UNIVERSITY OF EDUCATION, WINNEBA

ESTABLISHING RELATED FITNESS FOR MOTOR SKILL FOR SENIOR HIGH SCHOOL STUDENTS: A CASE STUDY IN BUILSA DISTRICT IN UPPER EAST REGION OF GHANA

KINGSLEY AKANGIRI AZANTILOW

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JANUARY, 2013.

DECLARATION

STUDENT'S DECLARATION

I, Azantilow Kingsley Akangiri, declare that this dissertation with the exception of quotations and references contained in published works which have all been identified and duly acknowledged, is entirely my own original work and it has not been submitted, either in part or whole, for another degree elsewhere.

SIGNATURE.....

DATE.....

SUPERVISOR'S DECLARATION

I hereby declare that the preparation and presentation of this work was supervised in accordance with the guide lines on supervision of dissertation as laid down by the University of Education, Winneba.

NAME OF SUPERVISOR.....

SIGNATURE.....

DATE.....

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DEDICATION

I dedicate this work to my late father, Nab, Dr Ayieta Azantilow, my mother and to my beloved family

TABLE OF CONTENTS

LIST OF TABLES

ABSTRACT

The purpose of the study was to establish related fitness for motor skills for students in the Sandema and Fumbesi schools in the Builsa district and whether taking part in physical activities during Physical Education lessons will help improve their related fitness for motor skills. This study involved 700 final year students comprising of 400 males and 300 females in Sandema SHS and 400 final year students in Fumbisi SHS in the Builsa District.

The researchers employed two types of instruments, the modified University of Illinois six motor tests were design by Corbin, Lindsey and Welk (2000) in Illinois, United State of America and Scale of motor skills related Attitude Questionnaire to collect the data. The 6-item motor test was designed to detect the participants‟ motor skill related fitness along the dimensions of Strength, Coordination, Speed and reaction time and the questionnaires were used to find the participants‟ attitudes towards motor skills related activities. The results of the test were coded and the statistical package for social sciences P.C windows 18.0 statistical software was used for the data analysis

Students showed positive attitude towards all the variables measured. Implications of the findings were discussed and recommendations made.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Early adolescence is a unique and fascinating period in human development. This period of great transition marks the end of childhood and the introduction into young adulthood. As children make the transformation into adults many developmental changes will occur. Because early adolescence is a time of metamorphosis from childhood to adulthood, it serves as a ripe opportunity for young people to establish patterns and habits that could continue into the future. One such pattern is the choice to initiate and maintain a physically active lifestyle. Earlier researchers (Dishman 1988; Covey & Feltz, 1991; Kuh & Cooper, 1992; Calfas & Taylor, 1994; Biddle, 1995; Lee, 1995) had it that, Individuals who are physically active during adolescence are more likely to be physically active during adulthood. This is of eminent importance due to the recent surge in research substantiating the health related benefits that come to those who consistently maintain a physically active lifestyle (Krouscas, 1999). With this in mind, health professionals are alarmed at the decrease in levels of physical activity that begin during early adolescence and continue throughout adolescence.

Krouscas (1999) indicated in his research that a Student attitude toward physical education has been under investigation since the 1930ʻs. Traditionally, the purpose of such inquiry has been to identify factors that contribute to positive and negative feelings toward physical education. Investigators believed that having such information would improve the quality of physical education by allowing teachers to consider student insights when making curricular or program decisions. Subsequently, research in this area

has been plentiful. According to Krouscas, The preponderance of attention, however, has focused on college (Alden, 1932; Bullock & Alden, 1933; Bell & Walters,1953; Keogh, 1962 Brumbach, 1968; Brumbach & Cross, 1965; Campbell, 1968; Figley, 1985;) and high school students (Carr, 1945; Earl & Stennett, 1987; Luke & Sinclair, 1991; Rice, 1988; Tannehill, Romar, Sullivan, England, & Rosenberg, 1994). The few studies conducted on junior high and middle school students indicate that positive attitudes toward physical education appear to be strongest at the sixth grade level for both boys and girls. With each passing grade, however, attitudes toward physical education become less favorable (King, 1994). Although this attitudinal decline transpires in both genders, it is more severe in girls (Treanor, Graber, Housner, & Wiegand, 1998).

The identification of possible factors which contribute to students overall attitude towards physical education have varied. In one of the earliest studies in this topic, Nemson (1949) while attempting to identify specific annoyances that lead students to have negative feelings toward physical education, discovered that boys with positive attitudes towards physical education were most irritated by the personal hygiene of the physical education teacher (e.g. smell of tobacco on the breath of the teacher). Conversely, boys who were categorized as having a poor attitude by their teacher were most annoyed with the requirement of having to take physical education. More recently Tannehill and Zakrajsek (1993) reported winning, success, performing well, being included, teamwork, participating and having fun as the factors which many middle and high school students associate with positive physical education experiences. On the other hand, negative experiences related to fitness exercises and injuries. Carlson (1994) found student attitudes toward physical education were influenced by culture (gender, idolization of

elite sports figures), society (family, mass media, sporting experience, skill level, peers, previous physical education experiences, and perceptions of fitness), and school (teacher influence). Additional research in 1995 set out to describe and analyze what students think, feel, and know about various aspects of their physical education programs (Graham, 1995).

Researchers found that 21% of junior high school students sampled, strongly disagreed with the statement, "I enjoy gym class". Reasons for discontentment included: irrelevant subject matter, perceived lack of ability, public display of athletic inadequacy, uneasiness with competition, and feelings of isolation (Carlson, 1995). Portman (1995) while studying unskilled sixth-graders also found that physical education was an unpleasant experience which led to feelings of isolation, embarrassment, and humiliation. Based on this literature it is apparent that for some junior high or middle school students physical education is a miserable experience, while for others this content area is enjoyable and worthwhile. In either case, as students progress through each grade overall attitudes towards physical education decrease. This is especially noteworthy, when considering the decline in physical activity that transpires during adolescence. In other words, as adolescents age, attitudes toward physical education become less favorable and levels of physical activity decrease. The parallelism of these two trends, indicate the importance of providing a physical education experience which will encourage young adolescents to initiate and maintain a physically active lifestyle. However, in order to provide meaningful physical education experiences for middle school students‟ additional research investigating student attitudes toward middle school physical education must be undertaken.

The development of motor skills is a fundamental part of human‟s movement, especially to children. Many research work that shows that Proficiency of gross motor skills in early years is a foundation to the introduction of physical fitness and the development of more advanced and specific movement skills in later life include; Bouchard, McPherson, Taylor, Gallahue & Qzmun, cited in Kwan, 2009 . All over the world, physical education is introduced in schools to help improve physical fitness and the development of more advanced and specific movement skills in later life According to Pufaa, Agbeko, Amui (2009), physical education was introduced into Ghana through the schools by our colonial masters. However, the pre-colonial Ghanaian had various mediums of activities through which the body was exercised. Throughout the years, many leaders in the field have articulated the goal and objectives of physical education and sporting activities were not widespread in the then Gold Coast colony as we know today. In many parts of Ghana, and indeed in some other parts of the world too, there has been a misunderstanding of the meaning of physical education and physical related fitness activities. Physical education is an educational process that has as its aim the improvement of human performance and enhancement of human development through the medium of physical activities selected to realize this outcome (Wuest and Bucher 1995). There are overwhelming benefits of physical education to the individual, society and the nation as a whole. This view point as stated in Wuest et al shows that the goals of physical education are to enhance human development and to improve human performance by assisting each individual to develop the skills, knowledge, and attitudes that will lead to a lifetime of participation in physical activities. Therefore, the objective of every school including Sandema Senior High

School and Fumbisi Senior High Schoool is for the development of attributes such as physical fitness, motor skills, cognitive skills, and affective domain skills.

Sandema Senior High School and Fumbisi Senior High School are located in the Builsa district in the Upper East Region. Sandema Senior High School was established in 1994 as a day Secondary School with a student enrolment of eighty-six (86). Mr Ndamba Yakubu was the first Headmaster of the school. The school was given boarding status in 2006. The enrolment of the school as at now is 2099, with girls, 1019 and boys, 1080. The school performed very well in the sporting activities in the Region and National level as well. In 2011 School and Colleges Sports, Sandema Senior High took first in the Milo games, Athletics Boys and Girls first, Cross Country Boys first Girls second, Handball Boys second, and Girls first, Volley, Boys second and Girls second, Basketball third. During 2011 sports festival in Tamale all those who performed very well for the Region were from Sandema Senior High School.

Fumbisi Senior High Agricultural School was established in 1990 as a community day school with a student enrolment of 23 students. The school now has an enrolment of 907 students. Fumbisi Senior High Agricultural School is also doing very well in the sporting activities organized in the region. In 2011 the Girls were first in cross country and at the Zonal level the Boys were first in football. Even though majority of the community members are farmers educating their wards is a priority. The performance in sports of these two schools in the region is above average. The region gets most of its sports boys and girls from Sandema Senior High School and Fumbisi Senior High School. Several

activities go on in these two schools but what is the level of motor skill related fitness in students of these schools.

Fitness is central to our health and our sense of well-being health and fitness means so much more than just the absence of illness, according to Beashel, Sibso, Taylor (1997). If we are healthy and fit then the physical, mental, cultural and social aspects of our lives are working together. Fitness is crucial to success in sport. It is essential for us to look at the particular demands of our sport and identify in what ways we need to develop our fitness.

Physical fitness consists of health-related fitness and sport-related fitness. Health related fitness is the minimum level of physical fitness that we all need in order to have good health. We need to be clear about what we mean by the good health and physical fitness, Sport related fitness is the level of physical fitness necessary to take on the demands of regular sporting activity. Although we may be fit from health related point of view we may not be fit for sport. There are many different kinds of sporting activities and each makes its own particular demands on the body. For example, the fitness required to be a table tennis player is totally different from the fitness demands for the triathlon.

To be successful in most sport, it is important to have health related fitness. It is also important to be as fit as possible in a number of additional areas; speed, agility coordination. There is therefore the need to establishe motor skill related fitness levels of sample of Senior High School (Sandema Fumbisi) whose students‟ involves in PE and find out whether physical activities improve motor skill related fitness

1.2 Statement of the Problem

In recent years there has been mounting evidence that supports the health related benefits that are gained by individuals who engage in moderate levels of physical activity. Governmental organizations and non-governmental organization such as Ghana nestle company limited for Milo games, unilever Ghana limited, keep fit clubs and the like has been a landmark in promoting programmes and other activities for quality life. Unfortunately, as the research supporting the benefits of physical activity becomes more apparent, many segments of our population are still not adhering to the call, opting instead for a sedentary lifestyle. One group in particular that is of great concern to health professionals is young people between the ages of 12-21. In Ghana such age group are found JHS and SHS. Research has shown that levels of physical activity begin to decrease starting at age 12 and continue decreasing throughout adolescence (United States Department of Health and Human Services cited in Krouscas 1999). In an attempt to combat the levels of sedentary lifestyles that are plaguing many of our young people, health professionals are calling upon JHS and SHS physical education to equip students with the skills and knowledge necessary to become physically active for a lifetime.

In order for physical education to accomplish this goal, it is essential that student attitudes be considered when making curricular and programme decisions. Up to this point, student voices have been rarely considered--this is especially true for SHS students‟ involvement in sports. Subsequently, little is known about which aspects of SHS physical education evoke subjects attending SHS in Builsa District

Fitness is central to our health and our sense of well-being. Health and fitness means so much more than just the absence of illness (Beashel, Sibso, Taylor, 1997). From the

researcher‟s experience as a physical education teacher in the upper east region, most schools do not have Physical Education on their time table. Even the few that have it on their time table use it to teach other subjects or a free time for students to do their own thing. Never the less when it comes to time for inter-school games and athletics, the story is different. Students in Sandema Senior High and Fumbisi Senior High Schools usually exhibit some potential motor skill related fitness when it comes to sporting activities. The general aim of physical education in schools is to bring about harmonious development of the student. This development includes insuring that the student is physically fit through physical activities and motor skills performance. The physical education syllabus provides an evaluation of both the physical and motor skill fitness level of the student. The important role motor skill related fitness plays in physical activities cannot be over emphasized. However, many Senior High Schools in Ghana failed to utilize physical education periods on the time table meaningfully. Therefore, this study is to establish motor skill related fitness levels of sampled students involve and to find out the extent in differences of motor health related fitness between male and female students in the Builsa district.

1.3 Purpose of the Study

The purpose of the study were to:

1. Establish Related Fitness for Motor Skills for students in the Sandema and Fumbisi schools in the Builsa district
2. to find out students‟ attitude towards establish related fitness for Motor Skills in the Sandema and Fumbisi schools in the Builsa district and whether

taking part in physical activities during Physical Education lessons helped improve their related fitness for motor skills.

The study specifically establishes related fitness for motor skills along the following dimensions:

- ❖ Coordination
- ❖ Strength
- ❖ Speed and reaction time
- ❖ Endurance

1.4 Research Questions

1. What is the level of establish related fitness for Motor Skills of students in the Sandema and Fumbisi schools in the Builsa district?
2. What is students‟ attitude towards motor skill performance in the Sandema and Fumbisi schools in the Builsa district?

1.5. Significance of the Study

The results of the study will provides data in the topic as well as helps to understand the related fitness for motor skills of students in the Builsa District.

Establish a baseline from which students could set targets and check progress. Hence, the students are the immediate beneficiaries of the study

Help students to experience and better understand the components of motor skill related fitness in their daily activities

The study can be beneficial to physical education teachers and coaches. As it provide useful information for physical educators for planning physical activities for children in different level of motor skills. Moreover, the results of the test will also help teachers to identify potential student athletes who are likely to succeed in various types of sports performances and provide opportunities for them to participate in physical activities.

1.6 Delimitations

The study was delimited to first year Senior High School students from Sandema and Fumbisi in the Builsa District in the Upper East Region. Other aspect of fitness were not considered

1.7 Limitations

The study was limited by the following factors:

1. Due to the small sample size (two schools), the result of the study could not guarantee a good generalization.
2. Learning effect might occur as the first people practicing, those to come later watched and practice before actual assessment in each motor skill, this could affect the result of the study.
3. The participants might learn from others‟ experience and this might lead to a learning effect.
4. The participants‟ attitude toward the test might affect the results of the study.
5. The ages of participants were uncontrollable.

1.10 Organisation of the study

This study was to establish motor skill related fitness of students in the Sandema and Fumbisi schools in the Builsa district and whether taking part in physical activities during Physical Education lessons will help improve their motor skill related fitness. The introductory chapter of this work includes background to the study which explains the background of the research problem, the importance of Physical Education lessons and the need for the establishment of motor skill related fitness and the need for the study. This information is included because it is important for the reader to have a basic understanding of motor skill related fitness and attitude towards motor skill related fitness. The statement of the problem, the purpose and significance of the research are well elaborated. More importantly, the research questions that are the primary focus of this work are identified under this chapter. The last part of this chapter comprises the operational definitions of some terms or words used in the report as well as the organisation of the study.

Chapter two reviews relevant related literature. I try to identify, locate, read and evaluate relevant previous studies, observations, opinions and comments related to the research. Chapter three explains the methodology used. It looks at the research design, the population and sampling, research instruments, validity, data collection and data analysis procedures in the context of a descriptive research survey. The results and findings of the study are presented by research questions in chapter four while chapter five summarises the key findings, conclusions, the scope and limitation of the study are outlined and implications and possibilities for future research in this area.

CHAPTER TWO

LITERATURE REVIEW

2.1Introduction

The purpose of this study is to measure and compare the motor skill related fitness level of SHS final year students of Sandema and Fumbisi SHS. Taking part in physical activities besides improving our health related fitness, it also enhances the opportunity for us to improve our motor/sport/skill related fitness (Beashel, Sibson, Taylor 1997). Beashel et al stated that to be successful in most sports, it is important to have health-related fitness. It is also important to be fit as possible in a number of additional areas such as strength, speed, agility, coordination, balance and reaction time.

Nevertheless, below is a review of the research dealing with literature on the following;

1. Strength
2. Coordination
3. Speed and
4. Reaction time, and
5. Attitude of students towards motor skill fitness performance

2.1.1 Strength Component of Motor Skill Related Fitness.

According to Beashel et al (1997), strength is the ability of the muscle to carry out daily tasks. This involves maximum strength, muscular power and muscular endurance. This means that students of Sandema and Fumbisi SHS doing well in sports depend to an unprecedented extent of their maximum strength, muscular power and muscular endurance qualities.

The maximum strength aspect as stated by Beashel et al (1997) is the ability to use our muscles to apply maximum force to an immovable object. While muscular power is the ability to contract muscles with speed and force in one explosive act and the ability to work the muscles very hard for a period of time is term as the muscular endurance aspect of strength.

Power is identified by Johnson and Nelson (1979), as the ability to release maximum force in the fastest possible time, the exhibition of which can be shown in the vertical jump, the broad jump, the shot put and any other movements against a resistance in the minimal time. Muscular power according to Johnson and Nelson is "the ability to exert a maximal contraction in one explosive act. It is dependent upon the interaction of two other components of fitness, strength and speed.

According to Ulrich (2000), horizontal jump can be use to check students muscular power. Ulrich stated that horizontal Jump should have 10 feet of distance. There is a starting line with white in colour and the word "Start" and a finishing line with green in colour and the word "Finish". Subject jumped as fast as he or she can after the examiner said "Go!". The four performance criteria were listed as follow: preparatory movement includes flexion of both knees with arms extended behind body; arms extend forcefully forward and upward reaching full extension above the head; take off and land on both feet simultaneously; arms are thrust downward during landing. After two times of trail, participant was asked to do the next test. Hence the ability to exert a maximal contraction in one explosive act depends to an unprecedented extent the muscular power

The above findings from researchers on the strength component of motor skill related fitness which deals with muscular power and muscular endurance qualities suggest that there are overwhelming benefits of strength to the individual, society and the nation as a whole. This view shows that the goals of physical education are to enhance human development and to improve human performance by assisting each individual to develop the skills, knowledge, and attitudes that will lead to a lifetime of participation in physical activities.

2.1.2 Coordination Component of Motor Skill Related Fitness.

Coordination refers to the ability to carry out series of movements smoothly and efficiently. This will happen if the nervous and muscular systems work in harmony. (Malpeli, Horton, and Darvey, 1997). A study by Heather in kwan, (2009) result showed that that the motor skills ability especially on the object control skills could be significantly improved after the 8-week motor skill intervention program. While Lee and Zhu in kwan, (2009) indicated that object control was the most difficult category in TGMD-2, the previous studies showed that it could be improved by motor skills intervention effectively. There were other similar result found in the study of Goodway and Branta in kwan, (2009). The result reflected that it is useful to provide motor skills-related program for improving children‟s motor skills. Moreover, a well-organizing program schedule was needed, and it was better to have experienced instructors and provide appropriate equipments within the program. Last but not least, the instructors would better use positive-corrective feedback in easy command to children. These are all essential elements for a successful program. Apart from the effect of a motor skill invention with suitable duration, aging was another reason which would lead to the motor

skill development, too. Study of Anshel (1986) pointed out that motor skills of children were developed by aging naturally. Study of Wong and Cheung (2006) found a similar result as well. They specifically indicated that the mastery level of gross motor skills among Hong Kong Chinese children was following an age trend. Although the motor skills-related program was not the primary reason for improving motor skills ability, it was without doubt that this was an efficient method to quicken the motor development among children. This therefore suggest that, the ability to carry out series of movements smoothly and efficiently for students nervous and muscular systems to work in harmony for improving motor skills ability needs efficient method to quicken the motor development among students of the Sandema and Fumbisi schools in the Builsa district .

2.1.3 Speed Component of Motor Skill Related Fitness

Speed is a performance-determining factor in sports and it implies the ability to move the whole body as quickly as possible

Wilmore (1977), stated that speed is the rate of motion or the velocity of the body, or any one of its parts. The researcher further stated that it is one of the factors that are critical to skilful performance in various physical activities. Agility is the physical ability, which enables an individual to rapidly change body position and direction in a precise manner.

Motor development for that matter speed is a fundamental component for students to produce an effective and fluent action. In order to assess motor skills performance of students in Sandema and Fumbisi schools in the Builsa district in an efficiency way, a reliable tool is needed since Speed is a performance-determining factor in sports

2.1.4 Reaction Time Component of Motor Skill Related Fitness

Reaction time is the interval between the presentation of an unanticipated stimulus and the beginning of the response. It laps between an external stimulus and the initial response to that stimulus. Reaction time; is the time elapsed between stimulation and the beginning of reaction to that stimulation. Corbin et al (2002). This may depends on the performer experience so far as training is concern. Students getting good reaction time depend on the development of motor skills-related program that enhance the performance of physical activities.

According to Wuest, D.A and Bucher C.A (1995), motor performance fitness emphasizes the development of those qualities that enhance the performance of physical activities such as sports. Whereas health fitness is concerned with living better, motor performance fitness is concerned with performing skills better and more efficiently. Moreover, motor performance fitness is specific to the sport or activity in which the individual engages. Different combinations of motor performance fitness components are needed depending on the specific motor activity. For example, the degree of power, agility, coordination, reaction and speed needed by a football player is different from that required by a tennis player, even though both individuals need all of those qualities to perform at an optimal level.

In a review of physical education teaching research, Silverman (1991) suggested the following characteristics for the effective teaching of motor skills: the planning for class management and student learning; the anticipation of situations and contingency plans; the knowledge of, and when to use, a repertoire of teaching styles; the accuracy and focus

of explanation and demonstration; the provision for adequate student practice time; the maximization of appropriate student practice and engagement; the minimization of inappropriate student practice and engagement; and the minimization of pupils waiting.

Rink (1993) also reviewed the research on effective teaching and identified seven distinct teacher characteristics associated with effective instruction in physical education realm. She identified the following teacher characteristics: the identification of intended outcome for learning; the planning of learning experiences to accomplish these outcomes; the presentation of tasks in a clear manner; the organization and management of learning environment; monitoring of the environment; the development of the lesson content based on student responses; and the evaluation of the effectiveness of instructional /curricular process.

Therefore, research to establish motor skill related fitness of students in the Sandema and Fumbisi schools in the Builsa district and to find out whether taking part in physical activities during PE lessons helped improve their motor skill related fitness can lead to effective teaching.

Mawer (1995) in a review of research and viewpoints on effective teaching of physical education, suggested that the following characteristics are indicative of effective teaching: the planning of work effectively; the good presentation of new material; the organization and management of learning experiences and students; the active involvement of the teacher in teaching students; the provision of a supportive and positive learning environment; the acquisition of a repertoire of teaching styles; and the ability to teach for the facilitation of student understanding of concepts and lesson

content. The characteristics suggested by Silverman (1991), Rink (1993) and Mawer (1995) bear some similarity to Borich‟s (1996) work. Several factors such as lesson clarity, structure, involving student‟s ideas, and instructional variety have a commonality among the lists. However, there seems to be little, if any, research that has directly looked at the suggested characteristics of effective teachers from the research that has directly looked at the suggested characteristics of effective teachers from the research reviews of Silverman, Mawer, Rink or Borich to determine if the identified characteristics actually do affect student learning in physical education domain.

2.1.5 Students Attitude towards Motor Skill and Fitness Performance

The purpose of this study was to examine Sandema Senior High and Fumbisi Senior High students‟ attitudes toward motor skill and fitness performance and the factors which contribute to those attitudes. In this section the literature that serves as the groundwork for this current study is reviewed.

To explain attitudes and how they developed in learners may require a scientific approach. Discussing the concept of attitudes, Skinner (cited in Braginsky & Braginsky, 1974), stated that, Science is first of all a set of attitudes. It is a disposition to deal with the facts rather than with what someone has said about them…. this explains the scientific nature of human attitudes. However, it is difficult to define human attitudes in terms of physical science alone because the human being is also a social animal with unpredictable behavior or attitude. Attitudinal research in the field of physical education has dealt almost exclusively with the entire three domains of human growth in

educational development of human life. That is, the psychomotor domain, cognitive domain and affective domain.

According to Zanna and Rempel (1988), attitude is a disposition to respond favourably or unfavourably toward some person, thing, event, place, idea or situation. Attitudes are the thought and feelings that motivate someone to act as though he likes or dislikes something or somebody. According to Tobias, students may feel that they will never be as good as their teacher. This suggests that, a teacher‟s behaviour or action or reaction can influence learners‟ attitudes

Steele and Arth (1998) state teachers have to be extremely careful in the manner in which they ask for correct answers as this can influence a learner‟s attitude. Steele and Arth suggest that teachers should not always single out a student before question; instead, the question should be asked first, before calling names. This suggests that, teachers‟ questioning technique can be a barrier for students‟ learning. When a teacher asked a question, pause, before calling on students‟ names will allow them to think and organise their ideas before talking.

The concept of Attitude borders on response to stimuli. Perry (2007) describes attitudes as being learned tendencies to respond in a generally favourable or unfavourable manner towards some object. Research on attitude may focus on one or more of the four conceptual distinctions of attitude: (a) affect, (b) cognition, (c) conation, and (d) behaviour. Affect refers to feelings toward some object, while cognition indicates beliefs about the object. Conation refers to a person‟s intentions to perform certain behaviours, and the behaviour category represents the actual observed overt acts.

Various people attempted defining attitude to reflect how they saw it demonstrated. Some examples of these peoples include the following: Kyriacou (as cited in Nabie, 2002) defines attitude as one‟s feeling towards some particular object or class of objects. This means that a change in behaviour as a result of experience constitute one‟s attitude. The nature of experience usually determines the type of attitude put forth

Research on high school students‟ attitudes toward physical was further propelled by the team of Luke and Sinclair (1991). Student attitudes toward motor skill and fitness performance have been under investigation since the 19th century. Traditionally, the purpose of such inquiry has been to identify factors that contribute to positive and negative feelings towards motor skill and fitness performance. Investigators believed that having such information would improve the quality of motor skill and fitness performance by allowing teachers to consider student insights when making curricular or program decisions

The field of motor skill and fitness performance has had a long history of investigating student attitudes toward motor skill and fitness performance. Many of the early studies examined the attitudes of college students. In recent times, more attention has been given to the attitudes of secondary students

The review of literature just presented provided the background information which served as the foundation for this current study. Section one discussed the development that occurs in Strength component of motor skill related fitness. Section two described the Coordination component of motor skill related fitness of the Senior High students. Section three analyzed the status of Speed component of motor skill related fitness.

Section four reviewed the reaction time component of motor skill related fitness, and section five examined attitude of students towards motor skill fitness performance.

The following chapter on methodology describes the procedures and methods of this study, and explains the development of the survey instrument used in this study, and provides detailed procedures used for final sample selection, data collection and data analysis.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter will describe the procedures and methods of the study under the following sub-headings:

- Research design
- Population
- Sample and sampling techniques`
- Instrumentation
- Validity and reliability
- Data collection
- Data analysis

3.2 Research Design

There are different types of research designs. Even though some topics lend themselves to a particular type of research design, some topics are open to a number of research designs. This is because in the study data was collected based on figures which had to be described as the outcome of the study before conclusions could be drawn

3.3 Population

The target population were all Senior High Schools Students in the Bulisa District. The accessible population was all 700 final year students comprises of 400 males and 300 females in Sandema SHS and 400 final years of which 250 are males and 150 are females

in Fumbisi SHS in the Bulisa District. The final year students were chosen because they had gone through the course content and practical lessons in the school and also participated severally in sports for the school and upper east region as well and were more appropriate.

3.4 Sample and Sampling Techniques

Purposive sampling was used to select final year students in the two schools because of their advantage of three years experience and was appropriate for the study. In purposive sampling, the researcher handpicks the cases to be included in the sample on the basis of judgement of their typicality and uniqueness, or particularly knowledgeable about the issues under study. Thus, in purposive sampling, also known as judgemental sampling, the researcher purposely chooses subjects whose opinions or talents are thought to be relevant to the research topic (Amedahe & Gyimah, 2003). To ensure adequate representation of essential categories of the population and increase in sampling precision for generalization in the two schools, one group of 80 students each of the assessable population was selected by random sampling from Sandema Senior High and Fumbisi Senior High School to measure and compare their motor skill related fitness. Random sampling was also used to select the sample population of … boys and …girls.

Simple yes and no papers were placed in a container. The yes papers were the exact number of boys and girls needed for the study

3.5 Instrumentation

The modified University of Illinois 6-item motor test design by Corbin, Lindsey and Welk (2000) in Illinois, United State if America, was used to collect data. The items include the following

1. Testing for strength. That is,
   a. Standing broad jump and standing vertical jump for muscular power
   b. Abdominal curl test for muscular endurance
2. Testing for coordination, the alternate leg ball juggle test
3. Testing for speed, the 50-meter speed runs test and
4. Testing for reaction time

3.6 Validity and Reliability of the Test Instrument

Although this instrument has been tested and published by Corbin, Lindsey, Welk and Corbin, (2001) in the United State of America for its reliability, the researcher adopted and modified the same instruments for use in Ghana. Since one of the means of achieving content validity is by expert judgement (Guy, 1987), six test items were reconstructed and discussed with colleagues and my supervisor before use.

3.7 Measuring Instruments

For the purpose of accurate measurement of the six motor skill related fitness levels the following tools were utilized:

1. A stop watch (electronic) for running
2. A whistle for starting events

3. A tailoring tape measure for graduation on a wall for the vertical or standing long jump performance
4. A football for evaluating coordination
5. Tennis ball/orange for evaluating coordination
6. Colored chalk for conspicuous and clear graduation on the wall floor
7. Skittles to indicate points and units in agility test run
8. Piece of graduated stick or paper for testing reaction time. (Corbin, Lindsey, Welk and Corbin, 2002 p, 269)

3.8 Testing and testing stations

The test was conducted at each school training grounds. The subject was tested using the test items. Since the schools are located in different towns. The duration of the test was approximately three days at each school. Standardized protocol was used to measure subject‟s motor skill related fitness levels.

3.9 Data Collection

An introductory letter from the District Director of Education was submitted to the Heads of the two above mentioned schools to obtain permission to conduct the research.

A rapport was created with the students to enable the participants to be acquainted to the researcher to discuss the format for the study

3.10 Procedures for testing

The following is the procedures for the various test and data collection of the six motor performances related fitness components.

3.11a Muscular Power

The Vertical jump for power;

Purpose: To measure the degree of subject‟s power

Equipment and facilities: piece of chalk, cemented surface, a wall of about 10 meter high, a measuring tape.

Procedure: Subjects stood with one shoulder next to a graduated wall and reached up with the arm to the wall. The highest point subject could reach with fingers of this arm was marked. Both feet remained flat on the floor. With chalk on the fingertips, subject leaped upward tapping the chalked fingers against the wall at the highest point.

Scoring: the distance between the two marks, gave a measure of how much power subject possessed.

3.11b Muscular Endurance

The press-up test for muscular endurance

Purpose: to measure the muscular endurance of the chest and shoulder muscles.

Equipment and facilities: stop watch, cemented surface for kneeling

Procedure: Subjects are made to complete as many press-ups as possible in 160 seconds. Girls were given the option to perform from kneeling position

Scoring: Subject number of time did for 160 seconds determined his score

3.12 Speed

The 50 meter run test for speed;

Purpose: To increase the speed of subject

Equipment and facilities: An athletic field, a stop watch and a whistle

Procedure: A distance of 50 meters was measured Subject was made to run the distance within the shortest possible time. Subjects ran in turns for the first, second, and third trials.

Scoring: Each subject ran 3 times and the middle time of the times returned was recorded.

3.13 Coordination

Alternate ball juggling with the feet for coordination;

Purpose: to measure feet eye coordination levels of subjects.

Equipment and facilities: a football playing field, a whistle and 20 skittles.

Procedure: subject kept playing the ball alternatively with the feet for 30 seconds with a restricted area without the ball touching the ground.

Scoring: Subjects who possessed high-level coordination were able to juggle the ball alternatively for the thirty seconds or above.

3.14 Reaction time

Stick drop test for reaction time;

Purpose: To measure how fast subjects reacted to different circumstances in the game of soccer.

Equipment and facilities: A 24 centimetre long graduated stick

Procedure: A partners held the graduated stick so that the side edge was between the thumb and index finger, about the width of the hand from the top of the stick. When the partner drops bed the stick, subject caught it before it slip bed through the thumb and finger. Subject did not lower the hand to catch the stick.

Scoring: The score was the number of centimetres read on the graduated stick just above the thumb and index finger after the catch. The test was used for scoring e.g. the finger between the maximum and minimum centimetres determined the score.

3.15 Data analysis

Results of the test were coded and the statistical package for social sciences P.C windows 18.0 statistical software was used for the data analysis. The test of significance was used to test the difference in the dependent variable obtained after the administration of the independent variable

CHAPTER FOUR

RESULTS, ANALYSIS AND DISCUSSIONS

4.0 Introduction

The purpose of this study was to establish motor skill related fitness of students in Senior High Schools and to find out motor skill related fitness activities carried out in the Sandema and Fumbisi schools in the Builsa district and whether taking part in physical activities during PE lessons have help improve students motor skill related fitness. First of all, the descriptive statistics with the percentages and proportions on the background information of the participants would be displayed. Secondly, percentage of participants who mastered a certain motor skills is showed. To find out the difference between male and female motor related skills, an analysis of Paired Samples T-Test was used. This chapter presents the results of the data gathered from the respondents. It entails an overview of statistical procedures, presentation of results by research questions and hypotheses.

The analyses and discussions are focussed on the six test variables The Statistical Package for Social Sciences (SPSS) soft ware package was used to analyse the data gathered in this study. The tables presented in this chapter look at relationships, the measures of associations and proportions. The results have been presented under each of the research questions and the hypotheses formulated.

The study involved a sample of 160 students randomly selected from 2 schools in Sandema and Fumbisi schools in the Builsa district.

Table 1. Distribution of Respondents by Gender

Sex	Frequency	Percentage
Female Students	70	43.75
Male Students	90	56.25
Total	**160**	**100**

Table 1. shows the distribution of respondents by gender. The total number of female students who responded to the items was 70. The male students were 90 making the total of 160 from the two schools.

Table 4.2 shows the percentage distribution of respondents by age. The table shows that the modal age group was 18-19 with a percentage 32.5. Also, 26.25% were above 19 years old. About 21.88% were between the age of 16-17 while only 20% were less than 16 years old.

Table 2: Distribution of Respondents by Age

Age Range	Frequency	Percentage
Less than 16	32	20.00
16 – 17	35	21.88
18 – 19	52	32.50
Above 19	41	25.62
Total	**160**	**100**

Table 2. Shows that model age of students falls within 18-19 years. As many as 41 students in the sample schools were above 19, years while still in SHS. Only 20% of the students were aged less than 16 years.

Table 2. shows 32.50% of the respondents falling within 18 and 19 years while 26.25% of the respondents were above 19 years old. About 21.88% were between the age of 16-17 while only 20% were less than 16 years old.

4.1 Level of Skill Related Fitness of Students

Research question one was formulated to establish the level of motor skill related fitness of students in Sandema and Fumbisi Senior High Schools in the Builsa District

4.1.1 Strength: The standing broad jump Score of participants" muscular power test for strength in standing broad jump by age groups.

Table 3. Score of participants muscular power Test for strength in standing broad jump by age groups

Distance	Less than 16	16-17	18-19	Above 19	Total	Percentage
Above 1.65m	0	0	2	4	**6**	**3.75**
1.56m - 1.65m	0	1	5	5	**11**	**6.88**
1.46m - 1.55	0	3	5	32	**40**	**25.00**
1.35m - 1.45m	12	8	40	-	**60**	**37.50**
Less than 0.35m	20	23	-	-	**43**	**26.87**
Total	**32**	**35**	**52**	**41**	**160**	**100**

Table 3 shows that 6 participants, 4 of them above the age 19 representing 3.75% were able to jump above 1.65m. 11 participants representing 6.875% were able to jump between 1.56m-1.65m. 40 participants representing 35% jumped between 1.46m-1.55m. 60 participants representing 37.5% jumped between 1.35m-1.45m. Finally 43 participants representing 26.87% jumped less than 0.35m. In conclusion, participants above 19 years of age performed better than the rest of the ages.

4.1.2. Muscular endurance: The next component to measure was the participants abdominal curl test for muscular endurance.

Table 4. Score of participants Abdominal curl test for muscular endurance by age groups

Duration	Less than 16	16-17	18-19	Above 19	Total	Percentage
Above 60 sec	2	14	10	12	**38**	**23.75**
50-60	13	18	32	13	**76**	**47.5**
40-50	12	2	8	12	**34**	**21.25**
30-40	5	1	2	3	**11**	**6.88**
Less than 30	0	0	0	1	**1**	**0.62**
Total	**32**	**35**	**52**	**41**	**160**	**100**

Table 4 shows Percentage Score of participants abdominal curl test for muscular endurance by age groups. The table shows that out of the 160 participants only one representing 0.62% could not perform the activity up to 30 seconds. Thirty-eight participants exhibited high muscular endurance in abdominal curl test for over 60 seconds for all age groups.

Table 4 shows that 76 participants representing 47.5% did between 50-60 second. 34 representing 21.25% did between 40-50 seconds and only 11 representing 6.88% performed between 30-40 seconds.

4.1.3 Speed:

Table 5. Score of participants testing for speed in the 50-meter speed runs test by age groups

Time	Less than 16	16-17	18-19	Above 19	Total	Percentage
Above 10 sec	1	0	0	1	**2**	**1.25**
8s – 9s	12	3	16	17	**48**	**30.00**
7s – 8s	13	15	19	12	**59**	**36.88**
6s - 7s	6	17	16	11	**50**	**31.25**
Less than 6s	0	0	1	0	**1**	**0.62**
Total	**32**	**35**	**52**	**41**	**160**	**100**

Table 5. Shows Percentage Score of participants testing for speed in the 50-meter speed runs test by age groups. Participants testing for speed were done in the 50-meter speed runs by age groups. This was tested to determine the ability to move all or part of the body as quickly as possible.

Table 5. Shows that only a total of 2 participants representing 1.25% could sprint 50m distance in above 10 seconds. All in ages 16-17 and 18-19 sprint below 10 seconds. The fastest age group falls under 18-19 year group were one sprinting less than 6 seconds.

4.1.4 Co-ordination: The alternate leg ball juggle test was used to examine students‟ coordination level.

Table 6. Score of participants testing for coordination, the alternate leg ball juggle test by age groups

Frequency	Less than 15	15-16	17-18	19 and above	Total	Percentage
40 and above	0	0	5	0	**5**	**3.12**
30-39	10	1	12	1	**24**	**15.00**
20-29	10	9	12	13	**44**	**27.5**
10-19	12	17	10	17	**56**	**35.00**
Less than 10	0	8	13	10	**31**	**19.38**
Total	**32**	**35**	**52**	**41**	**160**	**100**

4.1.5 Table 6. Shows the Percentage Score of participants testing for coordination using the alternate leg ball juggle test by age groups.

Table 6. Shows that students below 17 years have coordination problem as nobody could do up 40 times. Only 5 students aged 17-18 representing 3.12% could do 40 times and above showing good coordination. However, as many as 31 student representing 19.38% performed less than 10 times with 56, 44 and 24 performing between 10-19, 20-29 and 30-39 respectively.

However, majority of the participant representing 77.5% were among. Table 6 also shows that students below 17 years have co-ordination problems as nobody could do up to forty times. Only five students aged 17-18 representing 3.12% could do 4o times and above showing good co-ordination. 31 students representing 19.38% performed less than 10 times. 24 students representing 15% could perform between 30-39 times. Finally majority of the age groups representing 35% could perform the skill within 10 to 19 times.

4.1.6 **Reaction time:**

Table 7. Score of participants testing for reaction time, the stick drop test by age groups

Time	Less than 15	15-16	17-18	19 and above	Total
Above 49 s	1	11	12	0	**24**
40-49 s	10	10	15	11	**46**
26-39 s	10	11	9	10	**40**
11-25 s	11	2	14	17	**44**
Below 10 s	0	1	2	3	**6**
Total	**32**	**35**	**52**	**41**	**160**

4.1.7 Table 7. Shows the Percentage Score of participants‟ reaction time, in the stick drop test by age groups**.** The table shows that it takes 49 seconds for 24 participants to drop the stick and 6 participants in below 10 seconds after the command. No participants in ages less than 15years react below 10 seconds and the ages 19 and above49 seconds Table 7. The fastest reaction time below 10 seconds was recorded by six particiapnts. The weakest reaction time was above 49 seconds with 24 students in that category of reaction time. The modal reaction time was in 40-49 with 46 students.

4.2 Attitude towards Motor Skill Related Performance:

Table 8. Percentages of Students responding to the various Items constituting attitude towards Motor skill related activities

Item	positive	neither	negative
Like doing motor skill related activities	76.2	5.6	18.1
Confidence in doing motor skill related activities	63.1	2.5	34.4
Interest in doing motor skill related activities	76.9	2.5	15.0
Motor skill related activities as male domain	55.6	8.5	36.9
Anxiety doing motor skill related activities‟	61.0	6.9	32.5
All	**62.6**	**6.6**	**27.2**

Table 8 shows the raw counts of the responses to the likert scale on attitude towards motor skill related activities.

The results from the table shows that students have positive attitude towards motor skill related activities‟. About 62.6% responded positively to all the attitudinal dimensions measured. While a total of 6.6% remaining neutral to the items, about 27.2% shows a negative response. The highest positive response was in „Interest in doing motor skill related activities‟. Again about 76.2% indicated that they like doing motor skill related activities. The least positive response was in the dimension that Motor skill related activities was male domain but showing the highest negative response of 36.9%.

Table 9. Shows the means and standard deviations of responses on attitude towards motor skill related activities‟ by school and sex.

Table 9. Independent Sample t-test on attitude towards Motor skill related activities

	t-test for Equality of Means		
	t	df	sig (2 tailed)
Sandema	1.49	79	0.14
Fumbisi	-1.67	79	0.10
Both	0.64	158	0.52

Table 10. Shows the Independent Sample t-test used to compare the means of responses on attitude towards motor skill related activities ‟.

The t-test values of 0.64 in both schools are less than the table value of 1.96. This shows that the t-test with 158 degree of freedom was not significant. No significant differences were found between males and females students‟ towards like doing motor skill related activities in the Sandema and Fumbisi schools in the Builsa district.

This study reported the established motor skill related fitness along the following dimensions: Coordination, Strength, Speed and reaction time, Endurance

And also students‟ attitude towards motor skill related fitness in the Sandema and Fumbisi schools in the Builsa district. The results confirmed no significant gender differences for all variables. There were 43.75% female students and 56.25% male students sampled for the study.

The result in table 2 shows that as many as 45% of the respondents were those whose ages were within the range of 17-18, while 21.88% respondents fall within the age range of 15-16. Only 20% respondents were within the age ranges less than 15 years

The modal distance was 1.56m -1.65m with total number of 96 jumping that distance. As many as 9 out of 13 students who could jump more than 1.65m were in aged 18-19 showing high muscular power. But ages below 16 had their best jump to be 1.65 or less. Only 4 students age less than 16 jumped less than 0.35, while 1 and 2 students' age between 16-17 and 18-19 respectively jump a distance less than 0.35. No student jump less than 0.35 in ages above 19. The results show that the level of motor skill related fitness of students in Sandema and Fumbisi Senior High Schools in the Builsa District so as muscular power is concerns was higher, which is an indication that they were learning or doing activities involving motor skill related fitness. This is consistent with the findings that Students had begun to recognize that their lessons were not just keeping them busy (Placek, 1983), they also noted that they were learning, "…cool, new things". The thought of learning as being part of the physical education lesson was not mentioned at the start of the study.

The results in table 4 shows a total of 38 students performing abdominal curl test for more than 60 seconds. Only two students aged less than 16 could perform the abdominal curl test for muscular endurance above 60 seconds while 14 were within age 16-17. The modal class was in age 18-19 with 32 out of the total of 76 who performed for 50-60 seconds. Every participant performs more than 30 seconds except in ages above 19 one

participant performs less than that. The result on this table was consistent with table one findings on muscular power test for strength in standing broad jump

Table 5 shows significantly that students‟ potential speed was high within the 50 seconds run. Only 2 out of 160 participants performed above 10 seconds registering the slowest speed in age less than 16 and above 19. The fastest speed was in age 17-18 with one student running less than six seconds.

The table 6 shows that only 5 participants age 17-18 did the ball juggle above 40. Thirty one participants could not do up to 10. The results shows that students‟ coordination was average as over two-third of the 160 students did the ball juggle with ease

The table 7 shows that the total of 24 had reaction time above 49 seconds. Majority of the participants‟ time fall within 40-49 seconds. Six participants had their time to be below 10 seconds. However, no students aged less than 15 scored below 10 second.

The table 8 shows that, about three-quarters of the students indicated highest positive attitude in the statements; „when I am to do motor skill related activities, I have a feeling of joy‟ and „I am interested in motor skill related activities;

The table 9 illustrate that males show a positive characteristic of the attitudinal variable „like doing motor skill related activities ‟ than females with distribution of the scores slightly spread out in males than in females in Sandema, and for both schools, but indicating more in females than in males in the Fumbisi school.

The table 9 shows that the research was not supported. The t-test value of 0.64 in both schools is less than the table value of 1.96. This shows that the t-test with 158 degree of

freedom was not significant. No significant differences were found between males and females students‟ towards like doing motor skill related activities in the Sandema and Fumbisi schools in the Builsa district.

The interview data collected from the students provided valuable insight into their opinions of their motor skill related activities. Data collected at the onset of the study indicated that motor skill related activities were fun and had a very similar format: stretching, running laps, an activity, and ending with more stretching. A thread amongst the student responses concerned the used of physical education lessons for such things as assemblies, finishing class work, special projects, and misbehaviour.

At the conclusion of the study, students identified that changes had occurred in the way motor skill related activities carried out and that these changes were for the better. "…doing more things", "…rather than talking or listening or sitting", "…busier", "…I get sweaty" were some of the student comments indicating how the demonstration lessons had changed them. Another theme amongst the responses concerned the use of time. Classes had become "far busier", with "less time spent sitting or watching", and more time spent in performance and practice. Lessons were focussed, had a purpose, and experienced little wasted time ultimately providing extra time for practice and skill improvement. Students also stated that there was a difference in the time allocated to physical education. In a clear change from earlier statements, students thought that their lessons had become more frequent and that "everyone went to the gymnasium" to participate in their physical education lessons.

In order to gain an impartial view, the headmasters of the school provided some overall thoughts. The headmasters noted that physical education lessons seemed to have "…greater variety in activity, more involvement of students" and that the PE teachers were "planning and matching of activities to student ability levels." According to the headmasters, these changes had created a "…strong positive improvement in sports performance, more focused on the needs for the students motor skills related activities, Students seem more involved, and enjoy the practical more, everyone is active and challenging themselves to some skill or task."

Numerous educational jurisdictions now refer to life-long active living as a goal of their physical education curriculum. In such curricula, it is hoped that physical education can promote a positive attitude toward physical activity and increase participation rates that can offset and reverse the disturbing present trends of inactivity and poor health in children (Hickson, 2003). It is also thought that a well-structured physical education program can enhance and improve the movement proficiency and self-concept of students, thereby promoting the chances for life-long involvement in physical activity and, ultimately, better motor skill related activities.

As the knowledge, skills, and attitude to become a physically educated person are necessary and key components of a physical education program, educators need to teach for this understanding through effective teaching practices (Hickson, 2003). It is, therefore, essential that such effective teaching practices have student learning as a central consideration and basic tenet. Motor skill related activities have to be foremost in program planning, lesson delivery, and lesson effectiveness reflection. Teachers of physical education have the responsibility to use those characteristics and skills that are

effective for student learning. It is only then that students will receive the instruction that they need to gain the associated health benefits from being physically active and to truly become physically educated (Hickson & Fishburne, 2001).

It is recommended that the nature of this study is an important area of future investigation and worthy of further research in order to extend the understanding of effective physical education teaching. Such replication would provide confirmation to the extent that the motor skills related activities and the effective teaching model are important and valid additions to the physical education teaching literature.

An overview of the research problem, methodology and key findings are presented in reference to the findings. Each finding is evaluated and implications examined with respect to the current theoretical and educational practice. Conclusions, specific limitations of the research are provided in this chapter. Recommendations and suggestions for future studies are also given.

CHAPTER FIVE

SUMMARY, CONCLUSSIONS AND RECOMMENDATIONS

5.1 Summary of Findings

The study establish motor skill related fitness of students in the Sandema and Fumbisi schools in the Builsa district and whether taking part in physical activities during PE lessons will help improve their motor skill related fitness level. Hypotheses on differences between male and female were tested

The accessible population was all 700 final year students comprises of 400 males and 300 females in Sandema SHS and 400 final years of which 250 are males and 150 are females in Fumbisi SHS in the Bulisa District.. Convenience sampling was used to select 80 out of 700 students from Sandema SHS and 80 out of 400 from Fumbisi SHS. In all 160 students were conveniently selected from the two schools in the Builsa district of which 43.75% were female students and 56.25% male students sampled for the study.

Questionnaires were used as one of the main tools to collect data. The data gathered from the questionnaire and assessment were analysed quantitatively. The results of the study indicated among other things the following:

Students identified that changes had occurred in the way motor skill related activities carried out and that these changes were for the better indicating how the demonstration lessons had changed them.

Students were identified with different levels of motor skill related fitness among the various age groups of students in Sandema and Fumbisi schools in the Builsa district also

taking part in physical activities during PE lessons have helped improve students motor skill related fitness as the modal distance was with total number of 96 jumping a distance of 1.56m -1.65m during the measure of muscular endurance.

5.2 Conclusions

The following conclusions were drawn from the results of the analysis:

1. The results of the study shows that the level of motor skill related fitness of students in Sandema and Fumbisi Senior High Schools in the Builsa District so as muscular power is concerns was higher which is an indication that they were learning or doing activities involving motor skill related fitness.
2. The measurement for students speed shows that students‟ potential speed was high within the 50 metres run
3. The results shows that students testing for coordination using the alternate leg ball juggle test was average as over two-third of the 160 students did the ball juggle with ease
4. The result shows that students have good reaction time

5.3 Recommendations

The study‟s findings show that if the students developed confidence in motor skill related activities, like doing motor skill related activities, were aware of the usefulness of motor skill related activities and understand learning motor skill related activities, they would have less anxiety learning motor skill related activities. To this end, the following recommendations are made to inculcate positive attitude amongst students towards

learning motor skill related activities for the improvement of physical education and good of society:

1. Schools should be encouraged to put emphasis on fitness of students
2. Teachers of physical education should draw up programmes that promote fitness of students
3. Schools should form keep fit clubs under the supervision of the physical educators.
4. Schools should emphasise the following as indices for fitness
    i. Strength
    ii. Muscular endurance
    iii. Speed
    iv. Co-ordination
    v. Flexibility

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APPENDIX A

DEPARTMENT OF HEALTH PHYSICAL EDUCATION RECREATION AND SPORTS

UNIVERSITY OF EDUCATION, WENNIBA

QUESTIONAIRE FOR STUDENTS

PART 1

Background Information/Personal Data

(Tick one, or fill in on the blank line for others if appropriate):

1. Name of school ……
2. Sex : male [ ] female [ ]
3. Age: Less than 16 [ ] 16-17 [ ] 18-19 [ ] Above 19 [ ]

Part II

The following are series of statements. They have been set up in a way that permits you to indicate the extent to which you agree or disagree with the ideas expressed. Please tick [ ] the box that best describes your response as you read the statement.

Record Sheet of the Motor skill related activities.

Identifying Information

Date of testing …….

Name of subject…….

Examiner……

Gender Male ☐ Female ☐

The Standing broad jump for muscular power

Level	Below 16	16- 17 years	18- 19	Above 19
High score				
Above average				
Average				
Below average				
Low score				

The Standing vertical jump for muscular power

Level	Below 16	16- 17 years	18- 19	Above 19
High score				
Above average				
Average				
Below average				
Low score				

The Alternate Leg Ball Juggle Test for Coordination

Level	Below 16	16- 17 years	18- 19	Above 19
High score				
Above average				
Average				
Below average				
Low score				

Illinois Run Test for Agility (seconds)

Level	Below 16	16- 17 years	18- 19	Above 19
High score				
Above average				
Average				
Below average				
Low score				

The 50-Meter Speed Runs for Speed

Level	Below 16	16- 17 years	18- 19	Above 19
High score				
Above average				
Average				
Below average				
Low score				

The Stick Drop Test for Reaction Time

Level	Below 16	16- 17 years	18- 19	Above 19
High score				
Above average				
Average				
Below average				
Low score				

PILOT TEST ITEMS

SKILL	PERFORMANCE CRITIRIAL	TRIAL 1	TRIAL 2	SCORE
RUN 1	Arms move in opposition to legs, elbows bent			
2	Brief period where both feet are off the ground			
3	Narrow foot placement landing on heel or toe (i.e., not flat footed)			
4	Non-support leg ben approximately 90 degrees (i.e., close to buttocks) Skill score			
GALLAP	Arms bent and lifted to waist level at takeoff			
	A step forward with the lead foot followed by a step with			

	the trailing foot to a position adjacent to or behind the lead foot			
	Brief period when both feet are off the floor			
	Maintains a rhythmic pattern for four consecutive gallops			
HOP	Non- support leg swings forward in pendulum fashion to produce force			
	Foot of non-support leg remains behind body			
	Arms flesed and swing forward to produce force			
	4. takes off and lands three consecutive times on preferred foot			
	5. Takes off and lands three consecutive times on non-preferred foot			
Leap	Take off on one foot and land on the opposite foot			
	A period where both feet are off the ground longer than running			
	Forward reach with the arm opposite the lead foot			
Horizontal Jump	Preparatory movement includes flexion of both knees with arms extended behind body.			
	2. Arms extend forcefully forward and upward reaching full extension above the head.			
	3. Take off and land on both feet simultaneously			

	Arm are thrust downward during landing			
	Body turned sideways so shoulders are aligned with the line on the floor			
	2. A step sideways with lead foot followed by a side of the trailing foot to a point next to the lead foot 3. A minimum of four continuous step-slide cycles to the right 4. A minimum of four continuous step-slide cycles to the left			

Record Sheets-2

Identifying Information

Date of testing ……..

Gender Male ☐ Female ☐

Object Control Subtest

Skill performance criteria Trial 1

3. Hip and shoulder rotation during swing

4. Transfers body weight to front foot

Striking a Stationary Ball

5. Bat contacts ball

Skill score

1. Contacts ball with one hand at about belt level
2. Pushes ball with fingertips(not a slap)
3. Ball contacts surface in front of or the outside of foot on the preferred side

Stationary Dribble

4. Maintains control of ball for four consecutive bounces without having to move the feet to retrieve it

Skill score

1. Preparation phase where hands are in front of the body and elbows are flexed
2. Arms extend while reaching for the ball as it arrives

Catch

3. Ball is caught by hands only

Skill score

1. Rapid continuous approach to the ball
2. An elongated stride or leap immediately rior to ball contact
3. Non-kicking foot placed even with slightly in back of the ball kick
4. Kicks ball with instep of preferred foot (shoelaces) or toe

Skill score

1. Windup is initiated will downward movement of hand/arm

2. Rotates hip and shoulders to a point where the non-throwing side faces the wall
3. Weight is transferred by stepping with the foot opposite the throwing hand.

Overhead Throw

4. Follow-through beyond ball release, diagonally across the body toward the non-preferred side

Skill score

1. Preferred hand swings down and back, reaching behind the while chest faces cones
2. Strides forward with foot opposite the preferred hand toward the cones
3. Bends knees to lower body
4. Understand Roll
5. Releases ball close to the floor so ball does not bounce more than 4 inches high skill score

The Standing broad jump for muscular power

Level	Below 16	16- 17 years	18- 19	Above 19
High score				
Above average				
Average				
Below average				
Low score				

The Standing vertical jump for muscular power

Level	Below 16	16- 17 years	18- 19	Above 19
High score				
Above average				
Average				
Below average				
Low score				

The Alternate Leg Ball Juggle Test for Coordination

Level	Below 16	16- 17 years	18- 19	Above 19
High score				
Above average				
Average				
Below average				
Low score				

Illinois Run Test for Agility (seconds)

Level	Below 16	16- 17 years	18- 19	Above 19
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Below average				
Low score				

The 50-Meter Speed Runs for Speed

Level	Below 16	16- 17 years	18- 19	Above 19
High score				
Above average				
Average				
Below average				
Low score				

The Stick Drop Test for Reaction Time

Level	Below 16	16- 17 years	18- 19	Above 19
High score				
Above average				
Average				
Below average				
Low score				