STUDENTS' ATTITUDES TOWARDS PARTICIPATION IN PHYSICAL EDUCATION: A CASE OF SECONDARY SCHOOLS IN NAIROBI PROVINCE, KENYA

BY

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DECLARATION

This thesis is my original work and has not been presented for a degree in any other university

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DEDICATION

This work is dedicated to the late Mrs Magdalene Opiyo.

May God bless her soul.
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ABSTRACT

This study investigated secondary school students' attitudes towards participation in physical education. The relationship between the students' attitudes and their performance in the subject was also investigated.

The study was carried out in Nairobi Province. Descriptive survey research design was used. Stratified random sampling was used to select twelve secondary schools that were included in the study, while simple random sampling was used to select two hundred and forty students who were involved in the study.

Questionnaires, interviews guide and performance test were the instruments used to collect data. Descriptive statistics that included: frequencies, percentages and tabular representation were used to analyse and present the data. Spearman rank order correlation coefficient (Rho-P) was utilised to find out the relationship between secondary school students' attitudes and their performance in physical education. The t-test was used to analyse the difference among secondary school students.

The study found that there was a small correlation between the students' attitudes and their performance. The study revealed that the students have positive attitudes towards participation in physical education and that their performance is significantly above average. The study recommends a study to be carried out to establish factors that hinder performance of students in physical education in girls' day schools.
### TABLE OF CONTENTS

Declaration .................................................................................................................. ii
Dedication .................................................................................................................. iii
Acknowledgement ..................................................................................................... iv
Abstract ..................................................................................................................... v

Table of Contents ...................................................................................................... vi

**CHAPTER ONE: INTRODUCTION**

Background to the Study .......................................................................................... 1
Statement of the Problem ......................................................................................... 4
Research Questions .................................................................................................... 5
Null Hypotheses ......................................................................................................... 6

Significance of the Study ........................................................................................... 6

Basic Assumptions of the Study ............................................................................... 7
Scope & Limitations ................................................................................................... 8

Theoretical Framework .............................................................................................. 8
Definitions of Significant Terms ............................................................................... 11

**CHAPTER TWO: REVIEW OF SELECTED LITERATURE**

Attitude Theory and Concept ................................................................................... 13
Cognitive Component ............................................................................................... 15
Affective Component ................................................................................................. 16

Behaviour/Action Component ................................................................................ 18

Factors Affecting Attitude Formation .................................................................... 19
CHAPTER THREE: METHODOLOGY AND RESEARCH DESIGN

Study Locale .............................................. 26
Research Design ........................................ 26
Target Population ....................................... 27
Sample and Sampling Procedures ....................... 28
Data Collection Procedures ............................. 32
Interview Schedule ...................................... 32
Questionnaires .......................................... 33
Performance Test ........................................ 34
Pilot Study ................................................ 35
Validity .................................................... 36
Reliability ................................................ 37
Data Collection Procedure .............................. 37
Data Interpretation ....................................... 39
Interview .................................................. 39
Performance Test ........................................ 40
Questionnaire ............................................ 44

CHAPTER FOUR: PRESENTATION OF DATA, INTERPRETATION AND DISCUSSION

Characteristics of Schools Involved in the Study .................. 49
List of Diagrams

Diagram 1.1 A Schematic Conception of Attitude (Adapted After Rosebenberg and Hovland, 1960)..............................10

List of Tables

3.1 Value of the Positions in the 100m Race.........................................................40
3.2 Value of the Goals Scored.................................................................41
3.3 Value of Goals Defended.................................................................42
3.4 Value for Favourable Items on the SSSQ.................................................44
3.5 Scale Value for Negative Items on the SSSQ...........................................45
4.1 Distribution of Students By Gender..........................................................49
4.2 Summary of Findings on Students’ attitudes Based on Gender...................51
4.3 Summary of t- Test Samples on Students Attitudes Based on Gender..........53
4.4 Summary of t- Test for Independent Sample of Boys...............................54
4.5 Summary of t-Test for Independent Sample of Girls...............................55
4.6 Summary of Findings on the Students Performance in Physical Education.
   Based on School Category and Gender....................................................56
4.7 Summary of Students Attitudes and Performance Scores...........................57
4.8 Summary of Students Response on Item no.12 on the SSSQ.........................61
4.9 Summary of Students Response to Item no.7 on the SSSQ..........................64
CHAPTER ONE
INTRODUCTION

This chapter presents the problem that was investigated and puts it in the proper context for the benefit of the researcher and other readers. Research questions, hypothesis, scope and limitations, as well as, the significance of the study and assumptions on which the study was based are dealt with in this chapter. The theoretical framework guiding the study and terms used in the study are also defined so as to facilitate understanding and application of the research findings by the consumers.

Background to the Study

Physical activities in various forms have always been an integral part of people living in social groups. The major activities of primitive communities revolved around the development of physical efficiency and the challenge of survival (Harrow, 1972). The physical and mental education of primitive human beings consisted of both formal and informal activities. Informal education covered the physical and practical activities of life. The formal activities dealt with traditional education, both spiritual and moral. The bases for the sportive activity of primitive humans originated with their natural desire for movement (Beashel and Taylor, 1996).

According to Dauer and Pangrazi (1990), involvement in physical activity in form of play and sport dates back to the ancient civilisation. The Greeks were the first to embrace the concept of physical activity to develop the whole human being. Dauer and Pangrazi
(1990) emphasise that the goal of reproducing citizens with a high degree of physical prowess was to ensure that they could defend their homeland. The indigenous African societies were involved in various forms of physical activities for recreational, security, as well as, developmental reasons (Wamukoya, 1985). Participation in physical activities was therefore basic to all ancient cultures. This trend of lifestyle has continued to date. However, people participate in various sports activities for a number of reasons including recreation, health, economic and intrinsic pleasures.

Oluoch (1982) defines school curriculum as all that is planned to enable the students to acquire and develop the desired knowledge, skills and attitudes. Physical education has been identified as being important in the educational curriculum because it contributes to the goals of education in many significant ways. Physical education’s unique contribution to the development of the total person cannot be overlooked. Bucher (1995) states that physical education is the only area of the school curriculum that promotes the development of motor skills and fitness. It is the only subject in the curriculum that contributes directly to development in the psychomotor domain. Thus, a lot of emphasis should be put on the development and teaching of this subject and hence, the inclusion of physical education in the school curriculum.

Today education has great potential for promoting total development of the learners. This is by providing them with meaningful and sequentially organised movement activities offered by physical education. Given the emphasis on the importance of physical education to the total development of the students, it has been included in the school curriculum as a full partner in the students’ total education programme.
The period after independence saw the Kenya government strengthening and improving the policy on physical education. Following the presidential decree to education planners and curriculum developers in 1980, mandating them to include physical education officially in the school curriculum and on the time-table at the primary and secondary school level, physical education is being taught officially in all primary and secondary schools in the country as one of the subjects in the curriculum. The Government of Kenya has made strenuous efforts to provide necessary planning for physical education in all primary schools, secondary schools and teacher training colleges. According to the education act (1968), an approved curriculum includes subjects that are timetabled within the official school time and have a syllabus approved by the Kenya Institute of Education, textbooks, and taught by trained members of staff. The inclusion of physical education on the school time-table shows its importance in the total development of the students.

Following the presidential decree to the education planners to include physical education as a compulsory subject to be taught in all secondary schools, some institutions seem to have relegated it to a subject seen only on the timetable but not taken seriously. Lack of seriousness in the teaching of the subject led the Minister for Education to warn school Head-teachers regarding its teaching. He reminded school administrators that it was unacceptable to drop physical education from the school programme, as it is vital for the development of the total person (Imanene, 1998).
**Statement of the Problem**

Students should be encouraged to develop and maintain a level of physical fitness commensurate with each individual’s needs (Dauer and Pangrazi, 1990). Participation in physical activities and participation in the subject ensures total development of the students as intended by present day education curriculum. Sports make a positive contribution to individual’s morale and health development (Beashel and Taylor, 1996). Following the presidential decree to education planners, physical education has been included in the school curriculum as a partner in contributing to the physical development of the students. It is important that the objectives of physical education are achieved, as this will ensure that the students benefit by developing in the psychomotor domain. Successful development in the psychomotor domain can greatly be enhanced through the success and the promotion of physical education in primary and secondary schools in Kenya.

Evans (1965) states that the kinds of attitudes possessed by individuals determine their behaviour tendencies. The success and promotion of physical education relies heavily on the students’ interests, attitudes and value they hold towards it. Acquisition of the right attitudes by the students is therefore important in the development and performance of students’ in physical education. It is important that cultivation of positive attitudes towards participation in physical education is stressed among students. Attitudes towards any subject will in most cases determine the performance of the students in the subject.
It may be true that many schools are offering physical education programmes as directed by the Ministry of Education, and physical education teachers are teaching the subject under the most conducive environment, but this is not a sufficient assumption that physical education objectives have been met. Given that physical education plays an important part in the total development of the students, all the important variables leading to the attainment of the physical education objectives should be considered.

Given the emphasis on the total development of the students by the school curriculum, a study like this one becomes necessary to find out the attitudes the secondary school students have developed towards participation in physical education as this is a very important variable in the attainment of the subject's objectives. The problem under investigation in this study was the students' attitudes towards participation in physical education. The dependent variable in the study was the students' participation in physical education, while the independent variable was the students' attitudes towards participation in the subject.

Research Questions

The study sought to provide answers to the following questions:

- What attitudes do the secondary school students hold towards participation in physical education?
- Is there any difference in attitude between secondary school boys and girls towards participation in physical education?
- Do the students' attitudes affect their performance in physical education?
• Is there a difference in attitude between secondary school boys who attend day schools and those who attend boarding schools towards participation in physical education?

• Is there a difference in attitude between secondary school girls who attend day schools and those who attend boarding schools towards participation in physical education?

Null Hypotheses

The following hypotheses were stated for verification in the study:

$H_{01}$ There is a significant relationship between secondary school students' attitudes and their performance in physical education.

$H_{02}$ There is a significant difference between secondary school boys and girls attitudes towards physical education.

$H_{03}$ There is a significant difference between secondary school boys in day schools and those in boarding schools in their attitude towards participating in physical education.

$H_{04}$ There is a significant difference between secondary school girls in day schools and those in boarding schools in their attitude towards participation in physical education.

Significance of the Study

Physical education is a vital subject in the school curriculum. Unfortunately, inadequate research has been carried out regarding attitudes of students towards participating in it.
Therefore the findings of this study are expected to:

- form a basis to challenge curriculum developers, implementers and textbook writers to encourage more research studies on attitudes in physical education and related areas;
- assist the education policy makers to evaluate the physical education programmes being offered in secondary schools, and assess whether they conform to the learners' attitudes towards it and the outcomes expected; and
- assist physical education teachers to know the attitudes secondary school students have developed towards participation in physical education for appropriate lesson planning.

Basic Assumptions of the Study

- The following assumptions were made for the study:
  - All public secondary schools students in Nairobi Province are taught physical education.
  - All the schools have the syllabus and follow the national physical education curriculum.
  - The students had been taught the skills which were tested in the performance test.
  - That all students involved in the performance test were physically fit, and the responses they gave were a true reflection of their feelings.
Scope and Limitations

The study was focused on attitudes secondary school students in Nairobi Province have developed towards participation in physical education. The students' performance in physical education was confined to three activities namely: goal keeping in soccer, goal scoring in soccer, and 100m sprints.

The study was carried out in Nairobi Province. It was confined to twelve public secondary schools only. Private secondary schools students were not considered in this study. This is because most of them are under a different education system and use a different syllabus for teaching and learning of physical education. The private schools are not under the direct government control in terms of what they teach and evaluation. Other than that, most of the private schools have tough bureaucracy, thus carrying out research studies in their institution would have been difficult. Limited time and finance prevented the researcher from covering secondary schools from more provinces.

Theoretical Framework

This study was based on Rosenberg and Hovland's (1960) Expectancy - Value theory that states that all responses to a stimulus object are influenced by the person's attitude towards the object. This means that there is no better way to predict how a person will respond to a stimulus than to know his/her attitude towards it. By knowing the attitudes of secondary school students towards participation in physical education activities, one could predict their response to the subject with a certain amount of certainty. Simons et al (1994) support this theory by stating that the actions of man are the best interpreters of their thoughts.
Attitudes are composed of the following three components: the affective, cognitive and behavioural component. According to Rosenberg (1956), the affective component refers to a person's sympathetic nervous responses and verbal statements towards an object. This was reflected by the students' feelings towards participation in physical education activities, which were to be either positive or negative. The cognitive component refers to the perpetual responses, and verbal statements of beliefs. The behavioural component, on the other hand, refers to the person's overt actions and verbal statements concerning behaviour. In this study, the behaviour component was the students' readiness to act towards the subject.

Though the three components are highly interrelated and may be assumed for all practical purposes to be measures of the same thing, social psychologists favour separate measurement. Fehling and Triandis (1969) found through factor analysis that, when measures of the three components of attitudes are placed in the same analysis, the dimensions that are extracted are independent. It is therefore preferable to investigate independently the affective, cognitive, and behavioural ratings of subjects to a variety of attitude objects.

It is clear that these three components are important when studying attitudes. This study, however, concentrated on the affective and behavioural components of attitudes. These components helped in the formulation of research questions. Diagram 1.1 below presents a schematic conception of attitudes and behaviour.
Diagram 1.1: A Schematic Conception of Attitudes and Behaviour.

Source: Adapted from Rosbenberg and Hovland, 1960.

According to diagram 1.1, all responses to a stimulus object are mediated by a person's attitude towards the stimulus object, which in this case was physical education. The different responses, however, were classified into two categories (for purposes of this study); they were affective and behavioural. Corresponding to each of these responses were the two extreme-responses expected (positive and negative), for the affective component and (high and low), for the behavioural component.
Definition of Significant Terms

For purposes of understanding this study, the following terms were defined:

**Attitudes:** This is a latent or underlying variable that is assumed to guide or influence behaviour (Fisbein and Ajzen, 1975)

**Goal scoring:** Skill in soccer where an individual kicks the ball with intention of ensuring that the ball goes successfully through the designated goal posts.

**Goal keeping:** Skill in soccer where an individual aims at preventing the ball from going through the designated goal posts rendering it a score.

**National schools:** These are public secondary schools. They are given the first priority during selection of students to form one, thus they select the students with the best performance countrywide.

**Performance:** Refers to the rate and extent to which an individual actually takes part in physical education activities. For purposes of this study, the individual's score in the performance test was interpreted as individual's performance.
Physical education: All educational experiences learned and performed by students in school during the physical education lessons as per the subject syllabus. It is concerned with the development of general physical capability and involves vigorous physical exertion and skills by individuals (Beashel & Taylor, 1996). Physical activity was used interchangeably to refer to physical education in this study.
CHAPTER TWO
REVIEW OF RELATED LITERATURE

This chapter reviews vital literature regarding what various educators have expressed concerning the importance of attitude in the education process. The literature is divided into sub-sections as follows:

• Attitude theory and concepts.
• Components of attitude.
• Factors affecting attitude.
• Local studies on attitudes.
• Methods of measuring attitudes.

Attitude Theory and Concepts

Fisbein and Ajzen (1975) state that attitudes are determined by the most prominent beliefs about what would happen as a consequence in life. A negative attitude towards participating in physical education can be developed in a situation where an individual experiences negative consequences while participating in physical education lesson. On the other hand, an individual can develop positive attitude towards participating in physical education in a situation where one enjoys participating in a physical activity and experiences positive consequences while participating in physical education lessons.
Fisbein & Ajzen (1975) do not agree with Triandis (1971). They state that this is not always the case. Sometimes an individual may develop a negative attitude towards participation in physical education due to other factors and not necessarily from experiencing negative consequences while participating in physical education lessons. He states that attitudes have a dynamic influence upon the individual's response to all subjects and situations with which they are related. Triandis states that attitudes among other things help the individual to adjust in a complex world by making it more likely how one will react, so as to maximise the rewards accruing from the environment. Positive attitudes towards an object or event may sometimes imply avoidance.

Homas (1970) states that from the point of view of Gestalt psychology, a change of attitude involves a definite psychological stress. An attitude is a tendency to act towards or against something in the environment, which becomes thereby a positive or negative value. According to Dilleheyy (1973), the attitudes students develop are likely to stimulate or stop further studies. He also reveals that the attitudes students acquire are highly involved in the learning and retention of the subjects they learn in school. From the above-cited works, we can infer that attitudes play a significant role in the learning process of the learners.

Attitudes play a significant role in the learning process (Pate and Hohn, 1994). They concur with Donovan (1973), who emphasizes that the attitudes the students develop are likely to stimulate or stop further studies. According to Donovan, the attitudes the students develop are likely to play a crucial role in the learning and retention of the subjects they learn in school.
Hollander (1971) also emphasises that attitudes are important in education, as they retain the flavour of unique individual experiences. These experiences are conveniently summed up in the individual's present attitude. This in turn has direct effect for example on the individual's ongoing and future participation in physical education activities.

Cognitive Component

Travers (1973) argues that the cognitive components of an attitude may be broad or narrow. They may also be strong or weak. For example, a person may have preference for a particular physical activity or sport, but at the same time know so little about the physical attributes and advantages that come along with participation in physical activity. In such a case, the cognitive component is both narrow and weak.

According to Travers (1973), attitudes are built on solid foundation. A person may have a strong negative attitude towards participating in physical activity. His/her negative attitude may be based on substantial and valid data, or past experience in physical education. A simple example is a student who is obese, being laughed at by his/her colleagues and rebuked by the teacher constantly because they cannot run as fast as his / her fellow students during a race. The affected student will have a negative attitude towards participation in physical education. This is most likely as, he / she always faces humiliation from other students, and sometimes from the teacher too. In such a case, the cognitive component of the attitude is broad and strong.
Mbabu (1997) states that women who participate in active sports develop masculine bodies and thus reduces their femininity. Though this is not entirely true, it has greatly affected female athletes' attitude towards participating in physical activities. Malumphy (1968) for instance, after studying American national intercollegiate athletes teams, concluded that women who participate in sports are perceived to be less attractive. This has led other women to have a negative attitude towards participation in physical activities. This study attempted to find out whether there really was a big difference between boys' and girls' attitude towards participation in physical education, due to their knowledge in physical education and other attributes of the subject.

Affective Component

Travers (1973) states that the affective component of attitude can be defined as the liking or disliking of a particular object or event. Dauer and Pangrazi (1990) state that what individuals feel about a subject will determine their level of motivation to learn and perform. They emphasise that very little is gained if students participate in a subject yet leave hating it. It is important to design experiences in a manner that would improve the opportunity for students to like participating in physical activities during the physical education lessons and leisure time.

A positive attitude towards physical education involves a liking for participation in physical activities (Peters, 1970). For example, a student who responds promptly, and is enthusiastic during physical education lessons may easily develop a positive attitude towards physical education activities. A negative attitude towards participating in physical activity may also be developed during the physical education lesson.
Aiken (1970) states that the affective component of attitude is concerned with the emotional under-pinning of belief. He adds that the affective component represents an amount of positive or negative feeling an individual has developed towards an object. It is in this way that an individual ranks the world around him/her in terms of its attractive or unattractive qualities. Most of the time, this would result to one liking or disliking a particular object, or in this case physical education activities.

According to Triandis (1971), the way a person feels about something is often determined in most cases by previous associations with the attitudinal object. For example, if a student believe that participating in physical education activities is beneficial to his/her health, then the student will in most cases term the activities as being attractive. On the other hand if a student believes that participating in physical education activities is strenuous and of no benefit to him/her, she/he will term the activities unattractive.

Bem (1968) elaborates that attitudes develop from past experiences. This includes the unpleasant experience of punishment, and the pleasurable experience of reward. Dauer and Pangrazi (1990) emphasise that students need to know that teachers care about their feelings and want to prevent placing them in embarrassing situations. This would ensure that the teacher does not knowingly put students in an embarrassing situation. A situation that embarrasses students can result in negative attitudes being formed towards participation in physical activity. Dauer and Pangrazi (1990) further advised that students should be acknowledged as human beings with needs and concerns. They should be treated in a courteous and non-derogatory manner, and their feelings
should be documented. If teachers fail to sense how students feel, they would not be able to adjust the learning environment in a positive direction. There was a need for this study to be done as it will enlighten the teachers to understand their students' feelings and attitudes towards physical education.

**Behaviour/Action Component**

Behaviour component refers to the individual’s intentions to behave in a particular manner or his / her actual behaviour with regard to the attitudinal object. Beashel and Taylor (1996) emphasizes that the relationship between attitudes and behavior is important because attitudes direct behaviour. They argue that if one holds a positive attitude towards exercise, it may be reflected in one’s behaviour by exercising everyday, as well as encouraging friends to take exercise seriously. They further argue that if someone has a negative attitude towards exercise or physical activities, then she/he may be inclined to avoid many kinds of physical activities and may also discourage others from participating in physical activities.

Lapiere (1934), Wicker (1963) and Dillehay (1973) failed to find a positive correlation between measures of attitudes and behaviour. They came up with a number of reasons why overt behaviour may be inconsistent with an individual’s measured attitudes. They argued that attitudes like most traits are not permanent fixtures, but constantly evolve depending on the situation. For example, a person may act on past or present attitude, or even develop new attitude for the occasion. This may lead to behaviour of the individual not tallying with the attitude he/she purports to have towards a certain subject.
Dillehay (1973) also reveals that sometimes attitudes may not be consistent with an individual's behaviour. This is because individuals may not act on their attitude under different circumstances. For example, individuals might not portray a true picture of their attitude through their behaviour or performance when they are aware that they are being observed, or their behaviour is being recorded for one reason or other.

Carlson (1994) supports this by emphasizing that students' behaviour does not often indicate their attitudes. However, behaviour may be influenced by certain situational events which place them under pressure to act in a way contrary to their attitudes. This study endeavoured to find out whether the students' behaviour during the physical education lessons indicated their attitudes towards physical education.

Factors Affecting Attitude Formation

Significant social attitudes are learned early in life, mostly under parental influence and with strong emotional reinforcement. Garry (1970) states that attitudes can be acquired by imitation and role playing from emotional experiences and conditioning. He further states that schools should strive to foster socially desirable attitudes and provide relevant academic and intellectual experiences. Garry adds that this is important, as it will be influential to production of awareness, positive response and conceptual development.

Lumalla (1983) reports that non-examinable subjects in the school curriculum are usually relegated as subsidiary and of less importance. For example, physical education being a non-examinable subject has had several problems being accepted on the same basis.
of importance as the other subjects. Teachers and students tend to concentrate more on other subjects because they look at them as being important in one's future life. This might not necessarily affect their attitude towards physical education. This study sought to find out the feelings of the students regarding other subjects which are examinable and physical education which is non-examinable.

Past experiences in the classroom have also been known to influence students' behaviour. Jackson (1968) argues that most students have either mixed or neutral feelings about their classroom experience. This shows that classroom experience play a major role in students developing attitudes towards a subject. If the students have experienced enjoyable and conducive experiences during physical education class, they will most likely develop a positive attitude. Past experiences include individual's observation of others' behaviour, which sometimes influences the observer to internalise inferred attitudes and behaviour towards participation in physical education activities.

Local Studies on Attitudes

Several studies have been carried out in Kenya regarding attitudes of students and teachers, though most of these studies have been on other subjects. Mbaabu (1997) found that Kenyan women athletes have mixed attitudes towards competitive track events. He adds that though some people regard athletics as valuable and purposeful, others feel that active involvement in competitive athletics may induce masculinity, hence make women athletes look less feminine and unattractive. Such an attitude affects the women athletes' actual performance in track events. Mbaabu's (1997) study, however, did not strongly attribute the poor performance of women athletes on attitudes
but to other social factors. Most of these studies have been investigations of factors such as physical, social, educational and emotional outcomes derived from physical education activities.

Gitonga's (1983) study on attitudes of teachers towards science, found that female teachers had a more positive attitude towards science than male teachers. He found no relationship whatsoever between attitudes held by teachers and their background variables, including teaching experience. Aiken (1970) on the contrary found that experienced teachers have a more positive attitude towards arithmetic and a better understanding of basic arithmetic concept. No significant relationship was however, observed between the number of years the teachers had taught, the experience they had gained and their understanding of the subject.

Ngunjiri's (1985) study revealed no relationship between attitudes held by teachers towards teaching agriculture and other qualities such as their sex, age, academic and professional qualifications. Gitonga's (1983) findings differ from Ngunjiri's. Although both studies agree that, there is no relationship between teachers' attitudes and their experience in teaching their respective subject area. Their findings however, do not agree with Aiken's (1970) findings in this respect. Given such findings, one cannot generalise or draw conclusions on what background variables influence teachers' attitudes towards their subjects. There is need for more research to be carried out to investigate any other factors that are likely to influence teachers' attitudes towards their teaching subjects, other than background variables. Though these studies are in other school subjects, they are very informative as they can guide assumptions even in
physical education, which is also, one of the non-examinable subjects. This is because there is no study already done in Kenya on physical education teachers’ attitudes towards the subject.

Wamukoya (1985) is the only study on attitudes of secondary school students towards physical education currently done in Kenya. Using a sample of one hundred and twenty students, Wamukoya concentrated on three categories of schools in Kakamega District, namely: aided schools, unaided schools, and government schools to analyse and discuss information collected. His findings indicate that there was a low positive correlation between the attitudes and participation in physical education activities.

Wamukoya’s (1985) study used the Pearson Product Moment method to analyse the students' attitudes. This study, however, used the Statistical Package for Social Sciences (SPSS) computer package to analyse data. The Spearman Rank Order method was used to analyse the relationship between the students’ attitudes and their performance. The t-test was used for analysing the difference in attitude between boys and girls, as well as boys and girls in the different school set-ups.

Wamukoya’s study revealed that effort to promote favourable attitudes towards participation in physical education activities has not been very successful with the secondary school students. The study, however, stressed that participation in physical education does not necessarily result in favourable attitudes.
It was not very clear from Wamukoya’s (1985) study whether attitudes influenced behaviour or not. It was on this basis that a more extensive investigation of attitudes towards physical education be carried out to determine if the feelings expressed by the secondary school students in Kakamega District are typical with all the secondary school students countrywide. In view of the foregoing, the researcher decided to undertake this study to collect more information on the students’ attitudes.

**Methods of Measuring Attitudes**

According to Triandis (1971), the measurement of attitudes cannot be obtained correctly in most cases by use of only one data-collecting instrument. He states that it is necessary to employ a variety of methods of measurements, each measuring the same component.

There are several methods that can be used to obtain information on a person’s attitude towards something. Aiken (1997) states that these methods include direct observations of how a person behaves in relation to certain things. Direct observation includes what the person actually does or says in situations in which information is being collected regarding attitude towards an attitude object. Aiken adds that willingness of an individual to do a favour, sign a petition, and make a donation to some cause, are examples of behavioural measures of attitudes. Aiken (1997) supports Triandis (1971) by adding that direct observation is informative, particularly with young children or when other methods are considered obstructive.
Aiken (1997) emphasizes that observation is a good instrument for collecting information. It is a good instrument for collecting data regarding individuals' attitudes. However, the greatest disadvantage with observation as a data collecting instrument is that it is time consuming and expensive when obtaining a representative sample of behaviour across time and different situations. In addition, behaviour measures of attitudes often yield different results from projective techniques and attitude questionnaires' scales.

Kaplan (1990) states that the most popular method of measuring attitudes is to administer an attitude scale. The scale should consist of a set of positive and negative statements concerning a topic of interest. He adds that the Bogardus social scale was one of the very first scales developed to measure attitudes. Aiken (1997) adds that the Borgardus scale proved useful in research on regional differences, but it permitted attitude measurement on only an ordinal scale and is somewhat crude by present day standards. According to Aiken (1997), better measures of attitudes have since been developed from the research of Louis Thurstone in 1920, Louis Guttman in 1944, and other psychometricians. Aiken (1997) states that out of the scales that have been developed so far, the likert scale has an advantage over the other scales as it does not need expert, unbiased judges while constructing it.
The Likert scale also permits the use of items that are clearly related to the attitude being assessed as long as they are significantly correlated with the total score. Another method for collecting information on attitudes is the interview. Oppenheim (1966) states that the interview should consist of three interacting variables: the respondent, the interviewer, and the interview schedule. He adds that each of these can have an important influence on the results. Aiken (1997) adds that interviews are of advantage in research studies if a skilled interviewer is conducting them. The interviewer can make sure that the respondent has understood the questions and purpose of the research.

Oppenheim (1982) on the other hand states that though interviews are important while carrying out research on attitudes, they are fraught with possibilities of bias. He adds that the interviewer may give inkling of her/his own opinion or expectations by the voice tone, the way they read the questions, or simply by appearance. The interviewer may unwittingly influence the respondents by pausing unexpectedly at certain points, by probing with long leading questions, and also sometimes by agreeing with the respondent.

This study selected to use several data collection instruments which included the interview, questionnaire, observation as well as performance test. According to Aiken (1997), all the tests selected for this study are all good instruments for collecting data and the more they are the better.
CHAPTER THREE
RESEARCH DESIGN AND METHODOLOGY

This chapter describes the specific strategies or procedures that were used in data collection and data analysis in order to answer the research questions and hypotheses. The chapter focuses on the study locale, research design, target population, sample and sampling techniques, description of research instruments, piloting, data collection procedures and data analysis procedure.

Study Locale

This study was undertaken in Nairobi Province. Nairobi Province was chosen because it has a cross-section of schools which are representative of various types of schools found in the country. These schools include; national schools, provincial schools and district schools, both day and boarding. More so, most of the schools in Nairobi province are well equipped with physical education facilities. Another reason for choosing Nairobi was distances between schools provided the researcher with easy accessibility to the study schools.

Research Design

This study investigated secondary school students' attitudes towards participation in physical education. It was a descriptive survey study since it sought to describe the current situation in schools. Borg (1983) and Kaplan (1990) state that the aim of descriptive survey research is to objectively describe what is presently going on during
the education process. This design was suitable for the study as it sought information on the current situation of physical education in schools. Beashel and Taylor (1996) also state that this design is best when attempting to determine the current state of things such as knowledge, attitude and behaviour related to specific issues.

Target Population

The population for the study comprised of physical education teachers and secondary school students in Nairobi province. According to the Kenya National Examinations Council (1999) school list, there are forty-one public secondary schools in Nairobi Province. Ten are boys' day schools, four are boys' boarding schools, eight are girls' day schools and seven girls' boarding schools. There are twelve mixed schools, of which eleven are day schools and one boarding. The target population was students from the different types of schools. Secondary school students formed the core of the study because the success of attainment of physical education objectives depends on their attitudes towards the subject. Physical education teachers were also included in the study because they are directly involved in the success of the attainment of the subject's objectives. They are also in a position to give advice on matters pertaining to the subject.
The Sample and Sampling Procedures

This study employed stratified random sampling and purposive sampling techniques in selecting the study sample. Schools were selected first using stratified random sampling, then simple random sampling was used to select the students. This was to ensure equal opportunity of selection for students from the different types of schools for the benefit of this study. The sample consisted of 240 secondary school students and 12 physical education teachers.

For purposes of this study, all the public secondary schools in Nairobi were stratified according to their type: boys boarding schools, boys day schools, girls boarding schools, girls day schools and mixed secondary schools. This ensured that all the five categories of secondary schools in Nairobi Province were given an equal representation.

Kothari (1978) states that each stratum is more homogenous than the total population. It is easy to get more precise estimates from each stratum. He further adds that the use of a stratum will estimate more accurately on each of the component parts. In other words, a better estimate of the whole-stratified random sample is obtained and that, analysis of data is easy and reliable. The researcher, therefore, used the five categories of schools as the strata groups for the study.

Stratified random sampling was used to select twelve public secondary schools from thirty seven secondary schools. Nairobi Province has a total of forty-one secondary schools but five schools were used in the pilot study. The following steps were followed to select the study sample: - Names of all the public secondary schools were written on
small pieces of paper, the papers were then divided into five strataums according to the
five categories of schools. The papers were then folded neatly to conceal the names of
the school. Random selection of one piece of paper at a time from each stratum was
then done. The selected paper was then unfolded, and the name of the school written
on it immediately recorded down.

This process was repeated in each and every one of the five strataums, till the twelve
schools which were involved in the study were selected. The number of schools selected
from each stratum was being based on 35.71%.) as recommended by Borg and
Gall(1987). They state that a sufficient study sample for a good descriptive study should
be at least 10 % of the population. The number of schools included in each stratum was
calculated as follows: -

The total number of boys’ day schools in Nairobi Province is ten. After excluding one
school that was involved in the pilot study, the number of schools left for selection in this
stratum was nine. Hence,

- Boys’ day schools:

\[
35.71/100 \times 9 = 3.2139\quad 3: \text{- this stratum had three schools}
\]

The total number of girls’ day schools in Nairobi Province is eight. After excluding one
school that was involved in the pilot study, the number of girls day schools left for
selection in this stratum was seven. Hence,

- Girls’ day schools:
The total number of boys' boarding schools in Nairobi Province is four. After excluding one school that was involved in the pilot study, the number of boys boarding schools left for selection in this stratum was three. Hence,

- Boys' boarding schools:

\[ \frac{35.71}{100} \times 3 = 1.0713 \]

1: this stratum had one school.

The total number of girls' boarding schools in Nairobi Province is seven. After excluding one school that was involved in the pilot study, the number of girls' boarding schools left for selection in this stratum was six. Hence,

- Girls' boarding schools:

\[ \frac{35.71}{100} \times 6 = 2.4997 \]

2: this stratum had two schools.

The total number of mixed secondary schools in Nairobi Province is twelve. After excluding one school that was involved in the pilot study, the number of mixed schools left for selection in this stratum was eleven. Hence,

- Mixed secondary schools:

\[ \frac{35.71}{100} \times 11 = 4.2852 \]

4: this stratum had four schools.
Purposive sampling was used to select two classes which were involved in the study. The researcher selected two classes that were having physical education lessons on the day set aside for data collection. Simple random sampling was used to select ten students from each class. This was done as follows: - Names of all the students in each of the selected classes were written down on small pieces of paper. The papers were then folded to conceal the names of the students.

Simple random sampling was then employed to select one piece of paper at a time, and the name of the student on the selected piece of paper recorded down immediately. This process was repeated, until ten names of students were selected in each of the two classes. The total number of students involved in the sample study per school was twenty, whereas the total number of students involved in the study was two hundred and forty students.

In mixed secondary schools, the papers with names of the students were divided into two groups. There was one group for boys and one for the girls. From each group five names were randomly selected. This ensured that in each class five students selected were girls and five were boys.

Twelve physical education teachers were included, one from each of the twelve secondary schools that were selected for the study. In schools where there was only one physical education teacher, he / she was automatically included in the study, whereas, in schools where there were more than one physical education teacher, simple random sampling was used to select one teacher to participate in the study. The names
of all the physical education teachers in the schools were written down on small pieces of paper and folded. One piece of paper was randomly selected and the teacher whose name appeared on it was included in the study.

Data Collection Instruments

The following instruments were used for data collection; Interview, questionnaires and performance tests.

Interview Schedule

Interviewing is one of the oldest and most commonly used methods in research work. It is effective when collecting detailed information directly from the interviewee. Beashel (1996) argues that this method can overcome any confusion or lack of understanding, as well as detect subtle differences between verbal and non-verbal responses. In this study, structured interview schedule was used to gather more information from the physical education teachers concerning the students' attitudes towards participation in physical education. Krathwol (1993) states that interview allows the interviewer to follow-up respondents answers to obtain more information and clarify vague statements. He further states that interviews build trust and support with respondents, thus making it possible to obtain information that the individuals probably would not reveal by other data collection instruments.

The researcher employed this method of data collection so as to gain a thorough insight into the attitudes the students have developed towards participation in physical education through the physical education teachers.
The researcher interviewed each of the twelve physical education teachers, listened to them while recording their responses on paper as accurately as possible without modifying the responses given by the physical education teachers.

**Questionnaires**

Questionnaires were used to collect data from two hundred and forty students. Beashel (1996) elaborates that questionnaires can be used effectively to determine knowledge, attitudes, beliefs and behaviour of an individual. The purpose of the questionnaire was to solicit responses from the students regarding their attitudes towards participating in physical education. This five point-Likert questionnaire was adapted from Aiken's (1997) scale for measuring attitudes towards mathematics and science. This scale was adopted due to its relevance to this study. The questionnaire was referred to as Secondary School Students' Questionnaire (SSSQ), see appendix B. It also sought information on students' age, sex and class and included twenty items with five responses at the end of each item.

This questionnaire mainly answered the following questions: -

- What attitudes do secondary school students in Nairobi Province hold towards participation in physical education?
- Is there a difference in attitude towards participation in physical education between secondary school boys and girls?
- Is there a difference in attitude towards participation in physical education, between secondary school boys who attend day schools and those who attend boarding schools in Nairobi Province?
Is there a difference in attitude towards participation in physical education, between secondary school girls who attend day schools and those who attend boarding schools in Nairobi Province?

The five responses at the end of each item were:

- Strongly Agree (SA)
- Agree (A)
- Undecided (UD)
- Disagree (D)
- Strongly Disagree (SD)

Performance Test

The performance test included three physical education activities. The three activities were selected from the physical education syllabus and included; 100m sprint, goal scoring using the instep kick, and goal keeping. The researcher ensured that these skills had been taught to the students before the actual date of the test. The researcher visited the schools involved two weeks prior to the test date, and requested the physical education teachers to teach the three skills to be used in the test. The performance test helped in finding out the performance levels of the students and answering the following question; Do the secondary school students’ attitudes affect their performance in physical activities?
The performance test was a behavioural measure of attitude. According to Fisbein and Ajzen (1975), behavioural observations can be used to measure a person's attitude. They add that observation concerning the performance, or non-performance of a particular individual with respect to a specific target, in a given situation, at a given point could be interpreted as the attitude. The resulting score would represent a person's attitude towards the activities in question.

The skills considered for the performance test were based on repeated observations of the same simple act (goal keeping and goal scoring). According to Fisbein and Ajzen, repeated observation criteria represent generalizations across situations, or across time. Thus, physical condition, gender, or individual training does not play a major part to observations of the same single act performed repeatedly.

Fisbein and Ajzen (1975) state that the validity of the scale increases with the number of observations on which it is based. In each of the two activities, goal keeping and goal scoring, each student was given five trials to attempt the two performance skills.

**Pilot Study**

Piloting was carried out in five schools randomly selected before the actual collection of data of the study. The researcher personally administered the instruments which included the questionnaire, performance test and the interview schedule and followed the same procedure during the actual collection of data. The purpose of the pilot study was to ascertain the validity and reliability of research instruments. Ten students were selected through random sampling from each of the five categories of schools in Nairobi.
Province, thus, a total of fifty students were selected for the pilot study.

The schools involved during the pilot study were not included in the main study. Piloting was done to assist the researcher to discover weaknesses in the research instruments, check the clarity of the questions and items and also to elicit comments from respondents that would help in the improvement of the instruments. The students and teachers responded to the questionnaire with no problem, and had no difficulty understanding the questions asked. The interview schedule and performance test were also assessed to see how effective they would be to collect data regarding the students' performance in the three skills. The performance test proved effective, as the data were easily collected and were analysed without problems.

**Validity**

Validity refers to the extent an instrument measures what it is supposed to measure. Aiken (1997) states that the reliability of an interview is determined by comparing the ratings given to the interview's responses by two or more judges. The researcher established the content validity by seeking expert judgement while developing and revising the research instrument. This was done as follows:

- Outlining the interview schedule and holding discussions with supervisors and experts in this area, as well as, using the comments made during the Postgraduate departmental seminars.
- After the discussions, the researcher developed the interview schedule and handed it over to the experts in this area to check once again whether the
schedule measured what it was intended to measure and relevant corrections and comments were made.

- Necessary modifications were made based on the supervisors and experts recommendations and comments.

It was through this procedure that the instruments for data collection were found valid.

**Reliability**

Churchill (1995) refers to Reliability as the consistency of an instrument to yield the same results at different times. He states that validity enhances the reliability of an instrument. Valid instruments reflected the characteristics to be measured and could yield similar results when administered under the same conditions. The researcher, therefore, did not check the reliability of the instruments through statistical computation. The pilot study was done to ensure that the instruments to be used in the study were reliable and would collect the data required by the researcher.

**Data Collection Procedure**

Prior to data collection, letters were issued to each one of the twelve headteachers of the sampled schools to seek permission to use their schools. (See appendix C). These letters explained the purpose and importance of the investigation, as well as assured the headteachers of confidentiality on the part of the school and the respondents. The head teachers of each school were briefed about the study. Permission was obtained from each of them to meet and brief the physical education teachers about the study. The physical education teacher was requested to provide the list of all the classes in the school. The researcher sampled two classes from the lists. The teachers were also
requested to avail the list of names of students in the two classes, which had been sampled.

The physical education teachers' interviews were administered last in each school after the students had finished answering the questionnaire and the performance test. The researcher followed the interview schedule, and was concerned with the physical education teachers' responses to the items on the schedule. Each of the teacher's responses was recorded down immediately before the next question was asked.

The researcher visited each of the selected schools after at least two weeks after the initial visit. The researcher administered the Secondary School Students' Questionnaire personally to all the sampled students as a group. The physical education teachers were requested to find a private place or a class that was not in use, then gathered all the sample subjects together at the selected venue. The researcher then verbally explained to the students the purpose of the study and requested them to answer all the items in the questionnaire.

The researcher issued the questionnaires to the students and stayed around, in case the students experienced any difficulty while answering the questionnaire. After all the students had finished answering all the items in the questionnaire, the researcher collected them. The questionnaires were then kept safely. The researcher marked and graded the questionnaires at a convenient time.
The researcher conducted the performance test with the help of the physical education teachers. All the students in the class were involved in the 100m race. The physical education teacher in each school helped the researcher identify the students who had been randomly selected by the researcher and issued them with headbands of the same color. These headbands were to help the researcher to easily identify the study subjects while they were participating in the race. The rest of the students were issued with headbands, which differed in color with those issued to the study subjects. The other skills in the performance test, that is goal keeping and goal scoring, were administered to the research subjects only. The researcher recorded the students’ performance personally.

Data Interpretation

The data collected were analysed by use of descriptive statistics. Frequencies, percentages and tabular representations of the data were used to analyse the data. The SPSS/PC computer package was used to analyse data.

Interview

The researcher rated the interview as follows: All responses which were positive (yes) for question items 5 - 8; were awarded ten marks (10), whereas, negative responses (no) for the same items were awarded zero (0). For question 9, the negative response was awarded ten marks and a positive response was awarded zero. For question 10, on the interview schedule the researcher awarded the responses as follows; very active -5points; active -4points; average -3points; lazy -2points; very lazy -1point.
The total score for each respondent was added together over a total of forty-five which signified the highest score one could obtain in this interview, and then a percentage calculated. The results were interpreted as follows:

0 - 30% ....... The teacher felt that the students' participation and feelings towards physical education was below average.

31 - 60% ....... The teacher felt that the students' participation and feelings towards physical education was average.

61 - 100% ....... The teacher felt that the students' participation and feelings towards physical education was above average.

Performance Test

There were three activities included in the performance test. They are the 100M race, goal scoring and goal keeping. Analysis of the performance test was done as follows:

For the 100M race, the researcher was mainly concerned with the position of the sampled students in each race. Below is a table of how the researcher interpreted the students' performance in the 100M race.

<table>
<thead>
<tr>
<th>Position</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
</tr>
</tbody>
</table>

40
The researcher used the values assigned to each position to be attained as shown on table 3.1 above. On the higher side, if the student attained the first position in the race, he/she would be awarded 5 marks, while on the lower side a student who finished in the last position in the race (the fifth position) would be awarded 1 mark.

The other activities in the performance test were scoring using the instep kick and goal keeping. The researcher considered the time factor, thus only the sampled students were involved in the two activities. Each of these students was given five trials in each activity; five trials in scoring using the instep kick and five trials in goal keeping. This ensured that each student had an opportunity to defend five shots. The researcher interpreted the goals scored as follows:

<table>
<thead>
<tr>
<th>No. of goals scored</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Each student in the sample was required to attempt to score five shots in this activity. The students were awarded marks for each shot they scored. For purposes of this study if a student scored 5 goals, this was on the higher side and was awarded 5 marks for the scores. If the student did not succeed to score any shot on the other hand, there was no marks awarded for this activity.

The third activity in the performance test was goal keeping. The students were required to defend five shots from entering the goal. For each of the shots defended by a sampled student, the researcher interpreted them as follows:

<table>
<thead>
<tr>
<th>No of goals defended</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

Table 3.3 shows the value of the shots defended. If the students managed to defend 5 shots he/she was awarded 5 marks, whereas, if the students defended none then no marks were awarded.
The total score in the performance test for each student included all the scores the respondent attained in the three activities. The highest score was between 10 – 15. The attainment of this score indicates high performance in the physical activities included in the performance test. Whereas, a score of between 0 – 3 indicated poor performance. The total score in the performance test for each respondent was interpreted as follows:

- Each student was given 5 trials in each activity and there were three activities included in the performance test, thus the highest score the student could attain was 15 (3 activities x 5 marks). For purposes of interpreting data for this study a score of between 10 – 15 was interpreted as high performance.

- Average performance in the performance test was interpreted by considering 3 marks as representing the average mark a student would score in each activity. Given that there were three activities, the student who attained a total of 9 marks (3 activities x 3 marks) was considered to have performed averagely. For purposes of this study, a student who attained marks between 4–9 was considered to have performed averagely in the performance test. Whereas,

- The lowest mark a student could attain in each activity was 0. Thus, considering that there were three activities, the lowest marks a student could attain in the performance test was 0 (3 activities x 0 marks). For purposes of this study, marks between 0 – 3 were considered as poor performance.
The Secondary School Students' Questionnaire (SSSQ) was a five point -Likert scale. The scale assumed equal intervals. For purposes of this study, the items with favourable statements had a value as shown below.

Table 3.4: Scale Value for Favourable Items on SSSQ

<table>
<thead>
<tr>
<th>Scales</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree (SA)</td>
<td>5</td>
</tr>
<tr>
<td>Agree (A)</td>
<td>4</td>
</tr>
<tr>
<td>Undecided (UD)</td>
<td>3</td>
</tr>
<tr>
<td>Disagree (D)</td>
<td>2</td>
</tr>
<tr>
<td>Strongly Disagree (SD)</td>
<td>1</td>
</tr>
</tbody>
</table>
For the negative statements, each of the five scales had values assigned as follows:

<table>
<thead>
<tr>
<th>Scales</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree (SA)</td>
<td>1</td>
</tr>
<tr>
<td>Agree (A)</td>
<td>2</td>
</tr>
<tr>
<td>Undecided (UD)</td>
<td>3</td>
</tr>
<tr>
<td>Disagree (D)</td>
<td>4</td>
</tr>
<tr>
<td>Strongly Disagree (SD)</td>
<td>5</td>
</tr>
</tbody>
</table>

The sum of the item credits represented each individual's total score. For the purposes of this study, the highest, neutral and lowest scores were interpreted as follows:

- The questionnaire had 20 items and the most favourable response of this Likert scale was "strongly agree" for the positive items and "strongly disagree" for the negative items. The value assigned to these responses was 5. Thus, if the respondents strongly agreed with the positive items and strongly disagreed with the negative items in the questionnaire then they were awarded the highest score of 100 (20 items x 5 marks). For purposes of this study, a score of between 61 - 100 indicated that the respondent had most favourable attitudes towards participation in physical education.
According to the Likert scale the neutral response was “undecided” for both the positive and negative items in the questionnaire. This responses was awarded a value of 3. Thus, if a respondent was undecided in each of the 20 items then he/she would have a score of 60 (20 items x 3). For purposes of this study, a score of between 40 - 60 indicated that the respondent had neutral attitude towards participation in physical education.

The lowest score in the questionnaire was 20. This was attained when the respondent responded “strongly disagree” for the positive items in the questionnaire and “strongly agree” for the negative items in the questionnaire. These responses were awarded a value of 1. Thus, if the student responded as strongly disagree for all the positive items and strongly agree for all the negative items they were awarded a score of 20 (20 x 1). For purposes of this study, a score of between 1 - 39 indicated that the respondents had the most unfavourable attitudes.

The SSSQ was useful in this study as it gave the respondents adequate time to select well - thought out answers. The researcher used this questionnaire to analyse the students' attitudes.

Spearman rank order correlation coefficient (Rho - P) was used to find out whether there was a relationship between secondary school students' attitudes towards physical education and their performance in physical activity. It provided an answer to the
research question that endeavoured to find out whether the students' attitudes affected their performance.

Two sets of test scores were used here. Scores on attitude of secondary school students and scores of their performance. These scores were ranked to obtain the correlation between the students' attitudes and their performance.

The coefficient of correlation from the data obtained was interpreted as follows;

- If the coefficient of correlation varied from a +1 to -1, it indicated a perfect positive relationship to a perfect negative relationship.
- If the coefficient of correlation varied between 0.0 and +1.0 then, this indicated lack of relationship.

The t-test was selected for analysing the difference between the boys and girls' attitudes towards participation in physical education activities. The t-test is best when dealing with differences, as it deals more with means and proportions. These were important when describing the data obtained. More so, the population distribution was compared in terms of variability, as well as their central tendency.
The t-test was utilised for testing the following hypothesis:

H0₁ There is no significant relationship between the secondary school students' attitudes and their performance in physical education.

H0₂ There is no significant difference between secondary school boys and girls in their attitudes towards participating in physical education.

H0₃ There is no significant difference between secondary school boys who attend day schools and those who attend boarding in their attitudes towards physical education.

H0₄ There is no significant difference between secondary school girls in day schools and those in boarding schools in their attitudes towards physical education.

The standard deviation (Std dev) was found by calculating the square root of variance (S). For each scale, the level of significance (P) was 0.05. The computed t – value was then compared with the critical value to decide whether the difference between the means was significant or not (Krathwohl, 1993).
CHAPTER FOUR
PRESENTATION OF DATA, INTERPRETATION AND DISCUSSION

This chapter presents the analysis of data, interpretation and discussion of the findings generated from this study, as well as observations from other related studies. This study focussed on the relationship between the students' attitude and participation in physical education based on; gender, and type of school. The SPSS computer package was used to analyse data for this study.

Characteristics of Schools Involved in the Study

This study set to establish whether there was any difference in attitude and participation in physical education for secondary school boys and girls. The schools selected for the study were stratified according to their type: boys' day schools, boys' boarding schools, girls' day schools, girls' boarding schools and mixed secondary schools. Table 4.1 presents the proportion of the students who took part in the study based on gender and type of school.

Table 4.1: Proportion of Students by Gender

<table>
<thead>
<tr>
<th>Type of School</th>
<th>Day</th>
<th>%</th>
<th>Boarding</th>
<th>%</th>
<th>Mixed</th>
<th>%</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>F</td>
<td>%</td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
</tr>
<tr>
<td>Male</td>
<td>60</td>
<td>25</td>
<td>20</td>
<td>8.33</td>
<td>40</td>
<td>16.67</td>
<td>120</td>
<td>50</td>
</tr>
<tr>
<td>Female</td>
<td>40</td>
<td>16.67</td>
<td>40</td>
<td>16.67</td>
<td>40</td>
<td>16.67</td>
<td>120</td>
<td>50</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>41.67</td>
<td>60</td>
<td>25</td>
<td>80</td>
<td>33.33</td>
<td>240</td>
<td>100</td>
</tr>
</tbody>
</table>
From table 4.1, a total of 240 secondary school students participated in the study. Among those, 120 (50%) were male students while 120 (50%) were female students. Sixty (60) male students comprising 25% of the total population were drawn from day secondary schools, whereas 20 (8.33%) were male students from boarding school. Forty (40) male students who comprised 16.67% of the total population were drawn from mixed secondary school.

This study involved 40 female students from day secondary schools. This was 16.67% of the sample population of the study. Female students in boarding school, who numbered 40, comprised 16.67% of the total population, whereas girls in mixed schools who numbered 40 comprised 16.67% of the sample population.

Secondary School Students Attitudes Towards Participation in Physical Education

This study set out to find out the attitudes of secondary school students towards participation in physical education. In order to achieve this a questionnaire (See appendix B) was used. The scores from the responses of the questionnaire were analyzed as follows:

- A score between 60 - 100 indicated that the respondents had favourable attitude towards participation in physical education.
- A score of 40-60 and above means that respondents maintained neutral attitudes towards participation in physical education. From this study’s findings, the mean for the sample was 77.24 as shown in table 4.2 below. This clearly indicates that
all the students have positive attitudes towards participation in physical education. The data collected were based on gender as well as type of school as shown in Table 4.2.

### Table 4.2: Summary of Findings of Secondary School Students Attitudes Based on Gender

<table>
<thead>
<tr>
<th>Type of School</th>
<th>f</th>
<th>Mean%</th>
<th>Std Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys Day</td>
<td>60</td>
<td>89.61</td>
<td>14.23</td>
</tr>
<tr>
<td>Girls Day</td>
<td>40</td>
<td>73.95</td>
<td>17.79</td>
</tr>
<tr>
<td>Boys Boarding</td>
<td>20</td>
<td>82.25</td>
<td>18.16</td>
</tr>
<tr>
<td>Girls Boarding</td>
<td>40</td>
<td>72.60</td>
<td>17.17</td>
</tr>
<tr>
<td>Mixed</td>
<td>80</td>
<td>70.67</td>
<td>16.77</td>
</tr>
<tr>
<td>Total cases</td>
<td>240</td>
<td>77.2417</td>
<td>16.84</td>
</tr>
</tbody>
</table>

From Table 4.2, the highest mean for attitude was positive. This was for boys in day school (89.61%) followed by boys in boarding schools (82.25%). These two categories were above the mean of the entire population (77.2417%) with a mean difference of 12.3683% and 5.0083% respectively. This indicates that secondary school boys have a more positive attitude, though the difference is slight. Findings of this study support Wamukoya's (1985) study which also established that students in Kakamega District, Kenya have positive attitudes towards participation in physical education and more so, that boys attitudes are significantly better than those of the secondary school girls.
From the computed means of the data collected from the girls, it is clear that girls in day schools have a significantly higher mean score in attitude towards participation in physical education with a score of (73.95%) than girls in boarding school (72.60%). This is so, though, their mean difference is 1.35%. This means that though there is a difference in their mean scores, their attitude towards participation in physical education does not vary very much from each other. The findings also reveal that secondary school girls have positive attitudes towards participation in physical education activities.

The girls mean score is however significantly lower than the mean for the entire population (77.2617). The students in mixed secondary schools scored a significantly lower score of 70.67% than the rest of the students. This mean varies from the mean of the entire population with 6.5%. Given the above, this study established that secondary school students in Nairobi Province have positive attitudes towards participation in physical education.

To establish whether there was a significant difference between secondary school boys' and girls' attitudes towards participation in physical education, data was collected by use of a questionnaire and table 4.3 presents the findings on attitudes of students towards participation in physical education based on t-test computation based on their gender. The t-test was a very vital investment when it came to comparing data. To find out whether there was any significant difference between the mean scores of secondary school students on participation in physical education, data was obtained from the Secondary school students' questionnaire, then the t-test was used to analyse the mean scores.
Table 4.3: Summary of t-Test Samples on Students Attitude Based on Gender

<table>
<thead>
<tr>
<th>Variable</th>
<th>f</th>
<th>Mean</th>
<th>SD</th>
<th>SE of mean</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys</td>
<td>120</td>
<td>84.9417</td>
<td>12.257</td>
<td>1.119</td>
<td>7.95</td>
</tr>
<tr>
<td>Girls</td>
<td>120</td>
<td>69.5417</td>
<td>17.324</td>
<td>1.587</td>
<td></td>
</tr>
</tbody>
</table>

The t-value is 7.95 at 238 degrees of freedom from the statistical computation from Table 4.3, whereas the critical value is 1.645. This indicates that the difference is significant at P<.05. Since the computed value of t was more than the critical value, the hypothesis (H0) which states that there is no significant difference between secondary school boys' and girls' towards participation in physical education was rejected.

This shows that there is a significant difference between gender and attitude. The findings indicates that although the boys had a significantly higher mean score (84.9417) than the girls (69.5417), they both hold positive attitude towards participation in physical education based on the fact that both of them fall between 61 – 100.

Summary of t-test for Independent Sample of Boys and Girls
The study set to find out whether there was a significant difference in attitude between secondary school boys who attend day schools and those who attend boarding schools within Nairobi province. The t-test was applied to the mean scores of secondary school
boys in the different category of schools obtained from the responses of the students towards the items in the questionnaire. Table 4.4 presents the findings of secondary school boys' attitudes in the different school categories towards participating in physical education.

**Table 4.4: Summary of t-test for Independent Sample of Boys**

<table>
<thead>
<tr>
<th>Category of School</th>
<th>F</th>
<th>Mean</th>
<th>SD</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day school</td>
<td>100</td>
<td>85.4800</td>
<td>10.747</td>
<td>1.08</td>
</tr>
<tr>
<td>Boarding school</td>
<td>20</td>
<td>82.2500</td>
<td>18.163</td>
<td></td>
</tr>
</tbody>
</table>

The computed value of t was found to be 1.08. The critical value of t was 1.66 at 0.05 levels of significance, with 118 degrees of freedom. Since the computed value of t was less than the critical value, the hypothesis (H₀) that states that there is no significant difference between secondary school boys who attend day schools and those who attend boarding schools has been accepted.

Thus, there is no significant difference in attitude between secondary school boys who attend day schools and those who attend boarding schools. Likewise, the t-test was utilized to find out whether there was any difference in attitude between secondary school girls in the different school categories. Table 4.5 presents the findings on secondary school girls attitudes towards participating in physical education.
Table 4.5: Summary of t-Test for Independent Sample of Girls Attitude

<table>
<thead>
<tr>
<th>School category</th>
<th>Cases</th>
<th>Mean</th>
<th>SD</th>
<th>t-Value</th>
<th>Df</th>
<th>2 tail significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day school</td>
<td>80</td>
<td>68.0125</td>
<td>17.306</td>
<td>-1.37</td>
<td>118</td>
<td>.173</td>
</tr>
<tr>
<td>Boarding School</td>
<td>40</td>
<td>72.6000</td>
<td>17.167</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The computed value of t was found to be -1.37. The critical value of t was 1.66 at p<.05 level of significance with 118 degrees of freedom. Since the computed value of t was less than that of the critical value, the hypothesis (H04) that states that there is no significant difference between secondary school girls in day schools and those in boarding schools in their attitudes towards physical education was accepted. This indicated that there was no significant difference in attitude towards participation in physical education between girls who attend day schools and those in boarding school.

Secondary School Students Performance in Physical Education

In order to find out the performance of secondary school students in physical education, a performance test was given to 240 sample students. The data collected were based on gender, as well as school category.

The performance test comprised three physical education skills. These included; the 100m sprint, goal scoring using the instep kick, and goal keeping. Table 4.6, presents the findings on the students' performance based on gender and school category.
Table 4.6: Summary of Findings on Students Performance in Physical Education Based on School Category and Gender

<table>
<thead>
<tr>
<th>School category</th>
<th>f</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys day school</td>
<td>60</td>
<td>10.6833</td>
<td>2.094</td>
</tr>
<tr>
<td>Girls day school</td>
<td>40</td>
<td>10.0500</td>
<td>2.1597</td>
</tr>
<tr>
<td>Boys boarding school</td>
<td>20</td>
<td>10.6500</td>
<td>1.4244</td>
</tr>
<tr>
<td>Girls boarding school</td>
<td>40</td>
<td>11.1250</td>
<td>1.8001</td>
</tr>
<tr>
<td>Mixed</td>
<td>80</td>
<td>11.375</td>
<td>1.9405</td>
</tr>
<tr>
<td>Total</td>
<td>240</td>
<td>10.800</td>
<td>1.9667</td>
</tr>
</tbody>
</table>

From table 4.6 above, the mean for the entire population was 10.800. The mean scores show the findings of secondary students in the performance test. Specifically, the mean scores have shown that students in mixed secondary schools performed the best with a mean of 11.375, standard deviation of 1.9667, this being above the mean of the entire population (10.800). Girls in boarding schools also performed above the mean for the entire population with a mean of 11.375 and standard deviation of 1.8001. They performed second best.

The study shows that these were the only categories of schools that performed above the mean of the entire population. This indicates that 120 students (50%) of the sample population performed highly in the performance test. Girls in day schools performed significantly lower in the test with a mean of 10.0500 and standard deviation of 2.1598,
though their mean (10.0500) did not vary very much from the mean of the entire population. The study shows that the mean for boys in day schools (10.6833) did not vary much from that of boys in boarding school (10.6500). The means for these two categories of schools varied from the mean for the entire sample population with a margin of 0.1167 for boys in day school, and 0.15 for boys in boarding schools.

Relationship Between Students' Attitudes Towards Participation in Physical Education and their Performance in Physical Education

The Spearman rank order correlation coefficient (Rho.P) was utilised to find out whether there was a relationship between secondary school students' attitudes towards physical education and their performance in physical education. Table 4.7 presents a summary of students' attitudes and performance in physical education.

Table 4.7: Summary of Students' Attitudes and Performance Scores

<table>
<thead>
<tr>
<th>Category of School</th>
<th>Mean of Attitude Scores</th>
<th>Std dev.</th>
<th>Mean of Performance Scores</th>
<th>Std. Dev</th>
<th>Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys' day</td>
<td>89.6167</td>
<td>14.2310</td>
<td>10.6833</td>
<td>2.0294</td>
<td>40</td>
</tr>
<tr>
<td>Boys' boarding</td>
<td>82.2500</td>
<td>18.1626</td>
<td>10.6500</td>
<td>1.4244</td>
<td>20</td>
</tr>
<tr>
<td>Girls' day</td>
<td>73.9500</td>
<td>17.7893</td>
<td>10.0500</td>
<td>2.1597</td>
<td>40</td>
</tr>
<tr>
<td>Girls' boarding</td>
<td>72.6000</td>
<td>17.1671</td>
<td>11.1250</td>
<td>1.8001</td>
<td>40</td>
</tr>
<tr>
<td>Mixed school</td>
<td>70.6750</td>
<td>16.7731</td>
<td>11.1375</td>
<td>1.9405</td>
<td>80</td>
</tr>
<tr>
<td>Total cases</td>
<td>77.2417</td>
<td>16.845</td>
<td>10.800</td>
<td>1.9667</td>
<td>240</td>
</tr>
</tbody>
</table>
The scores from Table 4.7 were tabulated and analysed by use of Spearman Rank Order Correlation Coefficient to find out whether there was a relationship between the students' attitudes towards participation in physical education and their performance. The computed score for the relationship between the two variables was $-0.0471$ for the 240 students at a significance level of .468. This indicated that there was a very small correlation between the two variables. In addition, the negative value implies that the correlation between the performance score and attitude is inversely related. It is not significant at 95% confidence level as it gave a significance level of 0.468.

From the present statistical computations, there are grounds for rejecting the hypothesis $H_0$ which states that there was a significant relationship between secondary school students' attitudes and their performance in physical education. This study's findings support Lapiere (1934), and Wicker (1963) and Dillehey (1973) who failed to find a positive correlation between measures of attitude and behaviour.

**Teachers' Interview Schedule**

The researcher used an interview schedule to collect information from physical education teachers, one from each of the schools that were used in the study. The interview schedule allowed the interviewer to follow up the secondary school students' answers and to obtain additional information from the physical education teachers.

The interview schedule for physical education teachers, see (appendix A) was used to gather more information from the physical education teachers concerning issues such as students' participation, punctuality during physical education lesson, dress code and
their attitudes towards physical education. Krathwol (1993) states that the interview makes it possible to obtain information that would not be revealed by other data collection instruments.

It was established from the data collected from the physical education teachers that secondary school students hold positive attitudes towards participating in physical education. Ten teachers (83.33%) strongly responded that their students enjoyed participating in the physical education lesson. Physical education teachers stated that their students' participation varied from lesson to lesson. According to the ten physical education teachers, the students punctually attended the physical education lessons. These teachers also indicated that the students did not request to be given the physical education lesson to learn or concentrate on other subjects.

Eight (66.67%) of the physical education teachers revealed that their students always came dressed appropriately in their games kits, ready to participate in the physical education activities. Four teachers (33.33%) on the other hand revealed that their students did not dress appropriately in games kits.

**Attitude and Gender**

The present study found that secondary school boys in boarding schools, as well as, in day school hold positive attitudes towards participation in physical education. The boys scored a significantly higher mean score in the students' attitude questionnaire. Most scholars have indicated that females' attitudes towards participation in physical education activities have been affected by distorted beliefs about the harmful physical
effects of sport participation for women. Mbaabu (1997) found out that Kenyan women athletes have mixed attitudes towards competitive sports; this is because they feel that active involvement in athletics may induce masculinity.

From this study, it is evident that the way a person feels about something is often determined in most cases by previous associations with the attitudinal object. This study went out to investigate how the students perceived the past participation in physical education lessons. The students' questionnaire (SSSQ) had item (no.12) which stated that physical education is enjoyable and stimulating. This item shed light about the students past lessons, how the students perceive participation in physical education lessons. Table 4.8 below shows the students' responses to item 12 from the students' questionnaire.
Table 4.8: Summary of Students Responses Towards Item 12 of the Secondary School Students Questionnaire (SSSQ)

<table>
<thead>
<tr>
<th>School category</th>
<th>f</th>
<th>SA</th>
<th>%</th>
<th>A</th>
<th>%</th>
<th>UD</th>
<th>%</th>
<th>D</th>
<th>%</th>
<th>SD</th>
<th>%</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys' Day</td>
<td>60</td>
<td>52</td>
<td>86.67</td>
<td>4</td>
<td>6.67</td>
<td>2</td>
<td>3.33</td>
<td>2</td>
<td>3.33</td>
<td>0</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Boys' boarding</td>
<td>20</td>
<td>12</td>
<td>60</td>
<td>8</td>
<td>40</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Girls' Day</td>
<td>40</td>
<td>27</td>
<td>67.5</td>
<td>8</td>
<td>20</td>
<td>3</td>
<td>7.5</td>
<td>1</td>
<td>2.5</td>
<td>1</td>
<td>2.5</td>
<td>100</td>
</tr>
<tr>
<td>Girls' boarding</td>
<td>40</td>
<td>18</td>
<td>45</td>
<td>13</td>
<td>32.5</td>
<td>5</td>
<td>12.5</td>
<td>1</td>
<td>2.5</td>
<td>3</td>
<td>7.5</td>
<td>100</td>
</tr>
<tr>
<td>Mixed school</td>
<td>80</td>
<td>56</td>
<td>70</td>
<td>12</td>
<td>15</td>
<td>7</td>
<td>8.75</td>
<td>3</td>
<td>3.75</td>
<td>2</td>
<td>2.5</td>
<td>100</td>
</tr>
<tr>
<td>Total cases</td>
<td>240</td>
<td>165</td>
<td>68.75</td>
<td>45</td>
<td>18.75</td>
<td>17</td>
<td>7.08</td>
<td>7</td>
<td>2.92</td>
<td>6</td>
<td>2.5</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 4.8, shows that 87.5% of the study sample strongly agreed that they found physical education enjoyable and stimulating.

**Gender and Performance**

The findings of this study reveal that secondary school girls' performance in physical education activities is better than that of secondary school boys though, the boys had a significantly higher mean in their attitude towards participation in physical. Malumphy (1968) also found in their study that college women had high regard for the social,
physical and mental benefits that are derived from physical education, thus they participated very actively in physical education activities.

This study's findings regarding participation in physical education between boys and girls, however, differ from Wamukoya (1985) study, which established that secondary boys performed better than girls. Wamukoya states that this was not an unusual conclusion for boys to participate better than girls for they had greater opportunity to participate in physical activities, through planned physical education activities, both in and outside the schools.

The findings of this study reveal that secondary school students' performance is high and above average. For purposes of this study, all the scores for the three activities included in the performance test were all added together to get a total score for each student. More importantly, the scores were interpreted as follows; A score of 15, indicated that the respondent has performed highly, whereas, a score of 9, could be interpreted as average performance and a score of 3, indicated that the respondent had performed very poorly.

This study's findings indicate that the mean for the respondents were all above average performance, for the least mean was for girls in day schools (10.500). This was significantly above 9, which was the score that indicated that the respondents have performed averagely.
Attitudes and Performance

In summary, findings of this study reveal that there was a very small correlation between the secondary school students' attitudes and their participation in physical education. This study concurs with Wamukoya's (1985) study, which states that participation in physical education does not necessarily result in favourable attitudes. It can be concluded that it is not easy to deduce the students' performance from their attitudes.

Rosenberg and Hovland (1960) state that the best way to predict an individual's response towards a stimulus is to know their attitude towards it. This study reveals that it is not always easy to determine an individual's response towards a stimulus from their attitudes. It was expected that students who had positive attitudes towards participation in physical education would have performed highly in physical education activities. This study, however, shows that this is not always the case.

Status of Physical Education

From this study, it is observed that the secondary school students did not consider other school subjects more important than physical education. Table 4.9, shows the students' responses towards item 7 which states that other subjects are more important than physical education.
Table 4.9: Summary of Students’ Responses towards Item 7 on the Students’ Attitude Questionnaire

<table>
<thead>
<tr>
<th>School Category</th>
<th>Cases</th>
<th>SA</th>
<th>%</th>
<th>A</th>
<th>%</th>
<th>UD</th>
<th>%</th>
<th>D</th>
<th>%</th>
<th>SD</th>
<th>%</th>
<th>Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys’ Day</td>
<td>60</td>
<td>2</td>
<td>3.33</td>
<td>1</td>
<td>1.67</td>
<td>2</td>
<td>3.33</td>
<td>5</td>
<td>8.33</td>
<td>50</td>
<td>83.34</td>
<td>100</td>
</tr>
<tr>
<td>Boys’ boarding</td>
<td>20</td>
<td>1</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>10</td>
<td>4</td>
<td>20</td>
<td>13</td>
<td>65</td>
<td>100</td>
</tr>
<tr>
<td>Girls’ Day</td>
<td>40</td>
<td>3</td>
<td>7.5</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>2.5</td>
<td>6</td>
<td>15</td>
<td>30</td>
<td>75</td>
<td>100</td>
</tr>
<tr>
<td>Girls’ boarding</td>
<td>40</td>
<td>1</td>
<td>2.5</td>
<td>1</td>
<td>2.5</td>
<td>0</td>
<td>0</td>
<td>8</td>
<td>20</td>
<td>30</td>
<td>75</td>
<td>100</td>
</tr>
<tr>
<td>Mixed school</td>
<td>80</td>
<td>2</td>
<td>2.5</td>
<td>6</td>
<td>7.5</td>
<td>8</td>
<td>10</td>
<td>24</td>
<td>30</td>
<td>40</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>Total cases</td>
<td>240</td>
<td>9</td>
<td>3.75</td>
<td>8</td>
<td>3.33</td>
<td>13</td>
<td>5.42</td>
<td>47</td>
<td>19.58</td>
<td>163</td>
<td>67.92</td>
<td>100</td>
</tr>
</tbody>
</table>

From the computation in table 4.9, it is evident that 210 students, (87.5%) of the entire student population feel that physical education is just as important as any other school subjects. Out of the 240 students, 163 (67.92%) students strongly disagreed with item 7, which states that other subjects were more important than physical education.

Nine students (3.75%) of the students involved in the study strongly agreed with item 7. This means that they felt that other school subjects are more important than physical education. Thirteen students (5.42%) were undecided on whether physical education was as important as other school subjects.
This study differs with Lumalla's (1985), which revealed that students, as well as teachers concentrated more on examinable subjects and relegated non-examinable subjects as less important to their lives. This study sought to find out whether students' feelings regarding physical education, which is a non-examinable subject differed from other school subjects. The study established that the students felt that physical education was equally important to their total development as the other subjects in the curriculum.

Chapter four presents an analysis and interpretation of data collected. The data analyzed included data concerned with attitudes secondary school students had developed compared to their participation in physical education. Other data analyzed included comparison of secondary school boys' attitudes towards participation in physical education, as well as for the secondary school girls. The comparison between gender was done according to the different school categories, which were day schools and boarding schools.
CHAPTER FIVE
SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter presents the summary of the findings, conclusions drawn from the findings and recommendations based on the findings.

Summary of the Findings

This study was mainly concerned with investigating attitudes secondary school students in Nairobi Province have towards participating in physical education. The variables of study included students' attitudes and performance based on gender and school category.

The study involved an analysis of data derived from 240 subjects (120 males and 120 females) selected from twelve secondary schools in Nairobi Province. The computed means of the boys and girls' attitude towards participation in physical education were analysed using t-test to establish the differences, likewise the t-test was utilised to find out the differences in attitude of boys independently, as well as for the girls based on the school category.

Spearman Rank Correlation Coefficient was utilised to find out the relationship between the students' attitudes towards participation in physical education and their performance in physical education. In order to establish the relationship between the students' attitudes and performance in physical education, the researcher sought answers to the following questions:

66
• What attitude do the secondary school students hold towards participation in physical education?

• Is there a significant difference in attitude between secondary school boys and girls towards participation in physical education?

• Do the students' attitude affect their performance in physical education?

• Is there a difference in attitude between secondary school boys who attend day school and those in boarding schools towards participating in physical education?

• Is there a difference in attitude between secondary school girls who attend day schools and those who attend boarding schools towards participating in physical education?

The major findings of the study are as follows:

• There is a small correlation between the students' attitudes and their performance. The Spearman Rank Correlation Coefficient score for performance and attitude is -.0471 for 240 students at a significance level of .468. This implies that it is not significant at 95% confidence level, as it gives a significant value of .468. The findings of this study reveal that there is no relationship between attitudes and participation.

• There is a significant difference between gender and attitude. This means that there is a difference between secondary school boys and girls' attitudes towards participation in physical education.

• There is no significant difference between attitude towards participating in physical education of boys in day schools and those in boarding schools.
• There was no significant difference between attitudes towards participating in physical education of girls in day schools and those in boarding schools.

The findings of this study established that, secondary school students in Nairobi Province feel that physical education is as important as the other subjects. Furthermore, this study reveals that positive attitudes towards physical education do not necessarily indicate high performance from an individual and vice versa.

This study reveals that gender was a significant factor when determining attitudes secondary school students had developed towards participating in physical education. The other factor concerning category of school was not so significant, as the data collected from independent gender (boys/girls) in the different categories of school did not vary significantly from each other.

Conclusion

This study reveals that secondary school students have positive attitude towards participation in physical education. The study reveals that there is a very small correlation between the students' attitude towards participation in physical education and their actual performance in it.
The following conclusions were also drawn from the findings of this study:

- Secondary schoolboys' attitudes towards participation in physical education are significantly higher than that of secondary school girls. The study's findings reveal that the boys in day schools scored a mean of 89.61%, followed by boys in boarding schools with a mean of 82.25% as compared to the mean for the entire population of 77.24%.

- Students in mixed secondary school scored a significantly lower mean in attitude towards participation in physical education as compared to students from the single sex schools. The study's findings reveal that they scored a mean of 70.67%, however, this was still a most favourable attitude towards participation in physical education as their mean score falls between 61 – 100. For purposes of interpretations in this study any score that falls between these scores are interpreted as most favourable attitudes.

- Students in mixed secondary school performed significantly higher in the performance test than the rest of the students. The findings of this study reveal that the students in mixed schools scored a mean of 11.375.

- Secondary school girls performed significantly lower in the performance test than the other students. The girls in day school scored a mean of 10.0500, while those in boarding schools scored a mean of 11.1250. Though, their mean was significantly lower than the others, their performance is termed as high performance as they fall between 10 – 15.

- Secondary school students do not feel that other school subjects are better than physical education.
Secondary school students' attitudes towards participation in physical education in Nairobi are typical with those of students in kakamega district.

**Recommendations for Further Research**

For purposes of establishing future attitudes of secondary school students towards physical education, it is recommended that the following studies be carried out:

- A study should be carried out to find out the factors that hinder good performance in physical education activities in girls day secondary schools.
- An empirical study be carried out to establish the students' attitudes after completing their secondary school education. This should include information as to whether physical education played a role to their success or failure in their school life.


73


APPENDIX A

Interview Schedule for Physical Education Teachers

1. Name of school

2. Sex

3. Professional qualifications, (graduate, diploma, etc.)

4. No of years you have taught physical education

5. Do all the students in class participate in physical education lesson? if no, how many don’t on average?

6. Do your students report punctually for the physical education lesson?

7. Do your students prepare for the P.E by changing into their games uniform during the physical education lesson?

8. Do all the students participate in the physical education activities? if no, why?

9. Do your students request you to give them the physical education lesson to finish their class work or be taught another subject? if yes, how often

10. How would you rate your students’ participation during the physical education lesson, (very active, active, average or lazy?)
APPENDIX  B.

Secondary School Students’ Questionnaire (SSSQ)

Dear Student,

Congratulations, you have been randomly selected to participate in this study which is investigating attitudes of secondary school students towards participation in physical education in Nairobi province.

You are requested to fill the attached questionnaire. This is not a test; your answers will be kept confidential. Do not talk to anyone else about what answer you should give. The only right answers are the ones that describe you best. You are the only one who knows what the right answers are for you. You are requested to answer all the items in the questionnaire honestly and truthfully as they apply to you alone. Please answer all items in the questionnaire.

You do not need to put your name on your questionnaire. Please read each question in turn, and do not think too long before you answer. If you make a mistake, cross it out clearly and put it in the right answer. The answers will be used for research purposes only. Thank you in advance.

Yours sincerely,

AGNETTA MAKHOHA
P.E ATTITUDE SCALE FOR SECONDARY SCHOOL STUDENTS.

Please answer all the items.

1. Age

2. Class

3. Gender (male, female)

4. Date

Instructions:
- Each of the statements in this section, express a feeling or attitude towards physical education.
- Please answer all items in this section by selecting only one of the alternatives provided at the end of each statement.
- The alternatives will include the following alternatives and their abbreviations:
  - Strongly Agree (SA), Agree (A)
  - Undecided (UD), Disagree (D)
  - Strongly Disagree (SD)
- Draw a circle around the abbreviation of the alternative you have selected.
<table>
<thead>
<tr>
<th></th>
<th></th>
<th>SA</th>
<th>A</th>
<th>UD</th>
<th>D</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Physical education is not a very interesting subject</td>
<td></td>
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<td>2.</td>
<td>I want to learn physical education skills</td>
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<td>3.</td>
<td>Physical education is a very worthwhile subject</td>
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<td>4.</td>
<td>Physical education makes me feel uncomfortable and</td>
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<tr>
<td></td>
<td>nervous</td>
<td></td>
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<td>5.</td>
<td>I usually enjoy participating in physical education at school</td>
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<td>6.</td>
<td>I don not want to take any more lessons in physical education</td>
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<tr>
<td></td>
<td>than I absolutely have to</td>
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<td>7.</td>
<td>Other subjects are more important to me than physical education</td>
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<td>8.</td>
<td>I like learning new skills in physical education</td>
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<tr>
<td>9.</td>
<td>I have never liked participating in physical education</td>
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<td>10.</td>
<td>I am not motivated to participate actively in physical education lessons</td>
<td>SA</td>
<td>A</td>
<td>UD</td>
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<td>SD</td>
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<td>11.</td>
<td>Physical education helps develop the mind and body of a person</td>
<td>SA</td>
<td>A</td>
<td>UD</td>
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<td>SD</td>
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<td>12.</td>
<td>Physical education is enjoyable and stimulating</td>
<td>SA</td>
<td>A</td>
<td>UD</td>
<td>D</td>
<td>SD</td>
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<tr>
<td>13.</td>
<td>Physical education makes me feel uneasy and confused</td>
<td>SA</td>
<td>A</td>
<td>UD</td>
<td>D</td>
<td>SD</td>
</tr>
<tr>
<td>14.</td>
<td>I am not willing to participate in physical education activities, if I were to be given a chance</td>
<td>SA</td>
<td>A</td>
<td>UD</td>
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<td>SD</td>
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<td>15.</td>
<td>Physical education is not especially important to everyday life</td>
<td>SA</td>
<td>A</td>
<td>UD</td>
<td>D</td>
<td>SD</td>
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<tr>
<td>16.</td>
<td>Participation in physical education does not make me feel anxious</td>
<td>SA</td>
<td>A</td>
<td>UD</td>
<td>D</td>
<td>SD</td>
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<tr>
<td>17.</td>
<td>Physical education is dull and boring</td>
<td>SA</td>
<td>A</td>
<td>UD</td>
<td>D</td>
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<td>18. Physical education has contributed greatly to my health</td>
<td>SA</td>
<td>A</td>
<td>UD</td>
<td>D</td>
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<td>19. Physical education is one of the dreadful subjects in the school curriculum</td>
<td>SA</td>
<td>A</td>
<td>UD</td>
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<td>SD</td>
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<td>20. I don not get upset when I cannot execute a new skill in Physical education</td>
<td>SA</td>
<td>A</td>
<td>UD</td>
<td>D</td>
<td>SD</td>
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</table>
Dear Sir/Madam,

RE: PERMISSION TO CARRY OUT A STUDY IN YOUR INSTITUTION

I am a second year postgraduate student in the Department of Educational administration, Planning and Curriculum Development, Kenyatta University. I am carrying out a study on the attitudes of secondary school students towards participation in physical education in Nairobi secondary schools. I intend to carry out this study because, physical education is an important subject in the curriculum and it is vital to know the students feelings’ and attitudes towards it.
Your school has been randomly selected to be included in the sample study. I hereby request you to allow me to carry out the study in your institution. I am going to use questionnaires, interview and direct observation as the instruments for collecting the data required for the study. The answers and responses to be collected will be private and confidential and will only be used for research purpose. The co-operation of the students, physical education teacher(s) as well as yours will be highly appreciated.

Thank you in advance.

Yours faithfully

A.M SAKWA