence is also about rewarding the staff who "go the extra mile" in making it all happen.

10. Customer Impact

If we put all the “Batho Pele Principles” into practice, we then increase the chances of improvement in our service delivery. This, in turn, will have a positive impact on our customers. It is about how the nine principles link together to show how we have improved our overall service delivery. Here we look at the benefits we have given to our customers both internally and externally.

11. Leadership and Strategic Direction

Our leaders must create an atmosphere which allows for creativity management.

Appendix G: Ward Committee Members - Makhuduthamaga Local Municipality

1. Age: 50
2 Gender: Female
3. Educational Level: Tertiary qualification

Water service delivery challenges

a Who is responsible for water services delivery in SDM?

Infrastructure and Water Services department

b Are the responsible people ensuring that the community members are supplied with water?

Sometimes

c Are there communal standpipes next to the households?

Yes.

d Do you receive water daily?

No. Once a week or twice in two weeks' time

e If you don't receive water daily. Why?

We are sometimes told that the water pipes are broken

f How many litres of water do you receive per day?

There is no water supply every day, but water trucks sometimes deliver 1000 litres per household

g Is the water supplied enough for the household?

No, little water is delivered after a long time.

h Do you pay for municipal services like water, sewerage, and electricity?
Yes

i. Are you satisfied with the water service delivery?

No, because we can spend some months without water

j. Are you experiencing water cut-off in the area?

Yes, if the water pumps are broken

k. How is the water cut addressed?

The broken pipes are addressed after a long time and the water trucks supply water to the households.