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Perceptions and Attitudes of Selected Rural Communities in the Polokwane Local Municipality Regarding Water Supply

Phuti Ignatius Moloto
Tshwane University of Technology, Polokwane, The Republic of South Africa
Kabelo Boikhutso Moeti
Tshwane University of Technology, Soshanguve South Campus, The Republic of South Africa

The purpose of the study was to evaluate water supply in general, and in particular, the perceptions and attitude of rural communities with specific reference to Matlou and Letsokoane under jurisdiction of the Polokwane Local Municipality. This was done by using a case study design of two villages (Matlou and Letsokoane) selected as settings for the study. This article is a culmination of a study conducted towards the fulfilment of a postgraduate qualification. A mixed method approach was used for the study combing structured questionnaires and open ended interviews. The findings of the study have showed that Polokwane Local Municipality is failing to supply water services to residents in Matlou and Letsokoane. Contributing factors this state of affairs includes: increase in population in that area, residents tampering with water provision infrastructure, theft and no intervention by political representatives when there is no water. The results presented on this article are emanated from quantitative research method. The study has therefore produced a grounded water supply value chain model emanating from the findings of the research study as well as the literature surveyed. Lessons that can be learned from this study are the following: consultation with community trough ward councillors, which include educational aspect of preservation of water as a source of restoration for human life and dignity. Concertize the community with an attempt to reduce illegal activities as cited in the study regarding stealing of taps.

Keywords: water supply, community, Polokwane Local Municipality

Introduction

The Constitution of the Republic of South Africa (1996) provides that every household in the country should have access to clean drinking water as a basic human right. The criteria defining a basic water service are: communal taps or stand pipes as the abstraction technology, a prescribed maximum distance of 200 m from each household; minimum quantity of 25 liters per capita per day (DWA, 2001a, p. 110). South Africa is a water scares country with highly variable rainfall and runoff. Climate change has exacerbated the situation; however; as a result, numerous parts of South Africa have, for a few years now, been experiencing below average rainfall (DWA, 2016, p. 408). A local municipality, according to the Water Service Act 108 (1997), can assign the private

Phuti Ignatius Moloto, Ph.D., Dr., Department of Public Management, Tshwane University of Technology, Polokwane, The Republic of South Africa.
Kabelo Boikhutso Moeti, Ph.D., Prof., Department of Public Management, Tshwane University of Technology, Soshanguve South Campus, The Republic of South Africa.

sector to provide water and sanitation to local communities. They have the power to move progressively towards social and economic upliftment of local communities and affordable to all.

A municipality, as a Water Service Authority, must prepare a water service development plan to ensure effective, efficient, affordable, economic, and sustainable access to water services that promote sustainable. Local government must be accountable to local communities. In doing so municipalities must structure their administration, budgeting and planning in a manner that gives priority to the basic needs of the community and promotes the social and economic development of its people. Local government is constitutionally mandated to provide basic services including the delivery of water and sanitation services. Water authorities are defined as municipalities that provide water and sanitation services. Municipalities in South Africa are experiencing systematic issues that adversely affect their ability to deliver basic water services to the people in their area.

The study set out to evaluate water supply in general, and in particular, the perceptions and attitudes of rural communities with specific reference to Matlou and Letsokoane under the jurisdiction of the Polokwane Local Municipality.

Background

In the Limpopo Province, Polokwane Local Municipality is a provincial growth point which functions as a first order settlement. However, the geographical area of Polokwane Municipality consists predominantly of rural communities. It is made up of 45 wards; the main seven clusters of settlements are Polokwane, Seshego, Mankweng, Sebayeng/Dikgale, Molepo/Chuene/Maja, Moletji/Letsokoane/Matlou, and Aganang (Republic of South Africa, 1998). The focus of the study was based on the Matlou and Letsokoane villages outside Polokwane. The two villages are currently experiencing water shortages. They depend on water supply which they buy from the privately owned boreholes for survival. The two villages have been forced by sever water shortages to make use of underground water such as boreholes. Water drawn from underground gets contaminated by pit toilets and cow manure (Davis & Hirji, 2014, p. 101).

The communal tap which is installed in the two villages does not meet their water demand, since the pace at which water is flowing from the tap is very slow and at times water is not available for almost a whole week for households' usage. The Polokwane Local Municipality, as the principal pertaining to water supply to the affected communities, did nothing to address the problem of water supply, and the problem still persists (Davis & Hirji, 2014, p. 101). Consequently, other members of the communities who cannot afford to buy water from privately owned boreholes travel to the shallow wells and unprotected ponds, which they share with animals closest to their vicinity to fetch water. This is a common problem in rural areas of developing countries, such as South Africa.

The Aim of the Study

The study set out to evaluate water supply in general, and in particular, the perceptions and attitude of rural communities with specific reference to Matlou and Letsokoane under the jurisdiction of the Polokwane Local Municipality. The results presented on this paper are emanated from quantitative research method.

The study had six objectives, but the focus of this article is on Objective 5, which states: "To examine perceptions and attitudes of the affected communities to the current water supply efforts by the Polokwane Local Municipality".

Literature Review

The Right to Water—The Human Rights Perspective

McGraw (2011, pp. 127-204) states that in July 2010, 122 countries formally acknowledged the human rights to water and sanitation law, and it is now incorporated in the Formal International Human Rights Law. Following this development, the United Nations Human Rights Council adopted a binding resolution recognising that the human rights to water and sanitation are a part of the right to an adequate standard of living.

Access to safe drinking water is a basic human right and a constitutional right. Both social and physical health is adversely affected by contaminated water of which that is also an infringement of human dignity (World Health Organization, 2008, p. 204). The Water Services Act 108 (1997) entitles everyone to a basic water supply and basic sanitation, and for "every water service institution must take reasonable measures to realise these rights". In terms of this Act, the district (or authorised local municipality) is the water service authority within its area of jurisdiction. The South African government recognises and complies with this water right provision through the Department of Water Affairs (DWA), which has the mandate to ensure equitable access to water supply, sanitation, and the development of the water policy.

The human rights to water place certain responsibilities upon government to ensure that people can enjoy sufficient, safe, accessible water (McGraw, 2011, pp. 127-204). The 1996 South African Constitution states that all citizens have the right to an adequate amount of safe water. The Free Basic Water Policy (FBW) is implemented to ensure that these rights are fulfilled and addresses the inequalities in service provision, which were established during the apartheid era, are reduced. The goals of water supply in South Africa are outlined in 1997 National Water Service Act.

The Department of Water Affairs (DWA) is tasked with the responsibility of ensuring equitable access to water supply and sanitation and the development of the water policy. As stated by Rogers and Hall (2001, p. 207), the Dublin Principle has been influential in the shaping of the water sector reforms. At the United Nations Conference on Environment and Development (UNCED) held at Rio de Janeiro in 1992, when the principles were concluded, they provide that:

- Fresh water is finite and vulnerable, essential to sustain life, development and environment.
- Water development and management should be based on participatory approach involving users, planners, and policy makers at all levels.
- Women play a central part in the provision, management, and safeguarding of water.

Water has an economic value in all its competing uses and should be recognised as an economic good. Access to safe water is a fundamental human need and therefore a basic human right. The right to safe water is at the heart of every individual to better health and human dignity. It is also fundamental to a healthier, safe society. The human rights to water mean that the states may not prevent people from enjoying their human rights to water and sanitation. Water is an economic good and it is important that there are mechanisms to ensure equity, efficiency, and sustainability in the delivery of this service (UNCED).

As much as water is regarded and acknowledged as a basic right to every individual, it is critical that people contribute to the maintenance and operations of water services. Socio-economic development, in particular, protection and improvement of public health, is linked to safe drinking water. The human right to water and the Sustainable Development Goals (SDGs) formally acknowledge water as a human right and express the

willingness to give content and effect to this right may be a way of encouraging the international community and the governments to enhance their efforts to satisfy basic human needs and to meet the Sustainable Development Goals. Water as a basic human right is based on the following discussions:

Sufficient

Safe: The water required for each personal or domestic use must be safe therefore free from micro-organisms, chemical substances, and radiological hazards that constitute a threat to a person's health. The measurement of safety drinking water is usually defined by the national and local standards for drinking water quality. The World Health Organization (WHO) guidelines for drinking water quality provide a basis for the development of national standards that if properly implemented, will ensure the safety of drinking water (World Health Organization, 2008, p. 204).

Supply of water in the acceptance: Water should be of an acceptable colour, odour, and taste for each personal or domestic use. All water facilities and services must be culturally appropriate and sensitive to gender life cycle and privacy requirements.

Physically accessible: Everyone has the right to water and sanitation service that is physically accessible within or in the immediate vicinity of the household, educational institution, work place, or health institution (UNCED).

Affordable: water, and water facilities services must be affordable for all (UNCED).

Rural Communities of South Africa

In South Africa the problem of the provision of essential services, especially portable water, has been noted as an unresolved issue even more than a decade after apartheid (Bakker & Hemson, 2000, pp. 3-12). As posited by the World Health Organization (WHO), domestic water is water used for all domestic purposes which include drinking, cooking, and bathing. Therefore, when measuring adequacy of water in the household, all such uses should be considered (WHO, 2008, p. 204). Improved water supply services in rural areas can in turn give women more time for productive endeavours, adult education, empowerment activities, and leisure. The most important drivers of water use are population and economic development also, changing societal views on the value of water.

Some people still travel long distances with wheelbarrows to collect water from taps which are limited in the human settlements. The water scarcity situation in South Africa is exacerbated mostly by the mismanagement of available fresh water resources and by the deteriorating water quality as a result of pollution (Blignaut & Van Heerden, 2009, p. 123). Pollution of water resources (rivers, wetlands, reservoirs, lakes, and ground water) by toxic mine wastes has been identified as a problem. Water shortages are mostly experienced in rural communities that are fully linked to water reticulation networks. Most of these communities are located in mountainous areas of the province, for example the homelands. Only 8% of Limpopo Province have water on site, 50% have access to communal taps, and 32% draw water from the source distant from their home (Water Research Commission, 2005, p. 195).

In South Africa water is achieved mainly through small community water systems. These systems deliver a defined level of service referred to as "basic water supply service". The criteria defining a basic water service are communal taps or standpipes as the abstraction technology prescribed maximum distance of 200 m from household, minimum quantity of 25 liters per capita per day, minimum reliability of 98; water supply systems

that do not comply with these criteria are considered "rudimentary" (DWA, 2000, p. 108). These rudimentary systems are then upgraded to small "package" water treatment plants where water is abstracted on site, usually from ground water or sources such as rivers, treated (where required), stored, and then distributed to communal taps (Momba, Abongo, & Mwabakana, 2008, p. 23). Households collect the water from the taps in a variety of containers and carry it home for domestic usage. A water service in this study is defined by three attributes: access, availability, and portability.

The reliability of a water service is generally defined as the proportion of time that the service functions to its prescribe level (Moriarty et al., 2010, p. 4822). Therefore, a reliable service should deliver water of sound health—related (portable) that is physically obtainable with appropriate technology (e.g., tap) within a reasonable distance from the household (accessible), while being constantly obtainable at the source in quantities sufficient for daily demands for domestic use, including personal hygiene (available). Most of the people in rural areas are poor and so they sometimes try to mobilize their friends and neighbours to improve traditional water sources using local labour and materials; such sources are often associated with poor water quality and seasonal unreliability. Further it is important to note that though the self-supplying initiatives in rural areas are private, the use and access to the water sources by other households should be shared at no cost as a way of promoting social relations. This is because water is seen as a natural resource and as a result, payment for water in rural settings is quite unacceptable (Moriatry et al., 2010, p. 4822).

Many people especially in rural areas are unable to access clean water despite the fact that the Constitution of the Republic of South Africa Chapter 2 Section 27 provides that everyone is entitled to have access to adequate clean water. Although, generally, water resource is scarce in the country, strategic interventions have been put in place to ensure that people have access to adequate clean and safe water. The problem is that those who have the responsibility to provide the water have continuously been delivering poor water services to the people and at times, deliberate artificial scarcity is caused with the aim of making demands greater than the water supplied (Odeku & Konanani, 2014, p. 161).

According to Parnell and Pieterse (2002, p. 20), local municipalities find it difficult to fulfil their obligations, given that racial inequalities between historically black and the white local authorities and between urban and rural areas brought by decades of apartheid settlement patterns have not been completely overcome. Parnell and Pieterse (2002, p. 20) further stated that as a result of complex web, laws and extensive regulations and tactics involved to uphold the principle of territorial segregation black people suffered and most of them are in rural communities as far as water supply is concerned. It is often emphasized that in developing countries coping with water crisis is almost impossible; millions of women and girls spend most of their time looking for water to meet their household needs, thus limiting their participation in productive economic activities especially for women and low school enrolment for the girls (Coles & Wallace, 2005, p. 10).

As a result of the identified challenges, the Polokwane Municipality has identified the need for the review of their Spatial Development Framework (SDF) (2007) based on increasing pressure on land, natural resources, and the environment within the municipality's area of jurisdiction. The need exists also to update the SDF in terms of new theoretical background, urban design principles, local economic development theory, and spatial development principles that include approaches by the Department of Land Affairs and the Land Claims Commission, as well as the breaking of new ground policy and the Restructuring Zones and Housing Policies of the National Department of Housing (Hedden & Cilliers, 2014, p. 16).

Theoretical Frameworks Underpinning the Study

It is important for any scientific study to have a clearly articulate theoretical framework that should guide the research processes. The theoretical support is derived from agency theory and stewardship theory. The agency theory discusses the relationship between the principal and the agent (Hannaffey & Vitulano, 2013, pp. 599-603). Hence, the theoretical framework, when applied to public sector entities, splits when trying to distinguish between agents.

Agency Theory

Agency theory was first conceptualised to understand the relationship between the principal and his/her urgent (Zu & Kaynak, 2012; Hannefey & Vitulano, 2013). Hence the theoretical framework, when applied to public sector entity, splits when trying to distinguish between agents and stewards in the local government sphere. For example, if the local government managers behave as agents, then they are expected to manage the government resources making use of national budget allocations (housing, health, education etc.,). Agency theory has been called for in terms of Section 238 of the Constitution which requires that

> an executive organ of the of the State in any sphere of government may delegate any power or function that is to be exercised or performed in terms of legislation to any other executive organ of the State provided the delegation is consistent with the legislation in terms of which the power is exercised or the function is performed or exercise any power or perform any function for any other executive organ of State on an agency or delegation basis. (RSA, 1996)

Agency theory has its origins in economic theory (Eisenhardt, 1989) and was proposed as a means to evaluate relationships between principals and their agents.

Figure 1. Agency theory in the local government (Source: Authors' own illustration).

Agency theory when used to explain that local government exists to deliver resources to the communities highlights the points that the principal agent relationship should also build on trust that the agent will deliver as expected and where challenges are experienced, principals will receive pertinent information promptly, enabling them to take strategic and effective decisions. Despite the fact that the local government agents are widely distrusted, demonstrate poor leadership, and have failed to apply good governance and transparency to their administrations, the principals of agency theory still remain valid and can help re-establishing an effective, simple,

and straightforward relationships (Zu & Kaynak, 2012; Hannafey & Vitulano, 2013; Mahaney & Lederer, 2011; Lopes, 2012; Basau & Lederer, 2011).

Stewardship Theory

Stewardship theory is about being in control of something that has been entrusted to one's care, but does not belong to the entrusted person (Waters, 2013, pp. 324-340). Hence, politicians and government administrators are alike entrusted with the care of the nation resources placed under their control during their tenure of office. Thus the entrusted responsibility can be removed by the communities, if the stewards are not accountable and responsible in their actions. For example, most municipalities are reported to have been faced with corruption because of greedy stewards who have forgotten their rules (Corruption Watch, 2013, pp. 13-37). It is unfortunate that the removal of such stewards has been left increasingly, to the undiscriminating and violent actions of the previously principals.

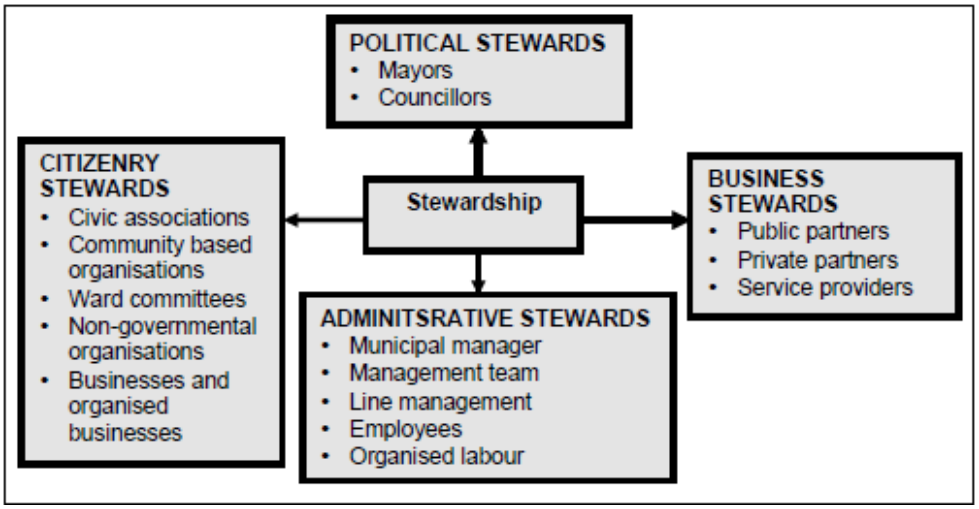

Figure 2. Stewardship relationships in local government (Source: Author's own illustration).

From the above discussion it should be apparent that the concept of stewardship is the equivalent to accountability. An ideal embodied stewardship is that elected councillors, citizens, administrative officials, and public private partnership hold each other accountable for the effective and efficient running of local government. Despite the fact that stewardship has become an important concept for identifying those responsibilities, it is to protect the interest and the resources of the local government, and may be proponents of stewardship theory (Podrug, 2011; Wales, 2013; Lindquist & Mijoski; 2012; Cloves & Tippet, 2011; Miller & Sardaris; 2011; Robb, 2012). The major elements of each stewardship role are presented in Figure 2 above. Therefore, it is essential to note that the key stewards are the local government administrators. Mazibuku and Fourie (2013) recognise that mayors, municipal councillors, and officials have the greatest responsibility communities to demonstrate good stewardship and accountability. Saner and Wilson (2003) argue that the stewardship concept is an essential driver of consultation processes, the system of governance oversight practices and also in setting out voluntary initiatives. Within the context of this paper the philosophy of stewardship requires that those who are entrusted with governance responsibilities and functions strive to be effective in the public institutions employing them. In local government perspectives, the stewardship concept is invoked to remind all municipal officials about the service delivery responsibilities that are due to their principals, the public at large.

According to Corruption Watch (2013, pp. 13-37), there have been too many reports of maladministration, mismanagement of public funds, and abuse of the resources of public funds and abuse of resources by the stewards at the local government level that have been apparently condoned. Corruption Watch 2013 statistics show that 22% of reports from the public implicate municipal traffic police, education institutions, housing subsidies and allocations, and South Africa police service in poor service delivery and bribery. Corruption can creep into the running of municipalities and threaten the delivery of services if stewards fail to protect principals' assets and neglect their responsibilities to use the assets wisely while under their care. Stewardship is concern with the management of sources by responsible people on behalf of their owners.

Research Methodology

The study utilised the combination of the qualitative and quantitative approaches which helped the researcher have a deeper understanding of the phenomenon and assist in avoiding biasness of the results to be collected from the study (Leedy & Omrod, 2013, p. 101). Mixed research incorporates both elements of a quantitative approach and qualitative approach. A mixed research allowed the researcher to handle the research problem from both perspectives of addressing the problem fully, and without the shortfalls of one approach (Leedy & Omrod, 2013, p. 101). The population of the study consisted of Matlou and Letsokoane communities. The total population of the study is 2,210. The population of Matlou community is 1,115 and that of Letsokoane is 1,095 (Statistics South Africa, 2018). For the purpose of achieving the objectives of the study, the researcher has chosen a case study as an appropriate design for the study because according to Devos et al. (2005, p. 272), a case study aiming to provide in depth analysis of phenomenon.

Population and Sampling

Brynard and Hanekom (2011, p. 55) defined population as a group in the universe, which possesses specific characteristics. Convenience sampling was used to select 111 research respondents out of 1,115 populations of Matlou households and 110 out of 1,095 of Letsokoane households who participated in the study. Purposive sampling method was used to select 10 municipal officials who are directly involved with water supply. In addition, the necessary protocols of the conducting a research process were observed. Non-probability method was utilised in this study. Convenience sampling method is a sampling method in which items are selected arbitrarily and in an unstructured manner from the sampling frame (Ramadass & Aruni, 2009, p. 44). This method does not follow any formula to select a unit which will form part of the sample. A convenience sampling method is appropriate for the study as the population of the study is large and research participants are not located in one place. Often the sample is intended to represent the total population (Welman, Kruger, & Mitchell, 2005, p. 53).

Data Analysis

This section follows discuss the data analysis processes to extract the themes from transcribed interviews.

The study followed an interpretive paradigm that employed a qualitative research design. The interviews were conducted with 10 participants from the Polokwane local municipality in South Africa. The interviews were translated verbatim to capture the full meaning of what the participants had to say.

Results

The results presented on this paper are emanated from quantitative research method.

As indicated earlier, the study consisted of six objectives, but for the purposes of this article, only Objective 5 is presented. It states as follows: "Objective: To examine perceptions and attitudes of the affected communities to the current water supply efforts by the Polokwane Local Municipality".

If water is outside the household yard, the majority of people who are still searching for scare water resources are females. As illustrated in Figure 3 below, the results revealed that the majority of Letsokoane (75, 5%) indicated that females are the ones who are still searching for scarce water. From the analysis below it is evident that the people who search for scarce water resources when there is need for it are females.

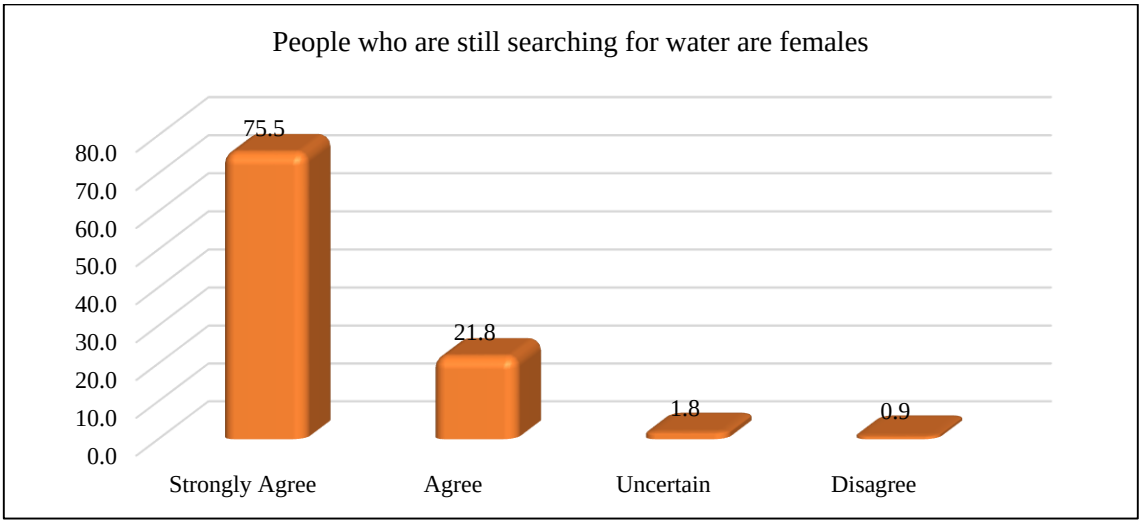

Figure 3. People who are still searching for water are females in Letsokoane.

The chart below in Figure 4 indicates that most of Matlou residents tend to strongly agree (96, 4%) that the majority of people who are still searching for scarce water resources are females when there is a need for it. Improved water supply in rural areas should give women more time for productive endeavours such as adult education, empowerment activities, and leisure.

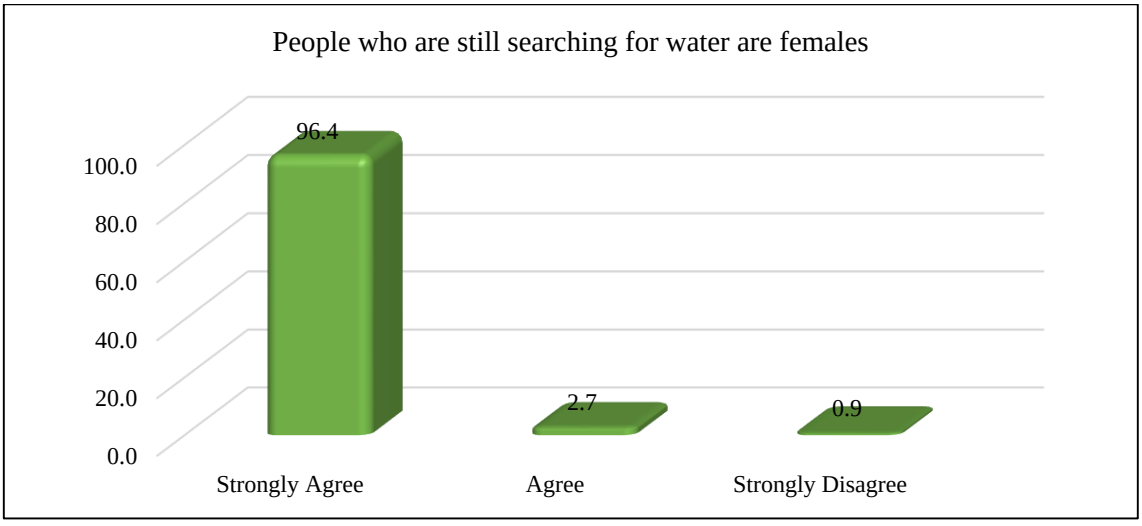

Figure 4. People who are still searching for water are females in Matlou.

1. Do you think that the condition of water supply in your community will improve in the next three years?

The residents from Letsokoane as per Figure 5 below illustrate that there is uncertainty (49, 5%) about that water supply condition in their community that it will ever improve in the next three years. It is confirmed by analysis that the majority of the residents are uncertain that the condition of water supply will improve in the next three years. As a result of climate change, the condition of rainfall might even be worse in the next three years as availability of water is a great challenge worldwide.

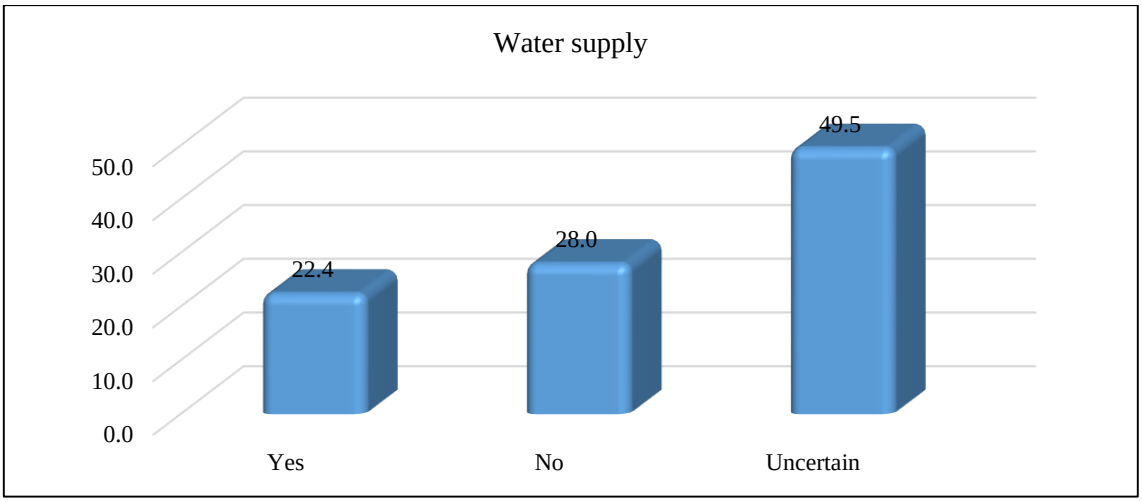

Figure 5. Water supplies in Letsokoane.

In terms of the results as presented in the Figure 6 below, 37, 6% of Matlou residents who participated in the study chose "NO" in answering the question that was asked meaning that they disagree that the condition of water supply in their community will change in the next three years. It means residents have lost trust in their local municipality. Climate change is one of the major contributing factors that impact negatively on water supply, temperature might increase and rainfall decreases and is distributed more erratically.

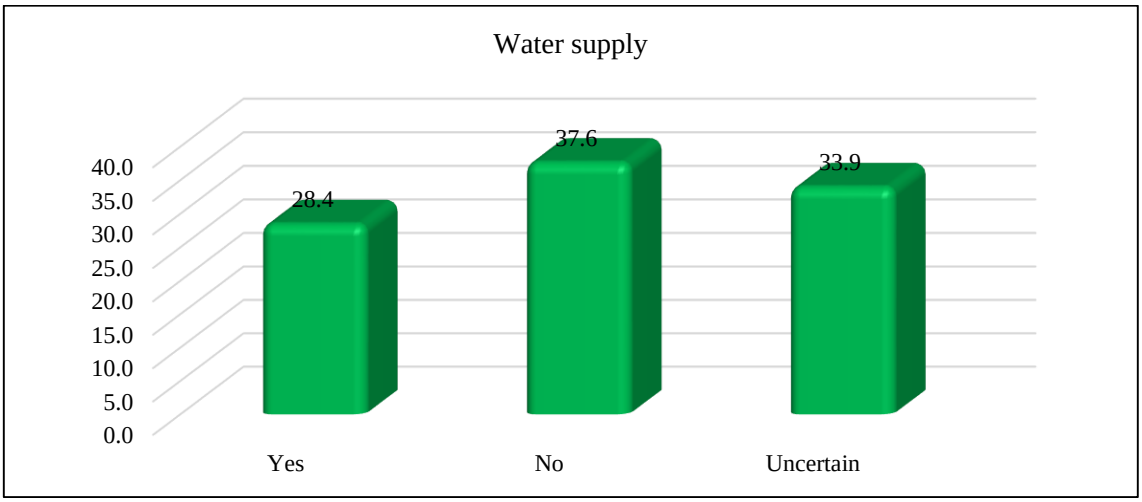

Figure 6. Water supply in Matlou.

2. How does inadequate water supply impact learner's performance at school or tertiary level?

The results as presented in Figure 7 below depict that the majority of the respondents (99, 1%) stated that inadequate water supply impacts negatively on the learner's performance at school or tertiary level in a poorly

way. In terms of lack of water supply which impacts negatively on the performance of learners, there are no good results for Letsokoane having responded. This reveals that among others, lack of water supply impacts negatively on the performance of learners at school or tertiary level in the community and this seems to be a serious concern to the residents of Letsokoane.

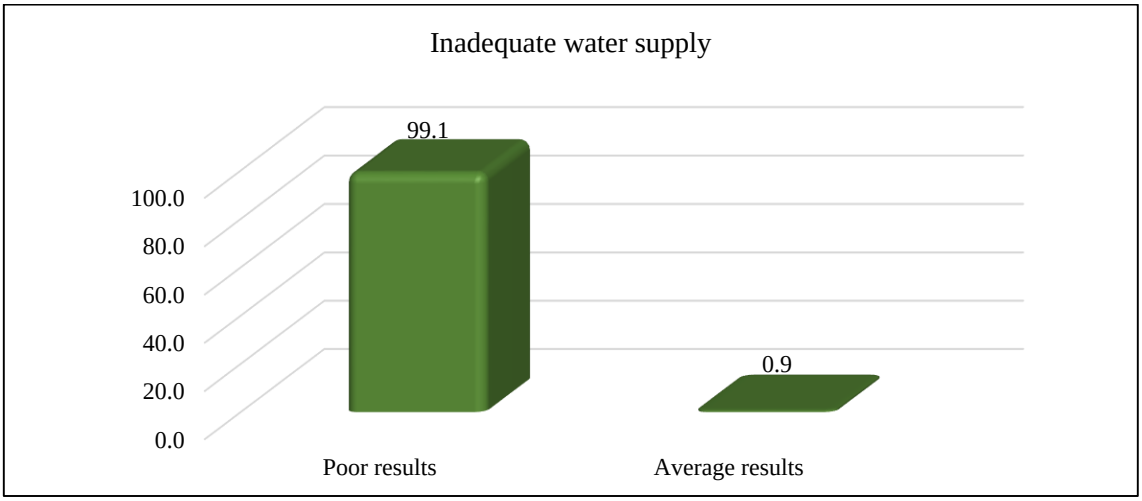

Figure 7. The impact of inadequate water supply in Letsokoane for learners at school or tertiary level.

The results presented in Figure 8 below indicate that the majority of the residents from Matlou (81, 7%) show that lack of water supply impacts negatively on the learner's performance at school or tertiary level. This reveals that among others, the lack of water supply impacts negatively on the performance of learners at school or tertiary level. The lack of water supply can make learners feel uncomfortable when their uniforms are not washed. Girls who are always involved are also greatly affected by the distance where they always fetch water. This can make them not concentrate in class because they are tired from the heavy duty of fetching water. Academic performance is a very important issue as it determines the future of the young generation. Poor performance in class by the female's learners can lead to a high rate of school dropout.

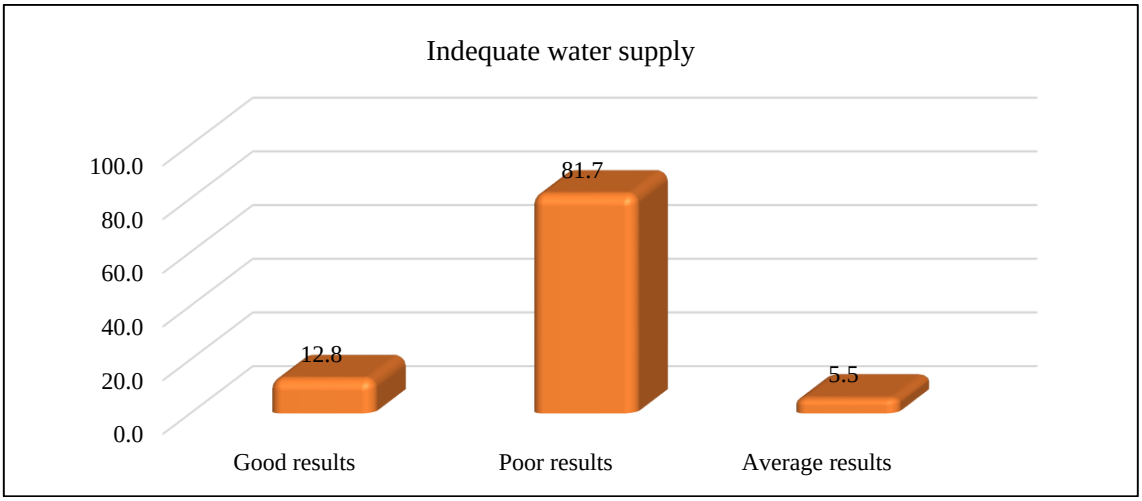

Figure 8. Lack of water supply to learners at school or tertiary level in Matlou.

3. How does lack of water affect the economic development of the rural communities?

In terms of the results presented in the Table 1 below, all of the Letsokoane residents pointed out that the lack of water supply leads to poor economic growth (100, 0%). From the analysis below it is evident that indeed the lack of water supply has a negative effect on economic development of the community. The economic growth of a particular area is determined by the number of businesses and their success. The lack of water supply negatively affects economic development in Letsokoane. Business people will not have any interest in establishing a business where water is a problem. The adequacy of water supply is conducive to economic development. This is because effective water supply makes it easier for investors to establish small enterprises and increase disposable income of households.

Table 1

The Lack of Water Supply to Economic Development in Letsokoane

How does lack of water affect the economic development of the rural communities?			
Residents		Frequency	Valid percent
Letsokoane	Poor economic growth	109	100.0

Note. The area that can welcome them and to be sure that hygiene is highly considered.

Table 2

Lack of Water Supply to Economic Development in Matlou

How does lack of water affect the economic development of the rural communities?			
Residents		Frequency	Valid percent
Matlou	Economic growth	1	0.9
	Poor economic growth	109	99.1
	Total	110	100.0

4. How does the lack of water supply affect the health condition of the community members?

Figure 9 below depicts that the majority of the residents said that the lack of water supply results in unhealthy conditions (99, 1%). The analysis below makes it clear that without adequate water supply it is difficult to maintain a higher standard of personal hygiene. The life span of elderly people and those suffering from dreaded diseases may be negatively affected when conditions for effective and efficient water supply are not created by the local municipality.

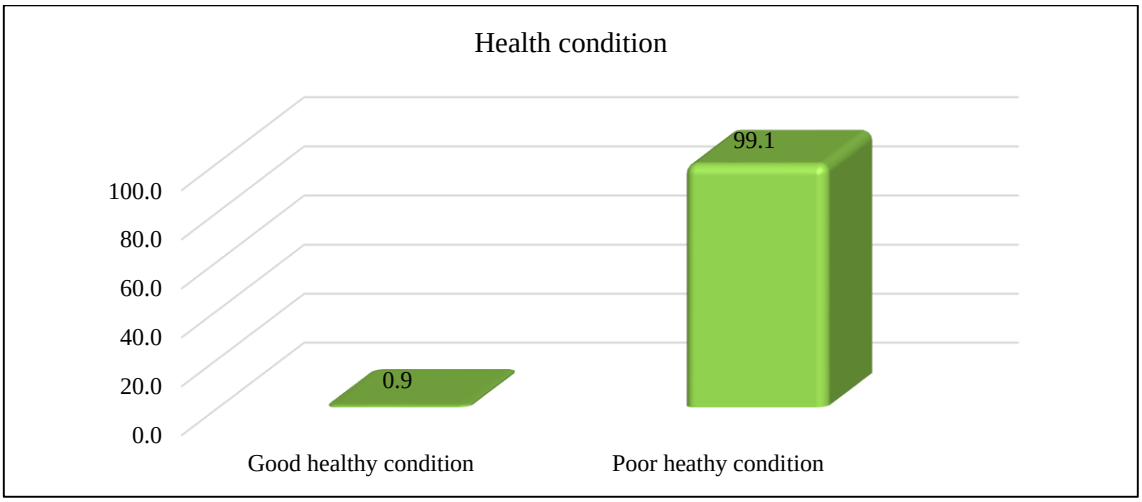

Figure 9. The lack of water supply on the health condition of Letsokoane residents.

The results in Table 3 below show that all Matlou residents (100, 0%) who participated in this study emphasized that the lack of water supply results in unhealthy conditions. The general observation from the analysis is that the lack of water supply negatively affects the health conditions of community members. Where there is scarcity of water, diseases such as cholera, diarrhoea affect people and as a result of such diseases the life span of the community members becomes shorter.

Table 3

The Lack of Water Supply to the Health Condition of Matlou Residents

How does lack of water supply affect the health condition of the community members?			
Residents		Frequency	Valid percent
Matlou	Poor healthy condition	110	100.0

5. How often do you receive free basic water services from your municipality?

As seen per Figure 10 below residents of Letsokoane indicated that they do not receive free basic water service from the municipality at all (47, 3%). The analysis indicates that there is no free basic water service in the community for the majority of residents. It means that the Polokwane Local Municipality lags behind in prioritizing free basic water services to the residents of this rural community. Poor water supply exposes the lives of the residents to risks which might lead to chronic diseases. Water is life; without water there is no life and as such free basic water services should be priority number one particularly in rural communities.

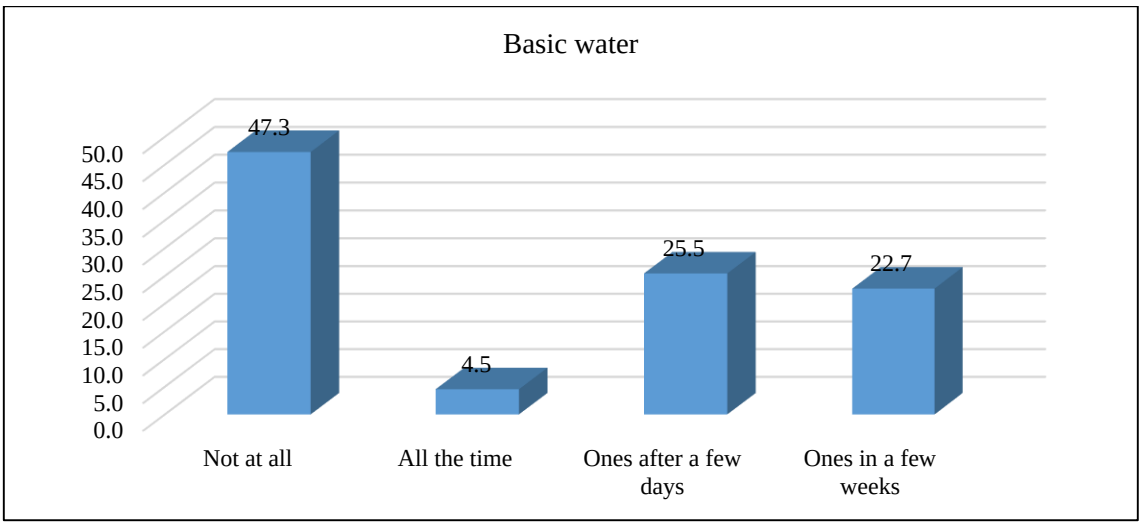

Figure 10. Free basic water supply from the municipality to Letsokoane residents.

In relation to the Matlou residents the picture is more worrisome in that the results in Figure 11 below indicated that a greater proportion of the residents pointed out that they do not receive free basic water from the municipality at all (50%). The analysis clearly indicated that indeed there is no free basic water supply at all for the majority of residents. Members of this community do not enjoy the highest attainable standard of physical and mental health. Without free basic water supply to the community it becomes near impossible to maintain a healthy living.

6. In your view how do you rate water supply in Matlou and Letsokoane households?

According to the view of the majority of the residents of Letsokoane as per Figure 12 water supplied in their household is poor (50, 0%). From the analysis it is evident that the majority of the respondents perceive poor water supply by their local municipality as something that negatively affects many areas of their lives.

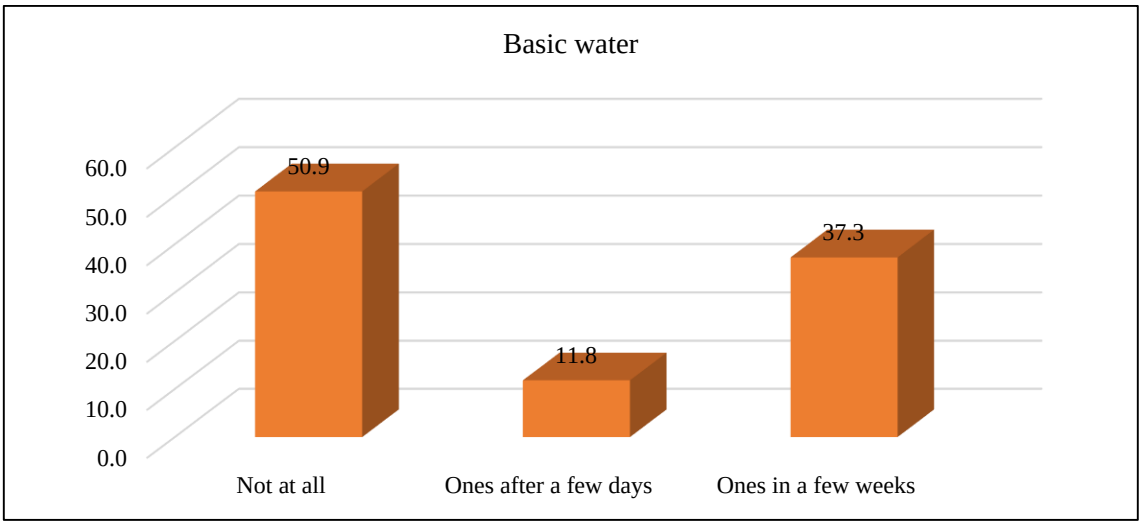

Figure 11. Basic water supply from the municipality to Matlou residents.

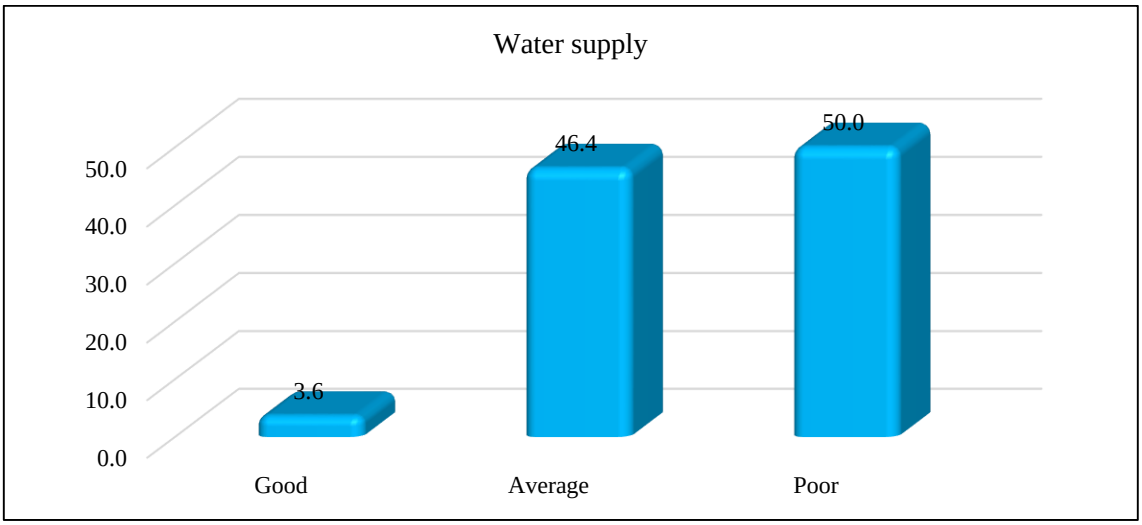

Figure 12. Rating water supply in Letsokoane.

The percentage becomes much higher at 82.7% when it comes to the residents or community of Matlou. The results indicate a higher level of dissatisfaction with the performance of the municipality when it comes to basic water supply. This, the community indicates, has adverse impact on education, economic activities, and growth as well as the general development of their rural community. Figure 13 provides a clear picture.

Among the results obtained from the study, both communities have a strong view on the violation of their human rights by the municipality when it comes to the consistent and sustainable supply of basic water.

From the figure below it is clear that the Polokwane Local Municipality does not value the frights of the residents. Inadequate water supply can affect the residents physically and psychologically. People know their rights may revolt if they are negatively affected by water supply.

Figure 14 below provides a clearer picture.

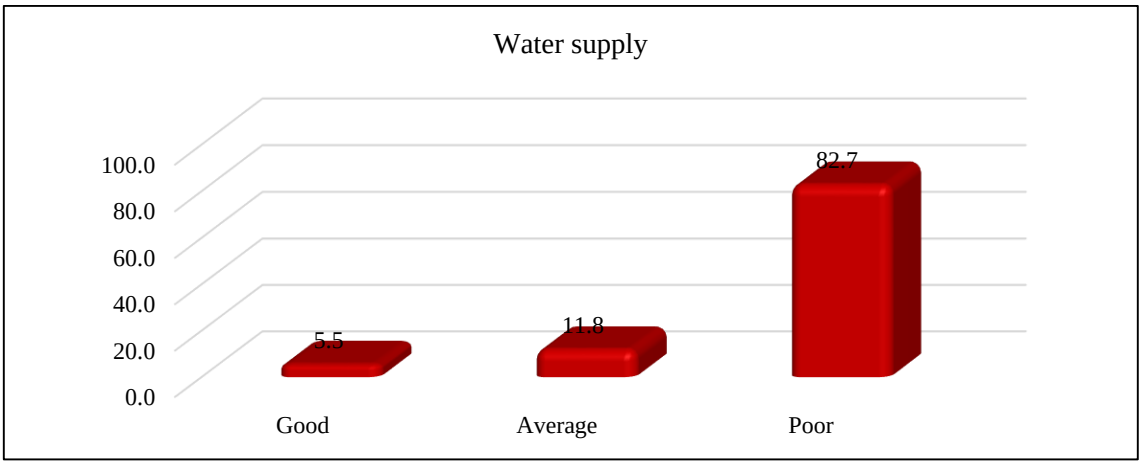

Figure 13. Rating water supply in Matlou.

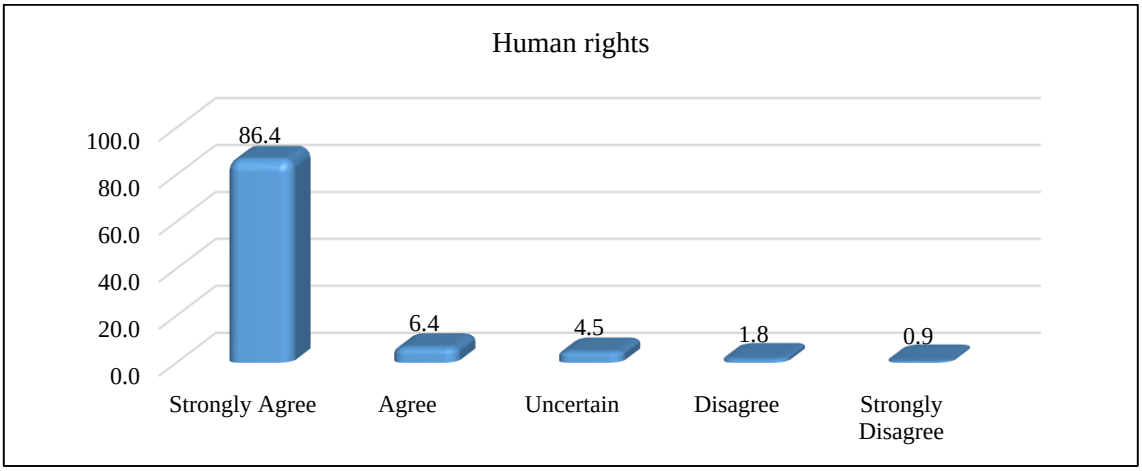

Figure 14. The lack of water supply violates human rights in Letsokoane.

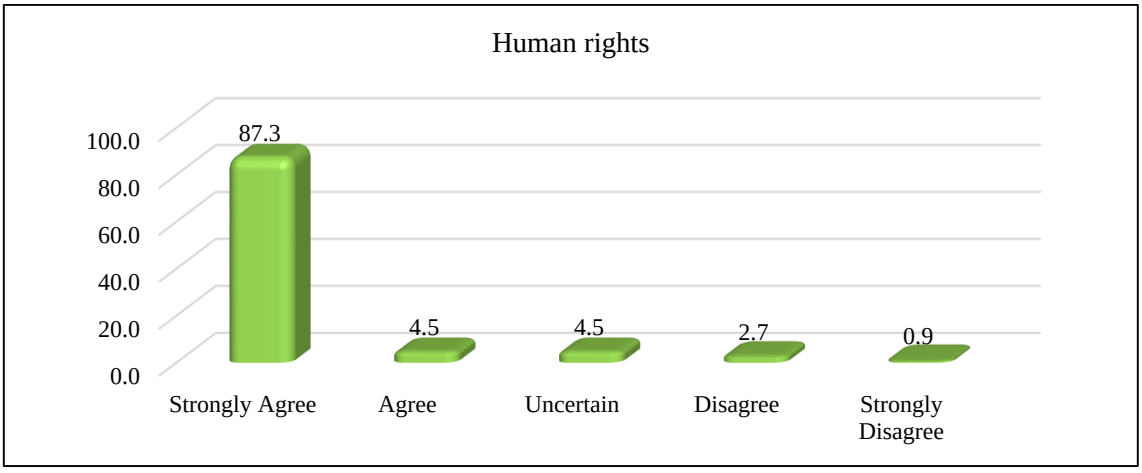

Figure 15. Lack of water supply violates human rights in Matlou.

Conclusion and Recommendations

The findings of the study have demonstrated that there is poor water supply to two sets of residents by the Polokwane Local Municipality in South Africa.

It is therefore suggested that when municipality starts developing rural areas, their starting point should be at Matlou as their external water source is not at the prescribed maximum distance of 200 m away as per the Department of Water Affairs (DWA, 2000, p. 108) from each household. The study has therefore produced a grounded water supply value chain model emanating from the findings of the research study as well as the literature surveyed. In order to improve on the precarious situations these communities found themselves in, the table below provides some suggestions from these communities for the Polokwane Municipality to consider in order to improve and provide sustainable supply of basic water. They are as follows:

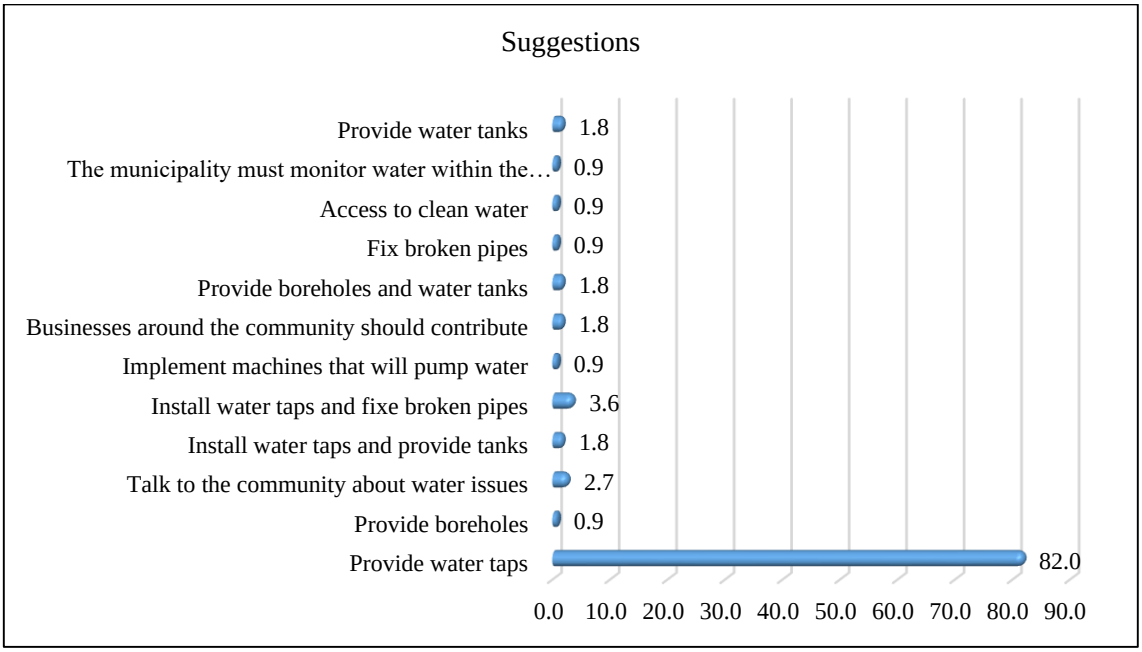

Figure 16. Suggestions from Letsokoane residents.

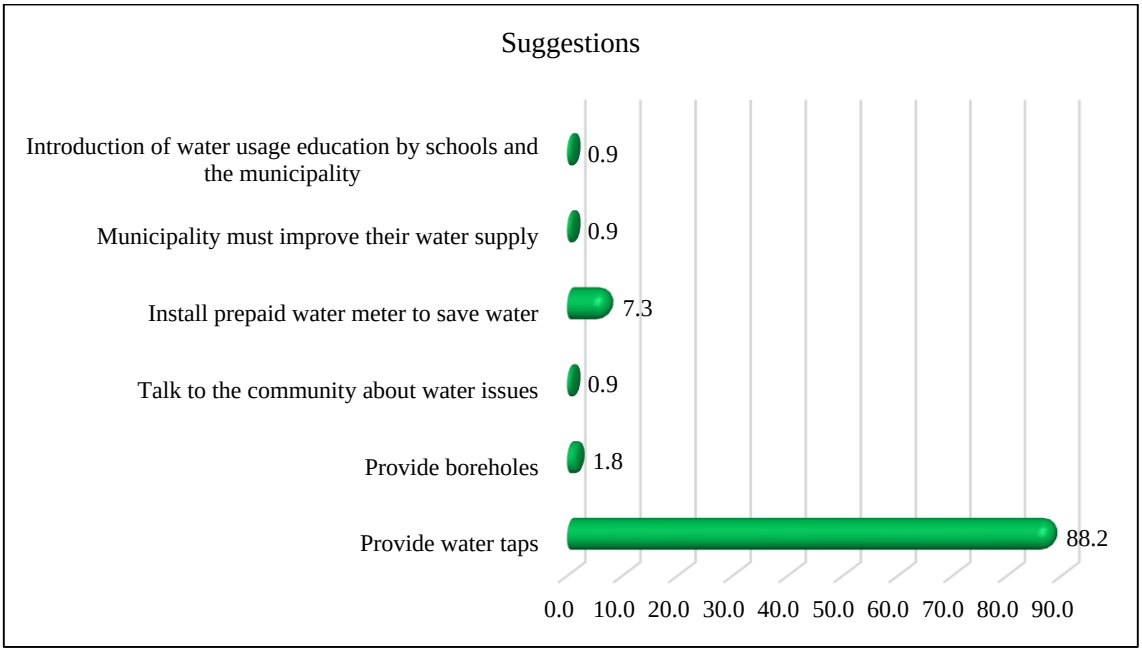

Figure 17. Suggestions from Matlou residents.

References

Babbie, E., & Mouton, J. (2010). *The practice of social research* (10th ed.). Cape Town: Oxford University Press.

Bakker, K., & Hemson, D. (2000). Privatizing water: BoTT and hydro politics in the new South Africa. *South African Geographical Journal, 82*(1), 3-12.

Blignaut, J., & Van Heerden, J. (2009). The impact of water scarcity on economic development initiatives. *Water SA, 35*(4), 415-420.

Brynard, P., & Hanekom, S. X. (2011). *Introduction to research in management-related fields* (5th ed.). Pretoria: Van Schaik Publishers.

Corruption Watch. (2013). *Local government the weakest link*. Retrieved from http://www.corruptionwatch.org.za/local-government-the-weakest-link/ (accessed on 09/04/2018)

Coles, A., & Wallace, T. (2005). *Gender, water and development*. Oxford and New York: Berg.

Davis, R., & Hirji, R. (2014). *Climate change and water resource planning, development and management in Zimbabwe: An issue paper*. Harare: The World Bank.

De Vos, A. C., Strydom, C. B. E., Fouche, C. B., & Delport, C. S. L. (2005). *Research at grassroots for the social sciences and human service professions*. Lansdowne, Pretoria: Van Schaick Publishers.

Department of Water Affairs. (2000). Strategic framework for water services, water is life, sanitation is dignity, South Africa.

Department of Water Affairs. (2001a). *Free basic wate*r. Implementation strategy document. DWA. Pretoria.

Department of Water Affairs. (2001b). *Strategic overview and key policy development* 2001/02-2007/08.

Department of Water Affairs. (2016). *Department of water and sanitation: Annual report 2015/2016.*

Eisenhardt, K. M. (1989). Building theories from case study research. *Academy of Management Review, 14*, 532-550.

Hannafey, F. T., & Vitulano, L. A. (2013). Ethics and executive coaching: An agency theory approach. *Journal of Business Ethics, 115*(3), 599-603.

Hedden, S., & Cilliers, J. (2014). Parched prospects-the emerging water crisis in South Africa. *Institute for Security Studies Papers*, (11), 16. Retrieved from http://www.waterencyclopedia.com/Po-Re/Public-Participation.html (access on 08/02/2018)

Jagals, P. (2012). *The impacts of rural small-community water supply interventions in rural South Africa.* Report to the Water Research Commission.

Leedy, P. D., & Ormrod, J. E. (2013). *Practical research: Planning and designing* (10th ed.). Harlow: Pearson.

McGraw, G. S. (2011). Defining and defending the right to water and its minimum core: Legal construction and the role of national jurisprudence. *Loyola University Chicago International Law Review, 8*(2), 127-204.

Mazibuko, G., & Fourie, D. J. (2013). Municipal finance: Relevance for clean audit outcomes. *Administratio Publica, 21*(4), 130-152.

Momba, M. N. B., Abongo, B. O., & Mwabakana, J. N. (2008). *Prevalence of enterohaemoragic escherichia coli O157: H7*. Kirstenbosch Research Centre Cape Town.

Moriarty, P., Batchelor, C., Fonseca, C., Klutse, A., Nears, A., & Nyarko, K. (2010). Ladders for assessing and costing water service delivery. International Water and Sanitation Centre: WASH Cost, IRC.

National Health (Act No. 61 of 2003). (2003). Retrieved from https: www.ecodriform.org.za/downloads/HEALTH-ACT-61-OF-2003-NEHNS.pdf date (accessed on 2021/08/06)

National Water (Act 36 of 1998). (1998). Retrieved from https//www.greengazette.co.za/ (accessed on 2021/08/06)

Odeku, K. O., & Konanani, R. H. (2014). Poor water service delivery: An exposition of the plight of the Phiri Community in Soweto, South Africa. *Stud Tribes Tribal, 12*(10), 161-170.

Oliver, J., & Van Heerden, J. (1999). *Implementation of an operational prototype fog water collection system: Project implementation.* Report to the Water Research Commission. Gezina, South Africa.

Parnell, S., & Pieterse, E. (2002). *Democratising local government: The South African experiment.* Landsdowne: University of Cape Town Press.

Podrug, N. (2011). The strategic role of managerial stewardship behaviour for achieving corporate citizenship. *Ekonomiski Pregled, 62*(7-8), 404-420.

Ramadass, P., & Aruni, A. W. (2009). *Research and writing across the disciplines*. Chennai: MJP Publishers.

Republic of South Africa (RSA). (1996). *The Constitution of the Republic of South Africa Act No. 108, as updated including the Constitution Twelfth Amendment Act, 2005*. Pretoria: Government PriRnter.

Rogers, P., & Hall, A. W. (2001). Effective water governance. *Tec background paper No. 7.*

Saner, M., & Wilson, J. (2003). Stewardship, good governance and ethics. *Institute On Governance Policy Brief*, (19), 1-8.

Statistics South Africa. (2018). Census 2011. Retrieved from www.statssa.gov.za (accessed on 11/07/2018)

Water Research Commission. (2005). Community water and sanitation training programme Pretoria. Government Printer.

Waters, R. D. (2013). The role of stewardship in leadership: Applying the contingency theory of leadership to relationship cultivation practices of public relations practitioners. *Journal of Communication Management, 17*(4), 324-340.

Water Services Act 108 of 1997. (1997). Retrieved from www.informea.org/en/details/Legislation/Water-act1997-act-no-108-of 1997-lex-faoc0159 (accessed on 2021/08/06)

Welman, C., Kruger, F., & Michelle, K. B. (2005). *Research methodology* (3rd ed.). Cape Town: University Press.

World Health Organization. (2008). *Toolkit on monitoring health systems strengthening service delivery*. Geneva, Switzerland: WHO.

Zu, X., & Kaynak, H. (2012). An agency theory perspective on supply chain management. *International Journal of Operations, 32*(4), 423-446.