

**AN INQUIRY INTO THE ACCESS AND CONDITION OF SPORTS FACILITIES  
FOR PHYSICAL EDUCATION WITHIN SECONDARY SCHOOLS IN SERENJE  
DISTRICT, ZAMBIA.**

**BY**

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**DECLARATION**

I, Vivian Mvula do hereby declare that this dissertation is out of my own sweat and knowledge and that it has never been submitted to this university or any institution of higher learning for academic award.

Signature of student.....Date.....

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## **DEDICATION**

This project is dedicated to my dear husband, Samson Nyimbili and my children Enala and David for their continued support towards my education.

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## ACRONYMS

ZCCM	Zambia Consolidated Copper Mines
ZSIC	Zambia State Insurance Corporation
IMF	International Monetary Fund
SAP	Structural Adjustment program
MMD	Movement for Multi-Party Democracy
SfD	Sport for Development
PF	Patriotic Front
MYSCD	Ministry of Youth, Sport Child and Development
AFCON	Africa Cup of Nations
FIFA	Federation Internationale de Football Association
FCB	Futbol Club Barcelona
FGDs	Focus Group Discussions
DEBS	District Education Board Secretary
PPPs	Public Private Partnerships

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## ABSTRACT

This study inquired into the access and condition of sports facilities for physical education in public secondary schools of Serenje district, of central province of Zambia. It adopted the descriptive approach embedded in qualitative research design. The population consisted of all public secondary schools in Serenje district and its teachers and learners. The sample for the study included 10 teachers who teach physical education or are engaged in sports and 30 learners who take physical education as a subject at 5 selected public secondary schools. The sample was selected using purposive sampling procedure.

The research made use of the semi- structured interview schedule, FGD and the observation checklist to collect data. Data was analysed using the thematic analysis developed from the objectives and emerging themes. The results showed that public secondary schools of Serenje have sports facilities for sports considered “national” that is, football, netball, volleyball and running track. The results also indicated that there are some other sports facilities like the swimming pools, basketball court and tennis court in schools that were built before independence. However, presence of all these facilities in these public secondary schools, the results showed that they are in poor condition with the participants attributing this to the following reasons; no government or school policy, vandalism, theft, poor attitude from both the teachers and learners, and lack of commitment from school administrators. This status quo brings to question how physical education is taught in public secondary schools with such deplorable sports facilities.

Based on the findings of the study, the following major recommendations were made;

- All public schools should come up with a policy on how to finance the procurement and maintenance of sports facilities at their school
- Vandalism of public properties including sports facilities should attract a stiff penalty to deter people from vandalizing them
- Government should increase funding to schools and apportion a certain amount for development and maintenance of sports facilities in schools.

Key Words: Physical Education, Access, Sports Facilities.

## **CHAPTER ONE: INTRODUCTION**

### **1.1 Overview**

This chapter encompasses the background of the study, problem statement, research purpose, objectives and questions. It also explores the significance of the study, examines into the limitations and delimitations, and presents the conceptual framework. Additionally, the operational terms have been employed to define key terminology.

### **1.2 Background of the study**

Sport facilities are structures built for sporting activities such as athletic fields, sports complexes, stadiums, basketball courts, volleyball courts, netball courts, lawn tennis courts, gymnastics buildings, and boxing arenas, among others (Ngeti et al., 2018). Research suggests that adequate sports facilities and equipment in any institution play a significant role in sports development for learners

These play a significant role in promoting sports activities in the society. Thus, the state of sports facilities within a particular society determines the quality of sports.

Track hurdles, netballs, whistles, bars, boxing gloves, chin pads, and cricket bails are examples of disposable sports equipment (Ngeti et al., 2018).

It has been discovered that the availability of sporting facilities promotes sports in schools and workplaces among students and teachers, allowing them to stay at work more frequently to participate in sports activities. On the other hand, lack of adequate sports equipment and facilities has a serious negative impact on learners, such as; gaining weight, obesity, living life in solitude, anti-social behaviour, low self-esteem, poor concentration in class, sportsmanship, lack of team-work, poor performance in school, prone to diseases like cancer, cardiac diseases, respiratory diseases, mental and physical health issues, drug abuse and violence (World Health Organisation, 2021)

The availability of sports equipment and facilities provides schools with a variety of program options, such as conducting sports-related extra-mural activities.

Sports According to the Sports Policy Factors Leading to international Sporting Success (SPLiSS) (2006) on factors leading to international sporting success study, nine pillars influence the state of

sports within a nation and its success in the global sports arena. They include: financial support, an integrated approach to policy development, participation in sports, a talent identification and development, participation in sports facilities, coaching provision and coach development, international competition, athletic and post-career support, and scientific research. One peculiarity of sport is that it does not only contribute to the satisfying of individual needs such as individual fitness, fun, and well-being, but also produces external effects like social integration, socialization, democracy, and public health (Heinemann, 2015). It is in the interest of governments to foster sport participation and several countries such as England, Scotland, and Netherlands have a health agenda that stipulates the importance of being physically active and published recommendations for weekly sport participation (Ibid, 2015). There are accompanying benefits that come with investment in infrastructure such as increased business for local shops in the area, employment, and income for construction workers and skilled labourers, increased revenue for stadiums and teams as updated facilities and expanded capacity bring in more ticket sales (Heinemann, 2015).

During the first republic under the rule of Dr Kenneth Kaunda in the mid-1960s to mid-1970s, private and parastatal companies were behind the building and renovations of most sports infrastructure in Zambia. Chipande and Banda (2018:34) note that “Kaunda’s government tasked Parastatals Corporation to be key providers of opportunities for both mass sport participation and elite performance”. In another development, the growth of sport in Zambia draws its roots to the urban areas especially the Copper Belt province which was home to major sports personalities in Zambia. The Copper Belt had a good number of sport and recreation facilities which were a breeding ground for both sports men and women (ibid, 2018). Newly nationalized parastatals conglomerates like the Zambia Consolidated Copper Mines (ZCCM) invested huge sums in sport. ZCCM used to spend about one million Kwacha (K1 000 000) every year on football clubs and other sports and recreation programs in the six mining towns of the Copper belt (Chipande, 2016). On the other hand, the Zambia state insurance corporation (ZSIC), Shell, British petroleum (BP Zambia) and the Bank of Zambia developed multi-purpose sports complexes as recreational facilities for their employees in order to be in good standing with government (Ibid). Noticeably, soccer fields were a main feature in all the new sports facilities. In the long run, these sports development activities made Zambia one of the most competitive footballing nations in Africa. This enthusiasm and high level support for the game earned Kaunda the title of ‘Soccer fan number one’ (Chipande, 2018). It was only during the first and second republics when Zambia had good



and dependable sports infrastructure due to the former President (Dr Kenneth Kaunda) policy of compelling private companies to sponsor one or two sporting clubs as well as involving the same companies to build and maintain sports infrastructure (Lindsey & Banda, 2010).

Towards the 1990s, most African countries experienced falling economies which made it difficult for governments to fully support sport infrastructure. For example, Zambia struggled to share its meagre resources beyond the core sectors of education, health and agriculture, the rollback of government assistance in sport in the 1990s paved way for non-governmental organizations (NGOs) and community-based organizations to provide basic social services such as sport and education (Lindsey & Banda, 2010). The severe economic meltdown that hit most African countries in the 1980s and 1990s, compelled them to engage the World Bank and the International Monetary Fund (IMF) for support (Chipande & Banda, 2018). Multi-national agencies urged some African countries to implement austerity measures such as the structural Adjustment program (SAP) in exchange for the desperate loans to revive their national economies and keep their governments operative (Banda, 2018).

The IMF set up conditionalities on how these loans were to be accessed which included to privatise state owned enterprises. In Zambia, the ascendance to power of the Movement for Multi-Party Democracy (MMD) government compelled the government adopt the Structural Adjustment Programme (SAP) which saw significant reduction in funding of sports and sports infrastructure (Chipande & Banda, 2018). As observed by Lindsey and Banda (2010), government 's failure to fund sport and sports infrastructure was due to Structural Adjustment Program (SAP) that was being followed at that time. Under the structural adjustment programme (SAP), Zambian government privatised most of the state owned companies including the mines which resulted in neglect of sport and sports infrastructure by the investors who were not keen to funding the sector (Chipande & Banda, 2018). Furthermore, the shrinking of local government provision resulted to the loss of parks and recreation budgets that funded the community welfare sports and facility maintenance (Ibid, 2018). The loss of community welfare provision created gaps in community sports provision which later contributed to the emergence of the sport –for development (SfD) sector (Chipande & Banda, 2018).

Mukela (2007) states that, in 2004 the government of Zambia recognized the need to provide infrastructure and other public services through the public- private partnerships (PPPs). Under

this Act No. 14 of 2009 with expectation that public and private sector players would collaborate in the attainment of public infrastructure projects. Thus, increasing implementation of PPPs in both developed and developing economies suggested that Zambia could benefit from this construction project delivery approach (Ibid, 2007). In agreement with Mukela (2007), Ngoma et.al (2014) observed that PPPs appeared to create opportunities that stimulated investment in infrastructure development and economic growth.

In a bid to further improve the sport and sports infrastructure, the coming to power of the Patriotic Front (PF) government leads to the revised sports policy (MYSCD, 2012). In the policy, it was stated that the government would encourage private sector participation in the construction and maintenance of sports infrastructure such as football fields, volley ball courts and tennis courts. To affirm its position for this cause, the National assembly report (2012) showed the commitment of the Zambian government in developing a policy that would ensure access to affordable equipment and also provide adequate modern sports recreational facilities. In the same report, there is a suggestion to increase the funding to the ministry of youth and sports in order to continuously develop new sports infrastructure in the communities (MYSCD, 2012). To ensure that every institution has needed sports infrastructure to support different sporting activities, the report also recommended that the Government was to make it mandatory for each school or college, whether Government or privately owned, to have sport grounds and other sports facilities (National Assembly Report, 2012).

The state of the sports infrastructure has not been good; it is inadequate, dilapidated and not up to international standards (2nd report on the committee on the sports, youth and child affairs, 4th session, 2008, national sports policy, 2012). This was also echoed by then the Copperbelt minister quoted in the Times of Zambia dated 15th April, 2013, bemoaned the poor state of sports infrastructure in the province which he said had adversely affected the growth of minor sports. Though this is just the case of one province, the picture is the same or worse considering that the Copperbelt is one of the few provinces that can boast of having descent sports infrastructure in the country. This picture of poor state of sports infrastructure is also extended to public institutions including public schools. To counter this state of affairs, (Mukela, 2007) postulates that the construction, improvement and uplifting of sports infrastructure in public secondary schools would improve the teaching of physical education. However, the improvement and state of these

infrastructure will need measures and policies to be made by both the government and the particular institutions. The implementation of the revised national sports policy on infrastructure as well as the proper implementation of the PPP are suggested as strategies that can be used to achieve the desired state of sports infrastructure in public secondary schools (Muleya, et al, 2019).

One of the challenges faced by sports administrators at school level is that of management and taking care of sports equipment and facilities for future use (Njubei, 2021).

### **1.3 Statement of the problem**

Sports equipment and facilities play a vital role in the teaching of physical education and equally important in developing sports – related skills among the learners (Kale and Zulu, 2023). In realisation of this fact, W.H.O (2018) observes that, several governments all over the world have embarked on a building journey and billions of dollars have been spent to establish contemporary schools with sports equipment and facilities that meet the needs of the modern generation. However, New Era Sports Desk (2021), notes that, the availability and conditions of sports equipment and facilities are deemed inadequate in most of the schools in the developing world, which has resulted in poor teaching of physical education, low learner participation in sports activities, and low scouting and discovery of new talent.

In Zambia, some studies have examined different aspects of sports facilities in various public schools such as Maimbo (2020) and Mwansa (2006), however, none seem to have addressed the question of access and condition sports facilities for physical education in public secondary schools of Serenje district. It is against this background that the study inquired into the access and condition of sports facilities in the public secondary schools of Serenje district of central province of Zambia.

### **1.4 Purpose of the study**

The purpose of this study was to inquire into the access and condition of sports facilities for physical education in public secondary schools within Serenje District, Zambia. This research aimed at comprehensively assessing the access and condition of sports facilities in public secondary schools within Serenje District, providing valuable insights into the teaching of physical education.

### **1.5 Objectives of the research study**

The study was guided by the following objectives:

1. To ascertain the access and condition of sports facilities for physical education in public secondary schools within Serenje District.
2. To find out the perceived factors that determine the access and condition of sports facilities for physical education in public secondary schools of Serenje district.
3. To find out how sports facilities for Physical Education can be enhanced and maintained in public secondary schools of Serenje district.

### **1.6 Research Questions**

The study answered the following questions:

1. How is the access and condition of sports facilities for physical education in public secondary schools within Serenje District?
2. What are the perceived factors which determines the access and condition of sports facilities for physical education in public secondary schools within Serenje District?
3. How can sports facilities for physical education be enhanced and maintained in public secondary schools within Serenje District?

### **1.7 Significance of the study**

First and foremost, gaining insights into the condition of sports facilities has the potential to significantly enhance the quality of physical education and sports programs offered in these schools.

Moreover, the findings of this study can guide decision-makers in the field of education to allocate resources more effectively. Additionally, the research outcomes can serve as a valuable foundation for policy development in relation to sports infrastructure within public schools. The data and insights generated by this study can inform the creation of well-considered policies that address specific needs and challenges. These policies can pave the way for more precisely targeted and effective initiatives in the future, contributing to the improvement of sports facilities and, consequently, the overall educational landscape.

### **1.8 Limitations of the study**

Like many other study, this study was not short of limitations. For instance, due to time and financial constraints, the research was limited to public secondary schools of Serenje district. As a result of this state, only five public secondary schools were used in the study. However, for a qualitative study, the number five is large enough to establish the state of sports infrastructure in public secondary schools of Serenje District. Owing to differences in district locations (urban or rural), management of schools in districts and school ethos, the findings of this study cannot be generalized to all public secondary schools in Zambia. As a result of this, the findings of the study cannot be generalized to all public secondary schools in Zambia. The study was also limited to period of one year running from 22<sup>nd</sup> June, 2023 to 21 June, 2024.

### **1.9 Delimitations of the study**

This study was confined to 5 public secondary schools of Serenje district of Central Province. The choice of cite of conducting the study was based on researcher's observation of a specific problem within this geographic area.

### **1.10 Theoretical Framework**

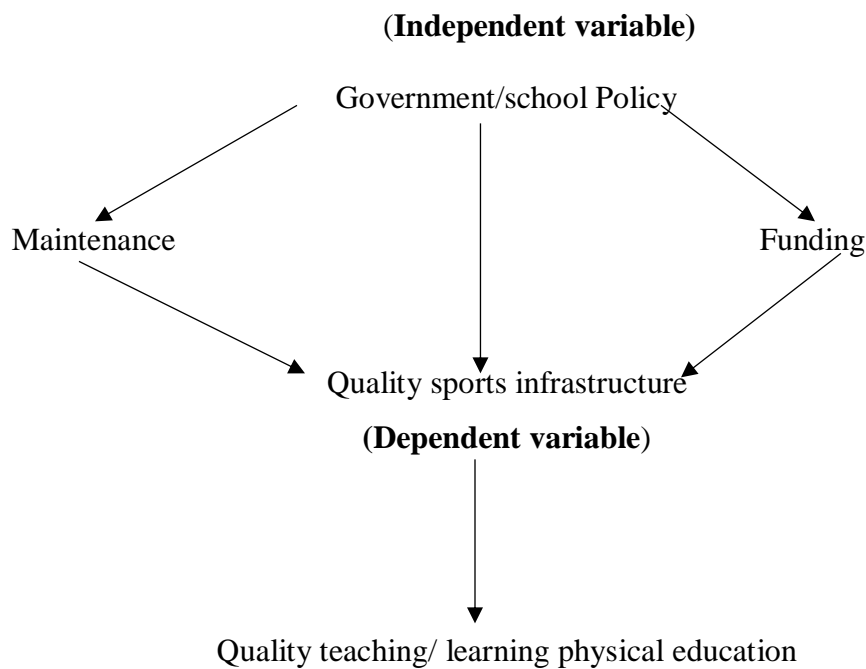
This study adopted the Theory of Change Approach by Weiss (1995), which uses logic models to articulate how sports programs are intended to operate and to test empirically whether and how they achieve their stated objectives. The theory for change approach seeks to increase participation in sports to ensure all benefit. The application of the Theory of Change Approach to this study guided and unearthed deeper information needed to increase participation in sports-related activities in secondary schools.

In this study, physical education as a subject needs to impart physical skills in learners so that it can benefit them in term of health, social life and career. However, the realization of the objectives is depended on how it is offered in schools. Quality sports facilities are ingredients in realizing the goals of this beneficial subject.

### **1.10 Conceptual framework**

A conceptual framework according to Orodho (2009), is a model that illustrates the nature of relationship between independent and dependent variables in a study. The diagram below is the conceptual framework of the study that connects the independent variable to the dependent

variable which are the effect of the state of sports infrastructure for physical education in public secondary schools of Serenje district.



**Figure 1: Conceptual Framework for the Study**

In this conceptual framework, the researcher showed the relationship between quality sports infrastructure (dependent) variable) and the factors (government/ school policy, maintenance and funding) (independent variables) on how it affected the teaching of physical education in school.

### 1.11 Operational Definitions

In this report, the following terms meant the following:

- Infrastructure : the basic physical and organizational structures a
- Policy : a course or principle of action adopted or proposed by an organisation or individual.
- Public Private Partnership (PPP) : it is a long- term contract between a private party and a government agency for providing a public asset or service. (Muleya, 2019)
- Sports complex : a sports complex is a group of facilities including track and field, volleyball courts, netball courts, and tennis courts, soccer fields etc used to enjoy recreational and competitive sports.

Sports facilities	:	are structures built for sporting activities such as athletic fields, sports complexes, stadiums, basketball courts, volleyball courts, netball courts, lawn tennis courts, gymnastics buildings, and boxing arenas, among others (Ngeti et al., 2018).
Sports participation	:	purposeful active participation in sports related physical activities performed during leisure- time.
Structural Adjustment Program (SAP):		a set of economic reforms that a country must adhere to in order to secure a loan from the international monetary fund. (Chipande and Banda, 2018)

### **1.12 Chapter Summary**

In this chapter, a number of issues have been discussed as a way of putting the study into context. An overview of sports infrastructure has been explained which has set the context of the study. The background led to the description of the statement of the problem. The objectives guiding the study have been highlighted; the questions which the researcher answered have also been framed in this chapter. The conceptual framework which anchors the study has been explained. Other aspects included the significance of the study, delimitation and operational definitions.

## CHAPTER TWO: LITERATURE REVIEW

### 2.1 Overview

The chapter was reviewed related literature on the access and condition of sports facilities, and how they are managed in public schools at global, continental and national levels. It will also highlighted the information gaps in the studies reviewed.

Sports facilities, encompassing facilities and installations designed to support sports organizations, sports enthusiasts, and community members, plays a pivotal role in promoting physical activity, both for leisure and competition. The significance of these facilities extends to their contribution to individual fitness, well-being, and social integration, making them essential components of the sports landscape (Hallmann et al., 2012). Oladipo (2016) underscores the critical role of sports facilities in the teaching of physical education and sports programs. These facilities, including volleyball courts, running tracks, basketball courts, swimming pools, gymnasiums, and stadia, are integral to the successful execution of physical education programs. The importance of sports facilities is also highlighted by Price Waterhouse Coopers (PWC) (2019), which emphasizes its role in enhancing community access to physical activity and fostering interest in competitive sports. Quality sports facilities not only provides people with opportunities to engage in sports but also contributes to nurturing future talent within a nation. In the context of school-based physical education, the access and suitability of sports facilities are paramount. Quality sports facilities is fundamental to delivering effective physical education programs that cater to the diverse needs of students (Wicker et al., 2019). Different age groups have distinct requirements for sports facilities, underlining the importance of access and suitability that aligns with participants' ages and activities.

The standard facilities and equipment available in a school or state for the conduct of sports programme determine to considerable extent the type of sports programme that can be offered. Different types of activities require different facilities and equipment.

Sports facilities were quite critical in the successful implementation of sport programmes including physical educations and sports in schools. Kale and Zulu (2023) observes that sports equipment and facilities are extremely important in every modern school of the twenty first century because they aid in the teaching-learning process and allow students to easily engage and participate in sports-related activities at any time. However, the condition of these sports facilities



have a say on the sports programs as Oladipo(2016) observes standard facilities and equipment available in a school or state for the conduct of sports programme determine to considerable extent the type of sports programme that can be offered. This was also echoed by Zvapon (2017) in Bizley (1996) who argued that an institution with good facilities may be able to offer far more activities at higher standard

The correlation between physical activity and the availability of suitable sports facilities is evident in various studies (Chad et al., 2005; Haug et al., 2008; Liu et al., 2009; Wicker et al., 2012). The presence of such facilities positively influences sports participation, supporting active lifestyles across age groups. This relationship underscores the significance of having sports facilities that meets the specific needs of sports activities and age demographics.

China's experience highlights the government's recognition of sports infrastructure's pivotal role in enhancing sports participation and physical well-being. Adequate infrastructure investment has contributed to significant growth in sports participation among the Chinese population (Xiong, 2007). However, this investment has been skewed toward urban areas, leaving rural regions underserved. Similarly, Hungary's approach to sports facilities demonstrates the importance of community involvement and local government support in infrastructure development (European Commission/EACEA/Eurydice, 2013). The extent and quality of sports facilities often depend on municipal finances, creating disparities in infrastructure across regions.

Russia's heterogeneous distribution of sports facilities illustrates how regions can differ significantly in terms of infrastructure availability (Davydova et al., 2019). Such disparities can influence sports participation levels within different regions. India's sports facilities faces challenges due to a lack of infrastructure facilities and limited private sector involvement (William & Kirubakar, 2019). Bureaucratic and political hurdles hinder private sector participation, leading to insufficient facilities and financial dependency on the government for sports development.

Sports facilities in Africa often has historical roots dating back to the colonial period when it was primarily constructed for diplomatic purposes, with a particular focus on competition-oriented stadiums (Lim et al., 2011). However, the distribution of sports facilities across African countries remains unequal, with South Africa, Egypt, and the Maghreb countries being the best endowed (Aweys, 2016). The majority of sports facilities in Africa is dedicated to elite sports, with a preference for disciplines requiring minimal equipment, such as soccer and athletics.

Unfortunately, few educational institutions in Africa possess adequate sports facilities for physical education and school sports, and these facilities vary significantly in standard due to differences in the economic capacities of the countries (Mammen & Faulkner, 2013).

The importance of sports facilities in Africa was underscored during the second session of the African Union of Ministers of Sports in 2008. It was emphasized that the accessibility and quality of sporting facilities significantly impact public participation and the overall quality of sports activities. Therefore, to promote widespread participation, ensure high standards, safety, and improved sports performance, African countries must give due attention to the development and maintenance of sports facilities.

Hosting major sporting events, like the African Cup of Nations (AFCON), often serves as a catalyst for the development and modernization of sports infrastructure. For instance, the organization of the 2002 AFCON in Mali led to the modernization of infrastructure, including the Bamako airport, roads, and telecommunication networks (Augustin, 2010). This trend demonstrates the positive impact of hosting major events on sports infrastructure development.

However, Research has shown that the availability and conditions of sports equipment and facilities in most schools in developing countries is below standard, resulting in poor sports involvement and a lack of interest in participating in sports-related activities (Orunaboka and Nwachukwu, 2012). This is in an agreement with Zvaponu(2017) in a study on the assessment of the state sports infrastructural facilities in university, which found out that universities in Zimbabwe were faced by challenges related to inadequate sports infrastructural facilities for cricket, rugby, swimming, athletics, hockey, tennis and gym. The challenges were due to lack of funding for the development of the sports facilities due to the cash flow challenges affecting the country in general.

In Nigeria again, inadequate physical education facilities and equipment have posed obstacles to the effective administration, organization, and management of physical education and sports (Pate et al., 2017). The scarcity of these resources has hindered the successful development of physical education programs and sports activities in the country. This study correlates with a study by Kabunge (2012), conducted in Mombasa which found that participants in that study, indicated that there were no swimming pools or gymnasiums, which affected the teaching curriculum of Physical education. However, in contrast, a study carried by Khan et.al (2021) in secondary schools of

Peshawar district of Pakistan indicated that the majority of schools were having sports facilities, however, fewer students were having sports facilities outside their schools.

South Africa's experience in the lead-up to hosting the FIFA World Cup is another illustration of the positive impact of major sporting events on sports infrastructure. In the five years preceding the World Cup, the country witnessed significant investment in stadium construction, with many stadiums located in major cities (Nord & Luckschieter, 2010). This boost in sports infrastructure likely had a positive effect on citizen participation in sports and physical education. South Africa's emphasis on multipurpose sports infrastructure beyond mega-events represents a forward-thinking approach (African Union, 2008).

In Nigeria, hosting the All African Games in 1973 led to the construction of the Lagos National Stadium in Surulere, Lagos. Three decades later, when Nigeria hosted the event again, another stadium was constructed (Awosika, 2019). This historical example underscores how major sporting events can contribute to the development and enhancement of sports infrastructure, which continues to benefit communities long after the events. Also, Ghana's decreasing government funding for sports infrastructure maintenance has left many facilities in deplorable conditions (Yinghua, 2018). This reduction in funding has implications for the upkeep and usability of sports infrastructure.

In Zambia, The 2012 national sports policy emphasizes the importance of modern and adequate sports facilities in enhancing sports participation and quality. The government committed to facilitating the construction and maintenance of such infrastructure while encouraging private sector involvement. Additionally, the policy pledged to construct an accessible ultra-modern sports complex with office space for sport development (MSYCD, 2012). However, despite population growth and increasing demand, there has been limited progress in expanding sports facilities in Zambia since independence. This status quo led to the country missing the opportunity to host the 2011 All Africa Games (MSYCD, 2012). Nevertheless, Zambia does have some sports infrastructure, including stadiums, sports complexes, and facilities in public institutions and community recreation centres across the country. These community centres align with the 2012 national sports policy's goal of providing sports and recreation facilities at the local level (MSYCD, 2012).

Zambia boasts two modern multi-purpose stadiums, the National Heroes' Stadium in Lusaka and the Levy Mwanawasa Stadium in Ndola. These stadiums primarily host football matches, including international matches, and are equipped with modern amenities. Lusaka and the Copperbelt province have additional stadiums and sports facilities used mainly for football matches, school sports competitions, and other sporting events. Furthermore, Zambia has sports complexes in Lusaka and the Copperbelt province. Notable sports complexes in Lusaka include the Zamsure Sports Complex, the University of Zambia Sports Complex, and the FCB Soccer Academy, which focuses on youth development. The Olympic Youth Development Centre in Lusaka is a multipurpose sports facility established in partnership with the National Olympic Committee of Zambia. It offers various sports facilities and educational programs aimed at developing sports talent and promoting the Olympic spirit.

The Copperbelt province also has several sports complexes, including those in Mufulira, Nchanga, Nkana, Luanshya, and Chililabombwe, which, despite their current state, continue to host sports events for institutions and communities in their respective areas. Additionally, Zambia has various sports infrastructure within public institutions, including football fields, netball and volleyball courts, running tracks, and sports recreation centres, supporting sports activities for different age groups and communities (Courtesy of Wikipedia, 2020; Lwizi, 2019; Sports for Hope Project, 2010; International Olympic Committee, 2018). To improve and maintain sports infrastructure, planning is crucial. Countries need policies and strategies that address construction, remodelling, and maintenance needs. Proper planning leads to the construction of new, modern facilities and ensures that existing infrastructure remains in good condition. Adequate attention to infrastructure maintenance contributes to safety, encourages participation, and maintains standards (2nd National Assembly Report, 2008; Kim et al., 2012; Yaliz, 2016).

Robson (2011) emphasizes forward-looking planning for sports infrastructure to avoid premature obsolescence. In India, private sector involvement plays a pivotal role in sports infrastructure development and maintenance. Public-private partnerships enable investment in stadium redevelopment, establishment of new sports facilities, and the creation of sporting universities (William & Kirubakar, 2019). Rwanda has established standards and guidelines for the maintenance and management of sports infrastructure to ensure their quality and functionality.

South Africa's private sector initiative, the Sports Trust, focuses on sports infrastructure and equipment for disadvantaged communities (Ministry of Sports and Recreation, 2012).

However, there remains a significant knowledge gap in the literature concerning the availability and state of sports infrastructure for physical education participation in public secondary schools in Serenje, Zambia. Existing research has primarily focused on sports infrastructure at the national and regional levels, leaving a need for a localized examination of infrastructure in educational settings in Serenje district. This research aims to address this knowledge gap.

## **2.2 How the current study will contribute to the knowledge gap**

The purpose of this study was to inquire into the sport facilities for physical education in public secondary schools of Serenje district.

This research's endeavors to provide relevant information in the areas of theoretical, methodological, and practical standpoint. Theoretically, this paper aims at contributing to the growing body of literature on the relationship between the access and condition of Sports facilities to the teaching of physical education and participation. From a methodological standpoint, the impact of sports facilities and individual determinant on sport participation are shown using multi-level modelling. From a practical perspective, this research can help sport managers and policy makers to identify key drivers in the improvement and maintenance of sports facilities for teaching of physical education which in the final analysis will enhance the teaching of physical education.

## **2.3 Chapter Summary**

This chapter has reviewed literature according to sports infrastructure globally, Sports infrastructure in Africa, Sports infrastructure in Zambia, and how the current study will contribute to the knowledge base of the area of study.

## **CHAPTER THREE: METHODOLOGY**

### **3.1 Chapter Overview**

In this section, the research approach, design and the data collection methods that were used in the study are described. The target population, sample size, sampling techniques, data collection instruments, data analysis, credibility and trustworthiness and ethical considerations are also highlighted.

### **3.2 Research approach**

A research approach, as defined by Chetty (2016), encompasses a systematic plan and procedure that encompasses a series of steps, starting from broad assumptions and leading to detailed methods of data collection, analysis, and interpretation.

For this study, a qualitative research approach was employed to inquire into the access and condition of sports facilities in public secondary schools within Serenje District. The approach was adopted, as the study aimed at describing the access and condition of the sports facilities in detail. As argued by Orodho and Kombo (2006), the qualitative research approach is well-suited for studying selected issues, cases, or events in depth and detail.

### **3.3 Research Design**

This study employed a descriptive research design embedded in qualitative approach. It described the access and condition of sports facilities in public secondary school in relation to the teaching of physical education and sports. By adopting this approach, the study was able to thoroughly describe and explore several contextual factors on the access and condition of sports facilities and how they affect teaching of physical education and conduct of sports in public secondary school in serenje district.

### **3.4 Study Area**

The study was conducted in Serenje District on the account of the researcher's observation of a specific problem within this geographic area. It was also necessary as it was going to be easy for the researcher to see the implementation of some of the recommendations that were made in the study due to the vicinity of the area.

### **3.5 Target population**

As described by Robson (2011), the target population for this study encompasses all individuals or entities within a hypothetical group to which the research findings are intended to be applied or generalized. The target population for this study were all secondary schools and its teachers and learners in serenje district. The estimated number of secondary schools stood at 23 with a population of 327 teachers and 9 364 learners as per 2021 statistics (serenje district education office bulletin, 2021)

### **3.6 Sample Size**

A population sample is a set of elements that ideally represents the entire population (Robson 2011). The sample size for this study were five public secondary schools in Serenje district. This sample was purposively picked on the account of these schools offering physical education subject as a career pathway.

To achieve a representative sample, two (2) teachers per school and six (6) learners per school were included. This resulted in a total of ten (10) teachers and thirty (30) learners, bringing the overall number of respondents to forty (40). This sample size was considered sufficient for generalizing the findings across the five schools as it was representative of all the other teachers and learners who could not make it as participants

### **3.7 Sampling Techniques**

In this study, the purposive sampling technique was employed in picking the participant. It began by picking all secondary schools in Serenje District that offer physical education as a vocational pathway.

Subsequently, within these chosen schools, the purposive sampling method was used once more, this time to specifically target individuals such as teachers and learners who actively engage in the teaching and learning of physical education respectively. These participants were chosen based on their substantial experience and profound understanding of the field. The rationale behind using purposive sampling lies in its ability to intentionally select individuals or groups who are likely to provide comprehensive and relevant information for the study (Kombo and Tromp, 2006).

### **3.8 Data Collection methods and Instruments**

In the research process, methods serve as overarching strategies for collecting data, while instruments are the specific tools used within these methods to gather information (Delbert et al., 2002). In this study, three distinct data collection methods were employed including; interview schedule, Focus Group Discussion (FGD) and observation checklist. The researcher will first gather data from interviews then compare it with the one from the FGD and then conducted an observation depending on the data that was given by the participants.

#### **3.8.1 The Focus Group Discussion (FGD)**

A focus group discussion (FGD) is a structured conversation among a small group of six to ten individuals who typically share common characteristics such as age, background, or geography. This method is valuable for analyzing a specific topic and gathering opinions on various issues. As stated by Kombo and Tromp (2006: 95), "Focus group discussions can yield a wealth of information quickly and are effective for identifying and exploring beliefs, ideas, or opinions within a community."

In this particular study, FGDs will be employed to encourage participants (respondents) to engage in discussions regarding the condition of sports infrastructure in their respective schools. The choice of FGD as a research tool aligns with the action-oriented nature of this research, as suggested by Baumbusch (2010). These FGDs will be conducted with learners, as they are frequently present in the school environment and can provide valuable insights into their perceptions of sports infrastructure. Data from Focus group discussions will be collected using a focus group guide.

#### **3.8.2 Interview**

In research, an interview serves as a method for gathering information through conversation. According to Creswell (2014), a research interview typically involves two parties: an interviewer who facilitates the conversation and poses questions, and an interviewee who responds to these inquiries. Interviews can generally be categorized into three types: unstructured, semi-structured, and structured.



In this study, a semi-structured interviews were conducted with teachers. A semi-structured interview incorporates both closed-ended and open-ended questions. Therefore, the researcher utilized a combination of closed and open-ended questions to obtain a comprehensive and detailed assessment of the state of sports facilities and their condition in the selected schools. The process involved the researcher asking questions and follow up questions to the participants who were expected to give objective response, then record the conversation. At her free time the researcher would replay the conversation and sieve the information for the useful ones. This enabled the researcher to explore the participants' thoughts, feelings, and beliefs regarding the access and condition of sports facilities in their respective schools.

### **3.8.3 Observation**

The researcher use targeted observation using the observation checklist and the data from the other two instruments. This enabled the researcher verify some of the data provided by the participant. This process also allowed for a systematic examination of how these facilities were utilized in the educational context. Data from observations was recorded on the observation checklist.

### **3.9 Pilot study**

Before commencing data collection, a pilot study was conducted to assess the validity and reliability of the research instruments intended for use in the actual data collection process. This step was crucial to ensure that any errors, regardless of their nature, were identified and rectified prior to the commencement of the data collection exercise. Conducting a pilot study also helps in cost reduction by preventing potential errors. As Fouche (1998), cited in White (2002), suggests, "It is essential that newly developed questionnaires, in their near-final form, undergo thorough pilot testing before being deployed in the main investigation. Only after necessary adjustments have been made based on the pilot test results should the instruments be administered to the full sample."

To assess both reliability and validity, the research instruments were administered to "mock respondents" selected from public secondary schools located outside the study district. This practice allowed for the identification and correction of any errors or deficiencies in the instruments before they were presented to the actual respondents.

### **3.10 Data Collection Procedure**

Semi-structured interviews were designed to incorporate both open and closed questions. This approach provided teachers with an opportunity to express their opinions using both types of questions. The interviews were conducted in a one-on-one format between the interviewer (researcher) and the interviewee, and the conversations were recorded. Subsequently, the researcher analyzed and extracted relevant information from these interviews for the study.

Focus group discussions were employed to gather information from students (pupils). These discussions took place within the school environment and involved grouping learners into teams of six. During these focus group discussions, all conversations were recorded, and the researcher later reviewed and extracted pertinent information relevant to the study. The observation checklist served as a tool for the researcher to document the state of sports infrastructure within the school setting. This was accomplished by observing specific infrastructure elements and marking them off on the checklist for later analysis.

### **3.11 Data Analysis**

In this study, the data was analysed manually using a thematic approach. According to Braun and Clarke (2006), a theme captures something important about the data in relation to the research question and represents some level of patterned response or meaning within the data set. The above statement is in line with Boyatzis (1998), when he said that thematic analysis was a qualitative process for identifying and reporting patterns (themes) within data. The method minimally organizes and describes data set in detail and often goes further than this by interpreting various aspects of the research.

Ravitch (2016) contends that, categorization in thematic approach can be used to organise data according to the questions. Therefore, in this research themes were generated from the research questions. This involved grouping of responses according to themes

In the first instance, the responses realised from the questionnaires were grouped based on the themes. Then the responses were analysed and then a conclusion made depending on the direction of the responses.

Data from the focus groups was analysed after the researcher listened to the recordings of the discussions the respondents had. The information that was thought to be relevant was gotten and fitted it in line with the themes. Both the information from the questionnaires and focus group

discussion was triangulated with what the researcher observed and recorded in the observation checklist.

### **3.12 Credibility and Trustworthiness**

Credibility and trustworthiness are essential aspects of qualitative research that contribute to the validity and reliability of the findings (Lincoln & Guba, 1985). In this study, several strategies were employed to enhance the credibility and trustworthiness of the research process and outcomes.

#### **3.12.1 Member Checking**

Member checking was conducted as a credibility-enhancing technique (Lincoln & Guba, 1985). This involved sharing the preliminary findings and interpretations with selected participants, such as teachers and students, and seeking their feedback and validation. By involving participants in this manner, any discrepancies or misinterpretations could be corrected, ensuring that the research findings accurately reflected their perspectives.

#### **3.12.2 Triangulation**

Triangulation, as recommended by Denzin and Lincoln (2005), was employed to enhance the trustworthiness of the study. This involved the use of multiple data sources, including focus group discussions, interviews, and observations, to collaborate and validate the findings. Triangulation helped reduce the risk of bias and provided a more comprehensive understanding of the research topic.

#### **3.12.3 Peer Debriefing**

To enhance the trustworthiness of the research, the researcher engaged in peer debriefing, involving discussions and feedback sessions with colleagues who were experienced in qualitative research (Lincoln & Guba, 1985). These discussions provided an external perspective on the research process and findings, helping to ensure that interpretations were grounded in the data.

### **3.13 Ethical consideration**

Ethical issues are matters which are highly sensitive to the rights of others Cohen, et al. (2009). In this regard, ethical issues were upheld in the study. First and foremost, a clearance letter was obtained from the District Education Board Secretary (DEBS), and school managers from the

respective secondary schools. The researcher ensured that participation by the teachers and pupils was on voluntary bases. This was done by explaining to them the procedure, relevance and purpose of the study. Participants were assured that data collected was going to be kept confidentially and used for research purposes only. Furthermore, the researcher gave assurance to participants that names and personal details were not going to be revealed or published anywhere. At the same time, names of schools and participants were represented by certain codes in order to ensure anonymity.

### **3.14 Chapter Summary**

This chapter presented the main research methodological aspects that was used in the study. It comprised of the research approach, the research design, study area, data collection, population, data collection instruments and procedure, sampling techniques and sample size. Data collection methods and techniques, data analysis tools and ethical considerations were also discussed. This study will be conducted in Serenje district.

## **CHAPTER FOUR: PRESENTATION OF FINDINGS**

### **4.1 Overview**

This chapter presents data that was obtained through the three instruments, that is, the interview schedule, the FGD and from observation which were used in this study. For the sake of upholding confidentiality, the names of the schools that participated in the study have been concealed but were only identified by letters as A, B, C, D and E, while teacher participants were identified as TA1, TA2, TB1, TB2, TC1, TC2, TD1, TD2, TE1, and TE2. The learners' true identity was also concealed but for the sake of records, they were identified as LA1, LA2, LA3, LA4, LA5 and LA6. The pattern was replicated on other pupil participants from other schools. The data is presented under the three instruments used in the study: the interviews schedule for teachers, the FGD for learners and the observation by the researcher.

### **4.2 Demographic Characteristics**

This section presents the demographic characteristics of participants who took part in the study. They are presented under i. Interview schedule and ii. Focus Group Discussion

#### **1. Interview schedule (teachers)**

A total number of ten teachers took part in this study. They were drawn from each of the five schools that were selected for the study. They included six males and four females. Of these 2 have been either teaching physical education or involved in sports at their respective schools for more than 10 years, while 6 between five and 10, and the rest (3) for less than five years.

#### **ii. FGD (learners)**

The number of learners who took part in this study were 6 from each of the five schools selected for study which brought the total number to 30. The learners were gender balanced, implying that there were 15 males and 15 females respectively. Of these, 6 were grade 9s, 6 grade 10s, 8 were grade 11s while 10 were grade 12s

### **4.3 Accessibility of sports facilities for physical education in public secondary schools within Serenje District?**

This section presents data on the accessibility of sports facilities for Physical Education in public secondary schools within Serenje District. Participants were asked on the accessibility of a number of sports facilities including football fields, netball courts, volleyball courts, running tracks and the basketball courts. The data is presented under the three instruments that were used to collect the data for the study. They are the Interview schedule, the FGD and observation

#### **Football Field**

Participants were asked whether they have football fields at their respective schools. The response is contained under the instruments used in collecting data in this study.

##### **i. Interview Schedule (Teachers)**

The teacher participants were asked about the accessibility of different sports facilities in their respective schools. The following sentiments were echoed by some of the participants about this question.

All the participants said they had football fields at their respective schools

TA1 from School A as typical examples:

*“When it comes to sports facilities, we do have some basics here. For instance, we've got a football field and even a running track. So, in terms of sports facilities, we've got the basics covered.”*

TB1 from school B said:

*“We've got football fields as sports facilities at our school. So, we could say we have the basic sports infrastructure in place for Physical Education.”*

T C2 at School C also narrated that:

*“..... We have a football field that we use for practical for Physical Education. We're pretty well-equipped in that regard.”*

**ii. FGD (Learners)**

The learner participants from the focus Group discussions were also about the accessibility of sports facilities in their respective schools. All the groups said that they had the football fields at their schools. Some of the responses given were:

LA3 from school A

*“We have a football field were we normally train from and have football games with other teams from other schools”*

LB6 from school B

*“There is a football ground just behind this classroom block although it is bumpy. But we still use it for training and football matches.”*

LD2 from school D

*“Yes, we have a football ground but it has only one goal post. The other goal post was stolen last year. It has not been repaired up to now. So, we only use the field for training. For serious games with other schools, we go to the community ground at National Square.”*

LE1 from school E

*“We have a football ground. We use it for training and for football matches with other schools. The same ground is used by the school from the community”*

**iii. Observation**

Using the observation checklist and the information gotten from both the interviews and the focus group discussions (FGD), the researcher also took time to verify the information about the football field. The observation indicated the presence of football fields’ at all five schools.

The following are the two football fields photographed by the researcher to back her observation claim.



Figure 2. Shows a football field at school A



Figure 3. Shows a football field at school with uneven surface.



## **Netball courts**

### **i. Interview schedule**

All the teacher participants indicated that, they had netball courts at their respective schools. Some of the responses given included:

TC1 from school C

*“.....Well, we do have a netball court which we use for inter-house and inter-schools competitions. We also use a netball court for practical after learning in class. However, we don't have a running track.”*

TE1 from school E

*“..... We do have netball and volleyball courts for Physical Education. We've got these for sure.”*

TC3 from School C

*“In terms of sports facilities, yes we have for instance a netball court and other facilities like a running track.”*

### **ii. Focus Group Discussion**

Learner participants were asked in their discussion groups if they had netball courts at their respective schools. They all said they had netball courts. The following were some of the sentiments made;

LD2 from school D

*“We have a netball court at this school but the rings are bend”*

LB1 from school B

*“Our netball court is very okay. We use it for trainings and the church team also uses it where I also play”*

### iii. Observation

The researcher took time to verify the information about the presence of netball court gotten from both the interviews and the focus groups discussions (FGD) through an observation. The observation authenticated the presence of netball courts at all the five schools. Below is the picture of a netball court at school C.



Figure 4. Showing a netball court at school C

### Volleyball court

#### i. Interview schedule (teachers)

All 10 participants asked about the presence of volleyball courts, all said they had a volleyball court as evidenced by some of the responses echoed;

*“Well, we do have the main facilities like volleyball court which is used for practice and inter school games. It’s a sports facility we use here. (TD2 from School D).*

TC1 from school C

*“In terms of sports facilities, we have a volleyball court.”*

**ii. Focus Group Discussion(FGD)**

All the discussion groups indicated that they had volleyball courts in their respective schools. For example, one of the discussant said

*“We have a volleyball court and a running track. So after learning in class we go there for practicals.” (LE5 from school E).*

**iii. Observation**

The researcher also observed the presence of the volleyball courts in all the five schools to verify the information from both the interviews and focus group discussion. Below is the picture of volleyball court from two of the schools.



Figure 5: volleyball court at school B



Figure 6: Unattended to volleyball court at school C

### **Running track**

The participants were asked if they had running tracks at their respective schools.

#### **i. Interviews schedule**

The teacher participants were asked if they had running tracks at their respective school. The response indicated that, out of the 10 participants, 2 said they had no running tracks at their schools while the rest (8) said they had the running tracks. Some of the responses echoed were;

TB2 from school B

*“Our school doesn’t have a running track because the football ground is too near the wall fence. The space from the wall fence is about a metre. We can’t make a running track as it requires about 6 metres if we are to make standard one.”*

TA2 from School A

*“Yes, we have a running track for physical education here at our school”*

T B1 from School B

*“..... We have a running track for physical education.”*

**ii. Focus Group Discussion**

The learner participants were asked if they have the running track at their respective schools. Of the five groups, 4 said they had while one said they don't have.

LD6 from school D

*We have a running track here at our school which we use for practicals and for school competitions.”*

LB5 from school B

*“We don't have a running track. We just use the inside of the football field to train. We go and do our inter-class athletics at ..... school”*

**iii. Observation**

The researcher cross checked the accessibility of running tracks in all the five schools. It was observed that one school did not have a running track on its football confirming the information given by some participants.



Figure 7: A running track school D without any markings.

## **Basketball courts**

Participants were asked on the presence of basketball courts in their respective schools. Below is the data that was obtained from the three instruments that were used in the study.

### **I. Interview schedule(teachers)**

Of the 10 participants (teachers) who took part in the study, only 4 said had the Basketball courts while the rest (6) said they did not have the basketball court. Some of the sentiments expressed are highlighted below;

TA1 from school A

*“This school has no basketball court. We have been pushing for its construction but all we get from the head teacher is that, they will look into it.”*

TC2 from school C

*“This school can’t afford a basketball court. It is expensive to buy a basket post”.*

TD2 from school D

*“No we don’t have. Our boys use the basketball court from the neighbouring school.”*

TE1 from School E

*“Yes, we have a basketball court, but it has only one basket post. The other post was broken down but has not been fixed up to now.”*

### **ii. Focus group discussion (FGD)**

In the discussion groups, only 2 groups indicated that they have the basketball court. Participants in the other 3 groups said, they don’t have the basketball court. Below are some of the verbatim on the question.

LA1 from school A

*“In terms of sports facilities, yes we have for instance a football ground, netball court and basketball court.”*

L E2 from school E

*“No, we only have the football pitch, the netball court and the volleyball court but we don’t have a basketball court or tennis court.”*

*LB1 from*

*“No we don’t have because there is no team for basketball at our school”*

### **iii. Observation**

Observations from the researcher indicated that no school has a basketball court. At school A, there is only an abandoned and neglected pitch with one deformed basket. The other schools do not have.

#### **4.4 Condition of Sports Facilities in Public Secondary Schools of Serenje District**

This section presents data on the condition of sports facilities found in schools. The data presented is gathered from the interview schedule, FGD and observation

##### **i. Interview schedule (teacher participants)**

The question on the condition of the sports facilities were asked to the teacher participants. the data indicated that, all the participants said the sports facilities were generally poor in all the five secondary schools under this study. This can be evidenced by the following verbatim of some participants;

*The sports facilities here is in such a deplorable state that it can't support the teaching of PE or sports. It's baffling how we manage to conduct physical education with such subpar sports equipment.” (T E2 from school E).*

*“The state of sports infrastructure at our school is quite disappointing. While we do have some basic facilities like a football field and netball court, it's evident that maintenance has been neglected. The running track, for instance, is in disrepair, our football field has uneven surfaces, and we lack essential sports equipment like jerseys and balls.”* (TD1 from School D).

*“In terms of sports infrastructure, we seem to have some basics, but it's far from sufficient. The football field is often waterlogged due to poor drainage, and our netball court needs resurfacing. It's frustrating because we could do so much more with better facilities.”* (TC1 from School C).

ii. **Focus Group Discussion**

Similarly, the question on the condition of the sports facilities were asked in the focus groups, the responses indicated that the condition of the sports facilities were generally poor in their schools. Below are some of the extract from the discussions of some groups.

L B3 from School C said;

*“Our soccer balls often go flat during matches due to uneven surfaces, forcing us to stop and inflate them. It's quite frustrating.”*

L D4 from School D;

*“The football ground has potholes that have led to injuries during games. We don't have proper boots for playing, and our sports equipment is worn out.”*

L B3 from School B lamented;

*“It's disappointing that our sports facilities are in such a terrible state. We want to excel in sports, but these conditions hold us back. Our potential remains untapped.”*

L E1 from School E complained

*“The state of our sports facility is a hindrance. We aspire to better sports facilities to unleash our potential.”*



### iii. Observation

The researcher also made an observation to verify the information provided by the participants in the interviews and FGD. data from observation indicated that indeed, the condition of the sports facilities were generally poor in all the study cites. for instance

At school A, a goal post at a netball court has a ring that is deformed.

At school B, football post has an upright pole missing and there a prominent path on the field used by people as a short cut to connect to the main road



Figure 8. Football field at school C

At school C, the volleyball court has no net, no markings and net holders are wooden and bend. the pitch is also used as a path. a picture below of the court.



Figure 9. Volleyball court at school C

At school D, the running track is small, very bumpy, not slashed and unmarked. There also a number of paths that cuts through the track in many points.

At school E the basketball court has only one basketball post, bend, rusty and the surface is uneven with just some few patches still bearing concrete surface

#### **4.5 Management and Maintenance of Sports Facilities in Schools.**

Proper management and maintenance is cardinal to the sustaining of sports facilities in school. In line with the concept, the researcher asked the participants on how their schools manage to maintain the sports facilities. The data in this section was also realised from the three data collecting instruments in use in this study, that's; the interview, FGD and observation.

##### **i. Interview schedule (teacher participants' responses)**

All the participants interviewed said that there was no proper management of sports facilities in their schools. The data also indicated that the facilities are rarely maintained until there some sporting event to be held in school. From this discussion a number of issues came out and are documented below;

a. Lack of funds

Participants attributed the poor management and non-maintenance of sports facilities in their schools to lack of funds. Below are some verbatim to this effect;

TD1 from school D;

*“Public institutions lack funds to channel towards maintenance of sports facilities. Whatever little funds is given to schools in form of grants they feel it's only for academic purposes and only used for the purchase of text books, pieces of chalk, Manilla papers, markers, pens and for office work.”*

TB2 from school B

*“What I have observed is that public schools fail to maintain their sports infrastructure because of lack of money”*

b. no policy

Lack of policy from both the government and school was one of the issues that came out as one of reasons for poor management and maintenance of sports facilities in public secondary schools. Below are some responses;

TA1 from school A

*“There is no government policy on the procurement and maintenance of sports facilities. This makes it difficult for school administrators to maintain sports facilities as they follow the guidelines on how the funds given should be used.”*

T C3 from school C argued:

*“The greatest challenge has been lack of government policy on the procurement and maintenance of sports infrastructure. If there was some policy of some sort, I strongly feel maintaining sports fields not only at our school but also in other schools could not have been a challenge.*

TA2 from school A

*“In most public institutions, there is no deliberate police put in place which would compel administrators to maintain sports infrastructure. In this case administrators will not feel guilty for not doing something to sports facilities because there is nothing that is pushing them into doing such, even in times were funds would be available nothing will push them to think of maintenance of sports facilities.”*

*“I wish our school had policies for sports equipment and facilities. It would make things more organized.”* (T E1 from school E)

TB2 from school B

*“We often struggle due to the lack of policies. It affects our sports experiences.”*

c. Lack of commitment from school administrators

Lack of commitment from the school administrators was cited as one of the reasons for poor management and non- maintenance of sports facilities in schools. Participants said most administrators lacked commitment to the management and maintenance of sports facilities in schools. Below are some responses;

T E1 from school E said

*“Most administrators consider sports as a mere pleasure activity for entertainment not for learning purposes hence they do not commit themselves to it by providing that which is required for physical education to be learnt by pupils. For instance, mostly they only maintain sports facilities in the first term when there is an incoming sports event being undertaken, thereafter, they forget about the facilities”*

*“The greatest challenge has been lack of commitment from school administrators. At our school, our administrators are not committed whatsoever. More especially when it comes to maintaining sports facilities. This has led to lack of commitment also by the learners when it comes to participation.”* (T C4 from school C)

d. Poor attitude from both teachers and pupils

Participants mentioned that poor attitude from both teachers and learners as another reason for poor management and maintenance of sports facilities for Physical Education in public secondary schools. Below are some of the highlights;

T C4 from school C observed:

*“Poor attitude from both teachers and learners. This can be seen by the number of pupils who choose P.E as their option subject. Most of them shun the subject because they feel it has no impact on their lives. As for teachers, this is seen in the number of teachers who have pursued the course at diploma level and do something else at degree level because they cannot continue with P.E at an advanced level due to their poor attitude towards the subject.” They use P.E as a fill up course.*

TA1 from school A

*“as Zambians we have a negative attitude towards public facilities, that is why we can’t maintain our sports facilities”*

**ii. Focus Group Discussion**

All groups observed that there is poor management and maintenance of sports facilities in public secondary schools of serenje. A number of reasons emerged as why it is so. Here are some of the extract from the discussions;

a. lack of funds

LC6 from school C:

*“Our school lacks money to maintain our netball court and volley court. If you look at them, they are not in good shape but we use them for practice because there is nothing we can do.”*

LE3 from school C

*“Our head teacher says we cannot construct a new basketball court because the school has no money”*

b. Lack of commitment from school administrators and sports teachers

Some discussants in group discussions said there was poor management and non-maintenance of sports facilities in schools because both the head teacher and some sports teachers lacked commitment. Here are some highlights from the discussions;

LA4 from school A

*“Our head teacher is not serious about constructing the sports facilities in the school because they think its expensive. Some of us wants to become footballers in future. His attitude is bad. He doesn’t even encourage us”*

LD1 from school D

*“Our sports masters are only interested in money. Instead of advocating for us so that the grounds in the school are maintained, they just keep quiet. The only time they become serious is when the tournament is around the corner”*

c. Poor attitude from both teachers and learners

Poor attitude from both the teachers and learners was also cited as one of the reasons why school do not properly manage and maintain sports facilities in their respective schools. Here are of the extracts from the discussion”

LA5 from school A,

*“Our sports fields are not well maintained because of the negative attitude of teachers and us pupils have towards physical education. Most of us the pupils choose physical education as an option subject.”*

LB3 from school B

*“We don’t have proper facilities because most of them have been vandalized. Each time there is a riot or we are closing, some learners destroys the sports facilities like the way they uprooted the netball goal post last term”*

### **iii. Observation**

Using the observation checklist and data from the participants, the researcher also observed the facilities and keen interest in some of the issues voiced during interviews and discussions. Below are some of things that came out from this observation.

- a. No school had any policy on the management and maintenance of sports facilities
- b. No money portioned to procurement or maintenance of any sports facilities apart small sports budgets for balls and teachers’ allowances when going out for sports. for example, at school A and school D, a partly K3000 and K3500 was budgeted for sports
- c. Sports fields were not slashed and no running track seemed ready for sports
- d. The sports programs in most schools only reflected the events to be attended in a particular term. no mention of maintaining any sports facility
- e. Some facilities vandalized or attempted to be taken away. For example, at school B, the left upright of the football goal post and netball goal post at school E seem to have been attempted to be uprooted

## **4.6 Measures and suggestions to Enhance and Maintain Sports facilities in public secondary schools.**

This section presents data on the measures and suggestions put in place to enhance and maintain sports facilities for Physical Education in public secondary schools of Serenje district. Data centered on the responses gotten from the interview schedule, FGD and observation.

i. **Interview schedule (teacher participants' responses)**

Data indicated that there are no formal measures put in place by the schools but they did come up with a number of suggestions of enhancing and maintaining sports facilities in their respective schools.

a. Guarding

*“In order to maintain sports infrastructure, basketball courts, volleyball courts, running tracks, and netball courts should be guarded by our school security guards.” (TB2 from school B)*

Similarly, T C1 from school C,

*“Sports facilities, basketball courts, volleyball courts, running tracks, and netball courts should be guarded by the security guards.”*

b. Cleaning and fixing

T D1 from school D,

*“The only way sports facilities in secondary schools can be maintained, football fields, basketball courts, volleyball courts, running tracks, and netball courts. Once football fields, basketball courts, volleyball courts, running tracks, and netball courts are cleaned, they can be maintained. Cleaning football fields, basketball courts, volleyball courts, running tracks, and netball courts can be done by our learners here at school.”*

T D1 from school D,

*“Goal post can be painted. These goal post sometimes develop rust so they should be painted from time to time. Our running tracks can be painted too as a way of maintaining them. We can even replace the worn out mattresses with better ones in order to enhance the teaching of physical education and sport in the schools”*



T D2 from school D

*“.....We can maintain our sports facilities such as football fields by demarcating them, fix the cracks or patch the holes on volleyball courts, netball courts, and sometimes change nets which are worn out.....”*

T E3 from school E,

*“.....Paint the poles when they have rust, paint running tracks, demarcate sports fields, fix the cracks on basketball courts, and change the nets if torn out so that they are well maintained*

TC1 from school C

*“School sports facilities need immediate and serious attention. It's affecting our performance and passion for teaching physical education and engagement in sports. Therefore, I would urge the government through the MoE to start providing sports equipment such as volleyballs, basketballs, balls, rackets, gloves, short putts, nets, and ropes.”*

*“... The sorry state of our sports facilities is discouraging. We deserve better conditions to nurture our passion for sports. Therefore, government through the MoE should allocate more funds towards the maintenance of sports infrastructure for Physical Education” (T B1 from school B).*

- c. enacting a government and school policies

TA2 from school A

*"Having clear policies on sports infrastructure and equipment would be great."*

TC1 from school C

*“Policies could make a significant difference for students interested in sports and physical education.”*

T E2 from school E and

*“Policies could provide guidelines on equipment usage and maintenance, making our sports experiences more enjoyable.”*

T B1 from school B says;

*“ If we had policies, it would be a step toward improving our sports facilities and overall experience.”*

T E2 from school E,

*sports facilities is far from ideal. We need more resources to maintain them. The government through the MoE should allocate more funds towards the maintenance of sports facilities for Physical Education. ”*

ii. **Focus group discussion(FGD)**

From the discussions in all the groups, no discussant was aware of any formal measure taken by the school of enhancing and maintaining sports facilities in their respective schools. however, the discussants brought out a number of suggestions to that effect.

a. Guarding

LA6 from school A

*Sports facilities, basketball courts, volleyball courts, running tracks, and netball courts should be guarded by the security guards.”*

LD4 from school D

*“we need to be guarding our grounds so that the thieves do not steal the posts”*

b. preventive maintenance

LA1 from school A suggests;

*“Sports facilities such as basketball courts, volleyball courts, running tracks, and netball courts should be maintained. We can make it a habit such that every week especially on Wednesday [preventive maintenance day], they can be cleaned. Our learners can take charge by cleaning i.e. cleaning the running tracks, sweeping volleyball courts, netball courts etc.”*

L B3 from school B had also suggested:

*“By cleaning football fields, volleyball courts and running tracks during preventive maintenance”.*

c. renovating the facilities

*“.....The state of our sports infrastructure is a hindrance. We aspire to better sports facilities to unleash our potential. So we start by renovating all our sports facilities we have at school for instance running tracks can be painted, basketball courts should be renovated.” (LD4 from school D).*

LC 3 from School C urges

*“Our school should repair the sports facilities such as volleyball courts and netball courts so that we use them properly”*

d. improvisation

LA5 from school A

*“We can use local materials such as trees to make wooden goal post for football, making poles for basketball and volleyball courts.”*

LB2 from school B

*“As a school we can use local materials such as trees to make poles for basketball and netball courts, local trees to make poles for volleyball courts, use local trees to make buttons, use local trees to make stands for high jumps, make stands for supporters to sit*

*when watching games, and use mealie meal for measuring football fields and making lines for running tracks.”*

LC6 from school C

*“.....Sometimes what we need to do is to improvise some of these sports equipment. For instance, we can use our local trees to make stands for supporters to sit when watching games, and use mealie meal for measuring football fields and making lines for running tracks.”*

L B6 from School B

*“Madam me I feel make poles for instance for volleyball courts and basketball just by using the trees we have around our school. We can cut them make them when we don't have the money to make standard ones.”*

### iii. **Observation**

Basing on the observation checklist and emerging issues in this section, the researcher used targeted observation. These are some of the results of the observation

- a. No secondary school had a written document on measures of how to enhance and maintain sports facilities
- b. No school had a plan of procuring or constructing new sports facilities.
- c. Nothing is directly mentioned on how to deal with a person who damages any sports facilities apart from rule that talks against vandalism of school property
- d. School preventive maintenance time is rarely used to go and maintain sports facilities

## **4.7 Chapter Summary**

This chapter has presented the data that was obtained from three sources; the interview schedule, focus group discussion and observation on the sports facilities in public secondary schools of serenje district. Sports facilities such as football fields, netball courts, volleyball courts, and running tracks for Physical Education are accessible in these schools. However, most of these

according to the participant's responses and observation are in poor condition. Unfortunately, no school seem to possess any policy on how to enhance or maintain these sports facilities.

Nonetheless, participants gave a number of suggestions on how the sports facilities in schools can be enhanced and maintained. The suggestions include cleaning sports infrastructure, renovating sports infrastructure, guarding sports infrastructure, emphasizing on the use of sports equipment, government should provide facilities and equipment for physical education and Sport, and government should formulate policies for sports facilities, improvisation of facilities.

## **CHAPTER FIVE: DISCUSSION OF FINDINGS**

### **5.1 Overview**

This chapter discusses the findings of the study. The discussion will be centred on the themes which were developed from the objectives and issues that have emerged from the data presented in chapter 4 of this study.

### **5.2 Accessibility of sports facilities for Physical Education in public secondary schools**

The findings from the study revealed that public secondary schools of Serenje district have access to sports facilities included football fields, netball courts, volleyball courts, and running tracks indicates a positive foundation for Physical Education. Of the five school that were selected for this study, all of them have sports facilities for the four sports disciplines; football, netball, volleyball and running tracks. This could be on the account that there are considered as national sports and therefore all schools in the country of no choice but provide an avenue where they can be participated from by all learners. This is in agreement with Musonda (2023), who argues that such facilities provide equal opportunities for learners to participate in inter-house and inter-school competitions.

Another reason that can be attributed to the four sports facilities being accessible is that the sports played under these four facilities dominate the national secondary school physical education curriculum. This is a positive aspect for the teaching of physical education. This finding agrees with that of Oladipo (2016) who observes that standard sports ` facilities and equipment available in a school or state for the conduct of sports programme determine to considerable extent the type of sports programme that can be offered. It is also in line with Kale and Zulu (2023) who observes that sports equipment and facilities are extremely important in every modern school of the twenty first century because they aid in the teaching-learning process and allow students to easily engage and participate in sports-related activities at any time

Another finding is that, sports facilities of ‘minor’ sports are not found in schools. for example, out of the 5 schools in question, only two had a basketball court and only one had a swimming pool. Apparently both of those schools were built before independence. This finding brings an interesting argument on commitment of the post-independence governments providing sports facilities in the newly built schools.

### **5.3 Condition of Sports Facilities in Public Secondary Schools of Serenje District**

The findings about the condition of sports facilities in public secondary schools reveal that they are in a poor condition. All participants who took part in this study all said the condition the sports facilities in their schools were very poor. This finding concurs with Orunaboka and Nwachukwu, (2012) points out that research has shown that the availability and conditions of sports equipment and facilities in most schools in developing countries is below standard, resulting in poor sports involvement and a lack of interest in participating in sports-related activities. This finding brings sad reading as it has an effect on the teaching of physical education. For example, one participant expressed his frustration on teaching physical education with such deplorable sports facilities as he laments, “The sports facilities here are in such a deplorable state that it cannot support the teaching of Physical Education or sports. It's baffling how we manage to conduct physical education with such subpar sports facilities.” (T E2 from school E, 2023).

### **5.4 Management and Maintenance of Sports Facilities in Schools.**

Proper management and maintenance of sports facilities is cardinal to the sustaining of sports facilities in school. However, from the findings, it has emerged that public secondary schools in serenje district do not have proper management and maintenance of sports facilities. A number of issues emerged from this effect.

#### **5.4.1 Poor funding**

The study has revealed that there is lack of funding to sports facilities in schools. This has seen a number of sports facilities not being attended to. Due to scarcity of funds, school administrators prefers portioning the little available funds to other sectors in the school considered more important. For example, one participant observes “Public institutions lack funds to channel towards maintenance of sports facilities. Financial constraints are identified as a major obstacle, with respondents highlighting the inadequacy of funds allocated to schools for sports facility maintenance. (Tamunobe et al., 2012). Whatever little funds is given to schools in form of grants they feel it's only for academic purposes and only used for the purchase of text books, pieces of chalk, Manilla papers, markers, pens and for office work. (Teacher1, school D, 2023). this poor funding of sports facilities is also in agreement with the findings by Zvapon (2017) in a study on

the assessment of the state sports infrastructural facilities in university, which found out that universities in Zimbabwe were faced by challenges related to inadequate sports infrastructural facilities for cricket, rugby, swimming, athletics, hockey, tennis and gym. The challenges were due to lack of funding. the findings mean that since the teaching aids (sports facilities) are in poor state, therefore certainly physical education is poorly taught in these schools

### **5.3.2 Poor attitude**

Poor attitudes from school administration, teachers and learners also contribute to the challenges faced in maintaining sports facilities. Teachers' negative attitudes towards physical education impact the subject's overall perception, reflected in learners' reluctance to choose it as an option. The findings indicate that administrators often view sports as a recreational activity rather than a crucial aspect of learning, resulting in a lack of sustained commitment.

These findings align with the argument that the attitudes of teachers and students play a significant role in the success of physical education programs (Wicker et al., 2009). as such, if the attitude was poor as highlighted in study, then there is certainly poor teaching of physical education in public secondary schools of serenje district.

### **5.3.3 No policies**

The study indicated that, schools have no policies on management and maintenance of sports facilities in the school. This finding imply that attention given to sports facilities is at the mercy of the person in charge of the school since there is no guidelines to follow. This lack of deliberate policies in schools contributes to a lack of accountability and motivation for administrators to prioritize maintenance. Teacher A3's statement aligns with the literature, emphasizing the need for policies that compel administrators to maintain sports infrastructure (Tamunobe et al., 2012; Wicker et al., 2009).

The study finding also revealed that lack of policy by government compromised the access and condition of sports facilities in schools. They argued that without the policy, the government is not compelled to provide these sports facilities. That clear policies could make a significant difference in enhancing sports facilities. This finding is supported by the literature, where scholars like



Tamunobelega et al. (2012) argue that policies are essential for the development of Physical Education and Sports. The participants suggest that policies could provide guidelines on equipment usage and maintenance.

#### **5.5.4 Measures and suggestions to Enhance and Maintain Sports facilities in public secondary schools.**

The study findings indicate that there are no formal measures put in place by the public secondary schools of serenje district. However, participants did come up with a number of suggestions of enhancing and maintaining sports facilities in their respective schools. They argued that if some of these were put in place, there will be certainly be an improvement in the number and condition of sports facilities in the schools.

#### **5.5.5 Fixing and Cleaning**

Cleaning sports facilities is identified as a key measure to maintain them. Respondents highlight the importance of regular cleaning of football fields, basketball courts, volleyball courts, running tracks, and netball courts. This includes activities such as sweeping, which can be carried out by learners. This finding is supported by literature, as Tamunobelega et al. (2012) recommend cleaning sports facilities as a means of maintenance. Encouraging learners to take charge of cleaning on designated days, as suggested by Teacher A1, adds a practical dimension to upkeep efforts. The emphasis on preventive maintenance, especially on Wednesdays, aligns with good practices in facility management.

#### **5.5.6 Renovation**

Renovation is identified as another critical measure for maintaining sports infrastructure. Respondents stress the importance of activities such as painting goalposts, running tracks, demarcating sports fields, and fixing cracks on various courts. The idea of replacing worn-out mattresses to enhance the teaching of physical education reflects a holistic approach to sport facility maintenance. Renovation activities contribute not only to the aesthetics of the facilities but also to their longevity. This aligns with the recommendations of Tamunobelega et al. (2012) and supports the notion that well-maintained facilities positively impact the teaching and learning experience.

#### **5.4.7 Guarding**

Guarding sports infrastructure, particularly basketball courts, volleyball courts, running tracks, and netball courts, is highlighted as a significant measure. Security guards are proposed to protect these facilities. This recommendation is in line with the findings of Ndambo et al. (2018), emphasizing the importance of guarding sports facilities to prevent theft and damage. Ensuring the security of these facilities contributes to their sustainability and usability.

The study suggests that emphasizing proper usage of sports equipment is crucial for maintenance. Teachers and learners stress the need to discourage vandalism and educate learners on the correct use of sports infrastructure. This finding aligns with the idea that proper use of the facility contributes to the longevity of equipment and facilities.

#### **5.4.8 Improvisation**

Using local materials to improvise sports facilities and equipment is suggested as a practical approach when financial constraints hinder purchasing standard infrastructure. This includes using local trees for wooden goal posts, poles, buttons, stands, and mealie meal for marking fields and running tracks. The idea of improvisation through local materials aligns with Gurhare (2014), emphasizing the necessity of improvisation due to financial constraints.

#### **5.4.9 Increasing government funding.**

Participants strongly urged government allocation of more resources towards the maintenance of sports facility. The study recommends that more funds should be allocated to improve the sorry state of sports facilities. This aligns with the findings of Musonda (2023), emphasizing the need for increased government funding for Physical Education in schools. Therefore, in order to encourage learners to participate in Physical Education, there is need by the Government through the Ministry of Education to allocate more funds towards sports facility and equipment.

### **5.5 Chapter summary**

This chapter has analysed and interpreted the findings on the data presented by the participants in the study. It was organized around the theme generated from the objectives and the emerging issues from the responses that were given by the participants.

The findings point to access of four sports facilities, football fields, netball courts, volleyball courts and the running tracks which are for the four sports disciplines considered national. It was also found that the conditions of the sports facilities in schools were poor and was attributed to a number of factors including the lack of government policy, financial constraints, and poor commitment from administrators, teachers, and learners

The study further highlighted poor management and maintenance of sports facilities which are also mainly as the above factors affecting the condition the facilities in public secondary school in serenje district. The study also revealed a number of suggestions the participants felt could enhance and improve the maintenance of the sports facilities in the schools. They include; fixing and cleaning, renovation and guarding. The study also pointed the crucial role of government support would play in the provision of sports facilities through increased funding.

## **CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS**

### **6.1 Overview**

This chapter gives the conclusions to the major findings of the study. These conclusions are based on the research objectives. The chapter will also give recommendations based on the conclusions of the study.

### **6.2 Conclusions**

#### **6.2.1 Access of sports facilities**

Public secondary schools in Serenje district generally possess sports facilities for four major sports: football fields, volleyball courts, volleyball courts and running tracks. This could be on account that they are national sports and therefore, it is a must for them to be there. Other sports facilities like basketball court, swimming pool and the tennis court are found at schools which were built before independence. This finding has put to question government commitment to providing sports facilities to the newly built schools. However, these sports facilities are in poor condition. Common sense would indicate that there is poor teaching of physical education in secondary schools since the sports facilities that are supposed to support its teaching are in poor condition,

#### **6.2.2 Management and Maintenance of Sports Facilities**

Management and maintenance of sports facilities enables the facility to continue being in use and being used correctly. The findings in the study indicating that there is poor management and non-maintenance of sports facilities in public secondary schools of serenje entails that the facilities are in bad condition. The implications of these findings means that physical education in public secondary schools, is not being fully or properly taught. It is either, being taught mostly as theory, that is, neglecting the other important aspect of practical or not being taught completely. This will compromise the quality of learners who will be graduating from these public secondary schools. If this picture is similar to all public secondary schools in the country, we should never expect any positive results in sports at international level since the sports nursery (schools) are not enhancing full potentials to would be sports persons. Dilapidate sports facilities can impede the overall development of physical education, compromising students' ability to practice and apply what they learn in class, thus producing half-baked graduates.

### **6.2.3 Measures of enhancing and maintaining sports facilities in public secondary schools of serenje district.**

The absence of government or school policy on the procurement and maintenance of sports facilities poses significant challenges for public secondary schools in Serenje District, in maintaining or procuring new sports facilities. A policy will guide and compel one to follow a certain action or adhere to it. Its absence means that, spending on the maintenance or procurement of sports facilities in schools is at the mercy of the head teacher who can decide whether to spend on the facility or not. With this status quo, it's unlikely to improve the teaching of physical education in public secondary schools

Compounded by poor fund as the finding suggested, it mostly unlikely that a head teacher would channel any reasonable financial resources from the meagre amount received to maintain or procure new sports facilities. The implications of this findings means the public secondary schools in serenje continues to have inadequate and deplorable sports facilities. This will have an effect in the teaching of physical education in public secondary schools of serenje district.

### **6.3 Recommendations**

Based on the findings, the following recommendations were made;

- All schools enhance security on the sports facilities at its premises.
- All public schools should come up with a policy on how to finance the procurement and maintenance of sports facilities at their schools.
- Any learner who destroys any sports facility deliberately either out of excitement or riots should be made to replace the destroyed facility and be expelled from school
- Vandalism of public properties including sports facilities should attract a stiff penalty to deter people from vandalizing them
- Physical education should be made a compulsory subject in secondary schools so as to heighten its value.
- Government should increase funding to schools and apportion a certain amount for development and maintenance of sports facilities in schools.

- The government should come up with a policy on the procurement and maintenance of sports facilities in public secondary schools
- Government should make it mandatory on all new secondary schools being constructed to be accompanied by sports facilities

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## APPENDICES

### **Appendix I: Informed Consent Form**

Dear Respondent,

This serves to give you an understanding of the purpose of this research and proceedings that will be followed. Further implications for your participation are explained. Finally, you are being asked to sign this form to indicate that you have agreed to participate in this exercise.

Thank you in advance.

#### **1. Description**

This exercise is an educational research; the researcher is a student at the University of Zambia pursuing a Master of Education in Physical Education and Sport. This research is a major requirement for the researcher to complete her program. Thus, this research exercise is purely academic.

#### **2. Purpose**

The researcher wishes to carry out an investigation on the state of Sport Infrastructure for physical education in public secondary schools of Central Province: A case of Serenje District, Zambia.

The researcher is interested in examining the importance of having access to different types of quality sport infrastructure for participation in physical education.

#### **3. Consent**

Participation in this exercise is voluntary. You are free to decline to participate in this exercise.

#### **4. Confidentiality**

All data collected from this research is treated with utmost confidentiality. Participants are assured that they will remain anonymous and untraceable in this research.

#### **5. Rights of Respondents**

All effort will be taken to ensure that the rights of participants are protected and respected. Participants are assured that they shall suffer no harm as a result of participating in this exercise. Participants are free to ask for clarification at any point of the exercise and to inform the researcher if they feel uncomfortable about any proceedings in the research.

#### **6. Declaration of Consent**

I have read and fully understand this document. I therefore agree to participate in this exercise.

## **Appendix II. Semi-Structured Interview Guide for Sports/ Physical Education Teachers**

**Dear respondent,**

I am a postgraduate student from The University of Zambia pursuing a Masters' Degree in **Physical Education and Sport**. I am collecting information for my academic research paper. My research topic is **“Sports Infrastructure for Physical Education and Sport in Public Secondary Schools in Serenje District.”** I would like you to help me in answering the following questions. Be assured that your identity shall not be disclosed and the information you are going to share shall not be given to a third party without your consent. I thank you!

### **QUESTIONS**

1. What is your designation at this school in relation to sports activities and physical education at this school?
2. How long have you been involved in sports/ teaching of physical education at this school?
3. How have the learners chosen physical education as an option subject in relation to other option subject?
4. How is the participation of pupils in the sports activities in this school?
5. Do think there is a relationship between the participation of learners in sports activities to the availability and state of sports infrastructure in this school?  
If yes, establish this relationship
6. Do you have any sports infrastructure in this school?  
If yes, mention them
7. In your opinion, are these sports infrastructure enough for the teaching of physical education or conducting in sports activities?
8. How is the state of these sports infrastructure at your school?
9. How is the state of sports infrastructure now compared to the time when you came to this school?
10. Since you came to this school, have any new sports infrastructure been constructed or the existing infrastructure been renovated?
11. Do you have any policy in your school concerning the construction and maintenance of sports infrastructure

If yes, what is contained in that policy concerning the construction and maintenance of sports infrastructure in the school?

If no, how do you come up with the new sports infrastructure or maintain the existing sports infrastructure at your school.

12. How is the funding to the sports infrastructure activities or physical education at your school?
13. What do you think should be done to improve the sports infrastructure in your school?
14. What can you say about the sports infrastructure in relation to the conducting of sports activities/ teaching of physical education at your school?
15. In your own opinion, what do you think would be the best way of improving sports infrastructure in public schools of Serenje district?



### **Appendix III. Focus Group Discussion Guide for Sports/ Physical Education Learners**

**Dear Respondent,**

I am a postgraduate student at the University of Zambia pursuing a Masters' Degree in Physical Education and Sport. I am collecting information for my academic research paper. My research topic is **“Sports Infrastructure for Physical Education and Sport in Public Secondary Schools in Serenje District.”** I would like you to help me in discussing this issue on sports infrastructure at your school. Be assured that your identity shall not be disclosed and the information you are going to share shall not be given to a third party without your consent. I thank you!

1. In what grade is each one of you?
2. Why did you chosen physical education as an option subject in relation to other option subject?
3. Other than taking physical education as an option subject, do you also participate in sports activities in this school?

If yes, each one of you should say the sports activity you participate in and why you chose to participate in that particular sports activity.

4. What sports infrastructure do you have in this school? Please , mention them
5. Are these sports infrastructure enough for the learning of physical education or participation in sports activities?
6. How is the state of these sports infrastructure at your school?
7. How is the state of sports infrastructure now compared to the time when you came to this school?
8. Since you came to this school, have any new sports infrastructure been constructed or the existing infrastructure been renovated?
9. Do you have any school program in your school concerning the maintenance of sports infrastructure like sports fields and courts?
10. What can you say about the sports infrastructure in this school?
11. Lastly, in your own opinion, what do you think would be the best way of improving sports infrastructure in public schools of Serenje district?

**Appendix IV. Observation Checklist**

**NAME OF THE SCHOOL:** \_\_\_\_\_

**Location:** Urban/ Rural

<i>Sports Infrastructure</i>	Available	State of the Infrastructure				Used For T/Learning	Used For Sporting Activities After Class	Evidence of Maintenance
		VG	G	B	VB			
Football field								
Basketball court								
Netball court								
Volleyball court								
Running track								
Swimming pool								
<b>Indoor game facilities and other materials</b>								
Badminton court								
Table tennis table								
Chessboards/ mats								
Badminton rackets								
Table tennis rackets								
Balls								

VG: Very Good    G: Good    B: Bad    VB: Very Bad

## Appendix: V: Research Budget

ITEM NO	DESCRIPTION	QUANTITY	UNITY COST (K)	TOTAL COST
1	Realm of paper	5	75	375
2	Note books	5	15	75
3	Pens	1	50	50
4	Pencil	1	40	40
5	Flash Disc	3	100	300
6	Folders	5	5	25
7	Recording device	1	2500	2500
				Sub Total= K3,365
8	Proposal printing	1	400	400
9	Report printing	4	300	1200
10	Report binding	4	200	800
				Sub Total= K2,400
11	Online Research	Several	500	500
12	Travelling cost breakfast, lunch dinner and logging	1	2500	2500
13	Contingency and ethical clearance	1	1000	1000
				Grand Total= K9,765

## Appendix VI: Research Schedule

S/n	Activity	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021	Sep 2021
1	Research topic and objectives formulation.	○											
2	Search for related literature and review	○											
3	Designing and adjusting research instruments	○											
4	Proposal writing and submission	○											
5	Field Trips for data collection					○							
6	Analysis and interpretation of data						○						
7	Report writing (first draft)							○					
8	First draft submission								○				
9	Final Report writing									○			
10	Defending the dissertation										○		
11	Working on comments and final report submission											○ △	

## Appendix VII: Approval letter



### THE UNIVERSITY OF ZAMBIA DIRECTORATE OF RESEARCH AND GRADUATE STUDIES

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258/253 952 | E-mail: [director.drgs@unza.zm](mailto:director.drgs@unza.zm) | Website: [www.unza.zm](http://www.unza.zm)

#### APPROVAL OF STUDY

**IORG No. 0005376**

**HSSREC IRB No. 00006464**

22<sup>nd</sup> June, 2023,

Ms. Vivian Mvula,  
University of Zambia,  
School of Education,  
Lusaka.

**REF NUMBER: 2023 - MAR- 039**

Dear, Ms. Mvula,

**RE: “ INVESTIGATION INTO THE STATE OF SPORTS INFRASTRUCTURE FOR  
PHYSICAL EDUCATION IN PUBLIC SECONDARY SCHOOLS IN SERENJE  
DISTRICT, ZAMBIA”**

Reference is made to your submission of the protocol captioned above. The HSSREC resolved to approve this study and your participation as Principal Investigator for a period of one year.

REVIEW TYPE	ORDINARY REVIEW	APPROVAL NO. HSSREC:- 2023- MAR- 039
Approval and Expiry Date	Approval Date: 22 <sup>nd</sup> June 2023	Expiry Date: 21 <sup>st</sup> June, 2024
Protocol Version and Date	Version - Nil.	21 <sup>st</sup> June, 2024
Information Sheet, Consent Forms and Dates	<input type="checkbox"/> English.	To be provided
Consent form ID and Date	Version - Nil	To be provided
Recruitment Materials	Nil	Nil
Other Study Documents	Questionnaire.	
Number of Participants Approved for Study		

Specific conditions will apply to this approval. As Principal Investigator it is your responsibility to ensure that the contents of this letter are adhered to. If these are not adhered to, the approval may be suspended. Should the study be suspended, study sponsors and other regulatory authorities will be informed.

#### **CONDITIONS OF APPROVAL**

- No participant may be involved in any study procedure prior to the study approval or after the expiration date.
- All unanticipated or Serious Adverse Events (SAEs) must be reported to HSSREC within 5 days.
- All protocol modifications must be approved by HSSREC prior to implementation unless they are intended to reduce risk (but must still be reported for approval). Modifications will include any change of investigator/s or site address.
- All protocol deviations must be reported to HSSREC within 5 working days.
- All recruitment materials must be approved by HSSREC prior to being used.
- Principal investigators are responsible for initiating Continuing Review proceedings. HSSREC will only approve a study for a period of 12 months.
- It is the responsibility of the PI to renew his/her ethics approval through a renewal application to HSSREC.
- Where the PI desires to extend the study after expiry of the study period, documents for study extension must be received by HSSREC at least 30 days before the expiry date. This is for the purpose of facilitating the review process. Documents received within 30 days after expiry will be labelled "late submissions" and will incur a penalty fee of K500.00. No study shall be renewed whose documents are submitted for renewal 30 days after expiry of the certificate.
- Every 6 (six) months a progress report form supplied by The University of Zambia Humanities and Social Sciences Research Ethics Committee as an IRB must be filled in and submitted to us. There is a penalty of K500.00 for failure to submit the report.
- When closing a project, the PI is responsible for notifying, in writing or using the Research Ethics and Management Online (REMO), both HSSREC and the National Health Research Authority (NHRA) when ethics certification is no longer required for a project.
- In order to close an approved study, a Closing Report must be submitted in writing or through the REMO system. A Closing Report should be filed when data collection has ended and the study team will no longer be using human participants or animals or secondary data or have any direct or indirect contact with the research participants or animals for the study.
- Filing a closing report (rather than just letting your approval lapse) is important as it assists HSSREC in efficiently tracking and reporting on projects. Note that some funding agencies and sponsors require a notice of closure from the IRB which had approved the study and can only be generated after the Closing Report has been filed.

- A reprint of this letter shall be done at a fee.
- All protocol modifications must be approved by HSSREC by way of an application for an amendment prior to implementation unless they are intended to reduce risk (but must still be reported for approval). Modifications will include any change of investigator/s or site address or methodology and methods. Many modifications entail minimal risk adjustments to a protocol and/or consent form and can be made on an Expedited basis (via the IRB Chair). Some examples are: format changes, correcting spelling errors, adding key personnel, minor changes to questionnaires, recruiting and changes, and so forth. Other, more substantive changes, especially those that may alter the risk-benefit ratio, may require Full Board review. In all cases, except where noted above regarding subject safety, any changes to any protocol document or procedure must first be approved by HSSREC before they can be implemented.

Should you have any questions regarding anything indicated in this letter, please do not hesitate to get in touch with us at the above indicated address.

On behalf of HSSREC, we would like to wish you all the success as you carry out your study.

Yours faithfully,



*Dr. J. I. Ziwa*

DR. J. I. Ziwa

**ACTING CHAIRPERSON  
THE UNIVERSITY OF ZAMBIA HUMANITIES AND  
SOCIAL SCIENCES RESEARCH ETHICS COMMITTEE - IRB**

CC: Director, Directorate of Research and Graduate Studies  
Assistant Director (Research), Directorate of Research and Graduate Studies  
Assistant Registrar (Research), Directorate of Research and Graduate Studies