

UNIVERSITY OF EDUCATION, WINNEBA

**ATTITUDE OF JUNIOR AND SENIOR HIGH SCHOOL STUDENTS
TOWARDS PHYSICAL ACTIVITY IN ABETIFI-KWAHU**

SIMON, MAWULORM AGYEMANG



MASTER OF PHILOSOPHY

2022

UNIVERSITY OF EDUCATION, WINNEBA

**ATTITUDE OF JUNIOR AND SENIOR HIGH SCHOOL STUDENTS
TOWARDS PHYSICAL ACTIVITY IN ABETIFI-KWAHU**

SIMON, MAWULORM AGYEMANG
200025199



**A thesis in the Department of Health, Physical Education,
Recreation and Sports, Faculty of Science Education, submitted to the School of
Graduate Studies in partial fulfilment
of the requirements for the award of the degree of
Master of Philosophy
(Health, Physical Education, Recreation and Sports)
in the University of Education, Winneba**

MAY, 2022

DECLARATION

Student's Declaration

I, Simon, Mawulorm Agyemang, declare that this thesis, 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 guidelines for supervision of thesis/dissertation/project as laid down by the University of Education, Winneba.

Name: Prof. J.O. Ammah (Principal Supervisor)

Signature:.....

Date:.....

Name: Dr. Patrick Akkufo (Co-Supervisor)

Signature:.....

Date:.....

DEDICATION

To my wife Mrs. Priscilla Boateng Agyemang and my sister Esi all of blessed memories.



ACKNOWLEDGMENTS

My sincerest appreciation to my study principal supervisor Professor Jonathan Orsbid Ammah and my Co-supervisor, Dr. Patrick B. Akuffo for their supports, guidance and encouragement through my entire research journey. You both led my path through narrow and thick, arched my prospective into accomplishments as you imparted knowledge in me that the core of academic life is to scuffle for brilliance and attainment in what one does. To Prof. J.A. Mintah of UCC and all the Senior Lectures in the HPERS department, Dr. E. Sarpong, Dr. E Acheampong, and Mr. Seidu Munkaila. Your advice and guidance has led me to this far.

To Kwahu East District Education Directorate for granting me permission to visit and conduct the study in all the five basic schools and the senior high school in Abetifi. I also acknowledge the contributions of the various heads of the schools as well as all JHS and SHS students who participated by sharing their opinions and views in the study. Their enlightening contributions made this research a success.

To all the authors whose works I have cited and to all friends and colleagues whom I shared ideas with. Special thanks to Mr. James Divine Danyoh, Dr. Samuel Appah and Mr Alfred Zormelo for the assistance and the encouragements offered throughout the period. To my aunty and uncle: Alice Nyarko and Akeb Agyemang; my sisters: Janet and Bernice; my nephews and nieces Ernest, Sylvia, and others; and to my children: Joel Armstrong Eyram Agyemang, Shirley Ann Ewoenam Agyemang, Franklin Roosevelt Edem Agyemang who stood firmly by my side through difficulties that emerged during my studies. Finally to Madam Grace Asantewaa, your contributions is much appreciated.

TABLE OF CONTENTS

Contents	Page
DECLARATION	iii
DEDICATION	iv
ACKNOWLEDGMENTS	v
TABLE OF CONTENTS	vi
LIST OF TABLES	ix
LIST OF FIGURES	x
ABSTRACT	xi
CHAPTER ON: INTRODUCTION	1
1.0 Overview	1
1.1 Background to the Study	1
1.2 Statement of the Problem	7
1.3 Purpose of the Study	8
1.4 Objectives of the Study	9
1.5 Research Questions	9
1.6 Hypotheses	10
1.7 Significance of the Study	10
1.8 Delimitation of the Study	11
1.9 Limitations	11
1.10 Organization of the remaining Chapters	12
1.11 Definition of Terms	13
1.12 Abbreviations	13

CHAPTER TWO: LITERATURE REVIEW	15
2.0 Introduction	15
2.1 Definition of Concepts	15
2.2 Attitude Formation	20
2.3 Definition of Physical Activity	22
2.4 Forms of Physical Activity by children and adolescents	29
2.5 Benefits of Physical Activity for Children and Youth	30
2.6 Adolescent Students Attitude towards Physical Activity	31
2.7 Students' Attitude towards Physical Activity	40
2.8 Prevalence of Physical Activity among Students Youth and Adolescent	43
2.9 Relationship between Attitude and Prevalence of Physical Activity	52
2.9 Some Theories	55
2.10 Limitations of the Theory of Planned Behavior (TPB)	63
2.11 Conceptual Framework	64
2.12 Conclusion of Literature Review	65
CHAPTER THREE: METHODOLOGY	68
3.0 Introduction	68
3.1 Research Design	68
3.2 Setting	72
3.3 Participants/Population	73
3.4 Sample and Sampling Techniques	73
3.5 Research Instruments	76
3.6 Pilot Test	77
3.7 Reliability	77
3.8 Validity	78
3.9 Ethical Consideration	79

3.10	Data Collection Procedure	79
3.11	Data Analysis and Integration	81
CHAPTER FOUR: RESULTS AND DISCUSSION		82
4.0	Introduction	82
4.1	Presentation of Participants Demographic Data	82
4.2	Ages of Participants	84
4.3	Differences in Students' Attitudes towards Physical Activity in Abetifi	92
4.4	Prevalence of Physical Activity among JSH and SHS Students	95
CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS		102
5.0	Introduction	102
5.1	Summary	102
5.2	Findings	103
5.3	Conclusion	103
5.4	Recommendation	104
REFERENCES		106
APPENDICES		125
APPENDIX A:	LETTER OF INTRODUCTION	125
APPENDIX B:	PARTICIPATION CONSENT	126
APPENDIX C:	STUDY QUESTIONNAIRES	128
APPENDIX C:	INTERVIEW GUIDE	131



LIST OF TABLES

Table	Page
1: Elements of the Caspersen et al. (1985)	29
2: List of Sample Schools Located within Abetifi Town	73
3: Number of Respondents in Each Grade Levels	76
4: Participants School or Grade Levels	82
5: Gender of Participants	83
6: Ages of Participants	84
7: Percentage of student engagement and non engagement in PA	85
8: Comparative Analysis of Students Attitude towards Physical Activity	87
9: Cross tabulation of JHS and SHS Students' Attitude towards Physical Activity	88
10: Differences in Attitudes of Students towards Physical Activity According to Grade Levels	93
11: Prevalence of Physical Activity among Students	95
12: Bivariate Correlation of ATPA and PPA	99
13: Time spent in engaging in PA in the past seven (7) days	100

LIST OF FIGURES

Figure	Page
1. Theory of Planned Behaviour Model	63
2. Conceptual Framework.	65
3: Embedded Survey Model Mixed Methods Design	71
4: Distribution of Participants according to reported Grade Levels	83
5: Percentage Distribution of Gender in the Study	84
6: Respondents responses to whether they did physical activity in the past seven	86
7: Comparative lines graph of activity engaged in by JHS and SHS students.	98



ABSTRACT

The purpose of this study was to compare the attitude of junior high and senior high school students towards physical activity (PA) and further determine the prevalence of PA among the cohorts. The present study employed a descriptive cross sectional mixed-method approach where 725 participants with age interval between 12 and 19 years from 5 JHS and 1 SHS in Abetifi-Kwahu were used as study sample. A multistage technique was used for sampling the participants. The attitudes were assessed by using a self-administered questionnaire, thus the Student's Attitude towards Physical Activity Skill (SAPA). Four dimensions of attitudes were considered for data collection, namely: social experience, health and fitness, aesthetic experience, and catharsis. Data was analyzed using frequencies and percentages. However, homogeneity of variance was tested using Levine's test. Normality was tested using the Shapiro-Wilk test. Descriptive statistics of the participants were presented as mean and standard deviation (SD). Independent T-test was conducted to find the differences while bivariate correlation was used to find the relationship between students' attitude towards physical activity and their prevalence of the activities. Results of the study showed that JHS and SHS students in Abetifi have a favourable attitude towards physical activities and they like to participate in such activities to improve their health. The results did not find a significant difference in the attitude of JHS and SHS students towards PA. However, most of the participants were aware of the benefits related to participating in PA. The findings also revealed that the prevalence of PA among JHS and SHS students was high, with walking and jogging being the most highly rated PA among students in Abetifi. There was also a positive correlation between students' attitude and prevalence of physical activity engagement. Based on the findings, the study recommended that GES should increase the amount and quality of physical activity in schools by improving physical education lessons, introduce in the schools a 30 minute walking and jogging activity on a routine basis throughout the week before or after the academic period. In-service training should be organized for teachers on PA and how to inculcate PA into teaching other subjects.

CHAPTER ONE

INTRODUCTION

1.0 Overview

This study is focused on comparing the attitudes of students at junior high and senior high schools towards physical activity. It is also important to figure out the prevalence of physical activity among students at both levels of education. However, the chapter under review elaborated on the background to the study, the statement of the study, the purpose, and significance of the study, objectives, research questions and hypothesis, definition of terms, and the organization or structure of the thesis.

1.1 Background to the Study

Physical activity (PA) is the central pillar that promotes good and balanced health, and its importance to our survival cannot be overstated. Therefore, individuals, who have devoted their lives to physical activity with a positive attitude, gain a dynamic, healthy, and productive personality (Kucukibis, 2019).

The practice of engaging in physical activity starts in the womb and continues throughout the entire stages of human development. Due to the benefits of physical activity, it is crucial for every human being to engage in physical activity to be healthy and physically fit to be able to carry out day-to-day activities with ease. Due to the critical nature of physical activity, nature finds it prudent even for unborn babies to begin to engage in some form of light physical activity from the womb by initiating movement of the limbs to their abilities and turn from one position to another.

Physical inactivity is a major cause of Noncommunicable diseases (NCDs), such as coronary heart disease, cancer, diabetes, and chronic respiratory illnesses, several malignancies, obesity, high and blood pressure. And the outcome of physical inactivity is death and morbidity in all age groups around the world, and Ghana is no exception (WHO, 2020). No wonder the mortality rate among the youth is on the rise. The current situation of physical inactivity is very much worrisome. Physical activity can help to avoid some noncommunicable diseases like mental illnesses (e.g. anxiety and depression) and improve psychological well-being. Physical exercise and fitness improvements have also been found to boost students' school involvement and cognitive and academic performance (Mailed et al., 2019). It is therefore enormously important for every Tom-Dig-and-Harry to appreciate and adapt to physical activity in their daily lives to maintain longevity of life.

Everything we do is tinged with attitude. Attitude plays a crucial role in all fields of human endeavour. Our attitudes have an impact on whether or not we begin or continue a particular activity, as well as whether or not we succeed in certain areas. Attitude formation occurs at a young age, and we may have a variety of attitudes toward various aspects of life. This study, however, focused on students' attitudes towards physical activity.

Studies indicate that children develop a variety of attitudes regarding physical activity and exercise. Irrespective of the numerous benefits of physical activity, individuals begin to develop a variety of attitudes toward it as they grow older. Children that have more positive attitudes toward physical activity and exercise, for example, engage in more vigorous physical activities outside of school, according to (Chung and Phillips, 2007). On the other hand, Kee et. al. (2017), assert that pupils lack a basic awareness

of physical activities and their associated benefits, which leads to unfavorable attitude. Li et. al. (2014), estimate that over 40% of school children are physically inactive and do not reach the recommended level of physical exercise. Nxumalo and Edwards (2017), also echoed this sentiment. This reflects the sedentary lifestyle of young students in general. However, WHO has described physical inactivity as an epidemic. A number three (3) silence killer in the world which need to be conquered by all with urgency. More especially with the focus on the youth since they are the future of every country. It is therefore paramount to investigate into youth attitude towards physical activity.

There are numerous relations between a lack of physical activity and metabolic syndrome; for example, physical activity is required to achieve effective energy continuity in order to prevent or mitigate insulin resistance. However, there are a variety of contributing factors to decrease physical activity, key among them are inadequate campus recreation facilities, poor weather, poor time management, a lack of motivation, increased study time, and a lack of social support for physical activities (Ding & Sugiyama, 2018). Physical activities and sports are widely acknowledged to play a significant part in the physical, social, and mental development of both male and females (Mirsafian et al., 2014). Nonetheless, Physical activity has been shown to be a key factor in weight loss and maintenance (Mirsafian et al., 2015). A study indicates that students, in comparison to the rest of the population, have a poor awareness of physical activities and their benefits, (Kee et. al. as Cited in Zama, 2018).

Celik (2011), opines that during adolescent life, physical development is fast as students in this age are strong and energetic and their needs for mobility and physical activity is high. Hence at this stage, the physical activities greatly support the physical and behavioural development of students. In both junior and senior high school levels. However, during student life, students develop positive or negative attitudes towards different physical activities (Defina et al., 2014). Negative attitudes of the young students towards physical activity and fitness classes can decrease effectiveness of the subject and also reduce the commitment with it. Due to this reason, students' attitude towards physical activities is very important for shaping and attaining aims of maintaining a healthy and active lifestyle.

Despite the multiple positive impact of PA, only a minority of children and adolescents engage in any of it (Halla et al., 2012). To attain best health outcomes, it is recommended that children should engage in at least 60 minutes of daily physical exercise, according to national and international standards, Canadian Society for Exercise Physiology, 2019; Centers for Disease Control and Prevention, 2016 and World Health Organization, 2018), cited in (Kolbe, 2019).

On the contrary, a study conducted by Guthold et. al. (2019), reveals that, globally, in 2016, more than 80% of school-going adolescents aged 11–17 years did not meet the required recommendations for daily physical activity, compromising their current and future health. A further study reveals that, barely only 19% of Australian children and adolescents satisfy these guidelines for recommendations (Hipscher and Leung, 2011). In Portugal, study conducted by (Batptisa et al., 2012) among persons age 15 years or more, reveals that Portugal was among 15 member states of the European Union, the country with the lowest prevalence of physical activity in leisure time

(40.7%) and the sixth country with the highest prevalence of “high physical activity” (33.1%).

With the rising burden of noninfectious diseases (NIDs) threatening millions around the world, physical inactivity has been proclaimed a worldwide epidemic. (Guthold et al., 2018). In 2015 for instance, physical inactivity caused approximately 21% of breast cancers, 25% of colon cancers, 27% of diabetes, and 30% of ischemic heart disease worldwide (Kyu et al., 2016).

Regrettably, the decline in physical activity levels, coupled with increasing sedentary behaviours over time (Katzmarzyk and Mason, 2009), is affecting younger people, including children and the youth, leading to negative health consequences such as obesity particularly among urban residents (Wang, and Lim, 2012; Abarca-Gómez et al., 2016). According to the Global School Health Survey of 2003 conducted among students aged 13 to 15 years in Kenya, only 11.1% met the required regular physical activity threshold of at least 60 minutes per day, and up 40.9% were reported to have sedentary habits (WHO Global InfoBase. Kenya Global School-Based Student Health Survey, 2003). The 2016 Kenya Report Card indicated that only half of Kenyan children and adolescents were engaging insufficient levels of physical activity (Kenya’s 2016 Report Card on Physical Activity).

The WHO estimates that annual global deaths from physical inactivity are currently above three million. (WHO. Global Status Report on Non-communicable Diseases, 2014; WHO. Global Recommendations on Physical Activity for Health, 2010). African countries, including Ghana, Kenya, Nigeria, etc. bear the disproportionately higher burden, partly due to fast-rising urbanization and economic growth, with a

consequent increase in unhealthy lifestyles and sedentary living across (World Health Organization. WHO Global Strategy on Diet, Physical Activity and Health: African Regional Consultation Meeting Report, 2003). In Nigeria for instance, the barriers to being physically active appear to be mediated by a couple of contextual factors. (Oduwole, et al., 2012). Rapid urbanization and widespread industrial activities in countries have created several environmental challenges that affect healthy behaviors across many Nigerian cities (Assah et al., 2011). Indeed, the prevalence of physical inactivity is reportedly high, ranging from 25% to 57%, this is linked to higher prevalence rates of obesity, type 2 diabetes, and cancer. However, the epidemiology of physical inactivity in the country is still poorly understood. (Oduwole et al., 2012; Abubakari and Bhopa, 2008).

In high-income countries, NCDs are major determinants of mortality (WHO: non-communicable diseases country profile, 2014b). Similarly, in 2015 about 48% of deaths in both low and middle-income countries were attributed to NCDs among individuals less than 70 years (WHO: physical activity, 2017). NCDs are on the increase in Ghana (Bosu, 2007). In 2012, about 88,200 deaths had been reported concerning stroke, hypertension, and type 2 diabetes (WHO: non-communicable diseases country profile, 2014a) which together accounted for about 42% of all deaths in some countries. Again evidence from the 2014 and the 2016 Ghana RC revealed low levels of overall PA among Ghanaian youths. (Ocansey et al., 2016), attributed the general level of physical inactivity in the Ghanaian schools as; absence of PE and sports policies, and the inadequacy of programs and PE teaching periods on school time tables, are major concerns that pose serious challenges for surveillance and monitoring in PA settings. In a more triggering development, (Seidu et al., 2020),

indicate that, out of 1,542 SHS students sampled in Ghana, only a quarter (25%) met the recommended levels of physical activity by the WHO. Also Ameyia et. al. (2021), reported high levels of physical inactivity and sedentary lifestyle of many young children. To buttress it, Nyawornota et. al. (2018), found that 70% of Ghanaian children do not engage in enough physical activity.

However, literature available revealed that there is inadequate information on physical activity in Ghana, indicating a gap in the literature that needed to be filled. This study is therefore aimed at filling this gap in the literature by comparing the attitudes of junior and senior high school students towards physical activity in Abetifi, Ghana.

1.2 Statement of the Problem

Physical activity is a vehicle that drives human lives (Lee et al., 2016). However, many people are adamant about this. Instead, physical inactivity has become a dominant force that leads children, young and old, into early graves. The economic gratification of physical inactivity on healthcare is very enormous. And the costs are substantially due to indirect costs such as the value of reduced economic output because of illness, heart-related disease, work disabilities, depression, and premature death (Lee et al., 2016; Ding et al., 2017).

Considering the role of physical activity and the adverse effect of insufficient physical activity, at the World Health Assembly in 2018, member states endorsed a global action plan on physical activity (WHO. Global Action Plan on Physical Activity, 2018), and agreed to a new target of a 15% relative reduction in insufficient physical activity among adolescents by 2030 at the World Health Assembly in 2018. This objective can only be realized if students have a favorable attitude toward physical

activity. Students' commitment will be more productive if they have a good attitude, and they will be more eager to participate in various forms of physical activity. If students are not exposed to regular physical activity and exercise, they may be exposed to a variety of lifestyle concerns and other health hazards. But when adhered to, the benefit to the individual, the nation, and the world will be unlimited. As a result, it is onwards for every country to not undermined adolescent attitudes towards physical activity.

A review of the literature suggests that plethora of studies on physical activity focused mainly on Europe (Andersen et al., 2006; Riddoch et al., 1991), and American countries such as Brazil (de Rezende et al., 2014; Dumith et al., 2010; de Lima and Silva, 2018), United States of America (Terzian and Moore, 2009), and Peru (Sharma et al., 2018), with few studies in Africa. Generally, in the context of Africa, Nigeria (Oyeyemi et al., 2016), and South Africa (Micklesfield et al., 2014), have been the focus of the few previous studies on physical activity. (Peltzer, 2010), also investigated the phenomenon from a cross-country perspective while (Guthold et al., 2018), investigated the phenomenon from a global perspective. In the Ghanaian context, literature available so far indicates not enough studies have been done on physical activity (Doegah and Acheampong Amoateng, 2019; Nyawornota et al., 2018; Ocansey et al., 2016). However most of the previous studies conducted were based on a broader focus (Peltzer and Pengpid, 2011). In effect, such studies do not present a panoramic view of the determinants of physical activity among junior and senior high school students in Ghana let alone in Kwahu East District, Abetifi. It is against this backdrop of the scarcity of studies on the physical activity among the

youth (junior and senior high school students) in Ghana that the present study is conducted using a mixed-method approach.

1.3 Purpose of the Study

The purpose of this study was to compare the attitude of junior high and senior high school students' attitudes towards physical activity in Abetifi-Kwahu in the Kwahu East District of the Eastern region, Ghana.

1.4 Objectives of the Study

The study aimed at achieving the following objectives:

1. To examine the attitude of students towards physical activity in both junior and senior high schools in Abetifi-Kwahu
2. Determine whether there will be a significant difference in attitude towards physical activity among junior high and senior high school students.
3. Determine the prevalence of physical activity among students in junior and senior high schools.
4. Determine whether there will be a significant relationship in attitude and prevalence of physical activity among junior and senior high school students

1.5 Research Questions

1. What is the attitude of students towards physical activity at the junior and senior high school levels?
2. What is the difference in attitudes towards physical activity between junior high and senior high schools students?
3. How common (prevalence) is physical activity among students in junior and senior high school?

4. What is the relationship between attitude towards physical activity and prevalence of physical activity among junior and senior high school students?

1.6 Hypotheses

1. H₀: There will be no significant difference in students' attitudes towards physical activity in junior and senior high schools.
H₁: There will be significant difference in students' attitudes towards physical activity in junior and senior high schools.
2. H₀: There will be no significant relationship between students' attitude towards physical activity and prevalence of physical activity.
H₁: There is a significant relationship between students' attitude towards physical activity and prevalence of physical activity.

1.7 Significance of the Study

The current study will be very significant because the outcome will serve as a source of secondary data for further researchers who may want to embark on further research in the area of attitude towards physical activity. However, the recommendations made in the study will help to improve or address some of the health issues as far as physical activity is concerned.

The study will also be significant to the students and the schools involved in the study since some of the thoughts and opinions expressed by students were added to the recommendation for policy makers to implement. It will also be very significant to the researcher because, per the literature available, there has not been any such study to compare junior and senior high students' attitudes towards physical activity not only

in the Eastern Region but in the whole of Ghana. Therefore, this study will add to the body of knowledge as far as research studies are concerned.

1.8 Delimitation of the Study

This research was only aimed at comparing students' attitudes towards PA in terms of school levels. It was also aimed at determining and comparing the prevalence of physical activity among students through the use of quantitative and qualitative (mixed) research methods. However, other variables such as age and gender are not the primary focus of this study. Additionally, an effort has been made to ensure fair representation of respondents in the study in order to be able to make a fair comparison. The study excluded private schools to ensure participants uniformity, despite the fact that students in private schools may have similar characteristics to those in public schools.

The study setting is situated in Abetifi in the Eastern Region. However, the researcher believes that it would have generated some other perspectives or results if the entire Eastern Region were considered. Due to resource and time constraints, only selected public junior high schools and senior high schools located in Abetifi have been used for the study. For junior high schools and senior high schools outside the study area could have added more value, but they have been excluded from the study in order to avoid and also to minimize potential complexities. Extending the comparing variables to include gender, age, and grade levels of students could also have rendered this study more solid in terms of analysis, but they were omitted due to time constraints.

1.9 Limitations

Following have been identified as limitations of the study:

- i. gender differences and comparison were not considered.
- ii. age differences and comparison were not considered
- iii. the instrument used (SAPA) was self-reported questionnaire. This implies that there is a likelihood that the responses to questions about the respondent's attitude may or may not be sincere or accurate.

1.10 Organization of the remaining Chapters

On the basis of research procedure, the current study is divided into five main chapters. The study begins with chapter one and ends with chapter five. Having gone passed chapter one, the organization of remaining chapters are as followed:

Chapter Two. This chapter is titled "Review of the Related Literature." The chapter gave a detailed account of the previous studies in relation to the current study, attitude of students towards physical activity. The chapter was reviewed under eleven (11) themes. That is, Concept Definition, Attitude Formation, Theories of Attitude, meaning of physical activity, Forms of Physical Activity, Adolescent Attitude Toward Physical Activity, Comparison of Junior and Senior High School Students Toward Physical Activity, Gender and Age of Students and their Attitude Toward Physical Activity, Prevalence of Physical Activity Among Students, Youth and Adolescents, Theoretical Framework and Conceptual Framework. Chapter ended with a summary of the literature review.

Chapter Three. The chapter is titled methodology. It spells out the design used in the current study. The chapter is composed of the following: Research Design, Setting, Participants, research instrument, sample and sampling technique, data collection procedure, and data analysis and integration.

Chapter Four this chapter constitutes the presentation, analysis, and discussion of results.

Fifth Chapter. This aspect focuses on the summary, conclusion, and recommendations for future research.

1.11 Definition of Terms

Ampe: A traditional game which is mostly played by female. It involves coordinating jumping and clapping of hands and shooting of a leg simultaneously. It can be played either indoor or outdoor.

Attitude: A behavior which is developed either positive or negative towards an object as a result of the perception one has towards an object.

Other games: Any outdoor play activity which demands the use of excess energy in a moderate to vigorous activities

Physical activity: Any activity engaged in with the intention of losing of energy in the body.

Prevalence: The frequency/rate at which the individual engaged in physical activity within a week.

Report Card: Information gathered from several national /countries about progress made on health care policy which include physical activities.

1.12 Abbreviations

COVID-19	Coronavirus Disease - 2019
CP	Cumulative Percentage
GAPPA	Global Action Plan on Physical activity
JHS	Junior High School

JHSS	Junior High School Students
MAPHW	More Active People for a Healthier World.
MVPA	Moderate to Vigorous Physical activity
NCD	NonCommunicable Diseases
PA	Physical Activity
PBC	Perceived Behaviour
PI	Physical Inactivity
RC	Report Card
SHS	Senior High School
SHSS	Senior High School Students
TPB	Theory of Planned Behaviour
TRA	Theory of Reasoning Action
VP	Valid Percentage
VPA	Vigorous Physical activity
WHO	World Health Organization

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter discusses a comprehensive review of the literature concerning the current study. In other words, the chapter provides a detailed report on what others have done in the field and how the current study helps to advance the academic debate. The literature will be reviewed under the following thematic areas:

- Definition of Concepts
- Attitude Formation
- What is Physical Activity?
- Forms of Physical activity
- Benefit of Physical Activity for Children and Adolescent
- Physical Activity Among Youth and Adolescent
- Prevalence of Physical Activity among students
- Relationship between attitude and prevalence of physical activity
- Theoretical Framework
- Conceptual Framework
- Summary

2.1 Definition of Concepts

2.1.1 Meaning of attitude

Schwarz and Bohner (2001), indicate that, definition of attitude has gone through a lot of metamorphoses since its conception to date. Century ago some researchers viewed attitude as social psychology. Having this concept in mind they have defined social psychology as the scientific study of attitudes, (Thomas and Znaniecki, 1918; Allport,

1954). The definition of attitudes has changed over time, as one might anticipate of any term that has gotten decades of scrutiny. This indicates that researchers are divided on the concept of attitude, as evidenced by the wide range of definitions. According to the literature, preliminary definitions were enormously wide and integrated cognitive, emotional, motivational, and behavioral components. Thurstone (1928), defined attitude as "the sum of a man's inclinations and feelings, prejudice or bias, preconceived beliefs, ideas, fears, threats, and convictions concerning any certain topic." Attitude is a highly personal and subjective matter. The phrase 'opinion' denotes a point of view. It is the expression of one's attitude in words. In addition, Allport (1935), listed 16 other classifications based on what other researchers had come up with. Later, he promoted the 17th term, which has now taken center stage, becoming the most quoted definition of attitude in any study involving attitude. According to Allport (1935), "Attitude is a mental and neurological state of readiness, organized by experience, exerting a directive and dynamic impact upon the individual's response to all objects and situations with which it is associated." This meaning of attitude refers to a psychoneurosis state of mental and physical action preparedness.

With the passage of time, Krech and Crutchfield (1948), described an attitude as "a persistent arrangement of motivational, affective, perceptual, and cognitive processes with respect to some component of the individual's world" (p. 152). Despite the fact that their definitions appear to be distinct in the mean, Krech and Crutchfield can be blamed for bolstering their notion by adopting comparable terminology from Allport's definition.

With the passage of time, Krech and Crutchfield, (1948), described an attitude as a persistent arrangement of motivational, affective, perceptual, and cognitive processes with respect to some component of the individual's world. Despite the fact that their definitions appear to be different in meaning, Krech and Crutchfield can be blamed for bolstering their notion by adopting comparable terminology from Allport's definition. Their definitions, on the other hand, stressed the enduring nature of attitudes and their intimate relationship to people's conduct. Again, Campbell (1966), defined attitudes as the likelihood that a person will exhibit a particular action in a particular situation. To them, attitude is an act or the result of demonstrating or exhibiting a specific behavior. In an attempt to explain attitude, a study merely displayed a summary of nonobservable individual behavior and was cited as saying, "Attitudes are likes and dislikes" (Daryl, 1970, p. 14). This definition, of course, would not stand the test of time because, to the best of my knowledge, attitude extends beyond an individual's likes and dislikes.

Nevertheless, attitude cannot occur without a trigger or a predictor. However, (Eagly and Chaiken, 1993; 1998), also gave a very simple but vivid definition of what attitude is. According to them, attitude is "a psychological predisposition shown by favoring or disfavoring a certain entity in some way". Many people have enthusiastically endorsed and accepted this definition. Researchers have generally agreed that the concept of assessment is critical in defining attitude, stating that "attitudes have been described in a variety of ways, but the core is the notion of evaluation" (Petty et al., 1997). In some studies, authors developed their own definition of attitude, which reads as follows: "attitudes are the evaluative judgments

that integrate and summarize cognitive/affective processes" (Crano and Prislin 2006, p. 347).

Tavsancil (2002), defines attitude as an emotional and intellectual state of preparedness that has directional and influence power over human behavior toward all significant states and things that occur as a result of life and experiences. Demirel (2003), also believes that attitude is a taught proclivity that leads to specific behaviors toward specific people, objects, and states. Again, attitude is described as a taught proclivity to respond consistently favorably or unfavorably to an item (Fishbein and Ajzen, 2010). People usually develop favorable attitudes toward actions that they feel have predominantly desirable outcomes, while they develop negative attitudes towards acts that they believe have mostly unpleasant outcomes. They also imply that attitudes are subjective assessments of objects (e.g., people, events, situations, etc.) on a scale of positive to negative. Until now, a person's attitude toward something may be determined by their intentions to engage in a range of behaviors related to that object. As a result, the most important indicator of a person's desire to conduct a specific behavior is their attitude.

Semerci and Aydin (2018), define attitude as an element that guides the behaviour of an individual in coherence with their feelings and thoughts. This implies that attitude is a driven force that controls the behavior of every individual in a positively or negatively manner irrespective of age or gender. The development of attitudes, whether good or negative, is governed by a person's ideas about a subject (Silverman and Subramaniam, 1999). Because it is mostly responsible for the control of behavior, attitude is often reflected in one's behavior toward the subject and involvement in everyday activities. As a result, behavior can serve as a predictor of attitude (Rikard et

al., 2006). Although beliefs and attitudes are important, they can change over time. This suggests that the situation or setting in which a person finds himself or herself might influence the attitude that person develops. An individual's attitude can be influenced in either a positive or negative way (Ajzen and Fishbein, 2005). Attitude can be expressed verbally, such as through belief statements, or nonverbally, such as through facial expressions (Silverman and Subramaniam, 1999).

According to Guyer and Fabrigar (2015), attitudes are measured in order to predict behavior and are the subject of persuasive arguments in order to shape behavior. In contrast, Thurston (1928) defines attitude as "the strength of a favorable or negative influence for or against a psychological object". Based on this revelation, it can be argued that attitude is a driving force that shapes an individual's behavior, feelings, and beliefs in a positive (favorable) or negative (unfavorable) way. This means that in the absence of any external force or stimuli to predict behavior, attitude will remain stable, neutral, or zero. Therefore, it will not be out of place to equate attitude to a weighing scale; in that when a weight is placed on the scale, there will be a shift on the indicator. However, when the weight is removed the indicator comes to zero weight. Relatedly, attitudes influence one's conduct in a variety of ways and define one's level of interest in one's everyday activities (Rikard and Banville, 2006).

On the other hand, (Boher and Dickel, 2011), describe attitude as a judgment of a thought object. They went on to say that attitude objects include anything a person can think about, from the common place to the abstract, such as things, people, groups, and ideas. In the latest definition of attitude per the literature available, attitude refers to a set of feelings, beliefs, and behaviors toward a certain item, person, thing, or event (Kendra, 2021). Because of the pluralistic character of the definition of

attitude, it may be argued that the concept of attitude is an open-ended topic about which literature will continue to grow.

The researchers' definitions in a special issue of *Social Cognition* (2007, Vol. 25[5]) titled "What Is an Attitude?" differ in the extent to which they accept the view that attitudes are stable entities stored in memory versus temporary judgments constructed on the fly from the information available (Gawronski, 2007).

2.2 Attitude Formation

The transition from having no "zero" attitude towards a given thing to having some attitude towards it, is referred to as attitude formation. The formation of an attitude is influenced by a number of things. Attitudes are formed, grow, and die or fade through time. Direct experience with the object or people, the environment, knowledge gleaned from others, motivation, and exposure to mass media and the Internet all contribute to their formation. Although changing attitudes might lead to changes in conduct, they are not the same thing. It's also worth noting that, when it comes to attitude formation, individual attitudes are formed within the context of the circumstance and are influenced by it. A specific situation can cause a person to act in ways that appear to be at odds with their beliefs. A positive experience can help to reinforce a positive attitude or neutralize a negative attitude, and a negative experience can help to neutralize a negative attitude (Hipscher & Leung, 2011).

Adolescents form their attitudes as a result of the influences they encounter, according to Bandura's social cognitive theory. They are predominantly impacted by their parents during early adolescence, but as the student matures during adolescence, they are increasingly influenced by others, such as teachers, coaches, and peers.

According to Figley (1985), teachers have an impact on their pupils' attitudes towards the subject they teach. According to several research, the environment has an impact on attitude formation. (Henry, 1993; Hawkins and Catelano, 1990; Rovengo, 1994).

The environment has a powerful influence on student attitude formation. Attitudes and values, like personality, are formed rather than born. People's opinions and appraisals of their experiences, as well as what they decide to do about them, are influenced by where and what they originate from.

Attitudes are influenced by both heredity and the environment. The habitability of attitude variables varies, and those with higher habitability coefficients appear to have a bigger influence on behavior and are less changeable than those with lower habitability. Rather than a direct genetic link, personality traits, physical attributes, intellectual achievement, and other individual differences variables are likely to moderate the heritable component of attitudes. Attitude formation is commonly considered as a social learning process, or as something that can be modified simply by repeated exposure to a fresh or unfamiliar by the time a person enters maturity, he or she has developed a set of subjective criteria or a frame of reference for assessing their experiences. The person's emotional bonds of affiliation, loyalty, and security formed via associating with other individuals influence these norms and attitudes. As a person matures, the number of these associations expands, as does the source of impact on attitudes.

As children get older, their opinions, although still resembling those of their parents, begin to resemble those of their peers and other people in their expanding social world. Classic conditioning, as applied to the acquisition of attitude, states that no

matter what a person does, he or she will develop a new attitude toward something that is frequently associated with a pleasurable or painful stimulus. How a person reacts in a given scenario impacts whether and how that reaction is reinforced in operant conditioning. Attitudes are thought to be cognitive or affective reactions that may be modified by reinforcement or punishment, just like observable behavior.

Many attitudes are gained vicariously or imitatively by seeing other people's activities rather than through direct conditioning or reinforcement. People's actions and attitudes become the observer's own when they are modelled. The act of comparing one's own ideas of social reality to those of others in order to assess whether one's own beliefs are true is known as social comparison. People adopt attitudes because they assert or act as though they are true. This appears to be how many prejudices and narrow-minded societal attitudes are learned. It is also not required to have direct, intimate contact with someone in order to adopt their attitude and perspective.

2.3 Definition of Physical Activity

To find the appropriate definition for physical activity, it is appropriate to begin by tracing from the origin to the development of the most widely accepted definition. To begin, physical activity is defined as "any body movement produced by skeletal muscles that results in energy expenditure" (Caspersen et al., 1985, p. 126). Until now, this definition has provided a logical and explicit manner of determining what physical exercise is. Physical activity is viewed as a machine, with a focus on "skeletal muscles" and "energy expenditure."

Many scholars in the research community have adopted and used term physical activity. As a result of the widely of of the term, Google Scholar has backed up

Caspersen et al. (1985) widely accepted definition of physical activity. According to the most recent data at the time of writing this thesis, the term has been mentioned 1124 times in Google Scholar, indicating its widespread use. Many health policies around the world (Australian Government Department of Health, 2011; World Health Organization, 2018; U.K Chief Medical Officers, 2019), are based on this definition, as academic textbooks (Biddle and Mutrie, 2001; Hardman and Stensel, 2009) and (Howley, 2001; Haseler et al., 2019). Except for some literature that provided some variety by widening the term, this analysis has not uncovered any literature that appears to have disputed this well-known definition of physical activity. This isn't to say that Caspersen's definition is without flaws.

(WHO, 2015), enhanced Caspersen's definition by adding that physical activity can be classified as occupational, sports, conditioning, home, or other activities as part of its endeavor to define physical activity. It encompasses various types of physical activity, such as daily walking or cycling, active play, active recreation (e.g., working out in a gym), dancing, gardening, or playing active games, exercise, and organized and competitive sports. Exercise is a type of physical activity that is planned, structured, and repetitive, with the ultimate or intermediate goal of improving or maintaining physical fitness (i.e. health or skill-related qualities), and can be done with or without supervision (Caspersen 1985; WHO Stay Active Report 2011).

WHO (2020), released a new definition that incorporated most of the terms or features from the previous one. "Physical activity" is defined as "any movement that occurs during leisure time, for transit to and from locations, or as part of a person's day-to-day employment. "Moderate and intense physical activity are both helpful to one's health. Walking, cycling, wheeling, sports, and physical enjoyment and play are all

popular methods to stay active, and anybody of any ability level may do them. Physical activity has been found to help prevent and treat noncommunicable illnesses like heart disease, stroke, diabetes, and a variety of cancers. It also assists in the prevention of a variety of diseases.

It also helps hypertension, maintains a healthy body weight, and can improve mental health, quality of life, and well-being. It also aids in the prevention of hypertension, the maintenance of a healthy body weight, and the enhancement of mental health, quality of life, and well-being. Physical activity, according to the (Association for Physical Education – AFPE, 2015), in a position paper, is a wide phrase that refers to all body movement that uses energy. Physical education, sports, and dancing activities all fall under this category. Indoor and outdoor play, work-related activities, outdoor and adventurous activities, active travel (e.g. walking, cycling, rollerblading, scooting), and routine, habitual activities such as doing housework and gardening are all included.

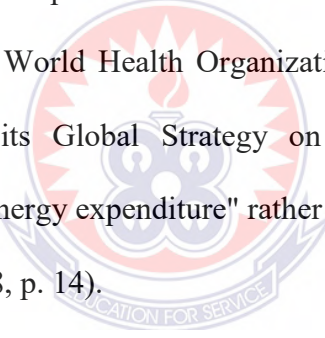
In another study, physical activity is defined as "games, sports, dance, and outdoor pursuits such as biking, hiking, soccer, swimming, street hockey, jogging, street dance, walking, skateboarding, gymnastics, and jazz that are not part of an organized program such as physical education classes, school sports, or community sports." (Hunt, 1995). It's a multifaceted concept that can be classified qualitatively (for example, incidental activity or exercise), quantitatively (for example, frequency, length, or intensity), or contextually (for example, time, place, position, or posture) (Butte et al., 2012).

Walking, jogging, cycling, wheeling, gaming, dance, active recreation, and play, according to (WHO, 2018) and other literature, are popular ways to be active. They can be done at any level of competence and for enjoyment by anyone.

Regular physical activity has been shown to aid in the prevention and management of noncommunicable diseases such heart disease, stroke, diabetes, obesity, and a variety of malignancies..It also aids in the prevention of hypertension, the maintenance of a healthy body weight, and the enhancement of mental health, quality of life, and overall well-being.

2.3.1 Variations in the definition

There are some subtle discrepancies as writers strive to come up with their own definitions. In 2018, the World Health Organization (WHO) modified Caspersen's definition somewhat in its Global Strategy on Physical Activity. Thus, body movement that "requires energy expenditure" rather than activity that "requires energy expenditure". (WHO, 2018, p. 14).



Variations by the same author are also possible to locate. Physical activity is defined as "body movement caused by skeletal muscle contractions that raises energy expenditure beyond the baseline level" by the US Surgeon General's report (US Department of Health and Human Services, 1996). Physical exercise, on the other hand, was described in their report's glossary as "physical movement caused by skeletal muscles."

The notion that all physical exercise is beneficial to one's health is debatable, because behaviours like overtraining, repetitive strain, and physical combat may all be considered physical activity. The idea that all physical activity is good for your health

is questionable because habits like overtraining, repeated strain, and physical combat are all considered physical activity yet may not necessarily give health benefits to everyone. The 1985 definition, along with minor variations, is limited to epidemiological discourse and hence limited. "The epidemiological study of any idea or event necessitates that the object under investigation be defined and quantified," Caspersen states in the introduction (p. 126). While Caspersen's definition of physical activity may be appropriate for some epidemiological studies, it may not sufficiently reflect physical activity in other situations.

2.3.2 A New broader definition of physical activity and the justification

In a recent study publication, a new definition of physical activity was proposed. Piggin came up with the concept that; Physical activity "involves people moving, acting, and performing within culturally particular settings and situations, and is impacted by a diverse range of interests, emotions, ideas, instructions, and connections," (Piggin, 2020). Piggin claims that this notion was first proposed in the book "The Politics of Physical Activity" in his essay "Conceptual Analysis," which was released in June 2020. Various explanations for coming up with new definitions were expressly presented as a result of this. The following are some of the benefits of a broader definition of physical exercise, according to the author:

To start with, it stresses the movement of people over the movement of muscles. Of course, anesthesiologists will still be accommodated by this modification. The biomechanical and physiological components of exercise are included in the focus on individuals moving. However, for the sake of inclusivity, it focuses on the individual rather than skeletal muscles or energy in the form of kilojoules. Complexity, the environment, and the human experience are all highlighted in a broader definition.

Practitioners and instructors of the concept will be able to account for the complexity of physical activity by include the cognitive, emotive, and contextual components of it (Pronger, 2002). The inclusion of social and cultural contexts, as well as a variety of influences, allows for the cognizance of physical activity opportunities and constraints.

Again, he justifies that by discussing acting and performing as well as moving, the definition appreciates the productive and creative potential that comes from physical activity. Distinct and in contrast with the original definition's emphasis on energy expenditure, the new definition imagines that much more is created through physical activity (such as the outcomes of labor, artistic performances and emotional, memorable experiences) than spent. He argues by pointing out that shifting away from a focus on exertion (measured by technical apparatuses) we can more appropriately acknowledge and appreciate the range of other reasons for people being active.

Also Pidgin pointed out that by emphasizing inclusivity, complexity, and the holistic, we can problematize the dualism (separation of the mind from the body) which emanates from Caspersen's original definition. Questioning dualism allows the reader to move away from a discourse of the "body as machine" and incorporate ideas about the "body as self" (Whitehead, 2001). With this, Piggin was of the view that, a new broader definition of physical activity may be appropriate.

Furthermore, the author reiterates the fact that a broader definition might be useful in re framing policy interventions, beyond disease risk as a justification. He added that this is not intended to marginalize the medical aspects of physical activity, though it is

intended to resist against overly medicalization. Having considered the points that have been advanced, Pidgin justifies the fact that his definition might open new ways of talking about activity, particularly within a policy sphere. For policy makers, it might elevate rights and values associated with physical activity to a higher priority, rather than the health benefits of physical activity remaining as the dominant justification for physical activity interventions. That is, there is more to health than physical activity, and there is more to physical activity than health. It might also stimulate novel ways of thinking about the place and meanings of physical activity for different people and different sectors of society. As the starting point for research studies it might provide impetus toward more inclusive questions and settings for research to take place.

Finally to his justification, Pidgin opines that, when people move they are influenced by a unique array of interests, emotions, ideas, instructions, and relationships. By acknowledging and prioritizing this, he stated that users of the definition can consider the wide range of intrinsic and extrinsic factors that are “unique” to each person’s experience of physical activity. He further argues that, interests, emotions, ideas, instructions, and relationships might well be marginalized when there is a focus on “energy expenditure.”

Table 1: Elements of the Caspersen et al. (1985) definition, compared with the new definition by Piggin (2020).

Caspersen et al. (1985)	Piggin (2020)
Bodily movement	People moving Acting Performing
Skeletal muscles	Culturally Specific Spaces Contexts
Results in energy expenditure (kilojoules)	Influenced by Interests Emotions Ideas Instructions Relationships

Apart from this novel definition of physical activity by Pidgin, as indicated by the literature, there has been any further new definition. In any case, this study cannot support this new definition as it lacks could not justify the elimination of some key ingredients involve in the performance of physical activity.

2.4 Forms of Physical Activity by children and adolescents

When people think about physical activity, they almost exclusively think of exercise and strenuous workouts that happen in fitness spaces, at dedicated times of the day. They think that individuals are almost solely responsible for deciding whether or not to engage in physical activity Davis et al., (2020). A variety of physical activities to improve the health condition is recommended for all people of all ages. Different types of physical activities work on different health-related components of physical fitness, It must be noted that the term "physical activity" should not be confused with "exercise", which is rather a subcategory of physical activity that is planned, structured, repetitive, and aims to improve or maintain one or more components of physical fitness. The intensity of different forms of physical activity varies between

people and age. Both, moderate and vigorous intensity physical activity brings health benefits. WHO recommends that children and adolescents should engage in a variety of enjoyable physical activities? WHO indicated that children (6 – 18 years) should perform 60 minutes of moderate to vigorous intensity activity per day and for adults (18+): 150 minutes of moderate-intensity activity per week (WHO, 2014). As part of the 60 minutes, it is also recommended that children and adolescent should engage in physical activity for at least 3 days a week.

2.5 Benefits of Physical Activity for Children and Youth

The benefits of regular physical activity and exercise are undisputed in the literature. Particularly large health benefits have been reported among individuals who have experienced significant losses in their psychological and physical functions as a result of chronic diseases such as cardiovascular disease, diabetes, cancer, hypertension, obesity, depression, and osteoporosis (Taylor et al., 1985; Paluska and Schwenk, 2000; Penedo and Dahn, 2005; Haskell et al., 2007; Knapen et al., 2015; Ruegsegger and Booth, 2018). Physical activity during childhood and adolescence is thought to positively affect a number of factors related to the risk for chronic disease later in life. While conclusive evidence is still lacking, potential benefits have been observed in some short-term cross-sectional studies and also in controlled interventions involving children engaged in specific physical training programs. There is also evidence, in some cases, to suggest that these benefits track into adulthood, thereby reducing chronic disease morbidity and mortality. Potential health benefits of physical activity include reduced risks of obesity, cardiovascular disease, diabetes and osteoporosis. Physical activity may also result in enhanced academic performance and psychosocial benefits.

2.6 Adolescent Students Attitude towards Physical Activity

Aristotle once said physical fitness as “the body is the temple of the soul, and to reach harmony of the body, mind, and spirit, the body must be physically fit”. Notwithstanding this, In 2016, more than 80% of school-aged adolescents aged 11–17 years did not meet current recommendations for daily physical activity (Guthold et al., 2019), in their study on global trends in insufficient physical activity among adolescents: a pooled analysis of 298 population-based surveys with 1.6 million participants, putting their current and future health at risk. The WHO issued a 2018 declaration in response to the reduction in teenage physical activity, as well as the launch of More Active People for a Healthier World, a new global physical activity campaign. The "More Active People for a Healthier World" statement expected a 15% reduction in physical inactivity among teenagers worldwide by 2030. In light of this, research is critical for developing school curricula as well as determining the mental and physical health of school-aged adolescents in order to establish their views toward PA. Because physical activity is a panacea for a healthy life, the prevention of noncommunicable disease (NCD), self-esteem, and academic achievement, it's vital to know what students think about it. As a result, examining people's attitudes toward physical exercise is a good way to learn about their intentions, because attitudes can influence whether or not they begin or continue participating in an activity (Martin et al., 2007; Shen et al., 2012). As stated in (Bouchard et al., 20011), active participation in physical activity supports the creation of beneficial habits, enhances healthy lives, has health implications (Irish Sports Council, 2009) and gives psychological health benefits (Haskell et al., 2007; Ahmed et al., 2017).

According to the literature, attitude affects all aspect of our life, including everything pupils encounter at school, including both curriculum and co-curricular activities. (Frederick et al., 2018; Ahmed, 2013 cited in Ahmed et al., 2017), teenage participation in physical activity has a positive influence on health-related indicators and well-being. Adolescents have a "fertilizer effect" (meaning they grow very faster) during development. (Ahmed et al., 2017), For example, sport participation by young people shapes their characters (and health) in socially desirable ways, while sports provide opportunities for guidance by adults as role models toward positive development (Donnelly et al., 2007; Hartmann, 2003; Hartmann and Depro, 2006 cited in Ahmed, 2017). Physical activity therefore plays an essential role in the development of physical and psychological health during adolescent stage. Physical activity attitudes are developed in childhood and, in most circumstances, continue to form throughout life. Being physically active on a regular basis could be attributed to one's favorable attitude about physical activity.

Negative attitudes about physical activity, on the other hand, have been linked to physical inactivity (Sjögren, 2012). In a research titled "Adolescents' Attitudes toward Physical Activity," (Sjögren, 2012), found that "Adolescents' Attitudes toward Physical Activity. Is there a link between a teen's attitude and their degree of physical activity?" Observes that teens were an interesting demographic to measure attitudes in since physical activity levels tend to diminish throughout these years. Sjögren's research highlights the need of attempting to comprehend the attitudes that underpin sedentary behavior, as well as the value of such attitudes for public health. Sjögren's claim that one's attitudes toward a topic influence how they respond in the context of physical activity. This suggests that if someone has a bad attitude about physical

activity, they are less likely to participate in physical activities. Study suggests that there is a strong link between attitudes about physical activity and physical activity levels. Therefore, individual athletic ability has a good link with attitude toward physical activity (Wang, 2012). Students develop positive or negative attitudes toward various types of physical activities throughout their lives, and negative (unfavorable) attitudes toward physical education and related activity classes impede the subject's effectiveness and decrease student commitment. (Defina et al., 2015) As a result, students' attitudes toward physical activities are critical for developing and achieving PE goals, as well as achieving WHO vision 2030 - physical activity among adolescents.

A survey of 98 students in Oman was undertaken to investigate their participation in sports and physical activities. According to the findings, students who are regularly involved in sports or other physical activities have a healthy lifestyle and a positive attitude toward such activities. Students that are healthy have a favorable and powerful attitude toward physical activities, according to the study. This phenomena may be best described by pupils in their childhood years, when they are seen actively engaged in physical activities for the sake of enjoyment, fun, and teach (Ainsworth et al, 2015). The number of teenagers who are physically active appears to be grossly inadequate, regardless of the type of physical activity they engage in (Ahmed, et al. 2017). Some researchers agree with Ahmed et al. that proper measures must be put in place to alleviate the epidemic of physical inactivity among adolescents, and that too much emphasis should not be placed on individual behavior strategies alone, but rather on public health approaches so that we can achieve the goal and vision for a "Healthy World." (Kohl and Cook, 2013; Rowland, 2007),

Individual psychosocial variables can prevent declines in physical activity among adolescents (Silverman and Subramanian, 2010). Positive attitudes toward physical activity formed in physical education may play an important role in maintaining an active lifestyle outside of school (Silverman and Subramanian, 2010; Duncan et al., 2007). Physical education, as a result, can be used to affect student attitudes toward physical activity and health because it reaches the majority of pupils (McKenzie, 2003). Silverman and Subramanian (2010), on the other hand, believe that as students get older, their views regarding physical activity situations become more unfavorable. This can be ascribed to a variety of psychosocial variables, as the adolescent begins to learn and battle with some developmental issues as he or she grows older. Typical among them is self-identity versus role confusion as identified by Erickson. In addition, in African for instance the adolescent begins to take responsibility by taking care of his or her siblings or the entire family by providing food for the family and the like. If such adolescent is saddled with things of these nature, his/her attitude towards physical activity will surely record a negative turn this will be carried into adulthood.

Children with more positive attitudes toward physical activity are more likely to participate in physical activity outside of school (Chung and Phillips, 2007; Ding et al., 2017; McKenzie, 2003; Portman, 2003) and have higher levels of physical activity (Hagger et al., 2002), than those with less positive attitudes. In their study on physical activities and academic performance, Trudeau and Shephard (2012) discovered that participating in physical activities can improve academic achievement, but that this effect is not statistically significant, and that GPA had no effect on attitude toward physical activities. Students who are naturally motivated and notice a change in their

physique and health as a result of participating in physical activities, regardless of their GPA, are eager to participate in physical activities (Murcia et al., 2009).

High school students' attitudes toward physical activity class were impacted by certain crucial anthropocentric and non-anthropocentric elements such as age, gender, grade level, and student's cultural influences, according to a study done to explore students' attitudes regarding PA (Ali et al., 2015). Physical inactivity, according to the findings of a related study conducted on young Austrians, is linked to high cholesterol, obesity, and cardiac illness, all of which lead to premature death (Burnett et al., 2016).

Students who are usually active in sports or other physical exercises with physical activity prevalence demonstrate a healthy life and a positive (favorable) attitude toward such activities, according to the findings of a study conducted on 98 students to examine their participation in sports and physical activities. Students that are healthy and active have an undeniable favorable and powerful attitude toward physical activities, according to the study. This research suggests that individuals who have a strong and positive attitude about PA may acquire a positive interest in physical activity as early as childhood, when they engage in those childhood physical activities for joy or fun (entertainment). (Ainsworth et al., 2015).

Many current cases of chronic diseases and obesity, according to health professionals, are linked to a lack of physical activity and a negative attitude toward such activities. Physical activity has also been linked to the prevention of heart disease, cancer, and diabetes, according to research. Omolayo et. al. (2013), demonstrate that participating in physical activities has health and social benefits, such as opportunities to connect with others, increased self-efficacy, and improved health and well-being. According

to studies, competent physical educators or coaches with a high level of motivation and positive attitudes toward physical activities help their pupils grasp the reasons of physical activities, resulting in higher fitness levels in their players (Murcia et al., 2009).

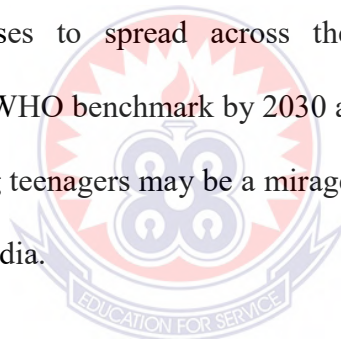
The most important social structure in which an individual spends his entire life is society. A society develops human talents or fosters beliefs that can aid in the establishment of attitudes and crucial actions related to physical activity (Drum et al., 2016). Building on the achievement goal theory, which states that a person is motivated to pursue success in an environment of accomplishment, such as society or peers (Granero et al., 2014). This implies that society is the one who models behavior. That is, it has the ability to foster and control individual attitudes, both positive and negative, in order to help the individual live well and integrate into society.

According to Kalaja et. al. (2010), athletes' apparent physical ability and sports skills influence their attitude. Fellow team members and sports coaches have a big influence on a player's behavior. Obesity is on the rise among Canadian adolescents, according to WHO data, due to a lack of physical exercise and a growing tendency of sedentary living. However, studies revealed that young males who participate in social activities engage in more physical activities than their peers. (World Health Organization, 2010; Paterson and Warburton, 2010). This finding was supported by similar study which assessed 58 male and 56 female students' attitudes about physical activity using the SATPA inventory. (Dacey, et al., 2014)

In a survey done in China, 949 students' perspectives and personal experiences concerning four Chinese colleges were evaluated. The model of attitudes included

social development and social realization, and the students and schoolboys in China had a good relationship in the outcomes (Li, 2014). Similarly, an academic study was undertaken on students in Poland to determine the attitudes of Polish youth toward sports. The data support the hypothesis that School Sport Clubs members exhibit more pro-social behavior toward sports than their non-sporting acquaintances. The findings back up the importance of sports in promoting positive social and cultural education in schools and universities (Tomik et al., 2012).

Despite the WHO's call for A Health World by 2030, physical education is still not considered an obligatory topic in India (Ahmed et al., 2017). As a result, public understanding of the benefits of physical activity is dwindling, paving the way for noncommunicable diseases to spread across the country and increasing their prevalence. Meeting the WHO benchmark by 2030 as a result of the high incidence of physical inactivity among teenagers may be a mirage if effective action is not taken to address the situation in India.



According to Ahmed et al, the situation in India is similar to that in China. They claim that physical exercise is frequently discussed in Chinese society as "draining energy and affecting academic attention," whereas academic performance is viewed as the sole measure of success, elevating physical inactivity to a high pedestal. In Pakistan, physical inactivity and obesity are on the verge of becoming epidemics. Over the last few years, this has piqued the interest of researchers. In Pakistan, sedentary lifestyles and the growing tendency of urbanization are thought to be the main causes of inactivity and different ailments. Study indicates that Pakistan has the highest ratio of diabetics in South Asia, while Pakistan ranks 9th in the world for obesity and

sedentary lifestyles, whereas America ranks first, necessitating an investigation into student attitudes toward physical activities. (Shujaat, 2018 cited in Zaman et al. 2018).

Furthermore, more than 22% of Pakistan's population over the age of fifteen is fat or overweight. According to studies, one out of every four Pakistanis is overweight, and Pakistan is ranked 165th out of 194 countries on a list of the world's "fattest countries." Obesity and inactivity are also prevalent among students, which has risen rapidly over the last two decades as a result of insufficient physical activity. (Ngandu et al., 2015)

In Africa, it was reported in a study that the rising incidence of lifestyle diseases in Sub-Saharan Africa (SSA) is due to a high prevalence of physical inactivity, and that adolescent students and adults have replaced traditional practices such as walking long distances and doing physical labor with motorized transportation and sedentary activities, particularly in urban settings (Doegah and Amoateng, 2019). In various African nations, such as South Africa, Tanzania, and Uganda, for example, hypertension prevalence rates of 22 percent, 11–23 percent, and 34–31 percent have been observed among youths aged 18–34 years (Kavishe et al., 2015). Peltzer (2010), reports in a study on physical activity among in-school adolescents in eight African countries that only 14.2 percent of the students in a total sample of 24,593 students aged 13 to 15 years from eight African countries were frequently physically active (5 days or more per week, at least 60 minutes per day) during leisure time. Similarly, Ugandan and Kenyan students recorded (17.7% and 16.0 percent, respectively), but Zambian and Senegalese students were the least physically active, with a record of 0% and 0%, respectively (9.0 percent and 10.9 percent, respectively).

In Ghana , researchers conducted a study on Understanding Physical Activity among Young Ghanaians aged 15-34 years and have reported that: on the whole, Ghanaian youth are physically inactive. Among the myriad reasons cited by the youth for being physically inactive according to the report were that, busy work schedules, fear of crime, plain laziness, chastity, illnesses, and etc. The study also reported that young people in general do not see the need to practice physical activity on their own or making it intentionally habit. Their findings reveal that upbringing was found to be a moderator to prevalence of physical inactivity among young Ghanaians. They concluded that exercise is not part of Ghanaian youths and for that matter African culture. (Doegah and Amoabeng, 2019; Randt, 2011). The conclusion drawn by Doegah and Amoabeng resonate both the 2014 and the 2016 Ghana Report Card (RC) which revealed a general low level of PA. The RC as concluded in (Ocansey et al., 2016) state that “irrespective of the low level of Physical Activity in the country, there is still inadequate effort to constructively develop and introduce effective interventions to improve the situation. For example, the absence of PE and sports policies, and the inadequacy of programs and PE teaching periods on school timetables, are major concerns that pose serious challenges for surveillance and monitoring in PA settings”. There is a need for investment in monitoring and surveillance of PA and the development of SB guidelines for Ghanaian children and youth. The grades as reported in the 2016 Ghanaian RC should be treated with caution due to the very limited evidence base on which they were based.

Base on the findings and conclusion drawn by various literature, the current study tries to get a better understanding of physical activity as relate to adolescents in both JHS and SHS at Abetifi in the Eastern Region, Ghana.

2.7 Students' Attitude towards Physical Activity

The attitude of students towards physical activity in this study was categorized under four main construct. Thus Social Experience (Fun), Catharsis (Benefit), Aesthetic (Self-esteem), and Health/Fitness.

Studies of junior and senior high students' perceptions on physical education /activity have contributed to furthering the understanding of their views of physical education/activity. For example, in a study conducted, it shows that students perceived physical activity/education as fun and it made them feel good and special (Solmon and Carter, 2007). It was also shown in another study that junior high students were able to evaluate parts of the physical education curriculum and that their evaluations could be useful for curriculum revision as far as physical activities are concerned. Findings also indicated a preference for skill-related over health-related activities (McKenzie et al., 1994). Studies of student attitude toward physical education/activity at the secondary level are informative. Some researchers observed that curriculum content was the most influential factor in the development of positive and negative attitudes toward physical education, regardless of gender or whether students elected or avoided physical education/activity (Luke and Sinclair, 1991). According to Tannehill and Zakrajsek (1994), among the curriculum choices, running was the least physical activity enjoyed by students and they indicated a negative attitude about fitness. These findings support the findings of (Luke and Sinclair, 1991) that running activities and fitness testing were very unfavorably viewed by all students. An examination of activity preferences among high school students found their choices to include a few team sports compared with a wide variety of individual and dual sports (Strand and Scantling 1994). In a study focused on perceptions of high

school students involved in a badminton unit, (Tjeerdsma et al., 1996), found that students preferred game play and competition over skill and drill practice. Finally, a further study indicates a significant positive relationship between high school students' attitudes toward physical activity and participation in leisure-time activities. They concluded that students' beliefs and attitudes impact their behaviors (Chung and Phillips, 2007).

A critical review of the literature on students' attitudes toward physical activity reveals as cited in (Zeng et al., 2011), that, findings on Junior and secondary schools Students Attitude towards Physical Education/Activity (ATPEA) indicate two major factors having relationship with students' attitude. Thus students' characteristics and contextual factors. The study cited students' characteristics as their age, gender and sports skill while contextual factors as the quality of physical activity programs and the accessibility of after school physical activities. After doing the comparison, they reported that with regard to students' characteristics, elementary students are found to have more positive attitudes towards physical activity than secondary school students. They further asserted that, while students progress the academic ladder, their attitude towards physical education/activity suffer a downward trend. (Biddle and Mutrie, 2008; Lee, 2004; Prochaska et al., 2001; Xiang et al., 2004). The study further conceded that Junior High school students express very favorable attitudes toward health, fitness, enjoyment and social interaction benefits of physical activity, but do not enjoy physical activities involving hard practice and risk-taking movements (Patterson & Faucette, 1990). Lee (2004), identifies that the younger students have more positive attitudes toward physical activity and show more interests toward all kinds of physical activities. However, the reliability of younger children responding to

questions might need to be carefully considered due to their lower self-evaluation ability (Lee, 2004). Lee's view may be true depending on the age parameters of the respondents. If the ages of respondents are very low or they or are found to be in lower classes, it will affect the kind of questions they are asked more especially if it deals with responding to questions on paper (questionnaire) instead of interview. It is on this ground that the current study deemed it necessary to employ a mixed method approach to give room to the able and unable to read and write.

Study indicated that school students' positive attitudes are likely to be associated with enjoyment, perceived usefulness of the curriculum and a sense of belongingness (Subramanian and Silverman, 2002 cited in Zeng, 2011). Curriculum with situational interests, such as those requiring students to analyze and design offensive and defensive strategies, may foster students' interests in physical activity (Chen and Darst, 2001). A learning environment that promotes personal meaning is considered to be important to the development of positive attitudes (Rink, 2006). Students are also likely to become more positive toward physical activity if they are in a learning environment that makes them comfortable and confident (Hagger et al., 2002). Carlson (1995), indicates that students would lose interest in physical activity if the subject matter lacks challenges or the instructors repeat the same class activities without making it fun and enjoyable (Chen and Darst, 2001). In another study, Siedentop (2008) also argued that a multi-activity curriculum with a series of short-term units would negatively influence the attitudes of students toward physical education/activity. In contrast it emerged from a different point of view that it is difficult for students to maintain interests in traditional team sports than in individual sports or activities. Additionally, study observes that, if physical education/physical

activity in school curricular becomes a marginal status, it would have a negative impact on students' attitudes (Subramanian and Silverman, 2007 cited in Zeng, 2011).

2.8 Prevalence of Physical Activity among Students Youth and Adolescent

It is apparent that physical activity is essential in the prevention of chronic disease, premature death and improve optimal health. However, doubt remains over the optimal “volume” (frequency, duration and intensity of exercise) and the minimum volume for health benefits, in particular the effects of intensity (e.g., moderate vrs. vigorous) on health status. There is evidence that intensity of physical activity is inversely and linearly associated with mortality. (Lee and Skerrtt, 2001). Early work by (Paffenbarger, et al., 1993) revealed that regular physical activity (expending > 2000 kcal [8400 kJ] per week) was associated with an average increase in life expectancy of 1 to 2 years by the age of 80 and that the benefits were linear even at lower levels of energy expenditure. Subsequent studies have shown that an average energy expenditure of about 1000 kcal (4200 kJ) per week is associated with a 20%–30% reduction in all-cause mortality.

It is recommended that children between ages 5 to 17 years should engage in physical activity at least 60 minutes of moderate- to vigorous-intensity physical activity (MVPA) daily. (WHO, 2020, 2018, 2016; Parrish et al., 2020). In line with the United Nations' Sustainable Development Goals (SDGs) vision 2030 (United Nations. Transforming our world), WHO published the Global Action Plan on Physical Activity 2018–2030 to provide guidance to support the implementation of national multi-secretarial Physical Activity actions and set a specific target of a 15% less reduction in the global prevalence of physical inactivity in adolescents and adults (WHO, 2018). But it is unclear if “operation 15% by 2030” can be achieved globally.

Over the past two decades, several studies have been conducted to estimate the prevalence of Physical Activity levels among children and adolescents. Studies indicate that USA had one of the highest prevalence of PA (Guthold et al., 2019; Marques et. al., 2020 cited in Aubert et. al., 2021). On the contrary, Gut hold et. al. (2019) observed that globally, in 2016, about 80% of students aged 11–17 years were insufficiently physically active indicating a less prevalence of physical activity thus more that 70% of boys and over 80% of girls. They were of the view that, although prevalence of insufficient physical activity significantly decreased between 2001 and 2016 for boys (from 80·1% in 2001), there was no significant change for girls (from 85·1% in 2001). Hitherto, insufficient activity prevalence in 2016 was 84·9% in low-income countries, more than 75% in lower–middle-income countries, 83·9% in upper–middle-income countries, and 79·4% in high-income countries. The region with the highest prevalence of insufficient physical activity in 2016 was high-income Asia Pacific for both boys 89·0% and girls 95·6%. While the regions with the lowest prevalence were high-income western countries for boys was a little over 70%, and south Asia for girls which was over 75%. Again, they pointed out in their study that in 2016, 27 countries had a prevalence of insufficient physical activity of 90% or more for girls, whereas this was the case for two countries for boys. Across all regions, girls were less active than boys, with significant differences between sexes in seven of the nine regions globally. Insufficient physical activity did not change for girls or both sexes combined in any region; however, male prevalence showed small but significant decreases in five out of the nine regions (high-income western countries, Latin America and the Caribbean, Oceania, south Asia, and sub-Saharan Africa

They further affirm that, In 2016, prevalence of insufficient physical activity was more than 80% in 71 (49%) of 146 countries analyzed for boys versus 141 (97%) for girls, more than 85% in 20 (14%) countries for boys versus 112 (77%) countries for girls, and more than 90% in two (1%) countries for boys versus 27 (18%) countries for girls. Their findings further revealed that Philippines was the country with the highest prevalence of insufficient activity among boys 92·8% whereas South Korea showed highest levels among girls 97·2% and both sexes combined (94·2%. However, Bangladesh was the country with the lowest prevalence of insufficient physical activity among boys (63·2%, girls (69·2% and both sexes combined (66·1%). Girls were less active than boys in all but four (3%) countries (Tonga, Samoa, Afghanistan, and Zambia), Among boys, in 6 (4%) out of the 146 countries, their finding indicate prevalence of insufficient activity decreased by more than 5 percentage points since 2001 (Bangladesh, Singapore, Thailand, Benin, Ireland, and the USA), whereas in Italy and Australia it increased by more than 3 percentage points. Among girls, changes in insufficient physical activity prevalence over time were small, ranging from a 1·7 percentage-point decrease in insufficient activity in Singapore to a 0·9 percentage-point increase in Afghanistan. Differences in prevalence between sexes widened from 2001 to 2016 in most countries analyzed 73%.

Further studies have shown that the frequency of participating in physical activities decreases in adolescence, and that individuals tend towards occupations with low activity, thus, it has been suggested that the school-age individuals perform physical activity for 60 minutes daily (Akman et al., 2012; Garipalaollu et al., 2008; Vadiveloo et al., 2009). A study by (Ryan, 2009) on 994 high school students between the ages

of 11-16 in Florida revealed that physical activity status decreases as the students grow. It has also been observed that Modern life style and the change in the sociocultural structure has minimized the need for physical activity for adolescents, thus, giving birth to sedentary life style. As commonly known, sedentary life style is defined as a risk factor in the development of coronary artery diseases, hypertension, obesity, type-II diabetes, some forms of cancer, and some chronic diseases. A life style that based on physical inactivity in daily life plays an important part in disability and mortality.

In a study conducted by Kucukibis and Gul (2019), they maintain that adolescent individuals may participate more in physical activities when their self-esteem is improved. They also pointed out that the attitude of students, who do sports in their free time or are players in a sports club, towards physical education lesson was higher. This may be due to the desires of students to attend the physical education lesson related with their interest in sports (Okut, 2017; Imamoglu, 2011; Zengin, 2013 cited in Kucukibis and Gul). Kucukibis and Gul concluded in their findings that, the fact that most of the adolescent individuals in their study engage in sports thus (53.7%) may suggest that these individuals have high prevalence for physical activity

Again studies reveal that in 2019 to 2020, 44.9% of children and young people in England met the Chief Medical Officers' (CMOs) guidelines of taking part in sport and physical activity for an average of 60 minutes or more every day. In 2019 to 2020, a statistically significant decrease in physical activity was reported compared with 2018 to 2019 (46.8%), but physical activity levels remain higher than 2017 to 2018 (43.3%). The percentage of children that reported being physically active in 2019 to 2020 ranged from 41.9% in London to 49.4% in the South West. All regions,

except the North East, reported a decrease in physical activity levels compared with 2018 to 2019, although only the East Midlands reported a statistically significant decrease. Boys (47.1%) continue to be more likely to report achieving recommended physical activity levels than girls (42.7%), although the gap narrowed by 3.2 percentage points (p.p.) in 2019 to 2020, with boys reporting a more notable decrease from 2018 to 2019 (50.6%).

The prevalence of physical activity among adolescent students in Africa as suggest by various studies and results from Report Card (RC) did not suggest much good news as far as physical activity among adolescent students is concerned. For instance, Draper, et al. (2018), report in a study conducted that the 2018 (RC) for South Africa indicate that the country is making insufficient progress with regards to the promotion of PA opportunities that are safe and accessible for the greatest number of children and adolescents in South Africa.

South Africa score a grade C for overall physical activity in 2016 and 2018 respectively with justification that there is no new evidence suggesting that overall PA levels are improving (or deteriorating), therefore the grade of C remains. Other studies conducted reported much higher levels of compliance in physical activity prevalence as 69% in 8-14 year olds, (Van Biljon, et al., 2018), and that children and adolescents were “moderately active”. (Van Biljon et al., 2018; Salvini et al., 2017), all reported similar findings with 8-12 year old children achieving 60 minutes of MVPA on an average of 3.5 days per week. (Salvini et al., 2017).

Regrettably, ‘physical activity transition’ referring to resultant decline in physical activity levels, coupled with increasing sedentary behaviors over time, is affecting

younger people, including children and the youth, leading to negative health consequences such as obesity particularly among urban residents. According to the Global School Health Survey of 2003 conducted among students aged 13 to 15 years in Kenya, only 11.1% met the required regular physical activity threshold of at least 60 min per day and up 40.9% were reported to have sedentary habits. WHO Global InfoBase. The 2016 Kenya Report Card indicated that only half of Kenyan children and adolescents were engaging in sufficient levels of physical activity (Kenya's 2016 Report Card on Physical Activity). Even though these surveys used different methods, (Gichu et. al. 2017), argue that the low levels of physical activity may have contributed to the observed increase in overweight and obesity among the children with 4% of rural and 21% of Kenyan urban children being overweight or obese.

The 2018 Nigerian Report Card on Physical Activity for Children and Youth suggest the current evidence on overall physical activity for children and youth in Nigeria has witnessed a modest improvement compared to a downward trend that was observed in the 2016 Report Card. In the year 2014, the overall physical activity was graded as C and a grade D in the 2016 Report Card. However, 30% up to 52% of the target population of children and youth are physically active (Ajayi, et al., 201). The improvement to grade of C for the overall physical activity may have been the consequence of a more synergetic action in the call for more engagement of children and youth in physical activity programmers. (Ajayi, et al., 2015; Omotowo, et al., 2017; Sadoh, et al., 2017).

In Ghana, some researchers uphold that the proportion of sufficient physical activity observe in their study was lower than what was ascertained by other researchers in the same country (Seidu et al., 2020). They mentioned the possible reason for the low

prevalence of physical activity among adolescent students as the strong correlation between sedentary behaviour, on the one hand, and the use of computers, televisions and videogames, on the other hand, among Ghanaian adolescents. (Asare & Danquah, 2015). They further indicate that some of the students may not have adequate knowledge on physical activity and the health benefits associated with it. Female students, compared to males, were less likely to report sufficient physical activity, which resonates with findings of some previous studies (De Lima & Silva, 2018; Subhi, et al., 2015; Haase Fox, 2017; Van der Horst, et al., 2007). This finding can also be explained within the context of some social and biological factors.

The social explanation, as given by de Lima and Silva (2018), concerns the cultural perception that young girls have fragile body and, therefore, must engage themselves in not-too-forceful activities. Boys, on the other hand, are perceived to have strong bodies and are, therefore, directed to involve themselves in vigorous physical activities. Regarding chances to practice physical activity, these norms could be a disadvantage to girls. In addition, some girls may perceive themselves to suffer negative consequences of participating in physical activities more than boys (Satija, et al., 2018). Be it as it may perceived, the current study did not focus on such gender disparity.

Corseuil et al. (2011) also explained that the insufficiency in the level of physical activity of students from low socio-economic background could be attributed to the fact that people with low monthly income often live in environments without facilities (such as parks, walking and running trails, and sidewalks) that promote children's involvement in physical activity. In addition, extracurricular activities at school do not guarantee students' active involvement in physical activity. (Seidu et al., 2020) in

their study figure out that there is a higher likelihood for students in SHS2 and SHS3 to be physically active, unlike their counterparts in SHS1. Seidu et al. findings' commensurate the existence of some relationship between adolescents' physical activity and educational level, as suggested by some studies (Sallis et al., 2020; Seabra et al., 2008) which note that there is a higher likelihood for adolescents in lower classes to be physically active. There is evidence suggesting that there is a likelihood for physical activity levels of adolescents to decrease with age (Sallis et al., 2020; Seabra et al., 2008). In addition, students at the lower levels in SHSs in Ghana, especially those in boarding schools, are considered as juniors and, for that matter, are directed to do some of the things the seniors (those in SHS2 and SHS3) are supposed to do during and after class. Relatedly, students who had support from their peers had a higher propensity to be physically active. In explaining this, Dumith et al. noted that physical activity is associated with social support but not cognitive performance

Seidu et al. (2020) also uncovered in their study that, the likelihood of being physically active was higher among SHS students who walked to school. This seems to substantiate the view that a decrease in physical activity among adolescents largely results from a decline in the number physical activities but not the duration of such activities. (Aaron et al., 2002).

In a study to find out whether SHS students in Ghana met WHO's recommended level of physical activity, Seidu et. al. (2020) observed that only a quarter of SHS students in Ghana met the recommended levels of physical activity by the WHO. Subgroups of SHS students who were less likely to be physically active are females, those in SHS2 and SHS3, and those from low socio-economic background (experienced hunger).

However, those who actively commute to school and those who get support from their peers are more likely to be physically active

In the 2016 Ghana Report Card (RC), it was observed that the findings are similar to that of the 2014 Ghana RC. There were no changes in PA levels observed. Ghana's score mark for Physical Activity was a grade D. The grade D assigned is based on physical activity levels of Ghanaian children, all of which reported that less than 40% of Ghanaian children accrue adequate levels of physical activity. (Nyawornota, et al., 2013; Ghana Statistical Service, 2008). The existing evidence suggests that over 60% of Ghanaian children do not meet minimum levels of physical activity for health enhancing benefits.

The 2018 Ghana Report Card reveal overall Physical Activity score was a grade C an improvement over a grade D score in 2014 and 2016. This revelation attest to the fact that Ghanaian children are beginning to react positively towards physical activity. Overall physical activity is mostly affected by community and built environment and school which, for many of the children, is a necessity in everyday life, play and active transportation in as much Ghana has made a significant improvement in overall physical activity in 2018 there is still inadequate effort to constructively develop and introduce effective interventions to improve the situation. For example, the absence of PE and sports policies, and the inadequacy of PA programs and PE teaching periods on school time tables, are major concerns that pose serious challenges for surveillance and monitoring in PA settings. There is a need for investment in monitoring and surveillance of PA and the development of SB guidelines for Ghanaian children and youth.

2.9 Relationship between Attitude and Prevalence of Physical Activity

Awareness of health benefits and positive attitudes towards participation in physical activity couple with physical activity enjoyment will result in an increase participation in physical activity among both the youth and adults (Islam et al., 2023). Knowledge of the health benefits of physical activity is expected to change people's attitudes towards physical activity in terms of association with coronary heart disease, hypertension, cancer related diseases blood pressure and other chronic diseases (Veluswamy et al.; Plotnikoff et. al. cited in (Islam et al., 2023). Given the increasing prevalence of hypertension and other chronic diseases among the youths, physical activity has a significant role in mediating health and wellness.

There is inadequate literature regarding the relationship between attitude towards PA and prevalence of physical activity participation or the involvement of students in physical activities relative to performance. However Frago-Calvo et al., (2017) indicate studies of high school students' academic achievement with regards to their involvement in extracurricular activities; the findings showed a correlation of a better academic achievement in direct relation to sport activity. Nonetheless Frago-Calvo et al. did not comments on the relationship of attitude and prevalence of PA. However the current study finds a positive relationship between physical activity and prevalence of physical activity among junior and senior high school students ($r(725) = .011, p=.011$) is significantly correlated with reported measure of prevalence of physical activity. This means that as students' attitudes towards physical activity increases, the prevalence or the rate of engagement in such activity also increases. This affirms Ajzen (1991) theory of planned behaviour which states that behaviour achievement depends on both motivation and ability. Thus the more people are

motivated or find delight in the kind of behaviour they exhibit, the more the prevalence or the occurrences of the behaviour will be. This is practically true in the sense that, when you have a favourite colour that you cherish so much the more you will use that colour. Therefore to stay active and healthy, one need to match a positive attitude towards physical activity with high prevalence of physical activity for a positive impact on the health. Because life without a good health will be atrocious.

There is a growing evidence base to suggest that neighbourhoods may support or constrain opportunities to lead healthy lifestyles through the influence of a range of social, cultural, structural and physical environment characteristics of neighbourhoods. These neighbourhood characteristics are seldom proposed to influence healthy behaviours such as physical activity participation directly, but are instead expected to trigger processes that may form part of chain of processes leading to influences more proximal to the individual.

Understanding mediators of behaviour change is an important step in advancing theory and developing more effective interventions and is one of the most commonly made

recommendations for future research by reviewers of the literature. In the public health epidemiology literature and in other fields there has been much debate about the most appropriate methods for assessing 'indirect' or 'mediated' pathways between attitude and outcomes. One point consistently made in recent commentaries that where there is no direct association between an independent and dependent variable, this does not necessarily mean that there is no indirect association that operates through one or more mediating variable (Watt et al. 2013)

A recent study reported that levels of physical activity and prevalence of compliance to physical activity recommendations in youth are diverse across European countries (Van Hecke et al., 2016). However, different studies have found low physical activity levels in children and adolescents in Spain (Ramírez, Fernández & Blández, 2013), and a substantial number of children fail to engage in any physical activity (PA) outside school.

According to Van Hecke et al., (2016) cited in Frago-Calvo et al., (2017), a recent study reported that levels of physical activity and prevalence of compliance to physical activity recommendations in youth are diverse across European countries. However, different studies have found low physical activity levels and attitude in children and adolescents in Spain (Ramírez, Fernández & Blández, 2013), and a substantial number of children fail to engage in any physical activity (PA) outside school.

Several studies that have identified individual correlates of attitude and physical activity, have reported that the most important variable was sex (Ridgers et al., 2012), with boys being consistently more active than girls in preschool, childhood and adolescence (Hinkley, Crawford, Salmon, Okely & Hesketh, 2008). However, it should be pointed out that other studies did not find sex differences in attitude and physical activity levels during (Erwin et al., 2012) or found girls to be more prevalence of physical activity level than boys (Mota et al., 2005). Nevertheless, it is generally accepted that girls are less active than boys during recess periods and other free play environments (Nettlefold et al., 2010; Van Sluijs, McMinn & Griffin, 2007). Boys may view recess as a chance to play competitive games that often lead the available space. Oppositely, girls may take recess as a chance to socialize with friends

(Blatchford, Baines & Pellegrini, 2003). It should also be pointed out that no differences have been detected in terms of school year level (Haug, Torsheim, Sallis & Samdal, 2010). Recent studies have suggested that an in-depth exploration of children's PA behavior during recess is needed (Escalante, Garcia-Hermoso, Backx & Saavedra, 2014; Dobbins, Husson, DeCorby & LaRocca, 2013).

2.9 Some Theories

A theory can be defined as a system that comprises empirical data derived from observation and /or experimentation and their interpretation (Luthan, 2008). In other words a theory must come out of systematic analysis of the past events. According to Adewuyi, (2006), a theory can be defined as interconnected statement.

2.9.1 Theories of physical activity

In relation to physical activity, several theories have been presented to elucidate the influence of attitudes in human behavior. Physical activity psychological connections have been intensively studied and are often the foundation of much physical activity research. Until now, there have been two primary types of investigations: descriptive studies, in which psychological variables are measured with physical activity, and theoretical model studies, in which psychological variables are assessed with Physical activity theories based on diverse approaches have been developed in other areas of psychology. Some of these are beliefs and attitudes, control opinions, competency perceptions, stage-based theories, and a based strategy. re assessed alongside physical activity.

2.9.2 The Health Belief Model (HBM)

The Health Belief Model (HBM) was developed in the early 1950s by social scientists at the U.S. Public Health Service in order to understand the failure of people to adopt disease prevention strategies or screening tests for the early detection of disease. The HBM suggests that a person's belief in a personal threat of an illness or disease together with a person's belief in the effectiveness of the recommended health behavior or action will predict the likelihood that the person will adopt the behavior. The HBM was devised in an attempt to predict health behaviors, primarily in response to low rates of adoption and adherence to preventive health care behaviors. It was developed from 'Kurt Lewin's theory which describes behavior as "a dynamic balance of forces working in opposing directions." This was based on the rationale that people often make decisions about behaviors based on the expectations of what might happen if they do or do not act in that way (outcomes) and also on what value (importance) they place on such outcomes. The HBM has six constructs which include: Perceived susceptibility - This refers to a person's subjective perception of the risk of acquiring an illness or disease. There is wide variation in a person's feelings of personal vulnerability to an illness or disease.

Perceived severity - This refers to a person's feelings on the seriousness of contracting an illness or disease (or leaving the illness or disease untreated). There is wide variation in a person's feelings of severity, and often a person considers the medical consequences (e.g., death, disability) and social consequences (e.g., family life, social relationships) when evaluating the severity.

Perceived benefits - This refers to a person's perception of the effectiveness of various actions available to reduce the threat of illness or disease (or to cure illness or

disease). The course of action a person takes in preventing (or curing) illness or disease relies on consideration and evaluation of both perceived susceptibility and perceived benefit, such that the person would accept the recommended health action if it was perceived as beneficial.

Perceived barriers - This refers to a person's feelings on the obstacles to performing a recommended health action. There is wide variation in a person's feelings of barriers, or impediments, which lead to a cost/benefit analysis. The person weighs the effectiveness of the actions against the perceptions that it may be expensive, dangerous (e.g., side effects), unpleasant (e.g., painful), time-consuming, or inconvenient.

Cue to action - This is the stimulus needed to trigger the decision-making process to accept a recommended health action. These cues can be internal (e.g., chest pains, wheezing, etc.) or external (e.g., advice from others, illness of family member, newspaper article, etc.).

Self-efficacy - This refers to the level of a person's confidence in his or her ability to successfully perform a behavior. This construct was added to the model most recently in mid-1980. Self-efficacy is a construct in many behavioral theories as it directly relates to whether a person performs the desired behavior.

2.9.3 Health Action Process Approach – (Hybrid) Model

The HAPA model is a well-established theoretical model in the field of health behaviors in the past 20 years. This model was first proposed by Schwarzer in 1992 based on the social cognition theory, the rational behavior theory, and the theory of

will. The HAPA model divides human health behavior into three stages: pre-intention stage, intention stage, and action stage.

The Health Action Process approach (Schwarzer 1992, 2001) is a model that explicitly integrates linear and stages assumptions and is thereby a hybrid model. At the same time, the HAPA integrates motivational (prediction of intention) and behavior-enabling models. The HAPA makes a distinction between a motivation phase and a volition/post-decision phase of health behaviour change. The basic idea is that individuals experience a shift in mindset from the first phase (motivational) to the second (volitional). The moment when people commit themselves to an intention of exercise they enter the volitional phase. First, they intend to act but they remain inactive and second they initiate action. To enhance maintenance, self-regulatory skills are important. The behaviour will mainly be directed by self-efficacy because it regulates effort and persistence in the face of barriers and setbacks. Also, the influence of self-efficacy on post-decisional processes, such as planning and behaviour, depends on whether one has decided to change or not. The HAPA also includes other aspects such as situational barriers and resources.

2.9.4 Trans Theoretical Model (TTM)

The term trans theoretical model describes the wider framework that describe both the 'when' and the 'how' of behavior change, including the processes of change and moderators of change such as decisional balance and self-efficacy. The Transtheoretical Model is an integrative, biopsychosocial model to conceptualize the process of intentional behavior change. (Prochaska and DiClemente, 1983; Prochaska et al., 1992)

This model when applied to physical activity studies, identifies five stages of change. *Pre-contemplation stage* includes people who are not currently physically active and have no intention of doing so in the future. Those in the *contemplation stage* include those not currently physically active but who have an intention to start shortly. The individuals in the *preparation stage* are currently exercising some, but not regularly. The *action stage* represents people who are currently active but have recently started. This is an unstable stage during which individuals are at high risk of relapse. Finally, the *maintenance stage* includes those who are currently physically active and have been for some time, usually at least six months.

2.9.5 Natural History Model of Exercise

Sallis and Hovell, (1990) produced a natural history model that has considerable utility in understanding the process of involvement in physical activity and exercise. This model consists of three important transition phases; sedentary behavior to exercise adoption, exercise adoption to maintenance or dropout, and dropout to the resumption of exercise. This model is a useful device for focusing on the dynamic process of exercise. Many other factors such as developmental stages, demographic characteristics, and actual activity differences need to be considered. The model is relevant to young people progressing through adulthood.

2.9.6 Theory of Reasoned Action (TRA)

The theory of reasoned action (TRA) was first presented by Martin Fishbein in the late 1960s, and it was later modified and expanded by Fishbein and Icek Azjen. The theory of reasoned action (TRA) is concerned with a person's intention to act in a specific way. The concept is based on the belief that purpose influences behavior

instantaneously, and that attitude and subjective (social) normative norms predict intention.

They claimed that one's attitudes toward various activities, as well as one's appraisal, or value, of the expected outcomes, define the model's attitude component... An intention is a plan or a likelihood that someone will behave in a particular way in specific situations — whether or not they actually do so. For example, a person who is thinking about starting a routine physical activity work outs *intends* or plans to quit, but may or may not actually follow through on that intent.

For example, an article on PA is likely to be relevant to your work (the *outcome* of the behavior) and whether or not you think learning something new that could be relevant to your work would be beneficial to you and to your organization (your *evaluation* of the outcome). Your attitude could be based on a number of different factors — your past experiences reading health education articles, your sense of whether or not you can learn something from reading versus going to a training about TRA, etc.

From the TRA perspective, the important aspect of your attitude is whether or not it is positive, negative, or neutral. For example, if you strongly believe that reading the article (or getting a mammogram, or using a condom, or whatever the behavior might be) will lead to a desirable outcome, then one could say that you have a positive attitude toward that behavior. Likewise, if you strongly believe that the behavior will lead to an undesirable outcome, you are likely to have a negative attitude about it.

2.9.7 Theoretical Framework of the study

The theoretical framework of the current study is the theory of planned behaviour. (TPB). The TPB was developed by (Ajzen, 1985, 1993), as a model to predict the

individual's intention to engage in a behavior at a specific time and place. The Theory postulates that behavior is a function of salient information, or beliefs, relevant to the behavior. The TPB states that “behavioral achievement depends on both motivation (*intention*) and *ability* (behavioral control). The theory considers that “intention” is the primary determinant of any behavior change (Ajzen, 1993). Intentions are indications of how hard people are willing to try, or how much of an effort they are planning to exert, in order to perform the behavior.

The TPB postulate three main independent constructs which are determinants of intention. These are: attitude towards the behavior in this case (physical activity). This refers to the degree to which the individual has a favourable or unfavourable assessment of the behavior in question. The next predictor of intention is social factor which is also known as subjective norm; this refers to the perceived social pressure to perform or not to perform the behavior. The last predictor of intention is the perceived behaviour control. This refers to perceived ease or difficulty of performing the behavior and it is assumed to reflect past experience as well as anticipated impediments or obstacles. As a rule of thumb, the more favorable the attitude, the attitude and subjective norm with respect to the behavior, and the greater the perceived behavior control under consideration.

Intention, in turn is viewed as one immediate antecedent of actual behaviour. That is, the stronger people's intention to engage in a behavior or to achieve their behavioral goals, the more successful they are predicted to be. However the degree of success will depend not only on one's desire or intention, but also on such partly nonmotivational factors as availability of requisite opportunities and resources such as money, time,

cooperation of others, etc. Collectively, these factors represent people's actual control over the behavior.

The TPB, focuses on perceived behaviour, rather than actual behavior control. In many situations perceived behavioral control may not be realistic. This is likely to be the case when the individual has relatively little information about the behaviour. When the social factors or available resources have changed or have been taken away, or when new and unfamiliar elements have entered into the situation. Under those conditions, a measure of perceived behavior control may add little to accuracy of behavioral prediction. In this case a direct path from perceive behavior control to actual behavior is therefore expected to emerge only when there is some agreement between perceptions of control and the person's actual control over the behavior.

A structural representation of the TPB is shown in Figure 2.1

Since this study is aimed at finding out the attitude and prevalence of PA among students, the researcher will be able to assess the antecedent (intention) and subjective norm (social factors) as well as perceived behavior and the actual behavior of the students in relation to the reseach problem. The TPB is closely related to the current study because, it will provide a clear view to the hypotheses formulated in the current study in order to ascertain relationship between the attitude towards physical activity their prevalence of physical activity

The model of TPB

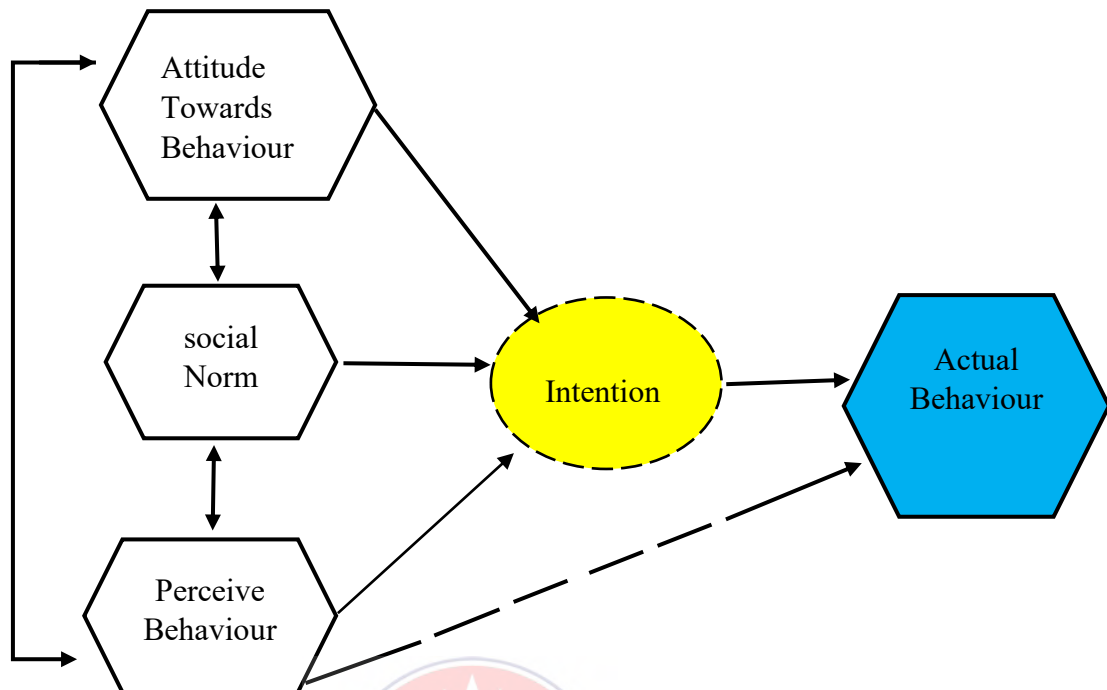


Figure 1. Theory of Planned Behaviour Model adapted from Ajzen (1993, 2014)

2.10 Limitations of the Theory of Planned Behavior (TPB)

There are several limitations of the TPB, which include the following:

First of all, the theory does not account for other variables that factor into behavioral intention and motivation, such as fear, threat, mood, or past experience. Also, while the theory does consider normative influences, it still does not take into account environmental or economic factors that may influence a person's intention to perform a behavior. Again the theory assumes that behavior is the result of a linear decision-making process, and does not consider that it can change over time. While the added construct of perceived behavioral control was an important addition to the theory, it doesn't say anything about actual control over behavior. Finally, the time frame between "intent" and "behavioral action" is not addressed by the theory.

2.11 Conceptual Framework

The entry point of the study model in (fig 2.2) is students (JHS and SHS). The purpose of the study is to determine students' current attitude towards PA and its prevalence among students in Abetifi. It is assumed that students might have a positive (high) or negative (low) attitude towards PA depending on some variables or social norms such as perception, experience, friends and or parental influence and the like. However, students' attitude in this study is measured under four domains: social experience (fun), catharsis (benefit), aesthetic self-esteem, health and fitness. According to Ajzen (1993), to achieve success, it takes, motivation and individual own effort (ability to do or not to do). This implies, for students to develop any kind of attitude towards PA, the social norm and the ability (attitude) must be considered. Notwithstanding, the kind of attitude students have will influence their prevalence of engaging in PA, which will ultimately influence their participation in PA. This means that when students have high or positive attitude, the level of engagement will be high leading to high prevalence leading to a positive (PA) and its associated factors such as good health, fitness, prolong life, and so on. On the contrary, if students have low or negative attitude this will affect the prevalence which will subsequently result in physical inactivity and its associated factors such as high blood pressure, hypertension, chronic diseases, premature death and so on.

The mode of study conceptual framework

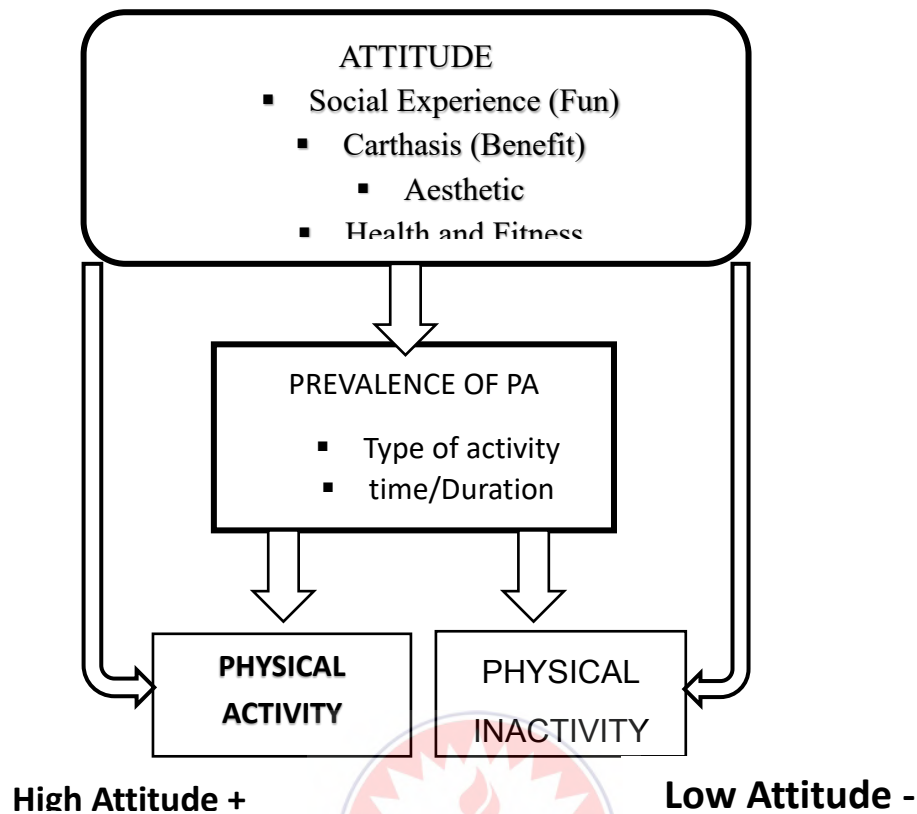


Figure 2 Conceptual Framework. Source: Author's Construct (2022)

2.12 Conclusion of Literature Review

The current study is focused on comparison of attitude of JHS and SHS students towards PA. The literature of the current study was reviewed under ten thematic areas which include; definition of concept, formation of attitude, theories of attitude, meaning of physical activity, forms of physical activity, adolescent students attitude towards physical activity, comparison of Junior and Senior School students attitude towards physical activity, gender and age difference in physical activity, prevalence of young and adolescent students towards physical activity, theoretical framework and lastly conceptual framework

Following the literature, it emerged that attitude was first investigated in 1928. Following its inception, several definition of attitude emerged. Thurston (1928), has defined attitude as "the totality of man's inclination and feelings, prejudice or bias, preconceived notions, ideas, fears, threats and convictions about any specific topic". Attitude is regarded as a subjective and personal affair which means that attitude differs from person to person, and from condition to condition. The term 'opinion' is the verbal expression of attitude. Also, Allport (1935), for instance tabled 16 different definitions from what other researchers have come out with. He later propelled the 17th definitions which has now taken the center stage to the extent that it has become the most cited definition of attitude in any study involved attitude. Thus; "attitude is a mental and neural state of readiness, organized through experience, exerting a directive and dynamic influence upon the individual's response to all objects and situations with which it is related" (Allport, 1935, p. 810).

Formation of attitudes begin developing in childhood and become crystallized to some extent in adulthood, but they may undergo modification even in later life. (Schuller 1991; Lewis 1994). This means that attitude are not inherited but nurture, they are like a see planted in the soil or the growth of a child; which grows as a result of some conditions such as climate, temperature, and environmental influence, nutrition and the like.

In general, by the time a person reaches adulthood, he or she has acquired a set of subjective standards or a frame of reference for evaluating his or her experiences. These standards and attitudes are influenced by the person's emotional ties of affiliation, loyalty, and security acquired by associating with other people.

Physical activity has been defined by several authors. However the wider definition which cut across the globe was (Carpersen, 1985), definition which says that Physical activity is "any bodily movement produced by skeletal muscles that result in energy expenditure". Notwithstanding this, WHO expanded Carpersen's definition to include all forms of activity, such as everyday walking or cycling, active play, active recreation (e.g. working out in a gym), dancing, gardening or playing active games, exercise, and organized and competitive sports?

Physical inactivity is becoming a major concern globally. In fact WHO declare PI as a pandemic? Apparently, (Guthold et al., 2019), reveals that globally, in 2016, more than 80% of school-going adolescents aged 11–17 years did not meet current recommendations. As a result of Guthold's and many other research findings WHO in 2018, makes The declaration for The More Active People for a Healthier World, (MAPHW) thus agender 15% by 2030.

The Report Card (RC) 2018 of many Sub Sahara African Countries reveal that countries are not meeting the WHO target rate if things continuous the way they are. It is therefore paramount for every country to have it hands desk to enable the declaration for the MAPHW meet the 2030 target rate.

The question is how are adolescent students meeting this agenda 15% by 2030 in Abetifi of the Eastern Region, Ghana, how are they meeting it Ghana, Africa and worldwide? This study there aimed at comparing the attitude of JHS and SHS students in Abetifi towards PA and also determine the prevalence of PA among them.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

The strategy used to explore and assess the views of junior and senior high school students concerning PA was discussed in this chapter. The following thematic areas make up the chapter: Design, setting, participants, instrumentation, sample and sampling strategy, data gathering procedure, and data analysis. are the important aspects of research.

3.1 Research Design

A very important decision in the research design process is the selection of a research approach or paradigm. It is a necessary parameter because it serves as a measure to determine how the researcher can collect relevant pieces of information in order to achieve the study objectives. However, the research design process involves many interrelated decisions (Sileyew, 2019). The current study adopted a descriptive cross-sectional embedded mixed method design in which both quantitative and qualitative methods were employed. Notwithstanding, the study was quantitatively dominant.

Surveys are research approaches that gather information directly from a participant in the study by asking a series of questions in a certain order. A survey, according to Almeida (2017), is one of the most often used quantitative approaches because it allows for the collection of information about a phenomenon through the creation of questions that represent the views, perceptions, and behaviours of a group of people. Surveys provide a number of advantages. Among them are the method's high representativeness of the entire population and its inexpensive cost when compared to

other options. On the other hand, Almeida (2017) argues that the dependability of survey data is highly dependent on the survey format and the correctness of respondents' responses. A cross-sectional design hitherto is a quantitative research approach that gathers and analyses data once (Wang et al., 2012). It must be noted that cross-sectional studies are more formalized and typically structured with clearly stated investigative questions. (Beashel and Taylor, 2007).

A descriptive survey was chosen owing to its benefits and the need to clarify and interpret students' attitudes towards physical activity as they exist in the natural settings among the various categories of students. A questionnaire and an interview were used to elicit information from the respondents directly.

3.1.2 Mixed Method

According to Creswell and Plano Clark, (2011) and Johnson and Onwuegbuzie, (2004), "Mixed methodology is the cornerstone of research within social science that is experienced in everyday life". The mixed methodology is described as being "the third paradigm" (Johnson and Onwuegbuzie, 2004:15). Again, Leech and Onwuegbuzie (2009) accentuate that mixed methods research involves the collection, analysis, and interpretation of both quantitative and qualitative data in a single research project or in a series of research projects that investigate the same underlying phenomenon. For their part, Morse and Niehaus (2016) speculate that the mixed methods approach includes a multiple-level strategy incorporating a two-phase approach where (for example) quantitative research is undertaken first, followed by qualitative research; a systematic and planned approach to research. Each phase can then be triangulated into a third phase where quantitative data can provide general

patterns and width and qualitative data can reflect upon experience and depth (Newby, 2014).

Using mixed methodology can help understand the topic area in greater depth (Hoover and Krishnamurti, 2010). It can also help increase confidence in findings, providing more evidence while offsetting possible shortcomings from using a single approach (Albert et al., 2009; Bryman, 2004; Caruth, 2013; Creswell et al., 2011; Tashakkori and Creswell, 2008). Whereas undertaking research using mixed methodology can be time-consuming, it can help to address broader questions by adding insight that could have otherwise been missed (Creswell et al., 2011).

The combination of quantitative and qualitative research approaches in mixed methods makes this design rich because it can add words, pictures, and narrative (qualitative data) to numbers (quantitative data). Therefore, mixed methods can address both the "what" (quantitative and qualitative) questions and the "how" or "why" (qualitative) questions. This enables researchers to understand the different interpretations of a certain phenomenon (Pardede, 2018).

Creswell (2012) classified mixed methods research designs into six types, which are: explanatory, exploratory, transformative, triangulation, and nested or embedded. Creswell further regroups these six types into two main categories or groups: sequential (explanatory, exploratory, and transformative); convergent or parallel (triangulation, nested/embedded, and transformative). The current study, is based on a convergent embedded/nested mixed method.

The model of mixed method used in the current study is represented in Figure 3

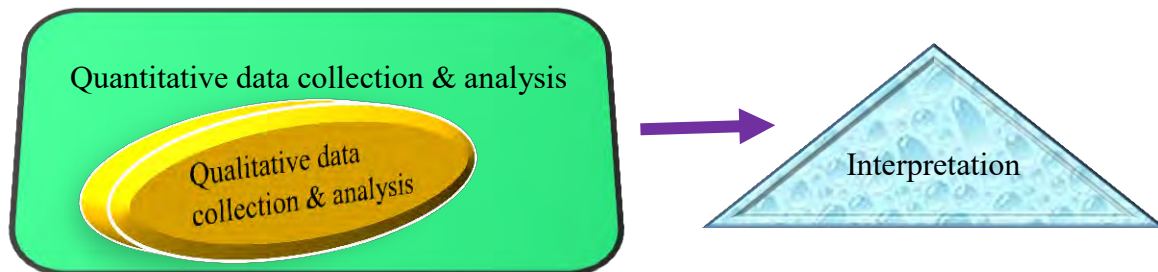


Figure 3: Embedded Survey Model Mixed Methods Design (Source: Author's Construct)

3.1.3 Rationale for using Mixed Method

Researchers have reasons or rationales for driving home their studies using a particular paradigm. Notwithstanding this assertion, Greene et al. (1989) identified five important reasons or rationales for using mixed methods; thus, mixed method design is used for triangulation, complementary, development, initiative, and expansion. However, the rationale for using the mixed method in the current study is triangulation. This means the use of more than one method while studying the same research question to "examine the same dimension of a research problem" (Jick, 1979, p. 602). While using triangulation, the researcher will have a broader look for a convergence of the collected data to enhance the research findings' validity. Triangulation eventually strengthens and enriches a study's conclusions, making them more acceptable to advocates of both quantitative and qualitative methods. (Pardede, 2018).

The mixed-method design adopted in the current study is called the convergent embedded mixed-method design. According to Cresswell, the embedded design is

aimed at collecting quantitative and qualitative data simultaneously or sequentially, but priority is given to one approach that guides the project, and the other approach is embedded into the project and plays a supplementary role. Since the current study is dependent on quantitative data, it would not be out of place to adopt this method.

3.2 Setting

The study was conducted in Abetifi, in the Kwahu East District in the Eastern Region of Ghana. The researcher in choosing the location considered two main factors: first of all, the number of schools in the town: three second-cycle schools, five basic public schools, and three basic private schools. The researcher believed that focusing on this setting would provide a reliable and encouraging sample population for the survey, thus placing the town in an advantageous position over other towns and villages within the Kwahu East District. Besides, visiting and gathering data for the study could be less strenuous and more economical in terms of transport costs and accessibility since the researcher resides within the town.

Administratively, Abetifi is the district capital town for Kwahu East. It is a mountainous area situated on the Kwahu Ridge Mountain. Abetifi town is the highest habitable point in Ghana, with a height of 1,972 feet (601 m). With its mountainous features and beautiful landscape, the town serves as a tourist attraction for foreigners and other visitors outside Kwahu. The principal occupations of the occupants are farming and trading. Education played a vital role in the history of Abetifi. Thus, the town can boast of one university (Presbyterian University College—PUC), a college of education where teachers are trained (Abetifi Presbyterian College of Education), a training school for nurturing men of God (Abetifi Presbyterian Ramseyer Training Center), a senior high school (Abetifi Presbyterian Senior High School), a technical

school (ABTECH), and a vocational training school (AVOTRAIN). Also, there are five public and three private basic schools. But for this study, the researcher chose a senior high school and kept the basic schools simple because of the purpose of the study.

3.3 Population

The participants for this study were all junior and senior high school students attending school in Abetifi township within the Kwahu East District in the Eastern Region of Ghana.

Table 2: List of Sample Schools Located within Abetifi Town

S/N.	Name of School	Initials of Schools	Category
1	Abetifi Presbyterian Senior High School	APSEC	Second Cycle
2	Abetifi Presbyterian Junior High School	PRESBY	Basic School
3	Abetifi Ridge Junior High school	RIDGE	Basic School
4	Abetifi R/C Junior High School	ROMAN	Basic School
5	Abetifi D/A Junior High School	D/A	Basic School
6	Abetifi Anglican Junior High School	ANGLICAN	Basic School

Source: *Author's own source 2021*

3.4 Sample and Sampling Techniques

A sample is a subset of a chosen sampling frame or an entire population. A sample can be used to make inferences about a population or make generalizations concerning existing theories (Taherdoost, 2016).

Research indicates that if the sample size is too big, the whole study becomes complex, expensive, and time-consuming to run, and although the results are more accurate, the benefits do not outweigh the costs. Most statisticians agree that the

minimum sample size to use in any kind of meaningful results is 100. A good maximum sample size is usually around 10% of the population as long as this does not exceed 1000 (Taherdoost, 2016; Vernoy and Kyle, 2002). However, this depends on the choice of sampling technique. To decide on the specific type of sampling to use, it is crucial to consider the target population and the sample size. The sample size of the current study was 725. The break down is as follows: male (n) 315 (43.4%), female (n) 410 (56.6%) with ages ranging between (11 – 19 years).

3.4.1 Sampling Techniques

The study employed a multistage sampling technique to select the respondents for the study. The multistage techniques were applied in three different stages. In the first stage, the schools were selected purposively for the study, which involved all the five (5) public basic schools, and one (1) senior high school. To get the sample size, the stratified technique was adopted to select appropriate sample size from each of the five schools. Stratified random sampling is a method of sampling that involves the division of a population into smaller sub-groups known as strata. Stratified random sampling is also known as proportional random sampling or quota random sampling (Thomas, 2011). To get appropriate size (one fifth – $1/5$) representing 20% of participants from each of the five (5) basic schools were used .

This technique was carried out to ensure that participants are evenly selected from each of the five (5) basic schools. As a result, learners were grouped as JHS 2 or JHS 3. After this, simple random sampling technique was then applied to select the respondents for the study. In this regard, about 16 male respondents and 24 female respondents were randomly selected from JHS 2 class in each school while in JHS3 11 male respondents and 12 female respondents were selected. Hence the total

number of respondent selected from JHS 2 and JHS 3 were 202 and 115 respectively. But in the SHS 2 and 3, simple random sample technique was used to select respondents.

3.4.2 Selection Procedure

In using a simple random technique to select respondents, the inscriptions "agree" and "disagree" were written on pieces of paper and folded into two separate boxes, one for males and the other for females. However, the number of "disagree" papers outnumbered "agree" ones depending on the population in each class. This was to limit the number of students who might have picked "agree" in their respective boxes. Following the placement of the two boxes in front of the class, students were informed of the purpose and rules of the exercise. were made aware that when one picks "agree", that means the person has agreed to be part of the research exercise, while "disagree" means "no." I have disagreed to be part of the research exercise. After giving out instructions pertaining to the exercise, students were then instructed to move forward in turns from their seats to pick one folded paper from the box randomly. Thus, the male moves to the male box while the female moves to the female box. The researcher and his assistance were standing by to direct students. The exercise continued until everyone had his or her turn.

The same was done with SHS 2 and SHS 3 students, but at the senior high school, the researcher and his two assistants were moving from department to department as students were grouped according to course offering. For example, General Arts (G/A), Home Economics (H/E). Science (S), Business (B), Visual Arts (V), and other subjects... At the end of the exercise, 159 SHS 2 (87 male and 72 female) students and 249 SHS 3 (93 male and 156 female) students were selected from a total sample size

of 725 participants for the current study. With the age estimated to be between 11 and 19 years old, Finally, focus group sampling was employed to select 12 participants randomly for the interview.

Table 3: Number of Respondents in Each Grade Levels

Category	Male	Female	Total
JHS 2	82	120	202
JHS 3	53	62	115
SHS 2	87	72	159
SHS 3	93	156	249
Total	315	410	725

Source: Field survey (2021)

3.5 Research Instruments

For objectivity, the study adopted two instruments and modified them as one instrument for the study. Thus, "Students' Attitude toward Physical Activity" (SATPA) (Schutz et al., 1995) and "Attitudes toward Physical Activity Scale" (APAS) (Mok et al., 2015). The SATPA instrument was principally developed and used by Schutz et al. (1995). The instrument was used to measure the attitude of students toward physical activity. After using the instrument to assess students' participation in sports and physical activity by (Salis et al., 2000), they also recommended its use since it was proven to be valid and consistent. Again, the SATPA instrument was also used and recommended by (Ekici et al., 2011; Eraslan, 2015). The latest to use the SATPA instrument per the literature available is Zaman et al. (2018), who used it to assess the attitude of young students towards sports and physical activity. The Cronbach Alpha of the instrument obtained was calculated and ranged from 0.80 to 0.90.

On the other hand, the "Attitudes toward Physical Activity Scale" (APAS) was designed in English for the larger project by Mok et al. (2015). The instrument was later used on schoolchildren by Sakl Uzunoz et al. (2017) in Turkey. However, Dinc et al. (2019) also adopted it for higher education students in Turkey.

The Student Attitude towards Physical Activity (SAPA), which was used in the current study, has a demographic session and a 4-point Likert type scale ranging from strongly disagree, disagree, agree, and strongly agree. A 4-point Likert-type scale was chosen for the current study to compel students to make a decision. The instrument has 20 items in all, put under four subscales, thus: social experience and fun (6 items), catharsis/benefit (4 items), aesthetic experience and self-esteem (4 items), health and fitness (6 items).

3.6 Pilot Test

The instrument was first piloted before the actual data was collected. Even though both instruments have been used in previous studies, they were piloted because of adoptions. The pilot test was conducted in 3 schools that is (2 basic schools and 1 senior high) in Kwahu South District. In all, a total of 50 respondents were considered. A study shows that the pilot test group can range from 25 to 100 subjects (Chung & Philips, 2007). This was the justification for the choice of 50 participants. The pilot test was conducted to assess the reliability of the test instruments, and also to see how much time the respondents will spend answering the questionnaire. In all, respondents took on average 10 minutes to 18 minutes to answer the questionnaire depending on the level.

3.7 Reliability

Churchill (1995) refers to reliability as the consistency of an instrument in yielding the same results at different times. He states that validity enhances the reliability of an instrument. Valid instruments reflect the characteristics to be measured and could yield similar results when administered under the same conditions. The pre-test study, which is the test-retest, was conducted to ensure that the instruments to be used in the study were reliable and could collect the data required by the study. The purpose of the pre-test was to detect shortcomings in the face validity in terms of the structure of questionnaires concerning the level of understanding of the students. The schools that took part in the pre-test were not included in the main study. This is in line with the cross-sectional study design methodology employed by this study. However the reliability coefficient of the pilot test was (0.81).

3.8 Validity

Validity indicates the degree to which an instrument measures what it is supposed to measure. Kothari (2004) explains that the extent to which differences found within a measuring instrument reflect true differences among those being tested (Kothari, 2004). The study used the supervisors, departmental lecturers, colleague masters students, and teacher friends to verify the content validity of the questionnaires. They also assessed the relevance of the content used for necessary modifications or moderation based on their feedback. Content validity determined the appropriateness of the questions or statements concerning coverage and full representation of what was to be tested.

3.9 Ethical Consideration

For ethical consideration, a formal letter was taken from the HPERS department of the University of Education, Winneba to the District Education Directorate in the Kwahu East District to seek permission and approval to conduct the study at the basic schools within its jurisdiction while another letter was sent to the senior high school head for permission and approval. After approval was granted, the researcher visited selected schools personally to introduce himself to the schools and the students.

3.10 Data Collection Procedure

After self-introduction and purpose of the visit, the researcher then asked for a convenient day and date that would be permissible to meet the students with the questionnaire. After all arrangements were set, students were asked to sign the consent form to indicate they were not forced to take part in the study. Based on that only students who had accepted to sign the form indicated their willingness to partake in the study. These students were therefore given the questionnaire to answer. On the contrary, students who decline to sign the letter of consent or could not return their letter of consent signed by them or their parents were deemed to be out of the study. This would be an indication of their unwillingness to partake in the study.

With the help of two research assistants, the researcher administered the questionnaire to the participants. But before the questionnaire was administered, participants were briefed about it. All participants were given the same questionnaire; but for the purpose of easy identification females questionnaire was printed on a pink sheet of A4 paper while the males' was printed on a green sheet of A4 paper. Again, JHS was written on the questionnaire of junior high schools participants while SHS was written on that of senior high participants. Such strategy was employed for easy identification

and grouping to avoid mixing up the answers or responses. A teacher was appointed from each school to retrieve the questionnaires after students had completed or responded to the questions. The questionnaire was collected a week after distribution. This was to give students ample time to respond to the questionnaire.

A structured interview was conducted using an interview guide to help elicit more information from the participants on their attitudes towards physical activity involvement and how frequent (prevalence) it is. The interview was conducted the same day the questionnaire were retrieved. Estimatedly, the administration and retrieving of questionnaires coupled with interviews took a period of five weeks.

A structured interview was conducted using an interview guide to help elicit more information from the participants on their attitudes towards physical activity involvement and how frequent (prevalence) it is. 12 participants were randomly selected for the interview. This means that two (2) participant from each school were selected. All the interview conducted took place in isolation place, in some cases it took place under trees while in other places classrooms and empty staff room were used. The interview was conducted in a serene environment where enough room was given to participants to express themselves well. However, participants who were finding it difficult to express or interact well in the English language were given the opportunity to use the local language (Twi) so long as the researcher understood what they mean. A smart phone was used to record all the interview conducted. On the average one interview lasted for 12 to 15 minutes. The interview was conducted the same day the questionnaire was retrieved. Estimatedly, the administration and retrieval of questionnaires coupled with interviews took a period of five weeks.

3.11 Data Analysis and Integration

Once the collection of data from respondents was completed, the quantitative data was collated and analyzed separately using IBM SPSS Statistics software, version 26 (Armonk, NY, USA: IBM Corp). First of all, data cleaning and coding were done. Homogeneity of variance was tested using Levene's test while normality of data was tested using the Shapiro–Wilk test. Descriptive statistics of the participants attitude are presented as mean and standard deviation (SD). To determine the statistical difference between junior and senior high school students' attitude towards physical activity, an independent T-test was conducted. According to Nihan, 2020, a T-test is an independent test used to estimate the probability of some non-random factors to take account of the observed correlation. The Significance value was set as $p < 0.05$. Bivariate correlations were computed between attitudes of students and their prevalence of physical activity to determine if a relationship exist.

However, MS Excel 2013 was used to to analyse the prevalence of physical activity among students. Charts were used to indicate percentage distributions of the respondents, schools or levels, and gender .

For the qualitative data, all interviews were transcribed verbatim and coding was done using identified themes from the interview. The coding was done manually.

After analyzing the quantitative (questionnaires) and qualitative (structured interview) data simultaneously, the results were triangulated (compared and synthesized).

CHAPTER FOUR

RESULTS AND DISCUSSION

4.0 Introduction

The results and analysis of the findings acquired in this study, as well as a discussion of the findings, are presented in this chapter. The study participants' demographics and attitudes are also detailed. The chapter is organized in the order of the study objectives and research questions.

The main purpose of this study was to determine and compare junior and senior high school students' attitudes towards PA in Abetifi, Kwahu East District, in the Eastern Region of Ghana. The intent was to find out if differences exist in students' attitudes towards PA among the two levels or cycles of education and also provide information on the prevalence of PA among students.

4.1 Presentation of Participants Demographic Data

Demographic data of the participants included in this study for the quantitative analyses were the grade level, age and gender of the participants.

Table 4: Participants School or Grade Levels

	CLASS/FORMS OF STUDENTS				TOTAL
	JHS2	JHS3	SHS2	SHS3	
Gender					
Male	82(40.6)*	53(46)	87(54.7)	93(37.3)	315(43.4)
Female	120(59.4)	62(53.9)	72(45.3)	156(62.7)	410(56.6)
Total	202	115	159	249	725(100)

Source: Field survey (2021).

**percentage*

From Table 4. above, the data reveal that participants in JHS 2, that is, 82 (40.6%) were male and more than half (59.4%) were female. In JHS 3, 53 (46%) were male, while 62 (53.9%) were female. At the SHS level, 87 (54.7%) were male, whereas 72

(45.3%) were female. In SHS 2, however, 93 (37.3%) were male, while 156 (62.7%) were female. in SHS 3. As it can be observed from the data, in both JHS2 and JHS3, there were more female than male participants in this study. However, the number of females in JHS2 outnumbers their seniors in JHS3. Notwithstanding the gender differences at the JHS level, the case of the SHS levels was intriguing. In SHS2, there were more males (54.7%) than females (45.3%) in SHS2. On the contrary, the data reveals more female 156 (62.7%) than male 93 (37.3%) participants in SHS in Abetifi. The differences in the representation of all forms were not due to chance but to the variation in the population of the participants in the schools.

Grade Levels of Participants

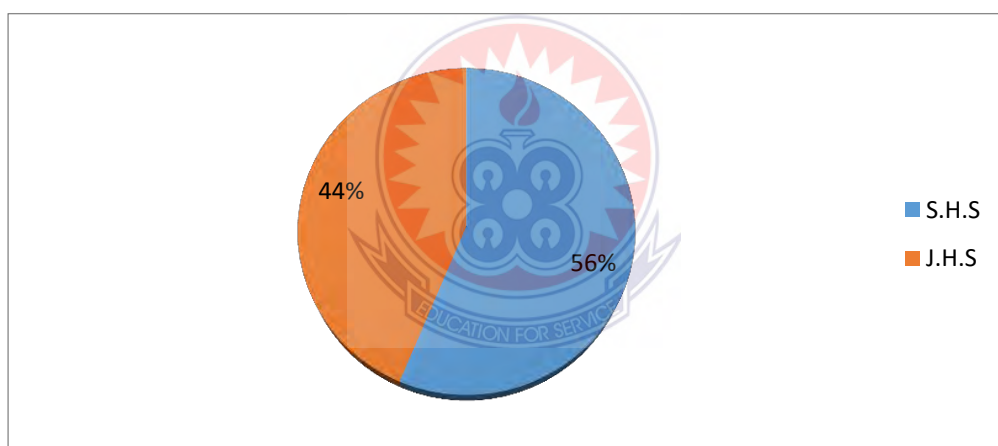


Figure 4: Distribution of Participants according to reported Grade Levels

Gender of Participants

Table 5: Gender of Participants

		Gender		Total
		Male	Female	
Grade Level	JHS	135(42.6)*	182(57.4)	317(100)
	SHS	180(44.1)	228(55.9)	408(100)
Total		315(43.4)	410(56.6)	725(100)

Source: Field survey (2021).

**percentage*

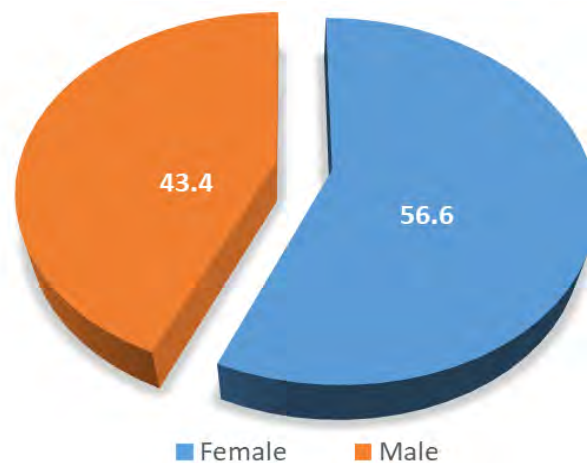


Figure 5: Percentage Distribution of Gender in the Study

As shown in Table 5, the total number of male participants was 315 (43.4%), while the total number of female participants was 410 (56.6%). This implies that, more female participants were reported in the study from both JHSs and SHSs in the Abetifi. For instance, in the JHSs, 182 (57.4%) of the participants were females. Similarly, 228 (56.6%) of the participants selected from the SHS were females.

This difference may not be by chance, but it is an indication that there are more female going to school than male.

4.2 Ages of Participants

Table 6 presents the age distributions of participants who responded to the questionnaire items.

Table 6: Ages of Participants

		Age range (in years)				Total
		10 – 12	13 -15	16 – 18	19 – above	
Grade Level	JHS	7(2.2)*	55(17.4)	197(62.1)	58(18.3)	317(100)
	SHS	0	53(13.0)	220(53.9)	135(33.1)	408(100)
Total		7(1.0)	108(14.9)	417(57.5)	193(26.6)	725(100)

Source: Field survey (2021).

*percentage

In Table 6, the data suggests that 7 (1.0%) of the participants reported age range 10–12 years, 108 (14.9%) participants reported an age range of 13–15 years, more than a half (417, 57.5%) of the participants reported age range 16–18 years, and more than a quarter (193.6%) of the participants reported an age range 19 years and above. In terms of differences in the reported ages between the groups, it was observed that the least age range 10-12 years was reported among the JHS participants while the highest age range 16-18 year was reported among the SHS students. The predominant age among students was in the range of 16 and 18 years old.

Research Question 1:

What is the attitude of students towards physical activity at the Junior and Senior High School levels?

Did you do any physical activity such as walking, jogging, running, cycling, playing etc, in the past seven (7) days beginning Monday and ending Sunday?

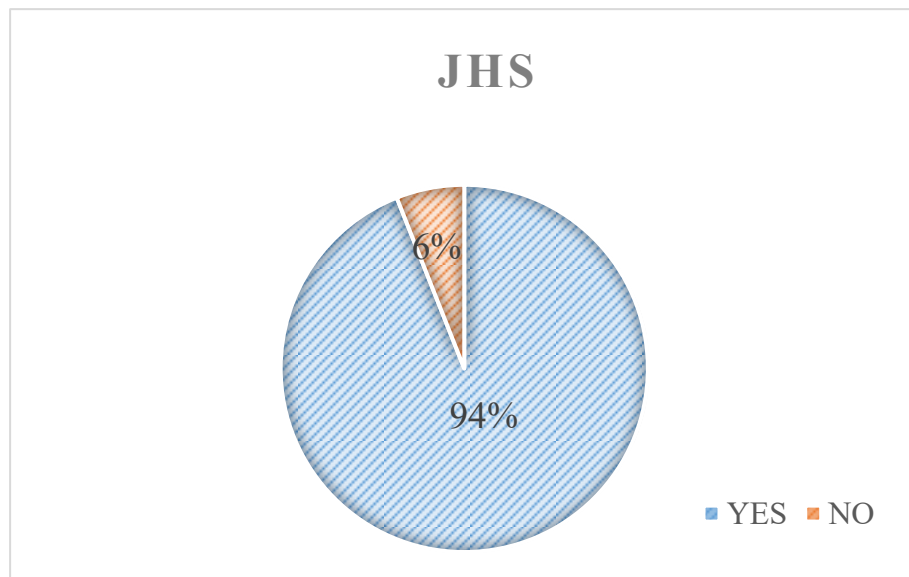
Table 7: Percentage of student engagement and non engagement in PA

	Yes	No	Percentage Yes	Percentage No	TOTAL	
JHS	298	19	94.00	5.99	317	100
SHS	374	34	91.66	8.33	408	100
TOTAL	672	53	92.68	7.31	725	100

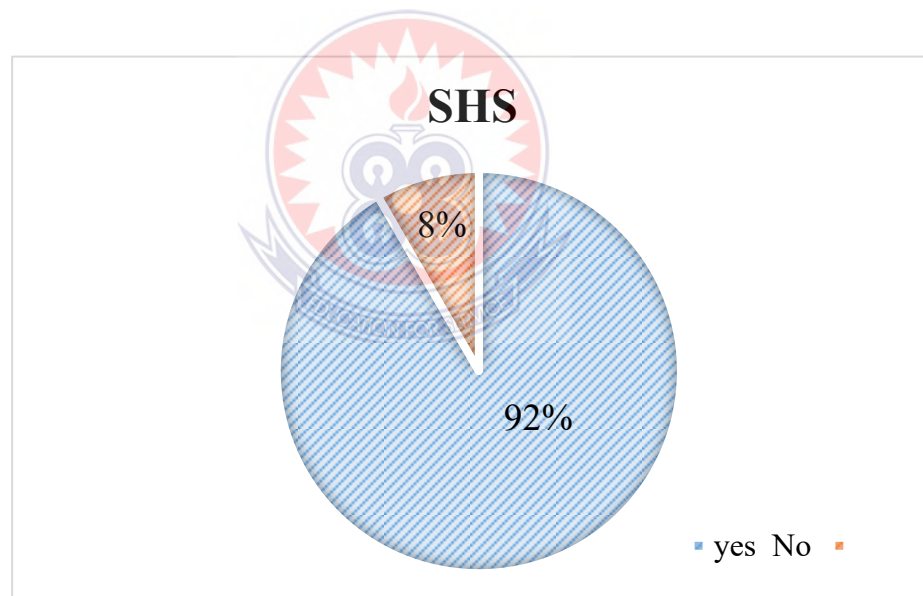
Source: Field survey (2021)

Fig. 6a and 6b: Respondents responses to whether they did physical activity in the past seven.

a



b



From table 7 The results indicate that n=298 (94%) and n=374 (92%) of JHS and SHS students respectively have admitted engaging in physical activity at least in the past seven days while n= 19 (6%) and n=34 (7%) denied doing any physical activity in the past seven days. However over 92% of the total sample size acknowledge doing some sort of physical activity within the past seven days while only a little over 7% never had engaged in any sort of physical activity within the past seven days. As little as a little of no activity was identified, it can be noted that this disparity is not due to chance. This attest to the fact most students are moving gradually away from sedentary behaviors such as watching moving, playing video games, sleeping and the like.

Table 8: Comparative Analysis of Students Attitude towards Physical Activity

Responses	Grade Level	N	Mean	Std. Dev.
Physical activity for social experience/fun	JHS	317	2.970	.523
	SHS	408	3.081	.543
Physical activity for catharsis/benefits	JHS	317	3.181	.580
	SHS	408	3.276	.613
Physical activity for aesthetic experiences/personal best	JHS	317	3.085	.623
	SHS	408	3.039	.636
Physical activity for health and fitness	JHS	317	3.108	.640
	SHS	408	3.120	.645

Source: Field survey (2021).

In Table 8., the results indicate that in JHS, students engage in physical activity for social experience/fun (M = 2.970, SD = .523), catharsis/benefits (M = 3.181, SD = .580) for aesthetic experience/personal best (M = 3.085, SD = 623) and for health and fitness (M = 3.108, SD = .640). However, SHS students engage in physical activity for social experience or fun (M = 3.081, SD = .534), for catharsis or benefits ((M =

3.276, SD = .613), and for health and fitness (M = 3.120, SD = .645). The highest mean score out of the four attitude domain for both grade levels was catharsis/benefit. The second mean score was health and fitness. However the least mean score was social experience/ fun. This means that eventhough, students do engage in physical activity, they do so for individual reason or purpose

The summary of the students' attitude towards physical activity is presented in Table below

Table 9: Cross tabulation of JHS and SHS Students' Attitude towards Physical Activity

	Grade	N	Mean	Std. Dev.	Remarks
Attitude towards physical activity	JHS	317	3.086	.490	High
	SHS	408	3.129	.493	High

Source: Field survey (2021). M < 2.50 = Low; M > 2.50 = High

As observed from table 9, both groups possessed a high attitude towards physical activity in Abetifi as the estimated average mean for each group surpasses the cut-off mean of 2.50.

The qualitative data, when collated, also affirms the quantitative data the high attitude. This is shown in the responses below

When qualitative data was collected using interview, it revealed that students in both groups knew the health benefits of physical activity and engaged in it for its health benefits, generally reducing their risk of sickness and improving their physical fitness. This means that students in Abetifi, and thus some individual youth and adolescents within the Abetifi community, are aware of the health benefits of physical activity,

and this awareness motivates them to be physically active, as illustrated by the following statement:

“Also we (my friends and I) think doing these physical activities like jogging, running and others make us fit, smart and not be always sick and those stuffs.” (JHS Female).

“Because engaging in physical activity has health benefits such as losing weight and also helps boosting of the immune system. It also makes you active and energetic.” (SHS Male).

“When you do physical activity you can eat plenty and also sleep well”. But I do not engage in PA for the purpose of eating or sleeping. Because I was encouraged by my parents and teacher (Female)

The quantitative and qualitative results show that junior and senior high school students in Abetifi have a positive attitude toward PA, as can be seen. Stewart et al. (1991) discovered that junior high and senior high pupils were more eager to engage in physical education. The current findings are in support of the findings of Zama et al. (2018), using five university students from Pakistan (ages 18–26 years) as respondents. The study concluded that Pakistani students are aware of the advantages of physical activity.

One reason that can influence students' participation in physical activity could be the attitude of parents towards physical activities. Students' positive attitude towards PA for both junior and seniors might not be far from parental attitude as students see the longevity of their parents as a by-product of PA, hence they engage in it as such. Another reason might be the nature of the environment and the climatic conditions being experienced. Abetifi is a mountainous area with a constantly low to moderate temperature. The cold weather might be compelling students (youth and adolescents) to constantly engage in some sort of moderate-to-vigorous PA in order to keep their bodies warm and active all the time. It also emerged from the study that most of the

students constantly walk to school as a form of exercise. This level of participation would encourage many of the students to meet the daily recommended moderate-to-vigorous physical activity as proposed by WHO (2010) global standard, to derive health benefits from healthy physical activity.

Students' active engagement in constant walking to and from school, jogging, gym work, and other kinds of activities, individually, in pairs, or in groups, is in agreement with Defina et al. (2014), who said that during student life, students develop positive or negative attitudes towards different kinds of physical activities. However, students' positive attitude towards PA in Abetifi could also be attributed to the safe paths and pedestrian walkways in the town, coupled with sufficient street lights. Also, there are no attacks on people or travelers, nor any cases of kidnapping (safe environment) in Abetifi. As a result of the safe nature, most of the students participated in physical activities because they were free play and enjoyable. Adolescents participate in activities that are non-competitive. They prefer not to be forced to compete and win. They enjoy activities that they choose to participate in freely. According to MacPhail et al. (2003), many different types of physical activity encourage participation in children. They do different types of activities while walking, jogging, or running, which include stretching, flexibility, and endurance exercises.

Mulvihill et al. (2000) indicated that enjoyment, or fun, was also crucial to PA participation. The findings from the current study confirm the findings of Sade et al. (2020), who found that there is a higher likelihood for students in SHS2 and SHS3 to be physically active. Again, the findings in this study also confirm the studies of other researchers who noted that there is a higher likelihood for adolescents in lower classes to be physically active. (Seabra et al., 2000; Sallis et al., 2008). Again, the current

study is associated with some other studies which have indicated that students who have more positive attitudes toward physical activity are more likely to participate in physical activity outside of school (Chung and Phillips, 2002; Ding et al., 2006; McKenzie, 2003) and demonstrate higher physical activity levels (Hagger et al., 1985) than those with less positive attitudes. Hitherto, the current study was conducted at a time when there is a ban on all school sports as a result of the COVID-19 pandemic. One might expect that students' appetite for PA outside of school might be drastically reduced as a result of the ban, yet the results proved otherwise. Evidence is found in Silverman and Subramaniam (2007), who attest that positive attitudes formed toward physical activity in physical education may play an important role in maintaining an active lifestyle outside school. This is an indication that students in Abetifi have adhered to the advice of the President and Ghana Health Service (GHS) to exercise regularly to avoid or stay safe from being attacked or infected by COVID.

Riddoch et al. (1991) observed that attitudes towards physical activity are formed in youth and, in most cases, continue to form throughout life. Sollerhed et al. (2005) state that a positive attitude towards physical activity is associated with being regularly physically active. They further state that, positive experiences of physical activity early in life can have an impact on positive attitudes. On the contrary, the current study did not support Ahmed et al.'s (2017) argument that regardless of the type of physical activity adolescents engage in, the number of adolescents who are physically active appears to be woefully inadequate.

Again, the current study also contradicts some studies conducted in Ghana and elsewhere; Doegah and Amoabeng (2019) findings that the Ghanaian youths (15–34

years) are physically inactive and that exercise is not part of Ghanaian youths' and, for that matter, African culture. Randt (2011) and Doegah and Amoabeng (2019).

The importance of understanding students' general attitude towards physical activity is very paramount since physical activity is a panacea for having a healthy life, prevention of non-communicable diseases (NCD), self-esteem, academic pursuit, improving endurance and stamina, reducing BP, increasing metabolic rate, burning extra calories, reducing risk of heart attack, reducing weight, improving muscle tone, etc.

With junior high and senior high students' positive attitudes towards PA, it can be concluded that the students in Abetifi are meeting WHO's target rate of a 15% reduction in physical inactivity globally by 2030 among adolescents.

Research Question 2:

Is there a difference in students' attitudes towards physical activity at Junior and Senior High Schools?

Hypothesis 1.

H0: There will no significant difference in students' attitude towards PA in junior and senior high schools in Abetifi

H1: There will be significant difference in student's attitude towards PA in junior and senior high schools in Abetifi

4.3 Differences in Students' Attitudes towards Physical Activity in Abetifi

The hypothesis, "there will be no significant difference in students' attitudes towards physical activity in junior and senior high schools," was posed to ascertain whether differences in the reported means (averages) have reached statistical significance. An

independent T-test was conducted on the data set, and the result is presented in Table 4.6.

**Table 10: Differences in Attitudes of Students towards Physical Activity
According to Grade Levels**

Grade Level	N	Mean	Std. Dev.	Df	T	Sig.	Remarks
JHS	317	3.086	.490	723	-1.163	.245	N/S
SHS	408	3.129	.493				

Source: Field survey (2021).

N/S (Not Significant; $p < 0.05$ (2-tailed))

It can be observed that there is a difference between JHS students' attitudes towards physical activity ($M = 3.086$, $SD = .490$) and SHS students' attitudes towards physical activity ($M = 3.129$, $SD = .493$). Though there are differences in the mean scores, these differences are not statistically significant ($t(723) = -1.163$, $p = .245$). The differences between the groups in terms of their attitudes toward physical activity using Cohen's d (Cohen, 1988) were small ($d = 0.087$). Consequently, the hypothesis is supported at an alpha level of 0.05, a significant level. This indicates that, the estimated differences in students' attitudes toward physical activity exist by chance.

When qualitative data was gathered, it appears that the overall fundamental motivation for female students engaging in physical activity is for their physical appearance (self-esteem) through weight loss as a result of physical activity, as well as for the acquisition of the desired body weight and health benefits. This means that, essentially, students see physical activity as something for overweight people to do to acquire their desired physical appearance. Others (some male students) also see it as a muscular definition endurance booster. This thinking on the part of the students is illustrated in the quotes.

“When you engage in physical activity, it also helps to burn excess fat in the body and makes the body looks nice.” (JHS & SHS Females).

“Yes sir! I do it with my sister before I come to school. My sister for instance used to go to the gym at least three times in a week but she exercise almost every morning because she is fat and she said she doesn’t like it, so she is trying to reduce her weight.” (Female student).

“I normally do more than 50 press up every morning before I take my bath sometimes especial weekends after jogging I go to the gym with my friends. Because I want to be fit and strong. It also builds your muscles i.e. to have six packs. When you lift your shirt people see it like ‘macho’ [strong] man and people will appreciate you.” (Male student,).

“Others also think that when they do it they will be brilliant in class. Because our teacher always tells that when you sports, you will be intelligent and I believe that too.” (Male).

The slight differences that exist between JHS and SHS students' attitudes are in agreement with the findings of Steward et al. (1991). An analysis by grade level indicated a slightly more favourable position for senior high subjects than junior high subjects (58% and 47%, respectively). The cause of the insignificance difference could be attributed to the fact that some of the students at the junior high school may not have adequate knowledge of physical activity and the health benefits associated with it. (Asare & Danquah, 2015). Even though there was a presidential ban on school sports as a result of the COVID-19 pandemic, SHS students continued to engage in cocurricular activities such as playing football, jogging, and running on their own at their leisure time. This attests to the fact that they have adequate knowledge of the benefits of physical activity compared to students at junior high schools. They have stopped playing all sougts of games in school because they have been told by their teachers not to do so due to the COVID-19 restriction.

4.4 Prevalence of Physical Activity among JSH and SHS Students

Research Question 3.

How common (prevalence) is physical activity among students in Junior and Senior High school?

This research question sort to find out the frequency and duration of Physical Activity among the two groups of students.

Table 11: Prevalence of Physical Activity among Students

Activity	Levels	Frequency	VP*	CP*
Walking	JHS	101	31.86	31.86
	SHS	112	27.45	27.45
Jogging	JHS	97	30.60	30.60
	SHS	97	23.77	23.77
Playing Football	JHS	16	5.05	5.05
	SHS	53	12.99	12.99
Playing other games	JHS	57	17.98	17.98
	SHS	67	16.42	16.42
Running	JHS	13	4.10	4.10
	SHS	10	2.45	2.45
Skipping	JHS	12	3.79	3.79
	SHS	40	9.80	9.80
Ampe	JHS	10	3.15	3.15
	SHS	2	0.49	0.49
Aerobic dance	JHS	4	1.26	1.26
	SHS	9	2.21	2.2
No activity	JHS	7	2.21	2.21
	SHS	18	4.41	4.41
Walking	JHS	101	31.86	31.86
	SHS	112	27.45	27.45

*Source: Field survey (2021) *VP= valid percentage *CP= cummilative percentage
 X_1 = Mean score for JHS, X_2 = Mean SHS*

From the Table 11 above, the study identified the prevalence of and variations in physical activity among students. Walking was the most common mode of PA among JHS and SHS students, with over 31% and over a quarter (27.45%) of participants engaging in daily walking, respectively. Jogging was the second most common mode

of PA, with scores of 30.60% and 23.77% of JHS and SHS students, respectively. However, almost 18% of JHS and 16% of SHS students engaged in some other games apart from football on a daily basis, while about 13% of SHS and 5% of JHS played football more than once in a week. Also, about 4% of JHS and a little over 2% engage in running activity. Again, about 4% of JHS students. About 10% of JHS students engaged in skipping as physical activity more than once a week. Again, ampe was the least active (less than 1%) among SHS students, but JHS recorded less than 4%. Over 2% of SHS and more than 1% of JHS engaged in aerobic activities. On the contrary, a total of 15 (6.62%), or 2.21% of JHS and 4.41% of SHS, do not participate in any activity.

Qualitative data gathered also reveals that physical activity is prevalent (common) among the two cohorts. Some of the students in the two cohorts taking up physical activity showed some awareness of the merits concerning physical activity, whilst a few others did not, either for a lack of knowledge or some other reason. Illustrative of how common or uncommon physical activity is among the cohort is illustrative in the following comments:

“It is very common because our parents do send us a lot on errands. So while we are carrying out this responsibilities, we walk and sometimes run a lot so that you wouldn’t be late. Yes sir! I know it is a way of engaging in PA and actually it helps me and keeps me fit.” (Male/Femal).

“Yes most people in the town also do exercise. Especially weekend like this you will see plenty people going out doing jogging. Sometimes I even do follow my parents. But my father do it a lot.

“For me I go out to play ball with my friends almost everyday so long as I am less busy in the house. No sir, we don’t always play football. We play other games like volleyball too. But we play soccer more. Yes I played yesterday” (Male)

“No my parents never prevented me from going out to play with my friends as long as I am done with my assignments.

“Even if I didn’t go for jogging, I have skipping rope in the house, sometimes I do skipping with my little sister, sometimes to we play Ampe” (female)

“Exercising is discipline that especially going to the gym, going for jogging especially when you are schooling you have to wake up early to the gym or go for a walk ...the time to wake up and go for jogging or even to go to the gym I think is discipline. And if you are not discipline you cannot do it. But if you continue, it will help you to manage your time for your books” (Male)

“Sometimes laziness makes people not to exercise.

Some people too, are not doing it because they are afraid of getting injured.

“No please. I don’t normally do any activity for fitness. Beause it does not interest me to do it. moreover, no one does it in the house”.

The high frequency recorded in some physical activities can be attributed to a particular activity's love and interest. For instance, "Ampe" is a traditional game which is normally played by African girls, particularly young children to middle-aged schoolgirls (age 6–15 years approximate). This means that the more girls get older, the less their interest in "Ampe". As a result, it is not surprising that SHS scored 0.49 (2/408) and JHS scored 3.14% (10/315).

The high frequency scores for walking and jogging for both JHS and SHS can be attributed to the fact that many students cannot afford to take a taxi to and from school or do not have a bicycle to run errands at home or to school, so they walk or jog as long as they can. This finding also agrees with Ghana’s report card 2018, which indicates that about 54% of children and youth, especially those in the rural areas, walk to school and back home, covering a distance of about 2km. (Yawornota et al., 2018). The prevalence of any walking, which was about 31% and 27% for JHS and SHS respectively, recorded in this study, was much higher in the current study than what was recorded in (Kubata et al., 2022); thus, the prevalence of walking was 14%

in the U.S.A. (including children, walking at least 10 mins in total duration) and 11% in Brisbane and its surrounding areas in Australia (Buehler et al., 2020; Cole et al., 2019) cited in (Kubota et al., 2022). Despite this, comparing the prevalence of all activity in the current study with findings from previous studies using different instruments, such as (Buehler et al., 2020; Fairnie et al., 2016; Lucas et al., 2016; Martn and Paez, 2019; Sugiyama et al., 2012; Tribby and Tharp, 2019; Yang et al., 2018), is difficult. This is due to the fact that different methods were used in these existing studies and the present study. However due to some demographical factors which may one way or the other affect the results, it will be difficult to do any meaningful comparison. Again, comparing the prevalence of the PA identified in the current study may be problematic because the the types of activities identified in the current study were not the in the previous study.

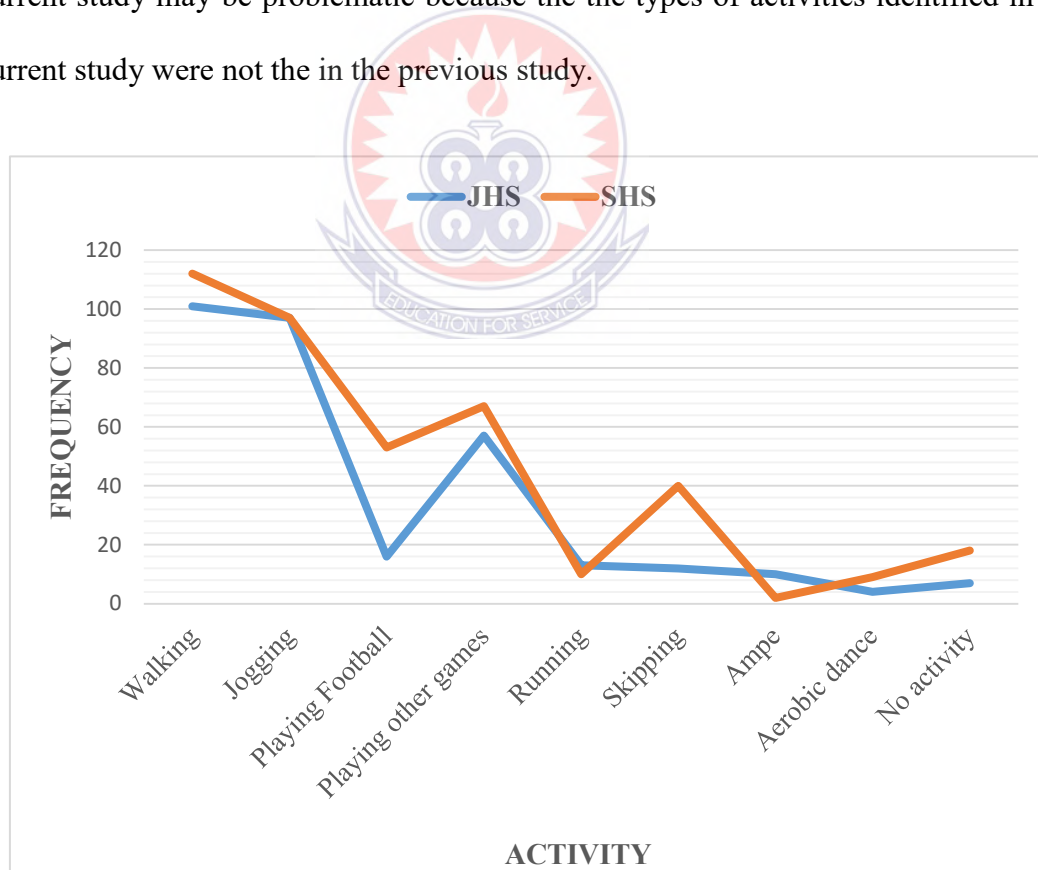


Figure 7: Comparative lines graph of activity engaged in by JHS and SHS students.

Source: Field survey (2021)

It is informative to consider the differences between the prevalence of PA of JHS and that of SHS as shown in the Fig 7. The differentials can be interpreted as an overall indicator of how each group is predominantly active or inactive per their activity level. Walking stands tall for each group, follow by jogging Playing football, playing other games. The least activity on the other hand include: running, skipping, ampe, aerobic and no activity.

Research Hypothesis Two (2)

H₀: There is no statistically significant relationship between students' attitude towards physical activity and prevalence of physical activity.

H₁: There is a statistically significant statistically significant relationship between students' attitude towards physical activity and prevalence of physical activity.

This hypothesis was tested to determine whether or not students' attitude towards physical activity will vary alongside prevalence of such activities. Bivariate Correlation test was first performed on the data set to measure the linear relationship between the two sets of data. The result is presented in Tabl 4.8 below

Table 12: Bivariate Correlation of ATPA and PPA

	ATPA	PPA
Pearson Correlation	1	.284*
ATPA Sig. (2-tailed)		.011
N	725	725

*Source: Field survey (2021) *p< 0.05 level (2-tailed).*

ATPA = Attitude Towards Physical Activity

PPA = Prevalence of Physical Activity

The correlational test in Table 12 revealed that ATPA ($r(725) = .011, p=.011$) is significantly correlated with reported measure of PPA. The results suggest that, the

observed relationship was not due to chance. However, the magnitude of the effect size of small (.284) can be considered as small (Cohen, 1988). The null hypothesis is rejected while the alternative hypothesis is supported. This also agree with Ajzen (1991) theory of planned behaviour which states that behavior achievement depends on both motivation and ability.

Table 13: Time spent in engaging in PA in the past seven (7) days

Duration	Duration/Time	Frequency	Percentage	*VP	*CP
Less than 1 hour	JHS	131	41.32	41.32	41.32
	SHS	153	37.5	37.5	39.71
1 hour or more	JHS	128	40.38	40.38	81.7
	SHS	160	39.22	39.22	76.72
2 hours or more	JHS	39	12.3	12.3	94.01
	SHS	56	13.73	13.73	90.44
No time for activity	JHS	19	5.99	5.99	100
	SHS	39	9.56	9.56	100

Source: Field survey (2021) * VP Valid Percentage; *CP Cumulative Percentage

From table 13 the results demonstrate that out of the total JHS, $n = (317)$ and SHS $n = (408)$ students, the analysis shows that over 40% (131/315) of JHS students and 37.5 % (153/408) of SHS students engaged in some form of physical activities for less than One hour regularly. While about 40% of JHS students compare to about 39% of SHS students engaged in some form of physical activities for 1 hour or more regularly. Sadly, almost 6% (19/315) of JHS students and over 9.5% (39/408) of SHS students reported have no time for physical activity. On the contrary, a little over 12% of JHS students and close to 14% of SHS students engaged in some form of physical activity for 2 hours or more on regular basis. The result of the current study found Prevalence of physical activity among adolescents stands at about 53%. This result is two times higher than what was recorded among adolescent in Ghana (25%)

by (Seidu et al., 2020). The cause of significant prevalence of physical activity among students in Abetifi attest to the fact that most parents as well as the environment influence students attitude towards physical activity. Different people have different reasons why they do or do not exercise. This means that if the reasons for doing it outweigh, why you don't do it, the motivation for doing it very often will be high.

However the prevalence rate of physical inactivity (no Physical activity) among JHS and SHS students stands at over 15% that is, (5.99% and 9.56%) for JHS and SHS students respectively. The result is similar to what was recorded in Kenya (7.7%) by Gichu, et al. (2017), and some Sub Sahara African countries (SSAC) which include Burkina Faso (7.8%) and Ghana (8.8%) (Asare and Danquah, 2015). However the prevalence of PI recorded in the current study is lower than what Guthold (2018) has recorded among similar age group globally. Thus about 87.5% in 2016. The possible reasons for the low prevalence of physical activity among students as observed could be high desire for sedentary behaviour such as the use of computers games, televisions and videogames, and the others (Asare & Danquah, 2015).

The current study thus reveals that even though SHS students attitude towards PA was slightly higher than their juniors at the JHS, the difference was insignificant. However, they both have positive attitude towards PA with a high prevalence rate of about 57%. This revelation implies that much need to be done to enable school going children to appreciate and engage in PA for quality health.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter contains a summary of the study, key findings based on the research questions. The conclusions of the entire study, drawn from the findings and review of existing literature are also presented. The chapter ends with some policy recommendations to the Ministry of Education, Ghana Education Service and other stakeholders in education based on the findings of the study.

5.1 Summary

The purpose of this study was to compare the attitudes of junior and senior high school students towards physical activity (PA) in the Kwahu East District. Abetifi is the setting of the current study. Form two and three students' attitude towards (PA) at the junior high as well as form two and three students attitude towards (PA) at the senior high schools were the focal point of the study. The study employed a mixed method approach while Student's attitude towards physical activity skill (SAPAS) was administered. along side structured interview. The SAPAS which was used consisted of four skill items built around four general physical activity domain namely: Social Experience, Catharsis/ Benefit, Aesthetic Experience, and Health & Fitness.

5.2 Findings

After collating and analyzing both quantitative and qualitative data, the following findings emerged:

1. Majority of students tested at both junior and senior high school had positive (favorable) attitude toward physical activity with regard to the four sub-domains measured. Thus; social experience/fun, catharsis/benefit, aesthetic/self esteem, and health and fitness.
2. About whether a difference exist in students' attitude towards physical activity among junior and senior high school students, the study found that, even though SHS students, had higher attitude score compared to JHS students, the difference was very insignificant. Therefore there was no significant difference in attitude of JHS and SHS students towards PA
3. The findings further revealed that the prevalence of PA is high among junior and senior high school students in the study setting.
4. It also revealed that Individuals who participated in physical activity had more positive views towards PA.
5. With regards to time spent on any kind of PA, the study observed that participants who spent less than an hour on any kind of PA outnumbered those who spent 1 hour or more as well as those who did 2 hours or more, with a lower percentage spending no time on any PA.

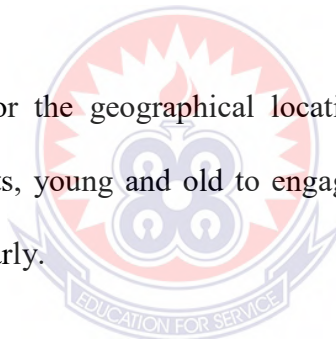
5.3 Conclusion

In determining what may have triggered the no difference in attitude, it is inferred that because all the students reside in the same environment practicing and doing almost everything together, there is no point diverting from the normal irrespective of age,

religion, gender, or school level. This attest to the fact that the environment plays a significant key role in the life of students and every individual.

Furthermore, the study concluded that, tudents' positive attitudes towards PA can be attributed to factors such as:

- i. students' knowledge on the benefit of physical activity such as: good health, physical fitness, intellectual development, self-esteem, and the like
- ii. Safe environment with adequate streetlight, and good pedestrian walk. Thus the environment is devoid of some social vices such as kidnapping and armed robbery
- iii. influence from parents, siblings, family members and friends as well as self-motivation
- iv. The topography or the geographical location of the area might have also compelled students, young and old to engage in walking and other activities for exercise regularly.



5.4 Recommendation

Based on the findings of this study, some recommendations are proposed for policy implementation and for further research.

5.4.1 Recommendations on Policy Implementation

1. In-service training should be organized for teachers on PA and how to inculcate PA into teaching other subjects.
2. The need to introduce in the school at least 30 minutes of moderate to vigorous physical activities (walking and jogging) daily at least 4 times a week before or after instructional hours or 2 hours on weekends.

3. The need for teachers, religious leaders, health practitioners, and other interest groups to embark on sensitization campaign on health and PA through talks, lectures and symposia.

5.4.2 Recommendation for Further Research

1. That further studies should be conducted among students who reside on mountainous areas and those on the low land regions to determine their attitude towards PA
2. Study be carried out to establish the attitudes of adolescents and older adults towards PA. This could establish when negative attitude towards PA starts developing among young and older adult.



REFERENCES

- Aaron, D. J., Storti, K. L., Robertson, R. J., Kriska, A.M., & LaPorte, R.E. (2002). Longitudinal study of the number and choice of leisure time physical activities from mid to late adolescence: implications for school curricula and community recreation programs. *Archives of Pediatrics & Adolescent Medicine*, 156(11), 1075–80.
- Abubakari, A. R., & Bhopal, R. S. (2008). Systematic review on the prevalence of diabetes, overweight/obesity and physical inactivity in Ghanaians and Nigerians. *Journal of the Royal Institute of Public Health*, 122, 173 -182.
- Adewuyi, T., & Akinade, E. (2010). Perception and attitudes of Nigerian women towards menopause. *Procedia - Social and Behavioral Sciences*, 5, 1777–1782.
- Ahmed, S., Venigalla, H., Mekala, H. M., Dar, S., Hassan, M., & Ayub, S. (2017). Traumatic brain injury and neuropsychiatric complications. *Indian Journal of Psychological Medicine*, 39(2), 114–121.
- Ainsworth, B., Cahalin, L., Buman, M., & Ross, R. (2015). The current state of physical activity assessment tools. *Progress in Cardiovascular Diseases*, 57(4), 387–395. <https://doi.org/10.1016/J.PCAD.2014.10.005>
- Ajayi, E. O., Elechi, H. A., & Alhaji, M. A. (2015). Prevalence of overweight/obesity among primary school pupils in Urban Centre, Nigeria. *Saudi J Obesity*, 3, 59–65.
- Ajzen, I. (1993). Attitude theory and the attitude-behavior relation. Uploaded by Icek Ajzen on 12 August 2020. <https://www.researchgate.net/publication/264655146>
- Ajzen, I., & Fishbein, M. (2005). The influence of attitudes on behavior. In D. Albarracín, B. T. Johnson, & M. P. Zanna (Eds.), *The handbook of attitudes* (pp. 173–221). Lawrence Erlbaum Associates Publishers.
- Akman, M., S. & Ünalán, P.C. (2012). Health nutrition and physical activity in adolescents. *Nobel Medicus*, 22(8), 24-29.
- Albert, N. & Merunka, Dwight & Valette-Florence, Pierre. (2009). The Feeling of Love Toward a Brand: Concept and Measurement. *Advances in Consumer Research*. 36.

- Ali, A., Waly, M., Bhatt, N., & Al-Saady, N. (2015). Proximate and phytochemical composition and antioxidant properties of indigenous landraces of omani fenugreek seeds. *African Journal of Traditional, Complementary and Alternative Medicines*, 12(2), 149. <https://doi.org/10.4314/ajtcam.v12i2.22>
- Allport, G. W. (1935). Attitudes. In Murchison, C (Ed.), *Handbook of social psychology*. Worcester, MA: Clark University Press
- Allport, G. W. (1954). Historical background of modern social psychology. In Linsey, G. (Ed.), *Handbook of Social Psychology* (pp3-55). Cambridge MA: Wesley.
- Almeida, Fernando & Faria, Daniel & Queirós, André. (2017). Strengths and Limitations of Qualitative and Quantitative Research Methods. *European Journal of Education Studies*, 3, 369-387.
- Amenyah, S. D., Ward, M. H., Strain, J. J., McNulty, H., Hughes, C. F., Dollin, C., Walsh, C. P., & Lees-Murdock, D. J. (2020). Nutritional Epigenomics and Age-Related Disease. *Current Developments in Nutrition*, 4(7). <https://doi.org/10.1093/cdn/nzaa097>
- Andersen, L. B., Harro, M., Sardinha, L. B., Froberg, K., Ekelund, U., Brage, S., Anderssen, S. A. (2006). Physical activity and clustered cardiovascular risk in children: a cross-sectional study (The European Youth Heart Study). *Lancet*. 22, 368(9532):299-304. doi: 10.1016/S0140-6736(06)69075-2. PMID: 16860699.
- Asare, M., Danquah, S. A. (2015). The relationship between physical activity, sedentary behaviour and mental health in Ghanaian adolescents. *Child and Adolescent Psychiatry and Mental Health*, 9(1), 11.
- Assah, F. K., Ekelund, U., Brage, S., Mbanya, J. C., & Wareham, N. J. (2011). Urbanization, physical activity, and metabolic health in Sub-Saharan Africa. *Diabetes Care*, 34(2), 491–496. <https://doi.org/10.2337/dc10-0990>
- Association for Physical Education Health (AFPE) Position Paper.(2015). http://www.afpe.org.uk/physicaleducation/wpcontent/uploads/afPE_Health_Position_Paper_Web_Version.pdf
- Aubert, S, Brazo-Sayavera, J., González, S. A., Janssen, I., Manyanga, T., Oyeyemi, A.L., Picard, P., Sherar, L.B., Turner, E. & Tremblay, M.S. (2021). Global prevalence of physical activity for children and adolescents; inconsistencies, research gaps, and recommendations: a narrative review. *International Journal of Behavioral Nutrition and Physical Activity*, 18, 81

- Baptista, F., Santos, D.A., Silva, A. M., Mota, J., Santos, R., Vale, S., Ferreira, P.J., Raimundo, M.A., Moreira, H., & Sardinha, B. L. (2012). Prevalence of the Portuguese population attaining sufficient physical activity. *Medicine & Science in Sports & Exercise*. DOI: 10.1249/MSS.0b013e318230e441
- Beashel, P., & Taylor, J. (1996). Advance studies in physical education and sport *Journal of Medicine and Science in Sport and Exercise*, 32, 70-84.
- Biddle, R. & Mutrie, N. (2011). *Psychology of physical activity determinants, well-being and interventions*. Routledge: Brown Publishing Firm. 60
- Biddle, S. J. H. & N. Mutrie, (2008). *Psychology of physical activity: Determinants, well-being and interventions*. 2 Edn, New York: Routledge, pp: 428. ISBN: 041536664X
- Blatchford, P., Baines, E., & Pellegrini, A. D. (2003). The social context of school playground games: Sex and ethnic difference, and changes over time after entry to junior school. *British Journal of Development Psychology*, 21, 481–505. Doi
- Bohner, G. & Dicke, N. (2011). Attitudes and attitude change. Publication at: <https://www.researchgate.net/publication/46109523>
- Bonsu, S. K., & Zwick, D. (2007). Exploring consumer ethics in Ghana, West Africa. *International Journal of Consumer Studies*, 31(6), 648–655.
- Bouchard, C., Sarzynski, M. A., Rice, T. K., Kraus, W. E., Church, T. S., Sung, Y. J., & Rankinen, T. (2011). Genomic predictors of the maximal O₂ uptake response to standardized exercise training programs. *Journal of Applied Physiology*, 110(5), 1160– 1170.
- Brandt, R. G., Anderson, P. F., McDonald, N. J., Sohn, W., Peters, M. C. (2011). The pulpal anesthetic efficacy of articaine versus lidocaine in dentistry: a meta-analysis. *J Am Dent Assoc.*, 142(5), 493-504.
- Bryman, A. (2004). *Social research methods* (2nd ed.). New York: Oxford University Press.
- Burnett, C. J., Li, T., Webber, E. C., Tsaousidou, E., Xue, S. Y., Brüning, J. C., & Krashes, M. J. (2016). Hunger-Driven Motivational State Competition. *Neuron*, 92(1), 187–201.
- Butte, N. F., Ekelund, U., & Westerterp, K. R. (2012). Assessing physical activity using wearable monitors: measures of physical activity. *Medicine and Science in Sports*

- Campbell, D. T., Kruskal, W. H., & Wallace, W. P. (1966). Seating aggregation as an index of attitude. *Sociometry*, 29, 1 – 15.
- Carlson, T.B., (1995). We hate gym: Student alienation from physical education. *J. Teach. Phys. Educ.*, 4: 467-477.
- Caruth, G. D. (2013). Demystifying mixed methods research design: A review of the literature. *Mevlana International Journal of Education*, 3(2), 112–122.
- Caspersen, C. J., Powell, K. E., & Christenson, G. M. (1985). Physical activity, exercise, and physical fitness: definitions and distinctions for health-related research. *Public health reports*, 100(2), 126.
- Celik, S. (2011). Characteristics and Competencies for Teacher Educators: Addressing the Need for Improved Professional Standards in Turkey. *Australian Journal of Teacher Education*, 36(4). <https://doi.org/10.14221/ajte.2011v36n4.3>
- Celik, Z, & Pular, A. (2011). Secondary school students' attitudes of physical education and sport. *YYU Journal of Education Faculty, Special Issue*: 115-121.
- Chen, A. & P.W. Darst, (2001). Situational interest in physical education: A function of learning task design. *Res. Quar. Exerc. Sport*, 72, 150-164.
- Chung, M. & Phillips, K. (2007). The relationship between attitude towards Physical Education. *Leisure-Times Exercise Journal*, 59: 126-138.
- Churchill Jr., G. A. (1995). *Marketing Research Methodological Foundation* (6th ed.). Fort Worth, TX: The Dryden Press.
- Colley, R. C., Garriguet, D., Janssen, I., Craig, C. L., Clarke, J., & Tremblay, M. S. (2011). Physical activity of Canadian adults: accelerometer results from the 2007 to 2009
- Corseuil, M.W., Schneider, I.J., Silva, D.A., Costa, F.F., Silva, K.S., & Borges, L.J., (2011). Perception of environmental obstacles to commuting physical activity in Brazilian elderly. *Preventive Medicine*. 2011; 53(4–5):289– 92. <https://doi.org/10.1016/j.ypmed.2011.07.016> PMID: 21820007
- Crano, W. D., & Prislin, R. (2006). Attitudes and persuasion. *Annual Review of Psychology*, 57(1),345–374.
- Creswell, J. W., & Clark, V. L. P. (2007). Designing and conducting mixed methods research. *Australian and New Zealand Journal of Public Health*, 31(4), 388.

- Dacey, D. M., Crook, J. D., Packer, O. S. (2014). Distinct synaptic mechanisms create parallel S-ON and S- OFF color opponent pathways in the primate retina. *Vis Neurosci*, 31(2), 139- 51.
- Davis, C., L'Hôte, E., Volmert, A., Segar, M., & Busso, D. (2020). *Communicating about physical activity: challenges, opportunities, and emerging recommendations. a FrameWorks Strategic Brief*. Washington, DC: Frame Works Institute. www.frameworksinstitute.org
- de Rezende, L. F., Azeredo, C. M., Canella, D. S., Claro, R. M., de Castro, I. R., Levy, R. B., et al. (2014). Sociodemographic and behavioral factors associated with physical activity in Brazilian adolescents. *BMC Public Health*, 14(1), 485.
- DeFina, L. F., Haskell, W. L., Willis, B. L., Barlow, C. E., Finley, C. E., Levine, B. D., & Cooper, K. H. (2015). Physical activity versus cardiorespiratory fitness: Two (Partly) Distinct Components of Cardiovascular Health? *Progress in Cardiovascular Diseases*, 57(4), 324–329.
- Demirel, C. B., Kalayci, M., Ozkocak, I., Altunkaya, H., Ozer, Y., Acikgoz, B. A. (2003). prospective randomized study comparing perioperative outcome variables after epidural or general anesthesia for lumbar disc surgery. *J Neurosurg Anesthesiol*, 15(3), 185-92.
- Department of Health and Social Care. (2020b, January 9). Physical activity guidelines: UK Chief Medical Officers' report. GOV.UK. <https://www.gov.uk/government/publications/physical-activity-guidelines-uk-chief-medical-officers-report>
- Dilek Temiz Dinç & Aytaç Gökmen (2019). Export-led economic growth and the case of Brazil: An empirical research. *Journal of Transnational Management*, 24:(2), 122-141.
- Ding, J., & Sugiyama, Y. (2017). Exploring Influences of sport experiences on social skills in physical education classes in college students. *Advances in Physical Education*, 7 , 248-259.
- Ding, J., & Sugiyama, Y. (2018). Examining relationships between the cognitive aspect of college students' attitudes toward physical education and their social skills in Physical Education Classes. *Advances in Physical*
- Dobbins, M., Husson, H., DeCorby, K., & LaRocca, R.L. (2013). School-based physical activity programs for promoting physical activity and fitness in children and adolescents aged 6 to 18. *Cochrane Database Systematic Review*, 2, CD007651.
- Doegah, P. T., & Amoateng, A. Y. (2019). Understanding physical activity among young Ghanaians aged 15–34 years. *Public Health & Primary Care | research*

- Donnelly, C., McColl, M. A., Charlifue, S., Glass, C., O'Brien, P., Savic, G., Smith, K. (2007). Utilization, access and satisfaction with primary care among people with spinal cord injuries: a comparison of three countries. *Spinal Cord*, 45(1):25-36.
- Draper, C. E., Tomaz, S. A., Bassett, S. H., Burnett, C., Christie, C. J. (2018). Results from South Africa's 2018 Report Card on Physical Activity for Children and Youth. *Journal of Physical Activity and Health*, 2018, 15(Suppl 2), S406-S408 <https://doi.org/10.1123/jpah.2018-0517>
- Dumith, S. C., Domingues, M. R., Gigante, D. P., Hallal, P. C., Menezes, A, Kohl, H. W. (2010). Prevalence and correlates of physical activity among adolescents from Southern Brazil. *Revista de saude publica*, 44(3), 457–67.
- Duncan, G. J., Dowsett, C. J., Claessens, A., Magnuson, K., Huston, A. C., Klebanov, P. K., Pagani, L. S., Feinstein, L., Engel, M., Brooks-Gunn, J., Sexton, H. R., Duckworth, K., & Japel, C. (2007). School readiness and later achievement. *Developmental Psychology*, 43(6), 1428–1446.
- Eagly, A.H., & Chaiken, S. (1993). *The Psychology of Attitudes*. Orlando, FL: Harcourt Brace Jovanovich
- Ekici, D. & Beder, A. (2014). The effects of workplace bullying on physicians and nurses. *Australian Journal of Advanced Nursing*, 31, 24-33.
- Erwin, H., Abel, M., Beighle, A., Noland, M.P., Workey, B., & Riggs, R. (2012). The contribution of recess to children's school day physical activity. *Journal of Physical Activity & Health*, 9, 442–448.
- Escalante, Y., Garcia-Hermoso, A., Backx, K., & Saavedra, J.M. (2014). Playground designs to increase physical activity levels during school recess: a systematic review. *Health Education Behavior*, 41(2), 138-144.
- Figley, C. R. (1988). Victimization, trauma, and traumatic stress. *The Counseling Psychologist*, 16(4), 635–641.
- Fishbein, M., & Ajzen, I. (2010). *Predicting and changing behavior: The reasoned action approach*. Psychology Press.
- Frago-Calvo, J. M., Pardo, B. M., García-Gonzalez, L., Solana, A. A., & Casterad, J. Z. (2017). Physical activity levels during unstructured recess in Spanish primary and secondary schools. *European Journal of Human Movement*, 38, 40–52.

- Frederick, D. A., St John, H. K., Garcia, J. R., & Lloyd, E. A. (2018). Differences in orgasm frequency among gay, lesbian, bisexual, and heterosexual men and women in a U.S. National Sample. *Archives of Sexual Behavior*, 47(1), 273–288.
- Garipalaolu, M., Y. Sahip, N. Budak, Ö. Akdikmen, T. Altan and M. Baban, (2008). Food types in the diet and the nutrient intake of obese and non-obese children. *Journal Of Clinical Research In Pediatric Endocrinology*, 1(1), 21-29.
- Gawronski, B. (2007). Attitudes can be measured! But what is an attitude? [Editorial]. *Social Cognition*, 25(5), 573–581. <https://doi.org/10.1521/soco.2007.25.5.573>
- Gichu, M., Asiki, G., & Juma, P. (2015). Prevalence and predictors of physical inactivity levels among Kenyan adults (18–69 years): an analysis of STEPS survey. *BMC Public Health* 18 (Suppl 3), 1217
- Granero, R., Fernández-Aranda, F., Steward, T., Mestre-Bach, G., Baño, M., Del Pino-Gutiérrez, A., Moragas, L., Aymami, N., Gómez-Peña, M., Mallorquí-Bagué, N., Tárrega, S., Menchón, J. M., & Jiménez-Murcia, S. (2016). Compulsive Buying Behavior: Characteristics of Comorbidity with Gambling Disorder. *Frontiers in Psychology*, 7.
- Greene, J. C., Caracelli, V. J., & Graham, W. F. (1989). Toward a Conceptual Framework for mixed-method evaluation designs. *Educational Evaluation and Policy Analysis*, 11(3), 255–274.
- Guthold, R., Stevens, G.A, Riley, L.M., Bull, F.C., (2019). Global trends in insufficient physical activity among adolescents: a pooled analysis of 298 population-based surveys with 1.6 million participants. *The Lancet Child & Adolescent Health*. 2019; 4(1):23–35. [https://doi.org/10.1016/S2352-4642\(19\)30323-2](https://doi.org/10.1016/S2352-4642(19)30323-2)
- Guyer, Joshua & Fabrigar, Leandre. (2015). The attitude-behavior link: A review of the history. Ghana Statistical Service, Ghana Health Services, ICF Macro. Ghana Demographic and Health Survey (2008). Accra: GSS, GHS, ICF Macro; 2009.
- Haase, L.J.A.M., & Fox, K.R., (2017). Physical activity among adolescents in Taiwan. *Asia Pac J Clin Nutr*, 2017 16 (2): 354–61. Retrieved from <http://apjcn.nhri.org.tw/server/APJCN/16/2/3>
- Halla, P. C., Andersen, L. B., Bull, F. C., Guthold, R., Haskell, W., & Ekelund, U., (2012). Physical activity series working group. global physical activity levels: surveillance progress, pitfalls, and prospects. *The lancet*. 2012; 380(9838):247–5

- Hardman, A.E. & Stensel, D.J. (2009). *Physical activity and health; the evidence explained* (Second edition). by Routledge 2 Park Square, Milton Park, Abingdon, Oxon OX14 4RN. Simultaneously published in the USA and Canada by Routledge 270 Madison Ave, New York, NY 10016. published in the Taylor & Francis e-Library, 2009.
- Haseler, C., Crooke, R., & Haseler, T. (2019). Promoting physical activity to patients. *BMJ. Sep 17*, 366-15230.
- Haskell, W. L., Lee, I.-M., Pate, R. R., Powell, K. E., Blair, S. N., Franklin, B. A., et al. (2007). Physical activity and public health: updated recommendation for adults from the American college of sports medicine and the American heart association. *Med. Sci. Sports Exerc.* 39, 1423–1434.
- Haug, E., Torsheim, T., Sallis, J.F. & Samdal, O. (2010). The characteristics of the outdoor school environment associated with physical activity. *Health Education Research*, 25, 248 –56. doi: 10.1093/her/cyn050
- Henry, B. C., Moffitt, T. E., Robins, L. N., & Earls, F. (1993). Early family predictors of child and adolescent antisocial behaviour: who are the mothers of delinquents? *Criminal Behaviour and Mental Health*, 3(2), 97–118.
- Hinkley, T., Crawford, D., Salmon, J., Okely, A.D., & Hesketh, K. (2008). Preschool children and physical activity: A review of correlates. *American Journal of Preventive Medicine*, 34, 435– 441.
- Hipscher, M. & Leung, R. W. (2011). Attitudes of high school students toward physical education and their sport activity preferences. *Journal of Social Sciences*, 7(4), 529-537.
- Hoover, A., & Krishnamurti, S. (2010). Survey of college students' MP3 listening: Habits, safety issues, attitudes, and education. *Am J Audiol.*, 19(1):73-83.
- Howley ET. Type of activity: resistance, aerobic and leisure versus occupational physical activity. *Med Sci Sports Exerc.* 2001 Jun;33(6 Suppl): S364-9; discussion S419-20.
- <http://www.who.int/mediacentre/factsheets/fs385/en/>
- Hunt, C. P., Moskowitz, B. M. & Banerjee, S. K. (1995). Magnetic properties of rocks and minerals. rock physics & phase relations: A Handbook of Physical Constants, Vol. 3. American Geophysical Union, Washington DC, 189-204. <http://dx.doi.org/10.1029/RF003p0189>
<http://welog.com/RF003p0189.pdf>
- Irish Sports Council. (n.d.). Irish Sports Council anti-doping testing 2012. - Drugs and Alcohol. <https://www.drugsandalcohol.ie/19301/>

- Isable, Kendra. (2021) | ID: hd76s522x | ScholarWorks. (2021, November 21). https://scholarworks.calstate.edu/concern/file_sets/hd76s522x?locale=es
- Islam, F. M. A., Islam, M. A., Hosen, M. A., Lambert, E. A., Maddison, R., Lambert, G. W., & Thompson, B. R. (2023). Associations of physical activity levels, and attitudes towards physical activity with blood pressure among adults with high blood pressure in Bangladesh. *PLOS ONE*, *18*(2), e0280879. <https://doi.org/10.1371/journal.pone.0280879>
- Jick, T. D. (1979). Mixing qualitative and quantitative methods: Triangulation in action. *Administrative Science Quarterly*, *24*, 602-611.
- Johnson, R. B. & Onwuegbuzie, A. J. (2004). Mixed methods research: A research paradigm whose time has come. *Educational Researcher*, *33*, 14-26.
- Kalaja, P. S., Jaakkola, T. T. Liukkonen, O. J. & Digelidis, N. (2012). Development of junior high school students' fundamental movement skills and physical activity in a naturalistic physical education setting. *Physical Education and Sport Pedagogy*, *17*(4), 411-428.
- Katzmarzyk, P.T. & Mason, C. (2009). The physical activity transition. *J Phys Act Health.*, *6*(3), 269–80.
- Kavishe, B., Biraro, S., Baisley, K., Vanobberghen, F., Kapiga, S., Munderi, P., Mutungi, G., et al. (2015). High prevalence of Hypertension and of risk factors for non-communicable diseases (NCDs): A population based cross-sectional survey of NCDS and HIV infection in Northwestern Tanzania and Southern Uganda. *BMC Medicine*, *13*, 126.
- Kee, Y. H., Wang, C. K. J., Chen, M. H., & Arjunan, S. P. (2017). Physical inactivity and activity patterns among Taiwanese secondary students. *International Journal of Sport and Exercise Psychology*, *0*(0), 1–13.
- Kenya's 2016 Report Card on Physical Activity and Body Weight of Children and Youth healthy active kids Kenya/Active healthy kids Canada; 2014. Available <https://www.activehealthykids.org/wp-content/uploads/2016/11/Kenya-report-card-long-form-2016.pdf>
- Knapen, J., Vancampfort, D., Moriën, Y., & Marchal, Y. (2015). Exercise therapy improves both mental and physical health in patients with major depression. *Disabil. Rehabil.*, *37*, 1490–1495.

- Kohl II, H. W., & Cook, H. D. (Eds.) (2013). *Educating the student body: Taking Physical activity and physical education to school. committee on physical activity and physical education in the school environment, food and nutrition board, and institute of medicine*. Washington DC: The National Academies Press.
- Kolbe, L. J. (2019). Annual review of public health school health as a strategy to improve both public health and education. <https://doi.org/10.1146/annurev-publhealth-040218-043727>. Downloaded from www.annualreviews.org 12/30/21.
- Kothari, C. R. (2004). *Research methodology: Methods and techniques* (2nd ed.). New Age International Publishers, New Delhi.
- Krech, D., & Crutchfield, R. S. (1948). The measurement of beliefs and attitudes. In D. Krech & R. S. Crutchfield, *Theory and problems of social psychology* (pp. 205–272). McGraw-Hill. <https://doi.org/10.1037/10024-007>
- Kucukibis, F. H. & Gul, M. (2019). The Relationship between Attitudes towards Physical Activity and Self-Esteem of High School Students. *Asian Journal of Education and Training* Vol. 5, No. 1, 70-73, 2019 ISSN(E) 2519-5387 DOI: 10.20448/journal.522.2019.51.70.73.
- Kyu, et al. (2016). Physical activity and risk of breast cancer, colon cancer, diabetes, ischemic heart disease, and ischemic stroke events: systematic review and dose-response meta-analysis for the Global Burden of Disease Study 2013. *BMJ*, i3857. <https://doi.org/10.1136/bmj.i3857>
- Lee, A.M., (2004). Promoting lifelong physical activity through quality physical education. *J. Phys. Educ. Rec. Dance*, 75: 21-26.
- Lee, I. M. & Skerrett, P. J. (2001). Physical activity and all-cause mortality: What is the dose– response relation? [discussion S493-4]. *Med Sci Sports Exerc* 2001; 33:S459-71
- Lee, WC., Bonin, V., Reed, M. (2015). Anatomy and function of an excitatory network in the visual cortex. *Nature*, 532, 370–374.
- Lewis, L. K., & Williams, C. L. (1994). Experiential learning: Past and present. *New Directions for Adult and Continuing Education*, 1994(62), 5–16. <https://doi.org/10.1002/ace.36719946203>
- Li, F., Chen, J. & Baker, M. (2014). University students' attitudes toward physical education. *Journal of Teaching in Physical Education*, 33, 186-212

- Luke, M. D. & Sinclair, G. D. (1991). Gender differences in adolescents' attitudes toward physical education, *Journal of Teaching in Physical Education*, 11, 3146.
- Luthans, F., Norman, S. P., Avolio, B. J., & Avey, J. B. (2008). The mediating role of psychological capital in the supportive organizational climate—employee performance relationship. *Journal of Organizational Behavior*, 29(2), 219–238. <https://doi.org/10.1002/job.507>
- Mac Kenzie, W. R., Hoxie, N. J., Proctor, M. E., Gradus, M. S., Blair, K. A, Peterson, D. E., Kazmierczak, J. J., Addiss. DG, Fox KR, Rose JB, (1994). A massive outbreak in Milwaukee of cryptosporidium infection transmitted through the public water supply. *N Engl J Med*. Jul 21;331(3):161-7.
- Mailing, L. J., Allen, J. M., Buford, T. W., Fields, C. J., & Woods, J. A. (2019). Exercise and the gut microbiome: A review of the evidence, potential mechanisms, and implications for human health. *Exercise and Sport Sciences Reviews*, 47(2), 75–85.
- Martin, R., Martin, P. Y., Smith, J. R., & Hewstone, M. (2007). Majority versus minority influence and prediction of behavioral intentions and behavior. *Journal of Experimental Social Psychology*, 43(5), 763–771.
- McKenzie, T. L. (2003). Health-related physical education: Physical, activity fitness and wellness. In Silverman, S.J. and C.D. Ennis, (Eds.), *Student learning in physical education: applying research to enhance instruction* (.pp. 207-226), Human Kinetics, Champaign,
- Micklesfield, L. K., Pedro, T. M., Kahn, K. (2014). Physical activity and sedentary behavior among adolescents in rural South Africa: levels, patterns and correlates. *BMC Public Health*, 14, 40.
- Mirsafian, H., Doczi, T., & Mohamadinejad, A. (2014). Attitude of Iranian Female University Students to Sport and Exercise. *Iranian Studies*, 47(6), 951–966.
- Mirsafian, H., Dóczi, T., & Mohamadinejad, A. (2014). Attitude of Iranian Female University Students to Sport and Exercise. *Iranian Studies*, 47(6), 951–966.
- Mok, W, Wang W, Cooper S, Ang EN, Liaw S Y. (2015). Attitudes towards vital signs monitoring in the detection of clinical deterioration: scale development and survey of ward nurses. *Int J Qual Health Care*, 27(3), 207-13.
- Möller, K., Danermark, B. (2007). Social recognition, participation, and the dynamic between the environment and personal factors of students with deafblindness. *Am Ann Deaf*. Spring, 152(1), 42-55.

- Morse, J. M. (2016). *Mixed method design*. Routledge EBooks.
- Mota, J., Suva, P., Santos, M.P., Ribeiro, J.C., Oliveira, J, & Duarte, J.A. (2005). Physical activity and school recess time: Differences between the sexes and the relationship between children's playground physical activity and habitual physical activity. *Journal of Sport Sciences*, 23, 269–275.
- Murcia, Juan & González-Cutre, David & Ruiz, Luis. (2009). Self-Determined Motivation and Physical Education Importance. *Human Movement*, 10, 5-11.
- Nettlefold, L., McKay, H.A., Warburton, D. E. R., McGuire, K. A., Bredin, S.S.D., & Naylor, P.J. (2010). The challenge of low physical activity during the school day: At recess, lunch and in physical education. *British Journal of Sports Medicine*, 45: 813–819.
- Newby, P. (2014). *Research method for education* (2nd ed.). London: Sage.
- Ngandu, T., Lehtisalo, J., Solomon, A., Levälähti, E., Ahtiluoto, S., Antikainen, R., Jula, A. (2015). Articles A 2 year multidomain intervention of diet , exercise , cognitive training , and vascular risk monitoring versus control to prevent cognitive decline in at-risk elderly people (FINGER): a randomized controlled trial, 2255–2263.
- Nxumalo, S. A., & Edwards, S. D. (2017). Attitudes of female university students towards participation in sports. Researchgate. https://www.researchgate.net/profile/SabeloNxumalo/publication/313845566_Attitudes_of_female_university_students_towards_participation_in_sports/links/58dca8baaa2725c47565670/Attitudes-of-female-university-students-towards-participation-in-sports.pdf
- Nyawornota, V. K., Aryeetey, R., Bosomprah, S. & Aikins, M. (2018). An exploratory study of physical activity and over-weight in two senior high schools in the Accra metropolis. *Ghana Medical Journal*.
- Ocansey, R., Aryeetey, R., Sofu, S., Nazzar, A., Delali, M., Pambo, P., Nyawornota, V. K., Nartey, J., & Sarkwa, R. (2016). Results From Ghana's 2016 *Report Card on Physical Activity for Children and Youth Journal of Physical Activity and Health*, 2016, 13 (Suppl 2), S165 -S168
- Oduwole, A., Ladapo, T. A., Fajolu, I. B., Ekure, E. N., & Adeniyi, O. F. (2012). Obesity and elevated blood pressure among adolescents in Lagos, Nigeria: a cross-sectional study. *BMC Public Health*, 12(1). <https://doi.org/10.1186/1471-2458-12-616>

- Omolayo, B.O. & Omole C.O. (2013). Influence of Mental Workload on Job Performance. *International Journal of Humanities and Social Science Vol. 3 No. 15; August 2013*. <https://www.researchgate.net/publication/282705900238>
- Omotowo, B. I., Ndu, A. C., Agwu-Umahi, O.R., Ezeoke, U. E., Idoko, C. A., & Umeobieri, A.K. (2017). Assessment of health risk behaviours among secondary school students in Enugu, South-East, Nigeria. *Glob J Health Sci.* 2017; 9(7): 57–66.
- Onwuegbuzie, A. J., Dickinson, W. B., Leech, N. L., & Zoran, A. G. (2009). A Qualitative framework for collecting and analyzing data in focus group research. *International Journal of Qualitative Methods*, 8(3), 1–21.
- Oyeyemi, A.L., Ishaku, C.M., Oyekola, J., Wakawa, H.D., Lawan, A., Yakubu, S., et al. (2016). Patterns and associated factors of physical activity among adolescents in Nigeria. *PloS one.* 2016; 11(2):e0150142. <https://doi.org/10.1371/journal.pone.0150142> PMID:26901382
- Paffenbarger, R. S. Jr, Hyde, R.T., Wing, A. L., et al. (1993). The association of changes in physical-activity level and other lifestyle characteristics with mortality among men. *N Engl J Med* 1993;328:538-45.
- Paluska, S. A., and Schwenk, T. L. (2000). Physical activity and mental health: current concepts. *Sports Med.* 29, 167–180.
- Pardede, P. (2018). Identifying and formulating the research problem.
- Paterson, D. H., & Warburton, D. E. (2010). Physical activity and functional limitations in older adults: a systematic review related to Canada's Physical Activity Guidelines. *Int J Behav Nutr Phys Act.*, 11, 7:38.
- Patterson, P., & Faucette, N. (1990). Attitudes toward physical activity of fourth and fifth grade boys and girls. *Res. Quar. Exerc. Sport*, 61: 415-418.
- Peltzer, K., & Pengpid, S. (2010). Fruits and vegetables consumption and associated factors among in-school adolescents in seven African countries. *International Journal of Public Health*, 55(6), 669–678.
- Peltzer, K., & Pengpid, S. (2011). Overweight and obesity and associated factors among school-aged adolescents in Ghana and Uganda. *Int J Environ Res Public Health*, 8(10), 3859-70.
- Penedo, F. J., & Dahn, J. R. (2005). Exercise and well-being: a review of mental and physical health benefits associated with physical activity. *Curr.Opin. Psychiatry* 18, 189–193.

- Petty, R. E., Wegener, D. T., & Fabrigar, L. R. (1997). Attitudes and attitude change. *Annual Review of Psychology*, 48(1), 609–647.
- Piggin, J. (2020). What is physical activity? A holistic definition for teachers, researchers and policy makers. *Frontiers in Sports and Active Living*, 2, 72.
- Plotnikoff, R. C., Brunet, S., Courneya, K.S., Spence, J. C., Birkett, N.J., Marcus, B., et.al. (2007): The efficacy of stage matched and standard public health materials for promoting physical activity in the workplace: the Physical Activity Workplace Study (PAWS). *Am J Health Promot*, 21(6), 501–509.
- Prochaska, J.J., Sallis, J.F. & Long, B. (2001). A physical activity screening measure for use with adolescents in primary care. *Arch Pediatr Adolesc Med.*, 155, 554–59.
- Pronger, B. (2002). *Body Fascism. Salvation in the Technology of Physical Fitness*. Toronto, ON: University of Toronto Press
- Ramírez, E., Fernández, E., & Blández, J. (2013). Levels of physical activity in Spanish adolescents (aged 12 to 14) measured by accelerometry. *Journal of Human Sport and Exercise*, 8(2), 401-411.
- Riddoch, C., Savage, J. M., Murphy, N., Cran, G. W., & Boreham, C. (1991). Long term health implications of fitness and physical activity patterns. *Archives of Disease in Childhood*, 66, 1426-1433.
- Ridgers, N. D., Salmon, J., Parrish, A. N., Stanley, R. M., & Okely, A. D. (2012). Physical activity during school recess: A systematic review. *American Journal of Preventive Medicine*, 43, 320 –328
- Rikard, G.L. & Banville, D. (2006). High school student attitudes about physical education. *Sport, Education and Society*, 11(4), 385-400.
- Rowland, T. W. (2007). Promoting physical activity for children's health: rationale and strategies. *Sports Med.*, 37(11), 929-36.
- Ruegsegger, G. N., & Booth, F. W. (2018). Health benefits of exercise. *Cold Spring Harb. Perspect. Med.* 8:a029694. doi: 10.1101/cshperspect.a029694
- Ryan, S. (2009). Body shape perceptions, attitudes toward physical education, and physical activity levels of middle school students. (2): 21-30
- Sadoh, W. E., Israel-Aina, Y. T., Sadoh, A. E., et al. (2017). Comparison of obesity, overweight and elevated blood pressure in children attending public and private primary schools in Benin City, Nigeria. *Niger J Clin Pract.*, 20, 839–846.

- Sallis, J. F., & Hovell, M. F. (1990). Determinants of Exercise Behavior. *Exercise and Sport Sciences Reviews*, 18(1), 307-330. <https://doi.org/10.1249/00003677-199001000-00014>
- Schüller, H., & Brandt, J. (1991). The pacemaker syndrome: Old and new causes. *Clinical Cardiology*, 14(4), 336–340. <https://doi.org/10.1002/clc.4960140410>
- Schwarzer, R. (1992). Self-efficacy in the adoption and maintenance of health behaviors: Theoretical approaches and a new model. In R. Schwarzer (Ed.), *Self-efficacy: Thought control of action* (pp. 217–243). Hemisphere Publishing Corp
- Seabra, V. F., Balk, E. M., Liangos, O., Sosa, M.A., Cendoroglo, M. & Jaber, B.L., (2008). Timing of renal replacement therapy initiation in acute renal failure: a meta-analysis. *Am J Kidney Dis.*, 52(2), 272-84.
- Seidu, A.-A., Ahinkorah, B. O., Agbaglo, E., Darteh, E.K.M., Ameyaw, E.K, Budu, E., & Iddrisu, H. (2020). Are senior high school students in Ghana meeting WHO’s recommended level of physical activity? Evidence from the 2012 Global School-based Student Health Survey Data. *PLoS ONE* 15(2), e0229012. <https://doi.org/10.1371/journal.pone.0229012>
- Semerci, A (2018). Examining High School Teachers’ Attitudes towards ICT Use in Education. <https://eric.ed.gov/?id=EJ1177301>
- Sharma, B., Chavez, R. C., & Nam, E. W. (2018). Prevalence and correlates of insufficient physical activity in school adolescents in Peru. *Revista de saude publica.*, 21, 52-58.
- Shen Y, et al. (2012) ZIP4 in homologous chromosome synapsis and crossover formation in rice meiosis. *J Cell Sci* 125(Pt 11):2581-91
- Shujaat, S. (2018). Attitude of young students towards sports and physical activities. <https://www.researchgate.net/publication/329737555>
- Sileyew, K. J. (2019). Research Design and Methodology. IntechOpen EBooks. <https://doi.org/10.5772/intechopen.85731>
- Silverman, S. & Subramaniam, P. R. (1999). Student attitude toward physical education and physical activity: a review of measurement issues and outcomes, *Journal of Teaching in Physical Education*, 19, 97-125.
- Silverman, S. A. & Subramaniam, P. R. (2010). Student attitude toward physical education and physical activity: A review of measurement issues and outcomes. *J. Teach. Phys. Educ.*, 19, 97-125.

- Sjögren, M. (2012). *Adolescents' attitudes towards physical activity on prescription for prevention and treatment of cardiovascular disease and type 2 diabetes, is there a relationship between a teen's attitude and physical activity level?* Faculty of health and occupational studies, department for work and - public health science. C- thesis in Public Health. The University of Gävle.
- Solmon, M. A. & Carter, J. A. (2007). Kindergarten and first-grade pupils' perceptions of physical education in one teacher's classes. *Element. School J.*, 95: 355-365.
- Strand, B., & Scantling, E. (1994). An analysis of secondary student preferences towards physical education. *The Physical Educator*, 51(3). <https://eric.ed.gov/?id=EJ497039>
- Subhi, L. K. A., Bose, S., & Ani, M. F. A. (2015). Prevalence of physically active and sedentary adolescents in 10 Eastern Mediterranean Countries and its Relation with Age, Sex, and Body Mass Index. *Journal of Physical Activity and Health*, 12(2), 257–265 .
- Taherdoost, Hamed, Sampling Methods in Research Methodology; How to Choose a Sampling Technique for Research (April 10, 2016). Available at SSRN: <https://ssrn.com/abstract=3205035> or <http://dx.doi.org/10.2139/ssrn.3205035>
- Tashakkori, A., & Creswell, J. W. (2008). Editorial: Mixed Methodology Across Disciplines. *Journal of Mixed Methods Research*, 2(1), 3–6.
- Taylor, C. B., Sallis, J. F., & Needle, R. (1985). The relation of physical activity and exercise to mental health. *Public Health Rep.* 100, 195–202.
- Terzian, M., & Moore, K. A. (2009). What works for summer learning programs for low-income children and youth: Preliminary Lessons from Experimental Evaluations of Social Interventions. *Child Trends Fact Sheet*. <https://www.childtrends.org/wp-content/uploads/2009/09/2009-41WWSummerLearning.pdf>
- Thomas, W. I., & Znaniecki, F. (1917). The Polish Peasant in Europe and America. Scrip.Org, 1. [https://www.scrip.org/\(Slz5mqp453edsnp55rrgjt55\)/reference/referencpapers.aspx?referenceid=1955875](https://www.scrip.org/(Slz5mqp453edsnp55rrgjt55)/reference/referencpapers.aspx?referenceid=1955875)
- Thurstone, L. L. (1928). Attitudes can be measured. *Amer. J. Sociol.*, 33, 529-554.
- Tjeerdsma, B. L., Rink, J. E. & Graham, K. C. (1996). Student perceptions, values, and beliefs prior to, during, and after badminton instruction, *Journal of Teaching in Physical Education*, 15, 464-476.

- Tomik, R., Górska, K., Staszkiwicz, A., & Polechoński, J. (2014). Motives for participation in active sport tourism – participants of holiday windsurfing camps. *Baltic Journal of Health and Physical Activity*, 6(3). <https://doi.org/10.2478/bjha-2014-0021>
- Trudeau, F. & Shephard, R. J. (2012). Contribution of school programmes to physical activity levels and attitudes in children and adults. *Sports Medicine*, 35(2), 89-105.
- Turhan, N. S. (2020). Karl Pearsons chi-square tests. *Educational Research and Reviews*. <https://doi.org/10.5897/err2019.3817>
- U.S. Department of Health Human Services (1996) Physical activity and health: a report of the Surgeon General (Atlanta, GA, Centers for Disease Control and Prevention).
- Vadiveloo, M., L. Zhu & Quatromoni, P.A. (2009). Diet and physical activity patterns of school-aged children. *Journal of the American Dietetic Association*, 109(1), 145-151. .
- Van Biljon, A., McKune, A J., DuBose, K. D., Kolanisi, U., & Semple, S. J. (2018). Physical activity levels in urban-based South African learners: a cross-sectional study of 7 348 participants. *S Afr Med J*, 108(2), 126–31.
- Van der Horst, K., Paw, M. J., Twisk, J. W, Van Mechelen. W. (2007). A brief review on correlates of physical activity and sedentariness in youth. *Medicine & Science in Sports & Exercise*, 39(11), 2012–2020.
- Van Hecke, L., Loyen, A, Verloigne, M., Vander Ploeg, H., Lakerveld, J., Brug, J., Deforche, B., (2016). Variation in population levels of physical activity in European children and adolescents according to cross-European studies: a systematic literature review within DEDIPAC. *The international journal of behavioral nutrition and physical activity*, 13, 70.
- Van Sluijs, E.M., McMinn, A.M., & Griffin, S.J. (2007). Effectiveness of interventions to promote physical activity in children and adolescents: Systematic review of controlled trials. *British Medical Journal*, 335, 703–715. <https://doi: 10.1136/bmj.39320.843947.BE>
- Veluswamy, S. K., Maiya, A. G., Nair, S., Guddattu, V, Nair, N. S., & Vidyasagar, S. (2014). Awareness of chronic disease related health benefits of physical activity among residents of a rural South Indian region: A cross-sectional study. *International Journal Behaviour Nutrition Physical Activity*, 11(1), 27.

- Vernoy, M. & Kyle, D. (2002). *Behavioral statistics in action* (2nd ed.). New York: McGraw-Hill Company, Inc. USA.
- Wang, Y., & Lim, H. (2012). The global childhood obesity epidemic and the association between socio-economic status and childhood obesity. *Int Rev Psychiatry*, 24(3), 176–88.
- Watts, P., Phillips, G., & Renton, A. (2013). Absence of direct association between variables does not always mean no evidence of association: Indirect pathways between neighbourhood characteristics and physical activity. UEL Research and Knowledge Exchange Conference 2013. University of East London, London 26 Jun 2013 London University of East London.
- West, L. W. (1972). Beliefs, attitudes, and human affairs. *Canadian Journal of Counselling and Psychotherapy*, 6(2). Retrieved from <https://cjc-rcc.ualgary.ca/article/view/60852>
- WHO Global recommendations on physical activity for health. Geneva; 2010.
- WHO World Health Statistics 2018: Monitoring health for the SDGs. (2018). WHO. Retrieved from https://www.who.int/gho/publications/world_health_statistics/2018/en/
- WHO Global action plan on physical activity 2018-2030: more active people for a healthier world. Geneva: World Health Organization, 2018.
- WHO Global Infobase. Kenya Global School-Based Student Health Survey 2003. *WHO 2003*. Available <https://apps.who.int/infobase/Indicators.aspx5-316>.
- WHO: noncommunicable diseases country profile. (2014a). Retrieved from: http://www.who.int/gho/countries/gha/country_profiles/en/
- WHO: noncommunicable diseases country profile. (2014b). Retrieved from: <http://www.who.int/nmh/countries/en/>
- WHO: physical activity. (2017). Retrieved from: World Health Organization (2014). World Health Statistics 2014. <https://www.who.int/news/item/15-05-2014-world-health-statistics-2014>
- World Health Organization. (2015). World health statistics 2015. <https://apps.who.int/iris/handle/10665/170250>
- World Health Organization. (2020). WHO. <https://www.who.int/>

Xiang, P., R. McBride & J. Guan, (2004). Children's motivation in elementary physical education: A longitudinal study. *Res. Quar. Exerc. Sport*, 75, 71-78.

Zaman, S., Khurshid, A. & Butt, F. (2018). Attitude of young students towards sports and physical activities. <https://www.researchgate.net/publication/329737555>

Zeng, Z. H., Hipscher, M. & Leung, R. W. (2011). Attitudes of high school students toward physical education and their sport activity preferences. *Journal of Social Sciences* 7(4), 529-537.



APPENDICES

APPENDIX A

LETTER OF INTRODUCTION



UNIVERSITY OF EDUCATION, WINNEBA

FACULTY OF SCIENCE EDUCATION

DEPARTMENT OF HEALTH, PHYSICAL EDUCATION, RECREATION AND SPORTS

P. O. Box 25, Winneba, Ghana

hpers@uow.edu.gh

+233 (03323) 22494

23rd August, 2021

To Whom It Concerns,

Dear Sir/Madam,

LETTER OF INTRODUCTION: MR. SIMON MAWULORM AGYEMANG

This is to introduce to you Mr. Simon Mawulorm Agyemang an MPhil student with Index Number 200025147 pursuing MPhil. Physical Education in the Department of Health, Physical Education, Recreation and Sports (HPERS) at the University of Education, Winneba.

He is researching into the topic: **Comparative Study of Attitude of Junior and Senior High Students towards Physical Activity in Abefifi.**

We would be grateful if you could accord him the necessary assistance.

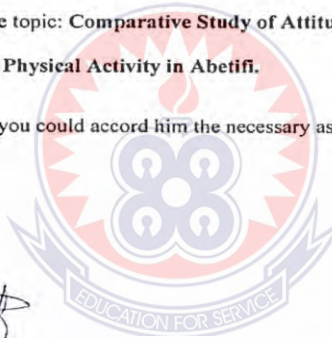
Thank you.

Yours faithfully,

A handwritten signature in black ink, appearing to read 'Munkaila Seibu'.

Mr. Munkaila Seibu

(Ag. HOD), HPERS



www.uew.edu.gh

APPENDIX B

PARTICIPATION CONSENT

Section A: Researchers' information

Researcher;

Simon, Mawulorm Agyemang (M. Phil student.

Department of Health, Physical Education, Recreation and Sports.

University of Education, Winneba

P.O Box 25, Winneba.

Ghana

E-mail simonagyemang340@gmail.com.

Cell: 0242171519.

Supervisors;

Prof. J.O. Ammah

Department of Health, Physical Education, Recreation and Sports

University of education, Winneba,

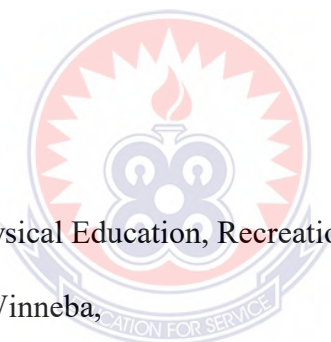
P.O. Box 25, Winneba

Dr. P.Akuffo (PhD).

Department Health, Physical Education, Recreation and Sports

University of education, Winneba

P.O. Box 25, Winneba.



Section B: Study Information/Consent

Why are they doing this Study?

There is need to establish the kind of attitude students have towards physical activity in both junior and senior high schools. Studies have shown that students in SHS and other higher educational levels hold negative attitude towards physical activity. This is a serious issue as an unprecedented increase in lifestyle diseases arising from sedentary living behaviors have been reported in the Ghanaian population. Research also shows that, youth who develop positive or negative attitude during early years are likely to continue with the same trend even in later years. With the understanding of the attitude of students towards physical activity, then, policies and programs can be put in place to ensure that students develop positive attitude towards physical activity to stay longer in life..

What will happen to me?

I have the right to take part in the study refuse to take part or withdraw from the study without any consequences

Will the study hurt me?

The study is used for research purposes only and at no point will this study hurt the participant in any way.

What if I have questions?

You can ask now or later. Ask the researcher or anyone else.

Do I have to be in the Study?

There will be no compelling reasons to force you to take part in the study. Being part of those taking part is purely voluntary.

Signature of participant/students

Age

Date

Above 22 ()

4. Gender Male () Female ()

5. Did you do any physical activity such as walking, jogging, running, cycling, playing etc, in the past seven (7) days? Yes () No ()

SECTION B

The following pages contain a set of statements that are posed to seek your understanding or about the physical activity. To what extent do you agree or disagree with the statements of attitude towards physical activity (Please, tick as appropriate).

Key: 1 = Strongly Disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree,

#	Physical Activity for Social Experience (Fun)	1	2	3	4
1	I enjoy doing physical activity alone or with friends	1	2	3	4
2	I feel more active after physical activity	1	2	3	4
3	I enjoy the physical feeling I get after strenuous physical activity	1	2	3	4
4	I persuade my friends to join me in doing physical activity	1	2	3	4
5	I enjoy doing physical activity with my parents	1	2	3	4
6	I feel more happy anytime I join my friends in jogging or play	1	2	3	4
Physical Activity for Catharsis (Benefit)					
1	Being physically active makes me feel relax and relieved from the stress of everyday life.	1	2	3	4
2	Being physically active enhances my mood	1	2	3	4
3	Taking part in physical activity makes me think fast	1	2	3	4
4	Being physically active help to give me good health	1	2	3	4
A physical Activity for Aesthetic Experience (Self Esteem)					
1	I just do physical activity to have nice look	1	2	3	4
2	My target is to go beyond what I have achieved in physical activity	1	2	3	4
3	I just do my best in physical activity to reduce in body weight	1	2	3	4
4	Being physically active help to enhance my self-esteem	1	2	3	4
5	I seek to explore my best potential in physical activity to become a model	1	2	3	4
Physical Activity for Health & Fitness					
1	It is important to spend time being physically active	1	2	3	4
2	It is important to form the habit of being physically active	1	2	3	4
3	It is important to be physically active	1	2	3	4
4	Being physically active is something I would encourage everyone to do	1	2	3	4
5	Being physically active is necessary for optimal health. Thus	1	2	3	4

APPENDIX C

INTERVIEW GUIDE

1. In the past seven (7) days have you engaged in any form of physical activity for exercise? Why?
2. In the past seven (7) days beginning Monday and ending Sunday, have you done any of the following exercises, , or physically active hobbies (Playing ball, wakling, aerobic dance, skipping, gym work , ampe, running, etc)?
3. Tell me which of the activity/activities you enaged in withing the past seven (7) days
4. How long do you normally spend doing physical exercises
Less than 1 hr? 1 hr? 2hours or mor?
5. Why do you do/donnot engage in such physical activity? Give reasons
6. Did your parents, teacher or any of your friend ever encouraged you for engaging in some form of ophysical activity?
7. Did your prents, teacher or any of your friend ever discouraged you from engaging in some form of physical activity?