

UNIVERSITY OF CAPE COAST

COMPARISON OF ACADEMIC PERFORMANCE OF ATHLETES AND  
NON-ATHLETES OF STUDENTS IN MFANTSIPIM SENIOR HIGH  
SCHOOL IN THE CENTRAL REGION OF GHANA

BY

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This thesis submitted to the department of Health Physical Education and Recreation (HPER) of Faculty of Education, University of Cape Coast, in partial fulfillment of the requirements for award of Master of Philosophy degree in Physical Education.

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## DECLARATION

### Candidate's Declaration

*I hereby declare that this thesis is the result of my own original work and that no part of it has been presented for another degree in this university or elsewhere.*

Candidate's Signature: ..... Date: .....

Name: Pennah Stephen

### Supervisor's Declaration

*We hereby declare that the preparation and the presentation of the thesis was supervised in accordance with the guidelines on supervision of dissertation laid down by the University of Cape Coast.*

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## ABSTRACT

The causal comparative design was used to compare the performance of athletes to non-athletes in Mfantsipim Senior High School. The stratified sampling technique was used in selecting 50 continuing students who responded to items on the questionnaire where as the lottery sampling method was employed in selecting 100 past students whose results at the West African Certificate Examination were used in the analysis.

The instrument had reliability co-efficient of 0.72. Data gathered were converted into frequencies, percentages, means and standard deviations. The independent t-test was also calculated on the mean scores of the students. The findings revealed that students have good reasons for playing sports and do not see playing sports to be affecting their academic performance. However, students who play sports for the school were sometimes disadvantaged because they at times get too tired or miss class playing sports for the school. There was statistically significant difference in the mean scores of athletes as compared to non-athletes in Social Studies and English but no statistically significant difference existed in the mean scores of athletes and non-athletes in Mathematics and Integrated Science.

It was recommended that school authorities and parents should encourage students to actively take part in sporting activities and also train students to manage and balance their time for sports and academic activities.

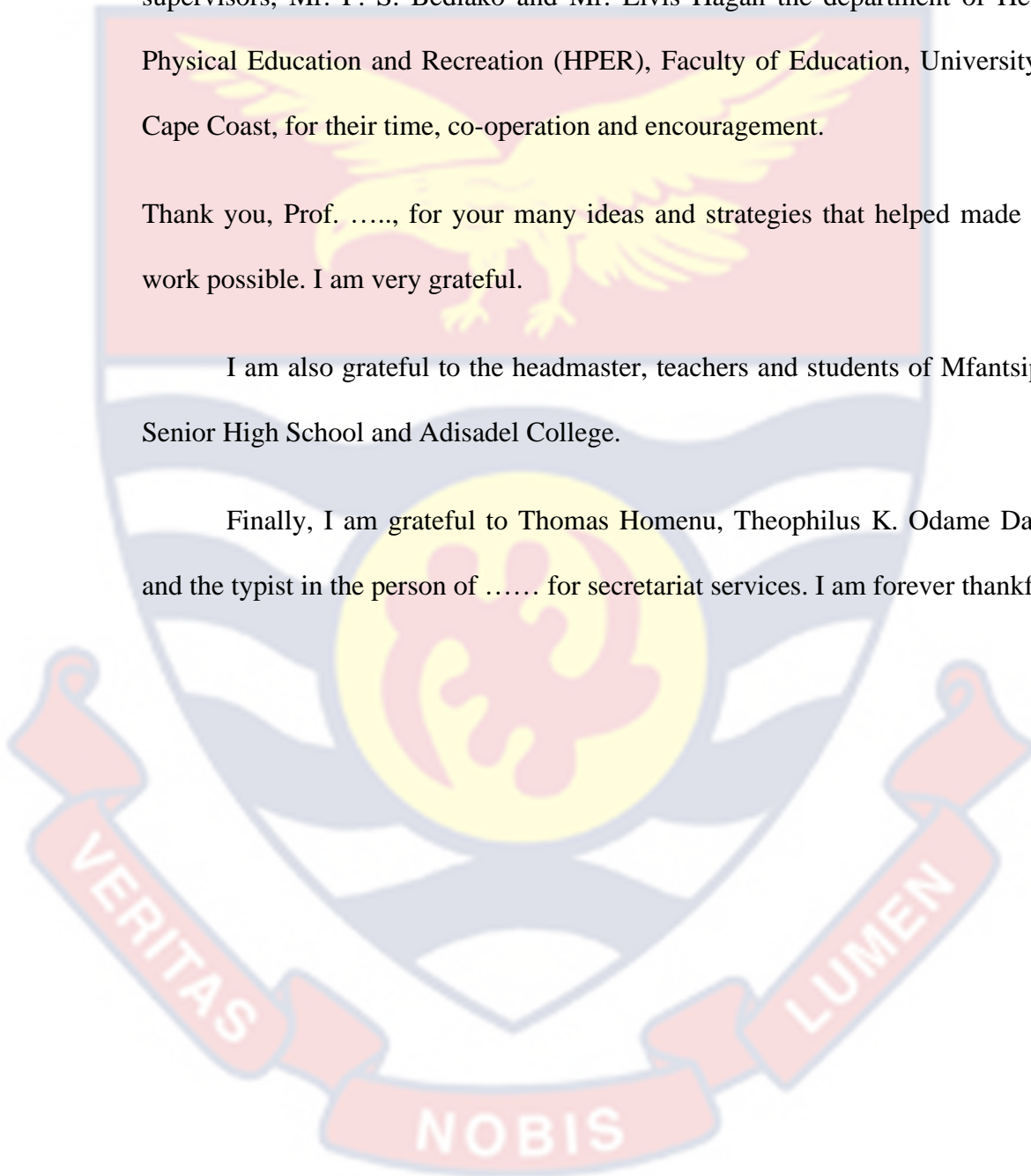
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## DEDICATION

To my mother Elizabeth Arizie, my late Uncle, Mr. John Kwesi Arizie,  
my wife Veronica Adu-Nti, and all my siblings.



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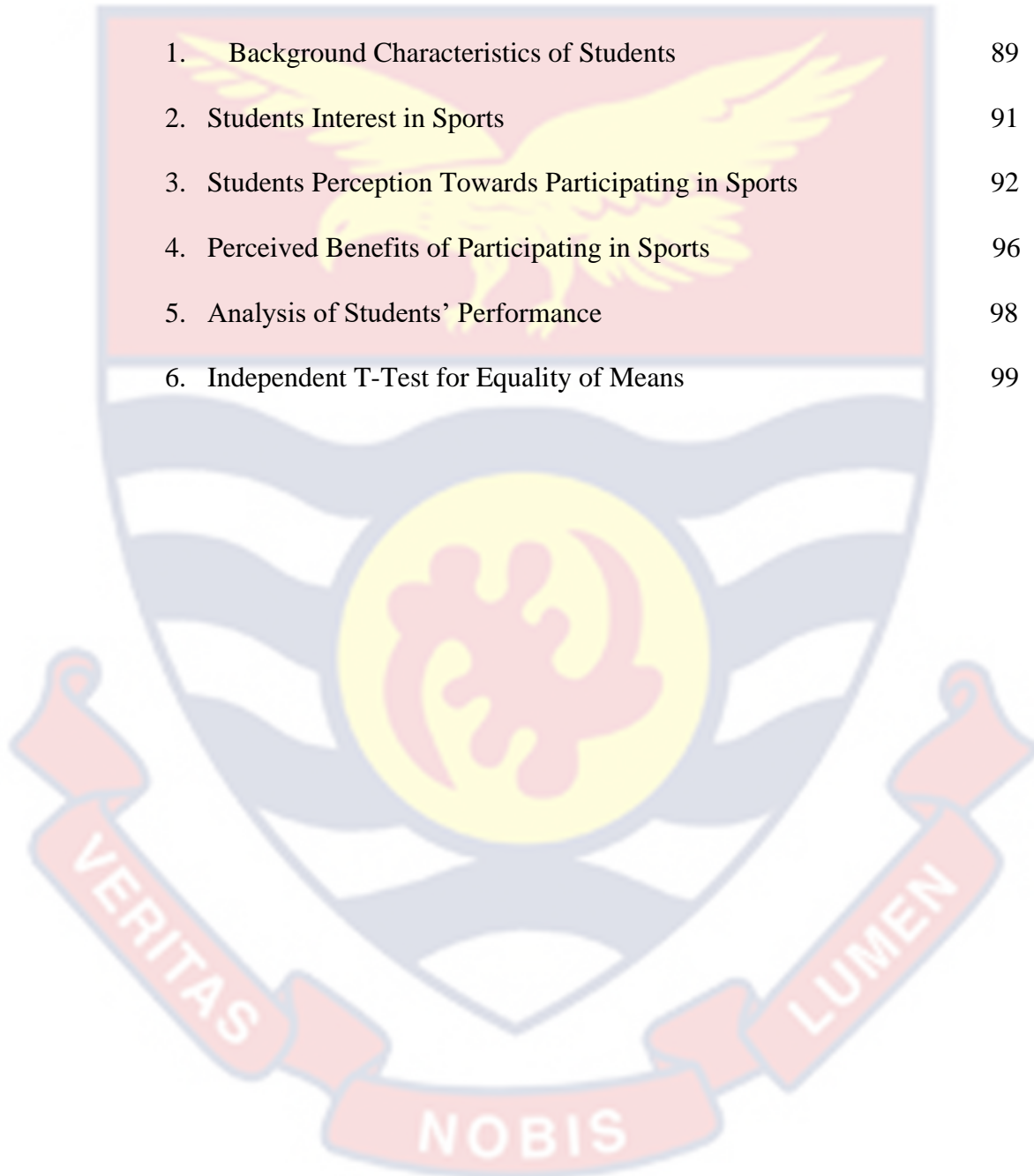
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## CHAPTER ONE

### INTRODUCTION

#### Background to the Study

Sports and games are integral part of the Physical Education programme. According to Webster's Sports Dictionary (2002), sport is defined as an institutionalized competitive activity that involves vigorous physical exertion or the use of relatively complex physical skills by an individual whose participation is motivated by a combination of intrinsic and extrinsic factors.

Sporting activities form part of the curriculum of the Senior High School programmes. Games such as; volleyball, table tennis, basketball, and track and field athletics events are participated in throughout the academic calendar. Basically, however, sport is categorized into individual events, dual events, team sports, amateur sports, professional sports, national, international and Olympic games(Wuest & Bucher, 1995).

Participation in sports depends on a person's sport interest be it primary or secondary. Participation in sports can either be voluntary or underlying active participation which is physical fitness. It has been established that the benefits to those who play sports include the development of physical fitness (Marsh, 1988). When a student develops general fitness, it culminates in that student a way that leads to establishing lifelong habits for good health. It also relieves student from stress by allowing them to clear their minds of academic and social pressures to literally run of the tension that is accumulated in their muscle (Hartmann, 2003).

Those who participate in athletics and games also get some benefits such as mastery of the skills, attitude control, leadership opportunities, and affirmation of identity, time management, long-term thinking, good human relations and building of teamwork (Jordan, 2000).

According to Leibe and Howard (2001), training not only improves overall physical conditioning but also develops physique, rehabilitate certain muscle groups that are passive and inactive due to diseases or injuries and contribute beneficially to performance in many sports. Sports participants also benefit from the acquisition of physical skill, basic movement skill and eventually the development of more advanced skills for specialized games (Leibe & Howard, 2001). Leibe and Howard (2001), further explained that participation in sports promotes psychomotor learning and helps athletes to gain good marketable skills. Most celebrities these days are athletes, For example, Tiger Woods in golf, Wayne Rooney and Cristiano Ronaldo in football, Serena Williams in tennis and Usain Bolt in athletics. They are among the highest paid professionals throughout the world. Professional sport has also increased since the 1990s and this has led to the expansion of the range of sports which has resulted in the addition of many professional tennis, hockey, football, basketball and baseball teams due to salaries of professional athletes which have increased dramatically, multimillion dollar contracts have become increasingly common (Wuest & Bucher, 1995). And some take home as much as \$100,000 a week to play a sport, be it baseball, football, hockey and basketball and when insurance and other endorsement are added, a sports person takes home not less than \$250,000 a week.

Bucher, (2000) asserted that throughout the world, sports capture newspapers headlines and television screens, produce billions of dollars every year and have social, political, legal and educational overtones. Indeed sports have become one of the social systems that bring the world together.

The importance of participation in sports in general and specifically in our senior high schools cannot be over-emphasized. Sports are a pleasing combination of physical education and modern concept of recreation. According to Bucher (2000), law of exercise is in respect to the development of skills in physical education and this means that practice makes for better coordination, more skill and better performance. As a result of practice, the path between stimulus and response become more pronounced and permanent. The knowledge of skills learned during physical activities or exercises are utilized in sports to provide opportunities for studies that are naturally gifted to develop high standards of performance (Schroeder, 2000).

According to Wuest and Bucher (2000), sports programmes may offer opportunities for making personal and group adjustment as a member of the society if proper leadership is provided. The rules of the game are the rules of the democratic way of life. In games one sees democracy in action and appreciates an individual on the basis of his ability and performance. In relation to this, sports also provide opportunities for students to learn how to develop traits of good sportsmanship, citizenship and leadership essential to a democratic living.

Considering the time made available throughout the academic calendar for various sporting programmes and competitions, provision is made for sport

programmes in school curriculum and that leads to the organization of intramural and extramural activities, that is, inter-houses, inter-school sport progression and further progression to national level (Jordan, 2000). All headmasters and teachers, parents as well as the students are bound to co-operate for the smooth running of the above stated sport programmes. Unfortunately there have been diverse opinions from the public, parents, family members, friends and even participation of their wards in sporting activities at the expense of their academic work (Jordan, 2000).

According to Coleman (1991), participation in athletics interferes with scholastic performance. When he refers to the relative "flow of energy" into sports and academic, he implies that sports "recruit" many boys who might have become students and that once "recruited" they are induced by the love of popularity, publicity, and prestige to give as much of their time and energy as possible to sports events at the expense of scholastic endeavor.

Coleman (2001) further observed that some athletes were able to combine their sports training and active participation in sports competition with their academic work and still attain higher educational standards. This may include Dr. Andrew Owusu (athletics) and Prof. Francis Doodu (athletics). Many however, could not pursue educational career by virtue of their involvement in sports. There is a school of thought that sportsmen are generally poor so far as academic work is concerned., like the work of Shulman and Bowen (2001) and Bowen and Levine (2003), reported that student-athletes competing in Division

III athletics at Ivy League institutions perform at lower levels academically than non-athletes.

According to Sage (2002), a study was conducted for two groups of former high school students. One group consisted of members of the school's athletes whereas the other group consisted of non-athletes. Sage observed that non-athletes who had high grade point average (GPA) were less likely to join a fraternity and were more occupationally oriented. His data suggested that athletes in the school may be less academically oriented than non-athletes.

Another school of thought is that due to physical exercise, athletes become physically fit and mentally sound and as such, they are able to perform well academically (Leonder, 1999; Spady, 2000). They studied and examined systematically the relative influence of athletics and service activity participation on educational aspirations, and attainment of high school students. It revealed that male athletes in athletics and service ranked highest on educational achievement followed by service activity only, and Spady (2000), also concluded that, the extensive involvement contribute to the ability to perform many roles simultaneously, many increase the likelihood of higher aspirations and in future success in education.

### **Statement of the Problem**

Research indicates that participation in physical activities affects students' academic performance (Bowen, & Levin, 2003). The impact that athletics have on academic performance have been debated over the years. Some have argued that the impact that athletics have on academic performance is positive, because

participation relates positively to growth in interpersonal skills, peer relationships and leadership abilities at students' personal and social well-being and to students' commitment to their academic institutions (Astin, 1993; Ryan, 1995; Cantor & Prentice, 1996). Athletic programmes can provide opportunities for building communal bonds among students, faculty and alumni despite differences in race/ethnicity, social class and geographic background (Wolf-Wendel, Toma & Morpew, 2001).

On the other hand, according to some researchers, the time demands of athletic programmes force student-athletes to sacrifice attention to academics (Meyer, 1990; Parham, 1993). Some of the most scathing and influential critiques of college athletics are by Schulman and Bowen (2001) and Bowen and Levin (2003). Their research suggested that student-athletes routinely receive preferential treatment in the admissions process and are more likely to be academically under-prepared than their peers. As a result, student-athletes earn lower grades in college. Additionally, they argued that institutions allow athletes to create their own subculture and that it flourishes, isolated and insulated from the larger campus culture. Early analysis of the effect of participation in sports on academic achievement produced inconsistent evidence (Jordan, 2000)

According to Richards and Aries (1999), athletes struggle with the time demands of completing requirements for school and academic performance with those of their chosen endeavor. Specifically, the authors found that the pressure to perform on the field caused student athletes to perform below their abilities in the classroom. Spinks and McClure (2007) performed a study looking at the number

of sports each student played and its effect on academic performance. They noticed that students who participate in at least one sport each year out performed those who participated in one or less, in class rank, overall GPA, and mathematics GPA. They also noticed that students who participated in physical activity not only improved academic performance, but has an actual physical benefit for the mind. Shepard (1997) said that Regular physical activity might influence cognitive development by increasing cerebral blood flow, altering arousal and associate neurohormonal balance, changing nutritional status, or promoting the growth of interneuronal connections. A study by the U.S. Department of Education revealed that students who participate in physical activities are three times more likely to have a grade point average of 3.0 or better than students who do not participate in any physical activities (Spinks & McClure, 2007).

Considering the above statements made by the various authors concerning sports programmes and competitions, people begin to wonder how students are able to effectively cope with their academic work and effectively prepare for their examination because there have been diverse opinions from the public, parents, family members, friends on participation of their wards in sporting activities at the expense of their academic work. Based on the above different views it has become imperative to conduct a study to compare athletes and non-athletes on academic performance in Mfantshipir senior high schools in the Central Region of Ghana.



### **Purpose of the Study**

There are two schools of thought in relation to students' involvement in sporting activities and its effect on their academic performance. One school of thought says that, sports participation affects academic achievement negatively while the other says that sports participation greatly stimulates the body and mind-. The purpose of the study therefore is to compare academic performance of student-athletes and non-athletes of Mfantshipim Senior High School in the Central Region of Ghana.

### **Research Questions**

1. What is the perception of students of Mfantshipim Senior High School towards participation in sports?
2. What are the perceived benefits Mfantshipim Senior High School students derive from sports participation?
3. What is the difference in the academic performance of students who engage in sports and non-sports students?

### **Significance of the Study**

The findings of the study will provide useful information for social and educational development of the study area (Central Region). Sports is undeniably an integral part of social and educational life of the people of Ghana. Therefore knowing its effect on the development of the youth will enhance its development in the region and Ghana at large.

The research findings gave useful information to those who are still skeptical of the necessity of students' participation in sporting competitions in the

schools. Such persons would be guided with more information upon which to draw their own conclusions instead of merely speculating.

Teachers as well as heads of schools and other educational administrators will also use the findings to help them prepare the sports calendar or make some extra provision for athletes with regards to academic work. Students using the findings of the study will be able to make realistic decisions with regards to participation in sports. Furthermore, the findings of the study will be of great importance to the parents since it will enable them regulate their children's time between studies and sporting activities.

The findings of this study would be beneficial to the athletes because it is a known fact that physical exercise, sports and games undertaken on regular basis make important and significant contribution towards prevention of certain diseases and thus promote health.

Organizations, groups and individuals who sponsor sports would find the results of this research very useful as it would help them to place some value on sports participation in order to develop sports in the country in general. Knowledge from this work could also increase existing knowledge -in the realm of physical education.

#### **Delimitations of the Study**

The study was delimited to Mfantshipir Senior High School in the Central Region of Ghana. The study was also delimited to fifty athletes who have participated fully in schools sports for at least two consecutive years and fifty non-athletes in year group of 2011 and 2012. The study was also delimited to 25

athletes and 25 non-athletes who were pursuing various programmes on Mfantispim campus. Results and aggregates of the subjects calculated from the following core subjects: Core mathematics, Core English, Integrated science, and Social studies. To students who were pursuing their programmes on campus, the study was delimited to their concepts of sports participation.

### **Limitations of the Study**

The study considered only the views of students of Mfantispim Senior High School. This means the views of teachers, school authorities or parents could have given a different dimension of the study. Also the results of past students at the West Africa Secondary School Certificate Examination for 2011 and 2012 was used as proxy in determining the performance of both athletes and non-athletes students. This means the examination results used in the analysis were not the results of the respondents. However, this did not affect the findings of the study because all the students were assumed to have same or similar characteristics.

### **Definition of Terms**

- 1. Senior High School (SHS) (Second Cycle):** These are the second cycle schools under the Ghana Education Service and Ministry of Education, which consists of SHS 1, 2, 3 and 4 respectively. It is a four-year course second cycle school for 16-19 year olds.
- 2. West African Senior Secondary School Certificate Examination (WASSCE):** This is an examination held at the end of the four-year

course leading to the award of a certificate by West African Examination Council (WAEC).

3. **Athlete:** Person who is trained or skilled in exercises, sports, or games requiring physical strength, agility, or stamina
4. **Non-Athletes:** They are those who do not take part in any sporting event or team game.
5. **Sports:** A physical activity in the form of structured games or play taken for the purpose of recreation or amusement in leisure time and continuing an element of competition or challenge against self-opponent or the elements.
6. **Grade Point Average (GPA):** The average obtained by dividing the number of grade points earned by the total number of credits attempted-called also quality point average (Webster's Online Dictionary, 1966). Research purported the grade point average was a stronger predictor of future academic success than ACT scores.
7. Promoting Achievement in School through Sports (PASS)

#### **Organization of the Rest of the Study**

The first chapter consists of the background to the study, statement of the problem, purpose of the study and significance of the study. Research questions, delimitations and limitations are included in the same chapter. Chapter two was devoted to the review of relevant literature which was organized under the following sub headings: Students and the Need for Sports Participation, The Nature and Degree of Sports Participation, Aims and Importance of Sports

Participation in Schools, Education and Sports Participation, Sports Participation and Academic Performance. Chapter three deals at the methodology, hence, the research design, population, sample and sampling procedures, instrument, data collection procedure and the procedure for analyzing the data were considered in this chapter.

Finally, chapters four and five deal with analysis and the discussion of the data as well as summary of the findings, conclusions and recommendations



## CHAPTER TWO

### REVIEW OF RELATED LITERATURE

The purpose of this study was to compare academic performance of student athletes and non-athletes in Mfantshipim Senior High School in Cape Coast. This chapter dealt with review of related literature under the following sub headings:

1. Concept of Sport Participation.
2. The need, aims, and importance of sports Participation in Schools.
  - a. Physical Health
  - b. Mental Health
  - c. Educational and Intellectual Development
  - d. Sports Participation
3. Education, Sports Participation and Academic Performance.
4. Summary of the Reviewed Literature.

#### **Concept of Sports Participation**

Participation in organized sports can have physical and social benefits for children (Malina, 1994). He further said, the younger the participant, the greater the concern about safety and benefits. If organized sports are going to be safe, healthy and beneficial for children and preadolescents, there must be reasonable goals for participation and appropriate strategies to attain these goals. Reasonable goals for children and preadolescents participating in organized sports include acquisition of basic motor skills, increasing physical activity levels, learning

social skills necessary to work as a team, learning good sportsmanship, and having fun (Rowland, 1990).

The involvement of preadolescents in organized sports is a relatively recent phenomenon. In the early 20<sup>th</sup> century, physical activity was a more regular part of life for the average child (Kamm, 1998). Sports and games provide an additional outlet for physical activity and were characterized by play that was generally spontaneous, unstructured and without adult involvement. Participation in such sports and games allowed for development of motor skills, social interaction, creativity and enjoyment for participation (Stryer, Toffler, & Lapchik, 1998).

Playing sports offers children more than just physical benefits. Sports typically help kids academically and socially as well. The benefits are the same whether or not the child actually excels at the sport. Although if they are really good they will probably want to continue playing when they are older. If the child isn't good enough to play competitively on a school team try signing them up for a city league or encourage them to just go shoot some hoops with their friends or church group. Batty (2008) suggested ten ways playing sports can benefit the child as:

1. Playing sports is fun. It gives the child something to do and a group to belong to. They have a group of friends that has the same goals and interests.

2. Research has found that kids that play sports, especially girls, are more likely to have a positive body image and higher self-esteem. They also are less likely to be overweight.

3. Kids involved in sports are less likely to take drugs or smoke because they realize the impact that these destructive activities can have upon their performance. Girls who play sports are also less likely to become pregnant.

4. Physical activities are a good way to relieve stress and reduce depression.

5. Sports help kids develop discipline. They learn to set goals and then work to achieve those goals. They learn that by working hard they can accomplish the things that they want to in their lives.

6. Kids who play sports quickly learn that sometimes you win and sometimes you lose. They learn to be a good sport in both situations. It also helps them learn to deal with disappointment and go on.

7. Statistics show that kids who are involved in sports while in high school are more likely to experience academic success and graduate from high school.

8. Sports help develop teamwork and leadership skills. Kids quickly learn that they have to work together as a team to win the game.

9. Motor skills, strategic thinking, and even math skills are learned by playing sports. Students develop strategic thinking as they figure out plays



and the best way to get around a player or score a goal. Math skills are used as they calculate scores and stats.

10. Regular exercise increases quality of life. Children who exercise are more likely to continue the practice into adulthood.

Whatever way you look at it sports benefits your child.

According to Bucher (2000), sport is an institutional competitive activity that involves vigorous physical exertion or the use of relatively complex physical skills by individuals whose participation is motivated by a combination of intrinsic and extrinsic factors. Wuest and Bucher (1995) also defined sport as organized, competitive physical activities governed by rules. Rules standardize the competition and condition so that individuals can compete fairly. Sports provide momentous opportunities to demonstrate one's competence and to challenge one's limits. Competition can occur against an opponent or oneself.

Sports can also be viewed as games that emphasize physical involvement and where strategy and skill play a significant role in the determination of the outcome. People engage in sports for enjoyment, personal satisfaction, and the opportunity to attain victory or obtain rewards. When sport is highly developed, governing bodies regulate sports and oversee its management. Also, playing sports and participating in physical recreation offers important opportunities to enhance health and well being, as well as promoting well-documented health benefits (such as reduced risk of cardiovascular diseases).

In the UK, Physical Education (P.E.) is compulsory in state schools until the age of 16 – that is, that sports are compulsory for as long as education is

compulsory. Every year, more and more parents complain to their children's schools about PE; they believe that their children shouldn't have to participate in physical activity if they don't want to and that it is not a conducive educational activity or environment. Proponents of P.E. however, believe that it is a crucial element of all-round schooling and our society's well-being, particularly with the contemporary rise in levels of obesity in the developed world and the proliferation of high-fat, sugary food and drink. They insist PE in schools remains one of the few places whereby the youth can be forced to participate in aerobic exercise (Marshall, & Hardman, 2000).

Sports promote a healthier lifestyle, and participation in sport promotes health. The effect on self-esteem and well-being as a product of sport can only be experienced by certain children if forced by their schools to first participate. A recent report to the European Parliament declared 'physical education is a springboard for involvement in sport and physical activities throughout life (Active Living Research, 2007). Government is, or should be, concerned with the health of its citizens. Encouraging physical activity in the young through compulsory PE fights child obesity and contributes to forming lifelong habits of exercise. This doesn't have to be through traditional team sports; increasingly schools are able to offer exercise in the form of swimming, gymnastics, dance, weight training, use of a multi-gym, aerobics and the like (Hardman, 2007).

Physical education helps to forge skills that will prove invaluable in later life. Physical education helps to forge character and the mutual respect required to succeed in an adult environment. Playing team sports builds character and

encourages students to work with others, as they would be expected to do in most business or sporting environments (BBC News, 2001). Sport teaches children how to win and lose with good grace and builds a strong school spirit through competition with other institutions. It is invaluable to imbue with children the delicate balance between a competitive rivalry that encourages effort and, on the other hand, losing the fairness and respect required to enjoy sport. It is often the experience of playing on a team together which builds the strongest friendships at school, which endure for years afterwards. As was noted in a report to the European Parliament, P.E. helps children learn to respect and value their own bodies and abilities, and those of others (Hardman, 2007). Compulsory physical education is the only means by which all children can be forced to appreciate such advantages.

Compulsory physical education will improve national sporting achievement. The quest for national sporting achievement begins in schools. If schools don't have compulsory P.E., it is much harder to pick out, develop and equip athletes to represent the country on a wider stage (Hardman, 2007). Even with a 'sports academy' model run along Australian lines, it's much easier to find suitable individuals with a full sports program in every school. In the UK seventy per cent of state-school students are dropping P.E. when it becomes optional; it is no surprise that up to 30% of its Olympic athletes are now privately-educated, where physical education is compulsory until the end of one's education (Active Living Research, 2007). State education is not just about aiding the individual it's

also about the state getting a good return on its investment in a well - educated populace to drive business and entrepreneurialism . This applies equally in sports.

Sports teams require the support of schools and the encouragement of physical education. Without school support, sports will collapse. If compulsory physical education classes aren't in place, then team activities will end by sheer lack of numbers, no matter if several very talented individuals are at the school (or even potentially talented – they'll never know without the program). New surveys in the United Kingdom have found that they expect to see a fall in sporting events provided in schools due to cost-cutting, despite the upcoming Olympics inspiring students to want to compete (The Labour Party, 2011). 'If voluntary take-up of sport in schools is too low, then schools will shut down PE programmes so that there is no choice at all. Not everyone is academic: why deprive those talented sports students of their one chance to shine?' (The Labour Party, 2011, p.34). Athletes who lack academic prowess are required to stick at classes like Mathematics even if it appears obvious their career path is in sport; why should mathematicians escape from their respective obligation to compete in sports?

Laing (2010) was of the view that with the seriousness of the UK government, schools can punish students who do not participate in the classes with further PE lessons. Compulsory PE lessons can be treated in the same manner an ordinary educational class is treated; if the student refuses to participate and therefore does not do their work, they are punished with extra work of that same class. In this case, that would necessitate added physical

education exercises at a later date or immediately after the class. The excuse that the student does not wish to participate in the class should be seen as no different to if it were stated during a Mathematics or English class, where it would not be accepted. The fact that physical education is qualitatively different to those classes is irrespective; once deemed a compulsory subject, and therefore beneficial, it must be accepted and completed.

Deprès, Bouchard and Malina (1990), said that participation in sports can offer a social and political space in which to cultivate cultural diversity and promotes social inclusion. Sport is also a form of competitive physical activity which, through casual or organized participation, aims to maintain or improve physical fitness and provide entertainment to participants. For children and preadolescents, factors such as fun, success, variety, freedom, family participation, peer support, and enthusiastic leadership encourage and maintain participation, whereas others such as failure, embarrassment, competition, boredom, regimentation, and injuries discourage subsequent participant (Rowland, 1990).

### **The Need, Aims and Importance of Sports Participation in Schools**

Sports provide numerous opportunities for children and teenagers to grow socially, emotionally, and physically (Steinberger, 1995). Furthermore, they also allow youth to learn and practice in a competitive environment. While sports may increase children's positive social interaction with adults and one another, they can also create stressful environments for children. For example, adults may place unrealistic pressure on their children to perform. Parents and children must find a

balance with regard to how many extracurricular activities in which children participate. Team sports participation can be an amazing tool that helps children grow and succeed in their everyday lives and in the future.

Sports appear to be good for children. Ask any parent or teacher of a high school athlete and you are likely to hear an enthusiastic listing of the benefits of sports. Simple correlations indicate that children who participate in sports have better outcomes than those who do not. Data from the 1997 National Youth Risk Behavior Survey indicates that adolescents who play a sport are less likely to drink, smoke, use drug, have sex, or have suicidal thoughts (Armentrout, 1979).

A recent medical study analyzing these data concluded the positive relationships between sports participation and health behaviours, suggest that physicians should actively encourage young people to join sports teams (Astin, 1982). Two types of motivation, intrinsic and extrinsic, have been of particular interest to researcher in the field of sport participation. (Ryan, 2008). Intrinsic motivation entails participating in an activity for the feelings of fun, pleasure, excitement, and satisfaction associated with it. While extrinsic motivation involves participation for the attainment of such rewards as money, trophies, and social approval or to avoid punishment.

According to Howard and Rosemary (2002), sport is concerned with the optimum performance that is getting the best of your body and mind. They further expressed the view that with normal development and average liking for physical movement, anyone can enjoy most sports up to a certain level. Similarly, Wuest and Bucher (2000) indicated that sport is an institutional competitive activity that

involves vigorous physical exertion or the use of relatively complex physical skills by individuals whose participation is motivated by a combination of intrinsic and extrinsic factors.

Sports participation has been an important issue which the general public love to talk about especially among students. According to Kenyan (1999), the nature and degree of participation in sports is directly related to the degree of primary (active) and secondary (spectator) activity during the individual's youthful age.

Robert (2000), classified sports into three spheres on the bases of outcome attributes; Sports of physical skills, Strategy and change. He further went to state that participation in sports can be very broad, would be greater or lesser depending on the bases of sex, age, social and other cultural factors.

Participation in sports may also be based on the level of interest in sports, be it primary or secondary. Basically, a person's relation to sports at a certain point in time is dependent upon a complex interplay between heredity and environmental factors, which include nature, mental and physical disposition, type of activity chosen and experience of success or failure on the skills.

Oduyale (1998) Said that throughout time, sports have been playing a very significant role in the education, socialization and welfare of man and the society. He cleared this view by quoting Rousseau, a French educator who had this to say, "If you would cultivate the intelligence of your pupils, you cultivate the power to govern and give his body continuous exercise". In relation to this, Sir Gordon Guggisberg in 1920 emphasised in his educational policies the need for sports.

His ninth principle for assistance stated that, organized sports should form part of school life (Mac Williams & Kwamena-Poh, 2000). Sir Gordon Guggisberg went on to say that no extension of schools would be sanctioned unless provision is made for playing fields.

Participating in competitive team sports at an early age gives children an opportunity to understand the healthy aspects of competition in a friendly environment. Students of all ages who participate in sports have been found to cope better with competition in other areas of their life (Yan & McCullagh, 2004). Participation in sports also helps a child's physical well-being. Children who are actively involved in a sport are more likely to describe themselves as being in good physical health than students who do not participate in sports (Piko & Keresztes, 2006). There is a limited research on the risk of injury for young children participating in team sport (Spinks & McClure, 2007). Also, athletically active youth who are more likely to be nutrition-conscious in their food and choices than children who are not actively involved in a sport (Pyle, McQuivery, Brassington, & Steiner, 2003).

Various governments have noted the importance sports play in the socio-political life of the country and have therefore shown interest in helping develop students; interests in sports as well as developing sports (Micklewright, 2002). While the physical health benefits that sports provide the youth are undoubtedly important, the social benefits may be what draw children to sports. Combating social exclusion, or 'the multiple and changing factors resulting in people being excluded from the normal exchanges, practices and rights of modern society



(Commission of the European Communities, 1993). Some writers have urged that sports not only reflect but can also contribute to girls' social exclusion in sports and wider society. Certainly, the dominance of sports as culturally valued physical activities, and the close identification of sports with masculinity, means that other, non-masculine groups can become pushed to the margins.

However, positive sports experiences do seem to have the potential to, at least, contribute to the process of inclusion by: bringing individuals from a variety of social and economic background together in a shared interest in activities that are inherently valuable; offering a sense of belonging, to a team, a club or a programme; providing opportunities for the development of valued capabilities and competencies; and increasing 'community capital', by developing social networks, community cohesion and civic pride (Micklewright, 2002).

Being able to spend time with their friends outside of school is more important to children than knowing they are physically active. Life skill gains through social interaction can be tremendous (Harrison & Naraya, 2003). Social interaction in team sports teaches youth to: associate with their peers, solve conflict and communicate effectively with their peers, emotional growth is also important for youth. Sometimes, the emotional development of youth is hindered because of the physical and/or emotional absence of parents. According to the World Health Organization [WHO] (2004), children take inspiration from role models as a way to help them bring out their aims and importance of participation in sports in their various schools with some using the names of their role models. In early childhood, primary role models are parents, with friends and

teachers becoming more significant as they enter school, and sports players, coaches and celebrities gaining in influence in adolescence (Sabo, Miller, Farrell, Barnes, & Melnick, 1998).

Sports provide youth with opportunities to interact with a caring and supportive adult (Harrison & Naraya, 2003). Adult support outside the family is a major protective factor for high-risk youth. The interaction a child has with his or her coach helps to improve self-esteem as well as lower the chance of depression (Harrison & Naraya, 2003).

Sports team membership can also help increase a child's self-worth, especially when the emphasis is on group or team success, rather than individual achievement. Youth of all ages, including those in high school, are likely to receive an end-of-the-season trophy for participating in the team sport. Receiving a trophy with their teammates is intended to help youth feel a sense of accomplishment, teamwork, and recognition (Harrison & Naraya, 2003).

Evidence suggests that from an early age, differences in gender-based attitudes towards and opportunities for sports and physical activities can have a significant influence on children's participation. This may, in turn, affect later involvement in physically active lifestyles, and the social and health benefits that may result for them (Collins & Kay, 2003).

Physical activity prolongs your optimal health. Without regular physical activity, the body slowly loses its strength, stamina and ability to function well. And for each hour of regular exercise you get, you'll gain about two hours of additional life expectancy, even if you don't start until middle age. Moderate

exercise, such as brisk walking, for as little as 30 minutes a day has the proven health benefits listed above as well as:

1. Improves blood circulation, which reduces the risk of heart disease
2. Keeps weight under control
3. Helps in the battle to quit smoking
4. Improves blood cholesterol levels
5. Prevents and manages high blood pressure
6. Prevents bone loss
7. Boosts energy level
8. Helps manage stress
9. Releases tension
10. Promotes enthusiasm and optimism
11. Counters anxiety and depression
12. Helps you fall asleep faster and sleep more soundly
13. Improves self-image
14. Increases muscle strength, increasing the ability to do other physical activities
15. Provides a way to share an activity with family and friends
16. Reduces coronary heart disease in women by 30-40 percent
17. Reduces risk of stroke by 20 percent in moderately active people and by 27 percent in highly active ones

18. Establishes good heart-healthy habits in children and counters the conditions (obesity, high blood pressure, poor cholesterol levels, poor lifestyle habits, etc.) that lead to heart attack and stroke later in life

19. Helps delay or prevent chronic illnesses and diseases associated with aging and maintains quality of life and independence longer for seniors (Smith, Segal, & Segal, 2013).

People who are emotionally healthy are in control of their emotions and their behaviour. They are able to handle life's challenges, build strong relationships, and recover from setbacks. But just as it requires effort to build or maintain physical health, so it is with mental and emotional health. Improving your emotional health can be a rewarding experience, benefiting all aspects of your life, including boosting your mood, building resilience, and adding to your overall enjoyment of life.

Smith, Segal, & Segal (2013) were of the view that emotions can be effected by brain chemistry, and exercise has a direct effect on brain chemistry. It stands to reason, then, that exercise (or the lack thereof) can alter emotions. All activity, from short bursts of intense exercise to moderate aerobic workouts can raise levels of "feel good" endorphins, as well as adrenaline, serotonin, and dopamine. These chemicals can elevate mood and offer kids who exercise a mental boost. Additionally, even moderate exercise can improve sleep quality, making kids feel more well-rested, energetic, and alert. Anxiety is becoming more commonplace amongst people of all ages, including kids and teens, but exercise is known to help relieve tension and lower anxiety levels or at least make anxious feelings

more manageable. Certain types of workouts such as yoga and Pilates are especially useful for promoting relaxation and alleviating stress.

In addition to offering relief from unpleasant emotions, regular exercise can help kids and teens to improve their self-image and boost confidence. Many kids today are plagued by body image issues, constantly comparing themselves to peers and even celebrities. Of course, when growing kids, who do not yet have the maturity to understand that the images they see on television, in movies, and on the covers of glossy magazines are not realistic or even honest portrayals of actual people, they often feel inadequate, nonetheless. Kids who participate in sports or other forms of exercise have the opportunity to develop strong, healthy bodies, making them less inclined to worry excessively about how they measure up to others (Smith, Segal, & Segal, 2013).

### **Physical Health**

The physical health benefits of regular physical activity are well-established (WHO, 1995). Regular participation in such activities is associated with a longer and better quality of life, reduced risks of a variety of diseases and many psychological and emotional benefits (Sallis & Owen, 1999). There is also a large body of literature showing that inactivity is one of the most significant causes of death, disability and reduced quality of life in the developed world (US Department of Health and Human Services, 1996).

Physical activity may influence the physical health in two ways. First, it can affect the causes of disease during childhood and youth. Evidence suggests a positive relationship between physical activity and a host of factors affecting

physical health, including diabetes, blood pressure and the ability to use fat for energy (Malina & Bouchard, 1991). Of all the health problems we suffer from, diabetes can be the most maddening. In the simplest terms, diabetes affects how your body digests food. Your body can't break down sugar, which leads to high glucose levels and potential health problems like nerve damage, kidney failure, vision problems, heart disease and depression. The top risk factor for getting type 2 diabetes is being obese, which is one reason that exercise is such a powerful tool. Exercise also helps manage blood glucose levels and enhance insulin sensitivity. In fact, one study showed that high intensity interval training may improve insulin action in sedentary adults, and another found that adding muscle helps manage glucose levels and decrease the risk of complications due to diabetes (Centre for Disease Control and Prevention, 2010).

Second, physical activity could reduce the risk of chronic diseases in later life. A number of 'adult' conditions, such as cancer, diabetes and coronary heart disease, have their origins in childhood, and can be aided, in part, by regular physical activity in the early years (Deprés, Bouchard & Malina, 1990). Also, regular activity beginning in childhood helps to improve bone health, thus preventing osteoporosis, which predominantly affects females. Girls or Ladies who take sports seriously in their early stages to the highest level also benefit as adolescent pregnancy and sexual ill-health are major social problems across the globe (Payne, Reynolds, Brown & Fleming, 2003).

Exercise improves sex life. It may sound like an infomercial promise, but exercise can indeed improve sex life. There is a long list of the benefits exercisers may experience in the bedroom, including:

1. Enhanced sexual performance and pleasure
2. Increased sex drive; more frequent sex
3. Increased sexual satisfaction
4. Fewer problems with erectile dysfunction

A healthy exercise program can also contribute to higher self-esteem and more confidence, two characteristics that draw people to you, both physically and emotionally. And don't forget, sex burns calories too. A 150-pound person can burn about 72 calories during 15 minutes of vigorous sex. Go for an hour and you'll burn up to 288 calories (Penhollow and Young, 2004).

Although there is a shortage of research in this area, early studies conducted in the US have found that adolescent girls who participate in sports tend to become sexually active later in life, have fewer partners, and, when sexually active, make greater use of contraception than non-sporting girls (Brustad, 1996). Projects are currently underway in the developing world that the use of sports participation as a strategy for empowering girls to avoid high risk sexual behaviour (Vescio, Crosswhite, & Wilde, 2003).

Obesity deserves special mention. There seems to be a general trend towards increased childhood obesity in a large number of countries (Kannus, 1999), and this increase seems to be particularly prevalent in girls from highly urbanised

areas, some ethnic minorities and the disabled (Dietz & Gortmaker, 1984). Exercise helps you lose weight and prevent obesity. Besides watching your calories, studies show that exercise is one of the most powerful tools for weight loss. The calories you burn during cardio and strength training help you lose weight, prevent future weight gain, and avoid obesity. This is critical, since being overweight or obese can put you at risk for a variety of health problems such as type 2 diabetes, heart disease, high blood pressure (Okay, Jackson, & Marcinkiewicz, 2009).

Okay, Jackson, & Marcinkiewicz (2009) were of the view that, exercise lowers high blood pressure. High blood pressure, which is considered anything over 149/90 mm Hg, can contribute to a number of health problems including coronary heart disease, stroke and congestive heart failure. Losing weight and watching your salt and alcohol intake are the best ways to lower your blood pressure, and studies have found that 3 to 5 moderate-intensity workouts a week (30 to 60 minutes each) is sufficient to reduce high blood pressure. Regular exercise may even protect you from developing high blood pressure, which can be a problem as we age.

The benefits of participation in physical activities are great, and the potential costs of inactivity can be severe. Many children around the world are not currently able to take advantage of the benefits of regular sports and physical activities due to inequitable access and opportunities (Sabo, Miller, Melnick, & Heywood, 2004). Therefore, a central challenge facing governments, schools, sports groups and communities is to develop forms of physical activity that are



sensitive to children's needs and interests. But rather than focusing on 'girl-friendly' sports (Kirk, Fitzgerald, Wang, & Biddle, 2000).

Exercise protects you from Heart Disease. Heart disease is the leading cause of death for American adults. Exercise not only protects you from heart disease, it can actually change how your heart works, making it stronger, more efficient, and better able to function as you age. What's even better is that a little exercise, regardless of whether you lose weight, can make a difference. Exercising for your heart can start with as little as 20 minutes of exercise most days of the week. Being active can also help you avoid things that strain your heart, like being overweight, having high blood pressure, or being highly stressed. Exercise can even help you recover from heart attacks and prevent or reduce the risk of future heart problems (Centre for Disease Control and Prevention, 2010).

Exercise reduces LDL Cholesterol and Raises HDL Cholesterol. There are a number of lifestyle changes you can make that can help reduce bad cholesterol (LDL) and raise good cholesterol (HDL), including eating healthy, quitting smoking and regular exercise. Being sedentary is a major risk factor for high cholesterol, but one study found that walking or jogging about 15 to 20 miles a week can lower LDL (bad cholesterol) and raise HDL (good cholesterol). Other studies have found that working at about 75% of your maximum heart rate, which is a higher intensity, is the best way to raise HDL and lower LDL. Interval training is one way to introduce high intensity training into your workouts. By alternating work intervals with recovery time, you get the benefit of high intensity training without the discomfort of long, hard workouts. We should be looking for

ways to make sports and other physical activities more ‘child-friendly’ and ‘youth-friendly’ (Centre for Disease Control and Prevention, 2010).

In addition, exercise reduces risk of certain types of cancer. Another great benefit of exercise is a reduced risk of certain types of cancer, including colon cancer, breast cancer, lung cancer, and multiple myeloma. One study found that moderate to vigorous exercise offers the best protection and that exercisers have a 30% to 40% reduced risk for colon cancer as opposed to non-exercisers. Another study suggests that modifying our lifestyles can reduce the threat of cancer. By eating a healthy diet, staying at a healthy weight, exercising, watching your alcohol intake and quitting smoking, you may actually protect yourself from some types of cancer as you get older.

Exercise helps protect from Osteoporosis. Bone health is a major concern for women, especially those who are postmenopausal. A number of things can contribute to osteoporosis, including smoking, drinking too much, and a family history of osteoporosis, but one preventable cause is being sedentary. Experts believe that children who exercise can build strong bones and carry that strength into adulthood, giving them some protection against osteoporosis. As adults, we can maintain strong bones and, perhaps, build stronger bones by choosing weight-bearing activities like running, walking, aerobics or any other movement that involves impact. High-intensity strength training is another way to build stronger bones, all while building lean muscle tissue and burning calories. Most evidence shows that working at higher intensities and greater frequency is the best way to increase bone density (Centre for Disease Control and Prevention, 2010).

Dunn (2005) was of the view that exercise boosts self-esteem, body image and confidence. Many studies show that exercise not only gives you energy, it can actually improve self-esteem and confidence. This isn't surprising when you consider that how we feel about ourselves is often wrapped up in how we look, how satisfied we are with ourselves and how competent we perceive ourselves to be. Exercise can improve all of those things. By improving your strength, endurance, balance and coordination, you feel stronger and more confident. One study published in the *Journal of Health Psychology* found that even a small amount of exercise can improve body image. Researchers reviewed more than 50 studies and found that people who exercise are less critical of their bodies than non-exercisers, regardless of their weight loss results.

Exercise boosts ones' mood. If you're feeling cranky, one of the best things you can do to improve your mood is exercise. We're not sure exactly how it works, but one study shows that just 10 minutes of aerobic exercise can reduce tension, fatigue and anger while increasing feelings of vitality and energy. Cardio seems to be the best way to boost your mood, but other activities can work as well (Dunn, 2005).

The Centre for Disease Control and Prevention (2010) indicated that exercise protects the elderly from injury. Falling is a major source of injury and, sometimes, death for older people. One study estimates that falls cause 90% of hip fractures. Beyond simple aging, we can fall and hurt ourselves because of loss of muscle, balance and coordination. If you don't exercise, that loss of muscle can contribute to weakness and inflexibility, which can affect your ability to move

around with strength and confidence. Studies have shown that seniors can prevent falls and maintain a higher level of functioning with exercise. Working on your balance, flexibility, endurance and strength will improve your quality of life as you get older while protecting you from injury.

### **Mental Health**

Physical activity is good for mental health. Experts believe that exercise releases chemicals in the brain that make you feel good. Regular exercise can also boost one's self-esteem and help individuals to concentrate, sleep, look and feel better (Neeser, 2005).

Physical activity is also good for your mental health. Experts believe that exercise releases chemicals in your brain that make you feel good. Regular exercise can also boost your self-esteem and help you concentrate, sleep, look and feel better. "When I left the gym that morning I felt as if someone had given me a million pounds – it was the sense of achievement" (Popovic, 1999). Being active doesn't have to mean going to the gym, taking up jogging or wearing lycra. There are lots of ways to be active - and they don't need to cost much money.

As well as releasing natural chemicals that improve your mood and make you feel happier, having an active lifestyle can do more to help your mental health. Taking part in physical activities offers many opportunities. It's a great way to meet people. And it can be a chance to have a well-deserved break from the hustle and bustle of daily life – to find some quiet time. Leading an active life can help raise your self-worth and improve your confidence. It can help you feel valued – and value yourself (Popovic, 1999).

Exercise and physical activity can provide something worthwhile in your life. Something that you really enjoy, that gives you a goal to aim for and a sense of purpose. Here are a few of the benefits:

1. less tension, stress and mental fatigue
2. a natural energy boost
3. improved sleep
4. a sense of achievement
5. focus in life and motivation
6. less anger or frustration
7. a healthy appetite
8. better social life
9. having fun.

Participation in regular physical activity - at least 30 minutes of moderate activity on at least five days per week, or 20 minutes of vigorous physical activity at least three times per week - is critical to sustaining good health. Youth should strive for at least one hour of exercise a day. Regular physical activity has beneficial effects on most (if not all) organ systems, and consequently it helps to prevent a broad range of health problems and diseases. People of all ages, both male and female, derive substantial health benefits from physical activity (U.S. Census Bureau, 199).

Regular physical activity reduces the risk of developing or dying from some of the leading causes of illness in the United States. Regular physical activity improves health in the following ways:

1. Reduces the risk of dying prematurely from heart disease and other conditions;
2. Reduces the risk of developing diabetes;
3. Reduces the risk of developing high blood pressure;
4. Reduces blood pressure in people who already have high blood pressure;
5. Reduces the risk of developing colon and breast cancer;
6. Helps to maintain a healthy weight;
7. Helps build and maintain healthy bones, muscles, and joints;
8. Helps older adults to become stronger and better able to move about without falling;
9. Reduces feelings of depression and anxiety; and
10. Promotes psychological well-being.

Regular physical activity is associated with lower mortality rates for both older and younger adults. Even those who are moderately active on a regular basis have lower mortality rates than those who are least active. Regular physical activity leads to cardiovascular fitness, which decreases the risk of cardiovascular disease mortality in general and coronary artery disease mortality in particular. High blood pressure is a major underlying cause of cardiovascular complications

and mortality. Regular physical activity can prevent or delay the development of high blood pressure, and reduces blood pressure in persons with hypertension (American Cancer Society, 2002).

Regular physical activity is also important for maintaining muscle strength, joint structure, joint functioning, and bone health. Weight-bearing physical activity is essential for normal skeletal development during childhood and adolescence and for achieving and maintaining peak bone mass in young adults. Among post-menopausal women, exercise, especially muscle strengthening (resistance) activity, may protect against the rapid decline in bone mass. However, data on the effects of exercise on post-menopausal bone loss are not clear-cut and the timing of the intervention (e.g., stage of menopausal transition) can influence the response. Regardless, physical activity including muscle-strengthening exercise appears to protect against falling and fractures among the elderly, probably by increasing muscle strength and balance. In addition, physical activity may be beneficial for many people with arthritis (American Cancer Society, 2002).

Regular physical activity can help improve the lives of young people beyond its effects on physical health. Although research has not been conducted to conclusively demonstrate a direct link between physical activity and improved academic performance, such a link might be expected. Studies have found participation in physical activity increases adolescents' self-esteem and reduces anxiety and stress. Through its effects on mental health, physical activity may help increase students' capacity for learning. One study found that spending more

time in physical education did not have harmful effects on the standardized academic achievement test scores of elementary school students; in fact, there was some evidence that participation in a two-year health-related physical education program had several significant favourable effects on academic achievement (American Cancer Society, 2002).

Participation in physical activity and sports can promote social well-being, as well as good physical and mental health, among young people. Research has shown that students who participate in interscholastic sports are less likely to be regular and heavy smokers or use drugs, and are more likely to stay in school and have good conduct and high academic achievement. Sports and physical activity programs can introduce young people to skills such as teamwork, self-discipline, sportsmanship, leadership, and socialization. Lack of recreational activity, on the other hand, may contribute to making young people more vulnerable to gangs, drugs, or violence (Vainio & Bianchini, 2002).

Regular physical activity reduces morbidity and mortality from mental health disorders. Mental health disorders pose a significant public health burden in the United States and they are a major cause of hospitalization and disability. Mental health disorders cost approximately \$148 billion per year. Potentially, increasing physical activity levels in Americans could substantially reduce medical expenditures for mental health conditions (U.S. Department of Health and Human Services, 2001).

In adults with affective disorders, physical activity has a beneficial effect on symptoms of depression and anxiety. Animal research suggests that exercise may



stimulate the growth of new brain cells that enhance memory and learning—two functions hampered by depression. Clinical studies have demonstrated the feasibility and efficacy of exercise as a treatment for depression in older men and women. Currently, National Institute of Mental Health (NIMH) investigators are conducting research comparing the effectiveness of home-based and supervised aerobic exercise to the use of antidepressants in relieving depression in these groups, and reducing relapse rates. Other NIMH researchers are studying whether greater exercise levels result in more symptom improvement. Regular physical activity also appears to enhance well-being (U.S. Department of Health and Human Services, 2001).

The preventive effects of physical activity on mental disorders are less well studied. Some studies suggest physical activity prevents depressive illness. Future research will clarify the extent to which physical activity may actually protect against the development of depression (Vainio & Bianchini, 2002).

Regular physical activity may also reduce risk of cognitive decline in older adults, though more research is needed to clarify the mechanism of this possible effect. Among people who suffer from mental illness, physical activity appears to improve the ability to perform activities of daily living (U.S. Census Bureau, 199).

Powers (2011) was of the view that children and adolescents who pursue sports activities have been shown to exhibit more active brain function, better concentration levels and classroom behaviour and higher self-esteem than their less-active counterparts. Understandably, all of these factors seem to support

better academic performance. In 2002, the California Department of Education examined whether any correlation existed between standardized test scores and results from a state-mandated physical fitness exam. In its analysis of data from over 954,000 fifth, seventh and ninth grade students, the study found that students with higher levels of fitness performed better in school. Students who met three or more physical fitness standards experienced the greatest academic gains.

The greatest Greek philosophers of all time, Socrates, Aristotle, Plato, all recognized physical exercise as means to preserve mental health. Convincing evidence from long-term human studies have shown that physical fitness apparently protects the memory centers of the brain and people who exercise are healthier (Powers, 2011).

Regular physical exercise helps enhance our mental state by increasing blood circulation, bringing oxygen and endorphins – hormones released after exercise that have benefits on mood and memory – to the brain tissues, helping promote growth of brain cells and is clearly associated with better performance on several cognitive measures, long term brain health and last but not least, general mental well-being (Neeser, 2005).

Dunn (2005) opined that, exercise makes you smarter. Exercise not only strengthens your body, it can also strengthen your mind. One study found that moderate exercise by older adults can reduce the odds of mild cognitive impairment by 30% to 40%. Some experts believe that exercise can, in fact, keep our minds sharp because it improves circulation throughout the body and the brain, which boosts your attention and ability to concentrate. Exercise may even

protect us from developing Alzheimer's disease. In one study, researchers found that older adults who exercise at least 3 times a week are less likely to develop dementia. Exercise can even make you more productive at work. People who exercise during the day perform better, manage their time more efficiently, and are mentally sharper.

Harris (1987) found exercise to be a convenient and manageable way of helping people deal with stresses and worries of everyday life and analysis in this particular area of mental health shows that exercise is a very healthy alternative to other means of dealing with periods of stress and anxiety. Harris (1987) further indicated that exercise gives more energy. It may be ironic, but if one ever felt too tired to workout, exercise is one thing that may cure him/her. Getting enough sleep, reducing stress, and eating a nutritious diet are all important for energy, but one major factor is movement. Studies show that exercise increases feelings of energy and lessens feelings of fatigue. Exercise also teaches the body how to produce more energy, making it more efficient at burning fat.

These common alternatives include the consumption of alcohol or the use of nicotine through smoking. It is also believed that, by being physically fit, an individual's reaction to a stressful situation is reduced to a level that is more capable of controlling (Powers, 2011).

In recent years, there has been evidence of disturbingly high rates of mental ill-health among adolescents and even younger children, ranging from low-self-esteem, anxiety and depression to eating disorders, substance abuse and suicide (Anderssen, & Wold, 1992).

Adolescent girls are particularly vulnerable to anxiety and depressive disorders. By 15 years, girls are twice as likely as boys to have experienced a major depressive episode Wold and Hendry (1998). Girls are also significantly more likely in depressive mood than boys to have seriously considered suicide (Flintoff & Scraton, 2001).

Depression being the most common form of mental challenge, occurs in various degrees of severity – from being a mild disorder to being a clinically diagnosed illness (Harris, 1987) and according to him research into physical activities and its effects have shown that exercise can help people overcome this state of mind to as high a level as that resulting from extensive psychotherapy.

It therefore appears that regular exercise could be a cheap alternative to expensive psychotherapy, and could lead to no medication being required. It is also understood that those who are stressful in maintaining a regular exercise program over a period of more than two years avoid long term depression (Neeser, 2005).

Research suggests ways in which physical activities can contribute to mental health. There is fairly consistent evidence that regular activity can have a positive effect upon girls' psychological well-being; indeed, some studies indicate that girls may respond more strongly than boys in terms of short-term benefits (Friedman & Berger, 1991).

Evidence is beginning to be gathered for exercise as a treatment for clinical depression, with studies finding that physical activity is as effective a treatment as anti-depressants (Hargreaves, 1994), and psychotherapy (Sallis, 1994). Similarly,

a variety of non-clinical studies have found that higher levels of activity were related to lower rates of depression. A position statement of the International Society of Sport Psychology drew out numerous mental health benefits of physical activity from the research literature, including reduced state anxiety, neuroticism and anxiety, mild to moderate depression, and various kinds of stress (Taylor, Baranowski & Sallis, 1994).

Exercise decreases symptoms of mild to moderate depression. Depression is frustratingly common for many of us, and while there are medications and therapies that can help, exercise is another method of treatment that can provide relief. Studies have shown that exercise can help you fight mild to moderate depression because it:

1. Lifts your mood and gives you energy
2. Offers distraction from your worries
3. Helps you feel more confident and in control
4. Releases feel-good hormones while reducing stress

Even clinically depressed people can find help through exercise. In one study, depressed patients who exercised ranked it as "the most important element in comprehensive treatment programs for depression." Any type of exercise, including cardio, weight-training, and mind/body activities like yoga, can work (Dunn, 2005).

Dunn further opined that exercise reduces stress and anxiety. Stress and anxiety can take a toll on your body, mind, and emotional well-being, but exercise

can help even if you're experiencing chronic stress. Studies show that consistent exercisers manage their stress more effectively and tend to have lower levels of stress than people who don't exercise. Exercise is also a great way to prevent stress, especially if you consistently exercise at least 3 times a week for 20 or more minutes. Anxiety is another problem that often accompanies stress and depression, leaving a feeling of agitation, uneasy and struggling to calm down. Studies show that aerobic exercise is one way to reduce anxiety.

Powers (2011), who researched into sleep disorders as mental health problem came up that 30 percent of the overall adult population suffers from sleeping disorders. The direct effects of exercise on the rather alarming number of sufferers are still being studied. Preliminary results have shown that exercising for prolonged periods of time in bright light increases the length of sleep periods and, in the opinion of the individuals studied, increases depth and the quality of sleep (Powers, 2011). It is therefore thought that regular exercise is a suitable means of improving sleep patterns, even for those individuals who do not suffer from insomnia.

Also, Neeser (2005) an expert in the field of self-esteem consider the aspect of self-analysis to be the best indicator of an individual's state of mental health. Studies have shown conclusively that exercise has a positive effect in the way people view themselves, particularly in the area of physical awareness (Neeser, 2005).

A positive effect is thus generated by allowing people see themselves as a better person physically. This outcome is most evident in individuals who initially

have low self-regard and low physical fitness levels. The resulting change in mental state of mind is one of the most common outcomes of an exercise program and it can be readily observed that this change is directly linked with mental well-being (Powers, 2011).

In addition, exercise reduces risk of stroke. Another health problem that can sometimes be prevented with exercise is stroke. Strokes can happen when blood can't circulate to the brain, and the three major risk factors include high blood pressure, diabetes and smoking. Exercise can help with both high blood pressure and diabetes, and it may actually reduce your risk of experiencing a stroke. Studies show that people who are moderately active have a 20% lower risk of stroke and, if you're more active, those numbers only get better. Exercise can mitigate those contributing factors and may widen the interior of blood vessels, contributing to better circulation. Exercise can also help people recovering from a stroke. One study found that stroke survivors who participated in a walking program were able to walk faster and longer and had better mobility than non-exercisers (Dunn, 2005).

### **Educational and Intellectual Development**

The role of sport participation for high school students in the educational process has been a topic for debate for decades. Critics observe that sport activities deflect time away from the classroom (Melnick, Sabo, & Vanfossen, 1992). Supporters of high school sport programs argue that sport participation improves students' achievement, motivation (Casey, 1989; Parker & Johnson, 2000), improves students' grades, keeps them in school, raises their educational

aspirations (Melnick, et al.), helps them appreciate health, exercise and fitness, helps them learn about themselves and to handle adversity, and helps them experience team work and sportsmanship (Rasmussen, 2000). Whether high school sport programs benefit or negatively impact the academic achievement of students' participations' remain debatable. While the quantity of research literature in this field is growing, its uneven quality provides no evidence to afford a clear understanding of the nature on the issues (Greendorfer, 1987).

To date, the educational consequences from participating in school-sponsored sport activities for high school students are still not fully understood. These have been attributed to parents' fears and concerns regarding safety. This can be a powerful constraint on children's time and access to opportunities for physical activity (Klesges, Eck, Hanson & Haddock, 1990).

But Brown Centre Report in 2002 on American school performance indicated that schools with top-ranked baseball, basketball and football teams were found to have better state achievement exam scores than those with less successful sports programs. Not surprisingly, public schools with both successful athletic teams and high academic achievement are found in areas with better financial resources: wealthy, suburban neighbourhoods with predominantly white, non-Hispanic populations. According to the report, such advantaged schools are better able to integrate excellence at sports into a broader culture that encourages achievement (Scully, Kremer, & Meade, 1998).

A range of evidence suggests that for many children especially girls, sports and physical activities are positive features of their academic aspirations and



achievement. Although academic performance in student athletes does vary between boys and girls, results of the California Department of Education study showed that all of the girls' teams had significantly higher grade point averages than their male counterparts. Bleyaert (2010) cited a 2010 study published in "The Sports Journal" reinforced these findings and showed some interesting comparisons. Boys on the cross-country team had among the lowest grades of all the sports examined, but girls' cross-country teams had among the highest.

The classic study of the relationship between physical activity and school performance was carried out in France in the early 1950s in Vanves (Hervet, 1952).

Researchers reduced academic curriculum time by 26%, replacing it with physical activities, yet academic results did not worsen, there were fewer discipline problems, greater attentiveness and less absenteeism. In the 1990s, a new program known as Promoting Achievement in School through Sport (PASS) was added to the curriculum of several California high schools over a four year period. The program was a year-long intervention that used sports in an effort to improve academic achievement.

The rationale behind the study was based on the American Sports Institute's (ASI) position that there are positive aspects of the sports culture which can provide a feeling of meaning and self-worth in students, which in turn, will provide an environment in which students want to be in school, want to learn, and ultimately enhance learning. This view contradicted the traditional notion of the time that at best, sports should take a back seat to academics, or at worst that

sports may impede academic success if they take priority over academics. The notion of a positive sports culture was the sole basis for this program despite the latter opinion, and indeed had promising results.

The program had an integrated curriculum whose interdisciplinary aspects included language arts, social studies, philosophy, and physical education. It focused on self-esteem, responsibility and leadership, all aspects seen by the ASI to be derived from sports participation. The program results revealed 47% more PASS students' improved their grades than students in the control group, with twice as many PASS students increasing their GPA by a full point. The PASS program supports the case that a positive sports culture can improve academic achievement.

The now classic study of independent mobility (Hillman, Adams, & Whitelegg, 1990) found a connection between restrictions placed on children's freedom to be away from home and participation in both organized and unorganized sports and physical activities. A number of studies have shown significant gender differences in independent mobility, with boys experiencing far more freedom than girls to be active (Matthews, 1987). Very often, girls' freedom to move are curtailed by cultural norms and conditions that determine where it is safe or appropriate for them to go (Brady & Kahn, 2002).

Nevertheless, many girls do take part in out-of-doors physical activities, especially if opportunities are convenient. Literature on the relationship between students' participation in sports and their various psychological and psycho-educational factors provides mixed findings. The findings of a group of studies

indicated that participation in sports increased students' overall interests and commitments to schooling as well as their engagement in more student-teacher contact, more positive attitudes about schooling, more parent-school contact (Crain, 1981; Trent & Braddock, 1992). Moreover, Slavin and Madden (1979) found that sports could facilitate positive racial/ethnic relations as well as positive inter-group attitudes and behaviors among different schools.

Although there is currently no directly related research on the graduation rates of student athletes and non-athletes. However, it follows that, based on the research on drop-out rates, the percentage of students-athletes who graduate have found improvements for many children in academic performance when time for physical activity is increased in schools (Sallis, McKenzie, Kolody, Lewis, Marshall & Rosengard, 1999).

To stress the importance of sports participation in schools and colleges Daughtery & Wood (1997) Said that students' participation in schools provide time to train fully and if organized sports are going to be safe, healthy, and beneficial for children and pre-adolescents, there must be reasonable goals for participation and appropriate strategies to train these goals. Reasonable goals for children and pre-adolescents in organized sports include acquisition of basic motor skills, increasing physical activity levels, learning social skills necessary to work a as team, learning good sportsmanship and having fun (Kuh, 2001).

Organized sports sessions should be tailored to match the developmental level of participants. Most pre-school children have short attention spans and are easily distracted; therefore, exercise sessions should be short and emphasize

playfulness, experimentation, and exploration of a wide variety of movement experiences (Richards & Aries, 1999).

According to them reasonable format would consist of no longer than 15 to 20 minutes of structured activity combined with 30 minutes of free play. Concentration will be maximized if instructional sessions take place in a setting with minimal distraction. Instructing younger children using a show-and-tell format with physical demonstration than verbal instructions in schools (Edgerton & Shulman, 2002).

There is an international consensus that participation in physical activities can offer a great deal to individuals, communities and nations. Evidence suggests that from an early age, differences in gender based attitudes towards and opportunity for sports and physical activities can have significant influences on children's participation. This may in turn affect later involvement in physically active lifestyles, and the social and health benefits that may result for them (Howard-Hamilton & Sina, 2001).

### **Sports Participation**

Participation in extracurricular activities increases academic performance. Recent studies show that students involved in extracurricular activities increase academic performance. Participation in extracurricular activities also improves school attendance. Higher school attendance enables a student to complete more class work and perform better on examinations. Melissa Fineman surveyed over 900 students on participation in extracurricular activities and academic performance, presenting her 2010 project summary at the California State Science

Fair. Her research concluded that participation in extracurricular activities helps students learn teamwork and develop leadership skills. These skills enhance the student's academic performance (Centre for Disease Control and Prevention, 2010).

Sports can enhance children's standing with their peers and improve self-esteem. According to John Holloway of the Educational Testing Service, this enhances learning and may discourage anti-social behaviour. Exercise gets blood flowing to the brain, sharpening concentration. Extracurricular activities can help disadvantaged and children with disabilities feel included. Drama, dance, music and sport foster social skills, dedication and team spirit. In Japan, clubs and social activities are considered essential and are integral to the longer school day. Holloway reports that children with extracurricular involvements are 50 percent more likely to be academically gifted (Centre for Disease Control and Prevention, 2010).

Deborah Vandell of the University of Wisconsin found that children who spend their free hours in unstructured, unsupervised settings have lower grades. She suggests children learn persistence in extracurricular activities that transfers to academic settings. States and schools that institute "No pass, no play" policies may not be helping students' academic performance. Allowing greater participation in sports, music and drama might be a better way to raise grades. Similarly, cutting these extracurricular 'frills' when school budgets are tight may be short-sighted (Centre for Disease Control and Prevention, 2010).

Throughout Ghana, schools and most especially the Senior High Schools, run a sports programme that is of uniformity with regards to sports competitions. There are a variety of team games such as soccer, volleyball, basketball, handball, and hockey. There are also individual sports such as table tennis, track and field athletics and cross-country.

Sports competition is a continuation of the instructional programme of physical education in the basic as well as Senior High School level. These usually come or are carried out in the form of intramurals and extramural. Special attention is given to the planning and conduct of these programmes as they run throughout the year. Touching on the organization of sports programmes, Udoh, Amusa, Sohi and Agbedi, (1999), strongly asserted that organisation for competition in the intramurals is usually best affected by arranging schedules between recognised groups such as houses, classes, sections, clubs, associations as well as religious groups. Intramural games are aimed at the enjoyment students derive from taking part in sports competitions and social interactions.

According to Udoh, et al. (1999), Intramural activities are usually easier to organise and they conform to the general calendar schedule by the schools and colleges sports Federation. These games are usually organised with the aim of selecting a team to represent at the zonal and regional level. As such athletes strive to excel in order to be chosen.

Like the intramural, extramural competitions are organised at zone, district and regional bases. This meets usually offer students the opportunity to compete at a more difficult level since the best athletes are represented. Inter zonals and

district sports competitions as well as regional sports are organised yearly with venues rotating from one zone, district or region to the other. Usually the final of these competitions are organised by the National School and Sports Federation where each of the ten regions present a team (Udoh, et al., 1999).

For all the competitions athletes are usually camped at a particular school to promote supervision of training. The time allocation for preparation defers for the various stages of the competition. These competitions need careful planning and organisation, as such physical education instructors who have been well trained are assigned to task with the help of ordinary classroom teachers who are interested in sports.

At all levels of schools sports competitions, students exhibit high completion spirit because of the singular objective of excelling to gain selections into the school and regional teams. Although all athletics really like the sports in which they compete, for the simple reason that sports provide them some gains especially in terms of physical and physiological benefits.

Athletes, derive ego satisfaction, natural returns, attractive pay and other internal benefits. According to Wuest and Bucher (2000), sports training and competition, develop a better state of physical fitness of a trained individual than a person who follows a sedentary inactive life. For instance, it has been proved that when two persons, one trained and the other untrained, and are both of approximately the same built are performing an activity which involves the same or moderate muscular work, the trained person has lower oxygen consumption (Wuest & Bucher, 2000). The study also showed that trained person has a lower

pulse rate, large stroke volume per heart beat, less rise in blood pressure, greater red and white blood cells count. Furthermore, the trained athlete has slower rate of breathing, lower rate of lactic formation and heart works more efficiently and is able to circulate more blood.

Also for any work of strenuous nature that cannot be performed for any great length of time, the trained person has greater endurance, a capacity for higher oxygen consumption and a fast return to normal of heart rate and blood pressure. From these benefit accrued to sports participations; most athletes will be hesitant to surrender these advantages even at the expense of maintaining minimal academic standard (Sabo, Miller, Melnick & Heywood, 2004).

In order to boost the morale of athletes participation in sports colleges in Germany, Kahn (1998), observed that top college athletes in Germany are provided with financial support from Deutsche sport life (Germany sport Aid). The purpose of this is to compensate athletes for the time and money spent in preparation and participation in international sports. Moreover, this assistance continues after school until the athlete secures a job. With this numerous motivational instructs and personal aspiration, there is no doubt has sports participation has assumed such a high standard in the schools.

There is a lot of truth to the old saying, “Families that play together, stay together.” Today’s families are busier than ever, with even children feeling the pressures associated with performance expectations and over-scheduling. Oftentimes, family members have so many commitments that family time is a rare pleasure, rather than an everyday part of life. Unfortunately, this disconnect can



have a significant effect on children and teens, who may feel distanced from the very people who love them the most. Families that make time to play actively together benefit in a number of ways. Obviously, families who make exercise and fitness priorities are inclined to be physically healthier than those who do not, but the pay offs do not end there. Spending time together helps to build strong emotional ties and reassures children that they are high on their parents' list of priorities, making them feel valued.

Sports helps kids stay active. Whether kids exercise now and into adulthood often depend on the parent. One study shows that girls are more likely to exercise when they have knowledge about exercise and when their mothers are active. Boys exercise more when they have exercise knowledge and when they get information from their dads. Being a good role model means your kids have a better shot at a healthy, active future.

Sports keep one fit for seasonal activities. If one likes to ski in the winter or hike in the summer, regular exercise is a must for giving the body a strong foundation for these kinds of irregular activities. There are a number of things we do that depend on the season and the weather, which can set you up for an injury if you don't maintain a base level of fitness. Regular exercise can give the stamina, strength and endurance needed for seasonal activities like shovelling snow, raking leaves, long bike rides or canoe trips, backpacking, skiing or snowboarding.

Dunn, 2005, opines that sports help one to live better and longer. If you've ever wished there were such a thing as a fountain of youth, I'm thrilled to make

your wishes come true. Studies have shown that regular exercise can actually add years to your life, whether you start exercising at 15 or 50. Even better, those extra years are less likely to include disability, which means a higher quality of life as you age.

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Nevertheless, many girls do take part in out-of-doors physical activities, especially if opportunities are convenient. Literature on the relationship between students' participation in sports and their various psychosocial and psycho-educational factors provides mixed findings. The findings of a group of studies indicated that participation in sports increased students' overall interest and commitment to schooling as well as their engagement in more student-teacher contact, more positive attitudes about schooling, more parent-school contact (Crain, 1981; Trent & Braddock, 1992). Moreover, Slavin and Madden (1979) found that sports could facilitate positive racial/ethnic relations as well as positive inter-group attitudes and behaviours among different schools.

According to Prentice (1997) school sports activities are designed to assist the physical and emotional development of students. Sports provide numerous opportunities for children and teenagers to grow socially, emotionally, and physically. Furthermore, they also allow youth to learn and practice in a competitive environment. Sports also increases children's positive social interaction with adults and one another, these activities are carefully selected, guided and are to reflect the available facilities and meet the individual student needs and capabilities. To stress the importance of sports participation in schools and colleges, Daughtery and Woods (1997) Said that student's participation in sports provides time to train fully and if organized sports are going to be safe, healthy, and beneficial for children and pre-adolescents, there must be reasonable goals for participation and appropriate strategies to attain these goals. Reasonable goals for children and pre-adolescents participating in organized sports include acquisition of basic motor skills, increasing physical activity levels, learning social skills necessary to work as a team, learning good sportsmanship, and having fun (Kuh, 2001).

Participation in school sports have positive impact on children who would otherwise be at risk of dropping out. A Massachusetts study of deprived, inner-city middle-school youth found that boys and girls who played sports were less likely to try marijuana. A study at Stanford University looked for a common factor in urban teenagers who were achieving well and avoiding drugs against the odds. The study discovered these students had deliberately chosen not to "hang out" in the neighbourhood, seeking sports, dance or YMCA activities instead

(Scully, Kremer, & Meade, 1998). The study followed-up on these disadvantaged students who had sought structured activities and found that in early adulthood they achieved superior academic success, had good jobs and contributed to their communities. Professor Christy Lleras of the University of Illinois found that 10 years after graduation, students who had participated in extracurricular activities completed more levels of higher education and were higher earners than peers with similar test scores but less extracurricular involvement.

US Department of Health and Human Services (1996) said that the physical health benefits of regular physical activity are well-established. Regular participation in such activities is associated with a longer and better quality of life, reduced risks of a variety of diseases and many psychological and emotional benefits. There is also a large body of literature showing that inactivity is one of the most significant causes of death, disability and reduced quality of life in the developed world.

Physical activity may influence the physical health of girls in two ways. First, it can affect the causes of disease during childhood and youth. Evidence suggests a positive relationship between physical activity and a host of factors affecting girls' physical health, including diabetes, blood pressure and the ability to use fat for energy Armstrong & Welsman, (1997). Second, physical activity could reduce the risk of chronic diseases in later life (Sabo, Miller, Melnick & Heywood, 2004). A number of 'adult' conditions, such as cancer, diabetes and coronary heart disease, have their origins in childhood, and can be aided, in part, by regular physical activity in the early years (Freedman, Khan, Dietz, Srinivasan, &

Berenson, 2001). Also, regular activity beginning in childhood helps to improve bone health, thus preventing osteoporosis, which predominantly affects females (Van Mechelen, & Kemper, 1995).

Obesity deserves special mention. There seems to be a general trend towards increased childhood obesity in a large number of countries, and this increase seems to be particularly prevalent in girls from highly urbanized areas World Health Organisation (1997), some ethnic minorities and the disabled. (Dietz, & Gortmaker, 1984) Obesity in childhood is known to have significant impact on both physical and mental health, including hyperlipidemia, hypertension and abnormal glucose tolerance. (Steinberger, 1995). Physical activity can be an important feature of a weight control programme for girls. (Corbin. & Pangrazi, 1998), increasing calorific expenditure and promoting fat reduction. Indeed, recent systematic reviews on both the prevention and treatment of childhood obesity recommend strategies for increasing physical activity (Sallis & Owen, 1999).

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a person who follows a sedentary inactive life. For instance, it has been proved that when two persons, one trained and the other untrained and are both of approximately the same built are performing an activity which involves the same or moderate muscular work, the trained person has a lower oxygen consumption (Bucher & Wuest, 2000). The study also showed that, the trained person has lower pulse rate, large stroke volume per heartbeat, less rise in blood pressure, greater red and white blood cells count. Furthermore, the trained athletes has slower rate of breathing, lower rate of lactic formation and heart works more efficiently and is able to circulate more blood.

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### Education, Sports Participation and Academic Performance

In all of the studies that I found, sports participation was generally agreed to improve academic performance. In each of the studies, the correlation made enables us to determine how and why this occurs. In a report to the President of the United States by the Secretary of Health and Human Services and the Secretary of Education, a landmark 1996 Surgeon General's report, "Physical Activity and Health" is cited, indicating that evidence points to a correlation between participation in sports and improvement in academic performance (Carter, Kannus, & Khan, 2001).

Although research has not been conducted to conclusively demonstrate a direct link between physical activity and improved academic performance, such a link might be expected. Studies have found participation in physical activity increases adolescents' self-esteem and reduces anxiety and stress. Through its effects on mental health, physical activity may help increase students' capacity for learning.

One study found that spending more time in physical education did not have harmful effects on the standardized academic achievement test scores of elementary school students; in fact, there was some evidence that participation in a 2-year health-related physical education programme had several significant favourable effects on academic achievement." The government study indicates that the increase in self-esteem and the reduction in stress and anxiety brought about by sports participation has a positive effect on the mental outlook of

students, thereby increasing their capacity to learn (Carter, Kannus, & Khan, 2001).

Proponents stated high school academic achievement is positively affected by athletic participation. In fact, supporters concluded high school athletics positively impacts the high school, its students and the community - academically, personally and socially. Thayer (1987) concluded high school athletics keep students out of undesirable activities. Thayer discussed and stressed the positive effects of athletics on the school culture. He found athletic participation reduces student absences and develops positive student teacher relationships. However, the positive effect of high school athletic participation found by Thayer (1987) is not relegated to a student-athlete's high school experience. Athletic participation can serve as a catalyst for post secondary academic success (Reith, 2005).

Reith's study focused on high school seniors who graduated in 1992. He compared and contrasted non-athletes and student-athletes who served as team captains of their particular sport, junior varsity and varsity athletes, and intramural participants. Reith found the student-athletes demonstrated higher rates of physical activity and smoked cigarettes at a lesser rate compared to their non-athletic peers eight years later. Reith referenced conclusions from another study which stated students participating in high school athletics demonstrated advanced performance figures pertaining to grades, school attendance, graduation rates, and discipline records.

In addition to males, high school athletics participation revealed positive benefits for females. Peckham (2008) found female athletes who participated in



high school athletics revealed higher undergraduate degree completion rates six years later when compared to their non-participating peers. Brooks (2002) compared high school sophomore female athletes (females participating in a high school sport) and non-athletes (females not participating in high school sports).

Brooks found in the areas of happiness

and satisfaction, intellectual and school status, the female athletes demonstrated average scores six points higher than non-athletes.

The positive characteristics of playing high school athletics were expanded upon by Carlson, Scott, Planty, and Thompson (2005). Carlson et al. (2005) utilized a sample of 10<sup>th</sup> grade students who graduated from high school in 1992. Eight years later they assessed the progress of the target students in the areas of education, employment and health. Carlson et al. found the students involved in scholastic sports achieved greater educational and professional success when compared to their non-scholastic peers. Furthermore, the athletic group engaged in cigarette smoking at a substantially lesser rate and demonstrated tangibly higher physical fitness rates when compared to the nonathletic group (Carlson et al., 2005).

In addition, the positive effect of athletic participation for student-athletes infiltrated achievement areas. White (2005) compared the GPA, class rank, and math GPA of high school athletes divided into two groups: high participant and low participant. High participant was defined by White as follows: a student whose number of seasons participating in athletics was equal to or greater than, their years in high school.

Low participant was defined as a student whose number of years in high school exceeded their seasons of athletic participation. White referenced the perceived allotted time requirements of playing numerous sports. White found the high participant group outperformed the low participant group in all three of the studies' measures: 1) GPA, 2) class rank, and 3) math GPA.

White (2005) cited the findings of Silliker and Quirk (1997) who concluded the grade point averages of high school soccer players were higher in-season than out-of season. The impetus for Silliker and Quirk's investigation was a study conducted in the late 1970s which compared the academic performance of in-season and out-of-season wrestlers. Silliker and Quirk's study focused on 123 students (64 females and 59 males) who attended five rural high schools and participated in interscholastic soccer. They stated extracurricular participation foster interpersonal and intrapersonal relations, lofty career expectations, and lower degrees of deviant behaviors for high school students.

Silliker and Quirk (1997) concluded "that participant had significantly higher GPAs in season than out-of-season" (p. 288). In addition, they confirmed their hypothesis which stated, "TAP in athletics for high school students does not endanger, and may enhance, academic performance" (p. 288).

Whitley (1999) compared the academic performance of athletes and non-athletes in one state's high schools. Whitley analyzed the GPAs, graduation and dropout rates, attendance records, and discipline referrals for the 1995 school year for 126,700 students from 133 high schools. He utilized eight subgroups comprised of black male, black female, white male, and white female groups with

an athlete and non-athlete group for each racial identifier. In all of the measurable categories, Whitley's findings confirmed a rejection of the null hypotheses as the athlete subgroups outperformed the non-athlete

Subgroups as a whole and within each subgroup. Whitley noted the mean GPA between the two subgroups was appreciably higher in seven of the eight subgroups for the athlete subgroup. In conclusion, in 20 out of 21 comparisons the performance of the athlete subgroup was superior to the non-athlete subgroup (Whitley, 1999).

Anderson (1998) conducted a quantitative study which compared the grade point averages (GPA) of the following groups: 1) in-season and out-of-season sophomore and junior athletes at the target high school, 2) student athletes participating in certain sports. In addition, he compared athletes and non-athletes in the areas of state achievement testing, classroom grades, and daily school attendance. Anderson found sufficient evidence to reject the null hypothesis as the GPA scores of male athletes were higher in season for male student-athletes compared to their out-of-season GPA. Anderson concluded males participating in certain sports demonstrated differences in GPA scores.

However, he stated females demonstrated no difference between in-season and out-of season GPA, or differences in GPA based on specific sport participation.

Bishop (2008) concluded America's zeal for sports is proliferating to unprecedented levels. Unfortunately, Bishop found America's veracity for sports negatively affects the intangible value of sports for children and their families.

Bishop denounced the recent trends permeating youth sports: parental pressure on student athletes to procure athletic scholarships, athletic contests devoid of uninhibited enjoyment, and student-athletes focusing on one sport. He found glaring differences between student athlete's athletic abilities and expectations. Bishop further asserted parents are seeking Division 1 college scholarship and athletic acclaim for their student athletes. In their quest to achieve athletic goals, Bishop concluded student-athletes and parents abandon core values and principles. Bishop encouraged parents and children to develop a holistic view of athletic participation: develop values, build relationships, and explore new opportunities.

Sports and education are inter-married especially at the pre-university level as proposed by the educational reforms of Sir Gordon Guggisburg in the 1920s in Gold Coast (Ghana). And his point was buttressed by the President of the Ghana Football Association (GFA), Kwesi Nyantakyi, who recently said his outfit will insist on education for footballers because it is the key to sustainable development in football. (ghanafa.org, 2012).

He said the GFA as part of its development plans has made education a key component of their strategy for player development and will ensure all players selected into the juvenile teams are educated and acquired the requisite knowledge. "If we discover a player who is not educated, we as an institution (GFA) will arrange an evening class for the player to ensure that his/her level of education is raised to an appreciable level.

After that, the player will be made to join main stream education” (ghanafa.org, 2012). Virtually all Senior High Schools whether private or public, are engaged in some form of inter-school sports and participation and teaching of Physical Education (activities). Being the primary societal institution with responsibility for promoting physical activity in young people, school physical education has the potential to be a powerful force against sedentary lifestyles. The potential of PE to reach virtually all children makes it a uniquely important resource (Bailey, 2004).

Especially important, in this regard, is the Primary/Elementary phase of schooling, which has the advantages of relatively high engagement in physical education lessons (Deem, 1986), and students who are curious about their bodies and receptive to health information (Brady & Kahn, 2002). Whilst the amount of actual activity experienced during many Physical Education lessons is probably inadequate to deliver health outcomes (Thompson, 1995), Physical Education is well placed to facilitate the development of a foundation of movement skills. (Calfas & Taylor, 1994) and positive attitudes towards recreational physical activities Brady, (1998), which are likely to positively contribute to health.

It ought to be stressed that physical education lessons do not necessarily promote physical activity in children. It is however difficult to say to what extent sports contributes to education.

Participation in sports provides numerous opportunities for healthy, positive development-physically, socially, and morally for all children. Regular sports activities are the preparatory gateways for children in their vital growth

years in creating a sense of self that will guide them throughout their lives. Research indicates that participation in sports can promote healthy development. Participation in sports helps children obtain crucial exercise that their growing bodies need; sports enhance a child's academic life in school; and most importantly sports assist in improving a child's self-esteem, Scully, Kremer, & Meade (1998).

According to Kahn (1998), there are indeed contrary views widely held that sports are believed to detract the educational goals of schools. The study conducted by Kahn revealed that some critics believed that while students' participation in sports might lead to some sportsmen becoming academically good, others have the opinion that when students participate in sports, they might become academically weak. In other words according to Kahn, the successful athletes after basic education, gain admission to high school or college and later on to university. In this way, sports participation has the positive effect of encouraging students to attain more educational heights than they might otherwise reach. This in turn increases their opportunities for success outside the sport world.

A controversy among the public, parents, educators and social scientists is whether the emphasis on competitive sport interfered with intellectual and academic performance of the students. Most parents and guardians contend that in many schools, sports have partly taken the position of academic work. (Schulman & Bowen, 2001).

They argue that whatever the contributions of sports are to character development and physical fitness, an appreciable amount of time, energy and attention are diverted from academic work is rather limited in scope. One of the important studies in terms of authenticity and recognition is reported by Coleman (2001). The main implication of Coleman's research is that sports participation interferes with scholastic performance. When he refers to the relative "flow of energy" into sports and academics, he implies that sports "recruits" many boys who might have become students and that once "recruited", they are maintained in the profession by the spirit of popularity, publicity and prestige to give off much of their time and energy as possible to sports events at the expense of scholastic endeavour.

Hanks' (1979) posited that participation in high school athletics has a basically salutary effect on the educational achievement of high school students. The results of this study certainly indicated that the educational performance of athletes is better than that of non-athletes. This finding true when analyses were conducted along both racial and n gender lines. The analysis of data for the different subgroups showed that all of the athlete subgroups outperformed the non-athlete group as a whole, as well as their non-athlete subgroup peers.

On the other hand, according to some researchers, the time demands of athlete programs force student-athletes to sacrifice attention to academics (Meyer, 1990; Parham, 1993), making it difficult for them to devote time to study or earn good grades (Cantor & Prentice, 1996). Greater commitment to the athletic role and less to academics is associated with lower grade point averages in college

(Simons, Van Rheenen & Covington, 1995). Furthermore, recruited athletes are often given an admissions advantage, entering college with less impressive academic records (Hood, Craig & Ferguson, 1992; Purdy, Eitzen & Hufnagel, 1985; Shulman & Bowen, 2001; Stuart, 1985). When pre-college differences are controlled for, some researchers find that the academic achievements of intercollegiate athletes and non-athletes does not differ (Hood et al., 1992; Pascarella & Smart, 1985), but other researchers find more negative consequences for college athletes. For example, Shulman and Bowen (2001) found athletes who played all types of sports to under-perform academically, but the under-performance was more pronounced for athletes who played high-profile sports (football, basketball and hockey).

MacEtroy and Boston (1998), Otoo and Alwin (1997) and Spady (2000), conducted some researches on the influence of sports activities on educational achievements. All of them found that social-economic status (SES) has been shown to be influential in developing educational motivation and attainment. In their separate reports on quality of educational opportunities, they concluded that social-economic status accounts for more of the variance in educational aspiration than those involvement in sports activities. Leonder (2002) found that those who take part in sport in their schools not perform creditably in their studies. Even though little empirical data exist to directly address this allegation, evidence suggests that this assertion has doubtful meaning.

On the hand, Rarich and Mckee (2004) who studied twenty three (23) graders grouped those who achieved excellent or good rating in reading, writing



and comprehension. They found that they grow with high motor proficiency, performed better than the group with low motor efficiency. Humphrey (1998) found that motor activities are beneficial in developing skills and concepts in reading, mathematics and science. He says that if academic skill or concept is practiced during a physical education, that skill or concept is learned forever. He further indicates that many advanced academic skills and concepts can be introduced to children at an early age through the use of motor activity as a vehicle for learning.

In the debate about athletic participation and academic performance, it is often assumed that sport activities of adolescents are harmful to their educational outcome. Since the time spent on sport activities crowds out time devoted to schooling, the impact of sport is negative. However, empirical investigations find a rather positive correlation between sport and educational attainment (Long & Caudill, 1991; Barron, 2000). The underlying line of reasoning is oversimplified: since the time spent on sport activities crowds out time devoted to schooling, thus impact of sport becomes negative.

According to Phillips and Schafer (1971) “athletes tend to exceed comparable non-athletes their achievement of educational goals” Although this research was performed in the late 1960’s and focused solely on boys, theoretical concepts of Phillips and Schafer (1971) study, seem to remain true today. The theory that athletes excel in academic endeavours as well as athletic ones, was described as the direct result of the cultural influence imposed by team members, coaches, and the overall sports culture formed by sporty teams. Schafer (1969)

indicated “athletes are less likely to be deviant than comparable non-athletes”, and argued that “there must be some influences in athletics that deter boys from engaging in delinquent behavior”.

In a second study on student athletes results support the earlier findings, whereby he defined delinquency to be smoking, drinking, maintaining late hours, wearing beards or long hair, breaking laws, disrupting the community (Schafer, 1969). Schafer further concluded that playing sports influences students to see school as a positive experience deterring them from rebelling against it. Together, Phillips and Schafer (1971) argued that the influence is due to the “subculture” that exists in the world of sport.

Although Phillips and Schafer (1971) research did not have strong conclusive data, they reported that athletes tended to befriend other athletes and that athlete overall were “more positive in educational attitudes, aspirations, and behaviours”, leading them to have had “greater exposure to pro-educational influences” (Phillips & Schafer, 1971). They further reported that both teachers and counsellors encouraged athletes to go on to college, and concluded that these combined findings indicate that student athletes receive rewards and support in school, which in turn lead them to “develop a pro-school subculture” (Phillips & Schafer, 1971). Phillips and Schafer (1971) again, argued that athletes are faced with the influence of their teammates, coaches, teachers, and counselors to perform well in school and due to this influence, perform better academically than their comparable non-athlete peers.

Twenty years following Phillips and Schafer (1971) research, trends of student athletes doing well in school was noted by another researcher. Chambers (1991), in a review of the effect of students' participation in sports, concluded "academic achievement can be fostered through sports." He linked this fostering of academic achievement to the influences of coaches as well as the heightened self-esteem which he found was a result of playing sports. Chambers noted that in most cases of his review of empirical research, students who played sports experienced fun, which lessened feelings of stress and anxiety (Chambers, 1991). He went on to state that this fulfillment leads to "a greater perceived competence and control" (Chambers,) and that this self-esteem and feeling of competence aids student athletes in academic endeavors as well. Furthermore, Chambers commented that athletes "perceive [their coaches as] significant influence[s]" (Chambers,) on their future goals, and is why he concluded that coaches played large roles in student academic achievement.

Although Chambers did not use the term "athletic sub-culture" that Phillips and Schafer used throughout their research, his work shared the underlying theme of coach influence on athletes which results in better academic achievement, and adds to the notion of heightened self-esteem due to sports participation as a positive influence on academics success. Participation in sport may lead to experiences, attitudes, self-perceptions, and treatment that enhance the academic role for the following reasons: (1) if one is participating in sport there may be an increased interest in the school, including academic activities; (2) to maintain athletic eligibility the athlete is motivated to perform at a higher academic level;

(3) athletic success may lead to a heightened sense of worth that spills over into academic achievement; (4) coaches, teachers, and parents take a personal interest in athletes, including their classroom performance; (5) athletic participation may lead to membership in the elite peer groups and an orientation toward academic success; and (6) the athlete may have the hope or expectation of participating in athletics in college (Snyder & Spreitzer, 1990). Looking at these six perceived influences for academic success in athletes, the notions of coach/parental pressure and influence, positive relationship with the school due to sport, heightened sense of self-esteem, and pressure due to eligibility requirements are all repeats of prior mentioned research. As the literature shows, one such benefit is that participation in sport activities could provide extrinsic rewards to students and help them form social bonds and relationships within school (Crain, 1981; Slavin & Madden, 1979; Trends & Braddock, 1992).

In a longitudinal study, Manners and Smart (1995) noted that athletic team participation was related to identify foreclosure, particularly for males. With respect to whether students' participation in sport activities was beneficial to their academic goals, Marsh (1988) reported that participation in too many activities produced diminishing returns. Participation in sports and other extracurricular activities was consistently beneficial, but participation in some activities had mixed or predominantly negative effects. With regard to the relationship between athletic participation and higher educational goals, Spreitzer and Pugh (1973) found an association between athletic participation and higher educational goals. Sport involvement was not necessarily detrimental to academic pursuits. Influence

of sport involvement was particularly strong for boys who were not otherwise predisposed to attending college. Sport involvement tended to engender high-perceived peer status, which in turn stimulated a desire for further status acquisition through college attendance.

Maloney and McCormick (1993) found a strong negative in-season effect of intercollegiate athletic participation in revenue sports (e.g. basketball, football), i.e. during the season the time devoted to learning shrinks, which negatively affects course grades. Whether we expect a negative time allocation effect depends on how time-consuming the sport and the studies actually are. Moreover, there might be some direct positive effects of sport on educational productivity.

First, the better health status of athletes could increase productivity and lead to more investments in human capital, because healthier people will probably have a longer life span and, hence, a longer amortization period. Second, sport does not only train functional skills like dexterity and balance but it also teaches soft skills like taking orders, leadership, teamwork, performing in a regulated system, and socialization.

Thirdly, sport can help to form the character of young people because it teaches behavioral habits like motivation, discipline, tenacity, competitive spirit, responsibility, perseverance, confidence, and self-esteem, which cannot always be acquired in classroom. Hanks' (1979) said that these behavioral aspects should lead to reduced truancy, increase the willingness to succeed in school, and encourage social interaction with other students, which are associated with higher efficiency of learning because time is used more productively.

A study conducted by Patranella (1987) in the North side Independent School in San Antonio, Texas. A total of three thousand, five hundred and thirty-five athletes and non-athletes were selected from the school. Grade point average (GPA) is used as a measure of academic achievement. It is found that the athlete's group attained more favourable scores. Then also it is discovered that, those who participated in sports most seemed to take the more difficult schedule of course and make better grades. Selected difference between athletes and non-athletes with respect to grade level, sex and ethnicity are also found.

Watson (1995) also conducted another research which involved two hundred and two athletes and two hundred and ninety three non-athletes in University of Minnesota. Using grade point average (GPA) as a measure of academic achievement, it found out that athletes and non-athletes had about the same grade point average.

The role that coaches, teachers, and parents play in adolescent sports is perhaps the most obvious and significant example of environment influence. Some of the most successful sport education programs are those that can effectively integrate parents, teachers, and coaches into the high sport experience (Hartmann, 2003).

Each of these groups can add an extra level of attention and encouragement to a successful sport and academic experience, but this too is dependent on context. Coaches who also teach and strongly encourage academic success (above athletic success) and teachers who support athletics are the most effective in promoting academic achievement (Coleman 1991; Gould, Collins,

Lauer & Chung, 2007). Children who have extracurricular interests generally have better school grades. The value of extracurricular activities is a matter of balance.

If children participate in so many that they have no time for homework or are tired in school, this impacts negatively on grades. Some teachers feel children's extracurricular involvement takes attention away from school work. Others say parents put too much pressure on children to excel in too many areas. In general however, school grades are higher in children who participate in extracurricular activities.

It is clear that from the above-mentioned researches on academic orientation, a number of factors such as background characteristic, type of sport, socio-economic status of the participation, socialisation and extent of involvement contribute to educational aspiration and academic performance in schools.

### **Summary**

From the available literature on the topic under study, the role of sports participation for high school students in the educational process has been a topic of debate for decades. Critics observe that sport activities deflects time away from the classroom but supporters of high school sport programs argue that sport participation improves students' achievement motivation, improves students' grades, keeps them in school, raises their educational aspirations, helps them appreciate health, exercise and fitness, helps them learn about themselves and learn to handle adversity, and helps them experience team work and sportsmanship.

Sports competition is a continuation of instructional program of physical education in second cycle level in the forms of intramurals and extra-murals. Special attention is given to the conduct of these programs as they run throughout the academic year. Regular physical exercise help lower our risk for high blood pressure, high cholesterol, diabetes, and host of other problems. But physical activity especially enhance our mental state by increasing the blood circulation, bringing oxygen and endorphins-hormones released after exercise that have benefits on mood and memory- to the brain tissues, helping promote growth of brain cells and is clearly associated with better performances on several cognitive measures, long term brain health, general mental wellbeing.

It is now believed that it could be the whole exercise experience that allows individuals to gain psychological benefits from physical activities. On the other hand, studies have shown that sports participation does not have negative effects on academic performance.

Nora and Terenizi, (1995); Terenizi, Parscarella and Blimling, (1996), grades in college (Hood, Craig, & Ferguson, 1992), or time devoted to studying or attending class (Richards & Aries, 1999). For example, Richards and Aries found no significance difference in GPA between athletes and non-athletes despite the fact that athletes entered college with significantly lower SAT scores. But other studies, like the work of Shulman and Bowen (2001) and Bowen and Levine (2003), reported that student-athletes competing in Division III athletics at Ivy League Institution perform at lower levels academically than non-athletes. Such differences are less evident for female student-athletes and student-athletes in



non-revenue generating sports (Parscarella, et al., 1999) as compared to male student-athletes and athletes playing revenue generating sports, such as football and men's basketball studies also show that women's experiences of sports participation have suggested that they can contribute to a more generalized feeling of empowerment (Deem, 1986). In many settings, adolescents may be encouraged to feel their bodies as sexual and reproductive resources for men, rather than sources of strength for themselves (Brady & Kahn, 2002). Physical activities may help them develop a sense of ownership of their bodies and access the types of activity experiences traditionally enjoyed by boys (Thompson, 1995). This may be because participation augments girls' self-esteem (Calfas & Taylor, 1994), or because being an athlete carries with it a strong public identity (Brady, 1998). Some female athletes report having a stronger sense of identity and self-direction – what Talbot calls 'being herself through sports (Talbot, 1989). Whatever the reasons, increasing the numbers of girls' participating in sports and physical activities does seem to open up routes through which they can acquire new community affiliations and begin to operate more openly and equally in community life. In doing so, girls' participation can challenge and change social norms about their roles and capabilities (Brady & Kahn, 2002).

## CHAPTER THREE

### METHODOLOGY

The purpose of this study was to compare athletes and non-athletes on academic performance at Mfantshipim Senior High School in the Central Region of Ghana. This chapter explains the methods and procedures which will be used to conduct the study under the following sub-headings: Research Design, Population, Samples and Sampling Procedure, Data Collection Procedure and Data Analysis.

#### Research Design

A Causal comparative survey was used to conduct the study. This type of research which is the other side of the experimental research, involves the investigation of an attribute or variable. This method does not deal with controlling and manipulating variables. It rather deals with finding out what abilities, capacities and experiences which the subject has and then the effects of these on his present or future performances. According to Gay (1992) causal-comparative research attempts to identify a cause-effect relationship between two or more groups. Causal-comparative studies involve comparison in contrast to correlation research which looks at relationship. This research design was found suitable because it was not possible to investigate the cause of academic performance differences between athletes and non-athletes. The focus was however to compare the academic achievement of these two groups of students in Mfantshipim SHS.

## Population

A population is a group of individuals or items that share one or more characteristics from which data can be gathered and analyzed (Sage, 2002).

According to Business.com (2008), population is all elements, individuals, or units that meet the selection criteria for a group to be studied, and from which a representative sample is taken for detailed examination. The total of all populations is called a universe.

The target population of this research consist of all students (athletes and non- athletes) of Mfantshipim Senior High School in the Central Region of Ghana either actively involved in sporting activities for at least two years and those who did not take part in active sports at all and have written their West Africa Secondary School Certificate Examination between 2011-2012 Examination years. Records at the school indicated that the 2011/2012 academic year graduates of Mfantshipim SHS were 452 out of which 50 were Athletes. Also the 3<sup>rd</sup> year Students of Mfantshipim SHS were 315 out of which 50 were Athletes. Mfantshipim school was used for the study because the school have been performing well both at the inter-schools sports competitions and at the West African Secondary Schools' Examinations.

## Sample and Sampling Procedure

Sampling refers to the process through which a group of representative individuals is selected from a population for the purpose of statistical analysis. Performing sampling correctly is extremely important, as errors can lead to invalid or misleading data (Gay, 1992).

The sample for the study was a hundred and fifty students who were made up of 50 graduate athletes and 50 graduate non-athletes who completed their course of study in 2011/ 2012 academic year, and 25 student athletes and 25 student non-athletes (third year students who answered the questionnaire). The students were selected from the four programmes run at the school. Mfantsipim Senior High School runs General Science, General Arts, Technical, and Visual Arts from which ten students were selected from each programme and year group by convenience.

A table was designed by the researcher indicating the various subjects in which the Assistant Headmaster (academic) was to indicate the grades of the students in the subjects chosen. In gathering the data on the academic performance of the students, the sports masters presented the list of athletes and the researcher ticked fifty of them. Numbers were assigned to the names of the students presented by the assistant head master. The numbers were written on pieces of papers and put in box from which the researcher blindly drew out 50 numbers (athletes) whose corresponding names were used for the study.

These were then presented to the assistant headmaster who provided the grades based on the 2011 and 2012 West African Senior Secondary School Certificate Examination (WASSCE) (Appendix B). The purpose was to prevent the sports masters from choosing only brilliant students. The list of the non-athlete students were also provided and the names of fifty students were sampled using the lottery sampling process as in the case of the athletes. Because of the varied nature of subjects in the school, four subjects; which were common to all

the students' were used to compute the students' results. The four subjects were Core Maths, Core English, Integrated Science and Social Studies.

The sampled population were assigned code numbers and the grades of the students were tabulated against the subjects. The interpretations of the grades were as follows;

Grade A1 represents Excellent and had a value of 1

Grade B2 represents Very Good and had a value of 2

Grade B3 represents Good and had a value of 3

Grade C4 represents Credit and had a value of 4

Grade C5 represents Credit and had a value of 5

Grade C6 represents Credit and had a value of 6

Grade D7 represents Pass and had a value of 7

Grade E8 represent Pass and had a value of 8

Grade F9 represent Fail and had a value of 9

Then also

Aggregate 6 – 12 represented division 1 with distinction.

Aggregate 13 – 19 represented ordinary division 1

Aggregate 20 – 26 represented division 2 and

Aggregate 27 – 33 represented division 3

Aggregate 34 – 40 represented division 4

Any aggregate above 40 represents a failure

Again, 25 athletes and 25 non- athletes who were currently pursuing their course of study in the school were also selected using the stratified sampling

methods. The stratified method was used in selecting students from the various programmes and forms at the school. Fifteen students were selected from the Sciences, five from General Arts, five from Visual Arts. The school has more than one class per programme so one student was selected per class per programme per form.

### **Instruments**

Questionnaire was also used to collect data from fifty current students who were on campus in order to ascertain their views on the participation of sports and the benefit of sports participation. The questionnaire was divided into three major sections; A, B, C. Section A was on background information which sought to find out basic information about respondents; age and BECE aggregate. Section B looked at reasons for participation in school sports whilst Section C sought to find out the benefits students derived from sports participation. The questions at the Sections B and C of the questionnaire were of a five point Likert scale type that required that students agreed, strongly agreed, disagreed, strongly disagreed or to indicate undecided on sixteen questions.

### **Pilot Testing of Instrument**

The instrument was pilot tested in Adisadel College in Cape Coast. This was to help the researcher to fine tune the instrument in terms of removing or rewording statements or items that were not clear to the understanding of students or respondents. Hitherto, the concern and approval of the supervisor was sought to conduct the pilot study. The supervisor critically examined the content of the questionnaire to determine the validity and subsequently gave approval for the

instrument to be used. This ensured the validity of the instrument. The instrument was administered on fifteen students in Adisadel College and the Chronbach Alpha reliability co-efficient was determined to be 0.76, an indication that the instrument was good to be used to collect for the main study.

### **Data Collection Procedure**

An introductory letter was taken from the head of Department of Health, Physical Education and Recreation (H.P.E.R) to give the researcher, easy access to the school's data processing office to collect students' results and also to the departments and classes where respondents were selected for the study. The study was conducted in the second term of the 2011/2012 academic year using the students of Mfantsipim Senior High School as respondents. The researcher employed the services of research assistants who helped in the administering of the questionnaires. The researcher adopted the captive audience way to administer the questionnaire. That is, the respondents were put into two groups (athletes in a group and non-athletes in the other group); the researcher supervised one group and the research assistants also supervised the other group. Athletes and non-athletes were confined to each room containing 25 respondents.

This was to avoid the situation where students would discuss the questionnaire (Appendix A) and produce the same responses. In addition, it helped in quickly collecting the questionnaires after they had been completed. In effect, all the questionnaires were retrieved the same day after the students had completed them.

## Data Analysis

When data were collected, the questionnaire was checked to find out if they contained errors and omissions. The responses were then coded as follows; questionnaire items requiring multiple responses such as always, not always, not at all, plenty, small, agree and disagree, strongly disagree were coded as 1, 2, 3, 4, respectively and this was fed into the computer. A Statistical Package for Social Science (SPSS) version 16.0 was used in analysing the data. This Statistical Package helps in making the analysis less difficult and more accurate.

The Statistical tools that were employed in analysing and presentation of the data were percentages, frequencies, mean, standard deviations and t-test. The mean and standard deviation were appropriate statistical tool for analysing the data gathered from WASSCE results of the students. For the research question 1 and 2, percentages were used to analyse the items. Research question three was analysed using the t-test to determine the difference between student-athletes and non-athletes.



## CHAPTER FOUR

### RESULTS AND DISCUSSION

This chapter discusses the results and findings from the study. WASSCE results of 50 athletes and 50 non-athletes graduates of 2011/2012 academic year and responses of 46 athletes and non-athletes students are presented, discussed and inferences or implication made where applicable. Only 46 responses were used in the analysis because after collecting and coding 50 questionnaires for analysis, four were noted not to be usable and thus were discarded. The study sought to compare the academic performance of athletes and non-athletes in the Mfantsipim Senior High School in Cape Coast.

The study was guided by the following research questions:

1. What is the perception of students of Mfantsipim Senior High School on sports participation?
2. What are the perceived benefits students of Mfantsipim Senior High School derive from participating in sports?
3. What is the difference in the academic performance of students who engage in sports and non-sports students?

#### **Background Characteristics of Respondents**

The background characteristics of the respondents, athletes and non-athletes in the Mfantsipim Senior High School in Cape Coast, were analysed foremost. Forty six students responded to items designed to elicit their views on

students participating in sports. The form or class of the respondents, age categories and the BECE grades are presented in Table 1.

**Table 1: Background Characteristics of Students**

Characteristics		Responses	
		No.	(%)
<b>Courses</b>			
<b>Sciences</b>	Athletes	11	23.9
	Non-athletes	11	23.9
<b>General Arts</b>	Athletes	8	17.4
	Non-athletes	8	17.4
<b>Visual Arts</b>	Athletes	4	2.0
	Non-athletes	4	2.0
<b>Age Category</b>			
<b>16 – 18</b>	Athletes	17	37.0
	Non-athletes	14	30.4
<b>19 – 21</b>	Athletes	7	15.2
	Non-athletes	7	15.2
<b>22 and above</b>	Athletes	1	2.2
	Non-athletes	0	0
<b>Grades</b>			
<b>6 – 9</b>	Athletes	16	34.8
	Non-athletes	18	39.1
<b>10 – 15</b>	Athletes	5	10.9
	Non-athletes	4	8.7
<b>16 – 18</b>	Athletes	2	4.3
	Non-athletes	1	2.2

Source: Field Data (2012)

It can be observed from Table 1 that, the respondents were in the Sciences and the rest in General Arts and Visual Arts. This implies that all the students have had at least two years of experience as Senior High School students and have thus accrued some experience to tell whether participating in sports could affect their academic performance.

Table 1 indicates that majority of the respondents were between the ages of 16 and 18 and the rest between 19 and 21 years. However, one respondent was about 22 years. Table 1 also presents the grades of the respondents at the BECE by which the respondents were given admission into the school. It can be observed from the table that 73.9% of the respondents were excellent students who scored between aggregate 6 and 9 and 6.5% who may be considered not excellent students scoring between aggregate 16 and 18. This is an indication that all the students of Mfantshipim Senior High School are academically good students who voluntarily take part in sports.

To determine the interest of the students in sports, the respondents were asked some questions to determine whether they had interest in sports naturally or not. Table 2 presents the responses of the students in relation to their interest in sports.

**Table 2: Students' Interest in Sports**

Statement		Yes		No	
		No.	%	No.	%
Do you like sports?	Athletes	23	100	-	-
	Non-athletes	12	52.2	11	47.8
Did you play sports in JHS	Athletes	23	100	-	-
	Non-athletes	15	65.2	8	34.8
Do you currently participate in sports?	Athletes	23	100	-	-
	Non-athletes	7	30.4	16	69.6

**Source: Field Data (2012)**

The students' responses as presented in Table 2 reveal that, all the athletes (100%) liked sports, but only 12 out of 23 (52.2%) of the non-athletes liked sports. In addition, all the athletes played sports in the JHS and currently continue to play sports in SHS but only 15 (65.2%) of the non-athletes played sports in JHS and 7 (30.4%) currently participate in sports.

**Research Question One**

What is the Perception of Students of Mfantshipim Senior High School in Sports?

The study sought to know among others the perceptions of students of Mfantshipim Senior High School on students' participation in sports. To answer the research question, eleven questions were posed to elicit the views and perceptions of the students. Their responses are thus presented in Table 3.

Students' responded to eleven questions on a five point Likert scale items on the questionnaire. The students responded by indicating the extent to which they agreed or disagreed to statements or perceptions about students' engaging in sporting activities. The responses ranged from strongly agree, agree, undecided, disagree to strongly disagree. The responses were collapsed into three: agree undecided and disagree to facilitate the discussion of the findings.

**Table 3: Students' Perceptions Toward Participating in Sports**

Statement	Respondents	Agree		Undecided		Disagree	
		No.	%	No.	%	No.	%
Participating in school sports affects academic performance	Athletes	2	8.7	0	0	21	91.3
	Non-athletes	9	39.1	2	8.7	12	52.2
Playing sports has no negative influence on one's academic performance	Athletes	17	73.9	1	4.3	5	21.7
	Non-athletes	15	65.2	2	8.7	6	26.1
Playing sports has no positive influence on one's academic performance	Athletes	2	8.7	2	8.7	19	82.6
	Non-athletes	8	34.8	3	13	12	52.2
Participating in sports is a waste of time	Athletes	0	0	1	4.3	22	95.7
	Non-athletes	2	8.7	2	8.7	19	82.6
All students should participate in sports because it improves one's social stature	Athletes	20	86.9	1	4.3	2	8.7
	Non-athletes	19	82.6	1	4.3	3	13

**Table 3: Continued**

Some teachers discourage	Athletes	14	60.7	1	4.3	8	34.8
students from participating	Non-athletes	10	43.4	3	13	10	43.4
in school sports							
My friends think	Athletes	10	43.3	2	8.7	11	47.8
participating in sporting	Non-athletes	14	60.9	4	17.4	5	21.7
activities will affect my							
studies							
Engaging in sporting	Athletes	0	0	1	4.3	22	95.7
activities affect my studies	Non-athletes	9	39	2	8.7	12	52.2
Playing sports results in	Athletes	2	8.7	2	8.7	19	82.6
poor academic	Non-athletes	3	13	1	4.3	19	82.6
performance							
Sports boys at times get	Athletes	20	86.9	0	0	3	13
tired after playing sports	Non-athletes	13	56.5	1	4.3	9	39.1
that they miss classes							
Classes at times take place	Athletes	16	69.6	0	0	7	30
when sports boys are	Non-athletes	19	82.6	1	4.3	3	13
playing for their school							

**Source: Field Data (2012)**

From Table 3, it could be deduced that 21(91.3%) of the athletes disagreed with the perception that participating in school sports affected students' academic performance. Twelve out of the twenty-three non-athletes representing 52% also disagreed with the assertion. Seventeen of the athletes (73.9%) were of the view

that playing sports had no negative influence on students' academic performance, a view 65.2% of non-athletes also share. Both athletes (82.6%) and non-athletes (52.2%) disagreed with the view that playing sports had no positive influence on students' academic performance. A large majority of the athletes (95.7%) disagreed with the assertion that participating in sports was a waste of time. This was supported by 19(82.6%) of the non-athletes.

It could be observed from Table 3 that, while 14(60.7%) of the athletes were of the view that some teachers discourage students from participating in school sports, non-athletes on the other hand were divided as 43% agreed with the assertion, 3.13% were undecided and 43.3% also disagreed that some teachers discouraged students from participating in school sports. Athletes were also divided as to whether their friends think participating in sporting activities affected their studies, 10(43.4%) agreed while 11(47.8%) disagreed with the assertion but 14(60.9%) of the non-athletes agreed to the assertion that their friends think participating in sporting activities could affect their studies.

The students were asked directly whether engaging in sports affected their studies or not, 22(95.7%) of the athletes disagreed that engaging in sports affected their studies. This was supported by 12(52.2%) non-athletes who also disagreed that engaging in sports affected their studies. Both athletes (82.6%) and non-athletes (81.6%) disagreed that participating in sports results in poor academic performance. It is worth noting that 20(86.9%) of the athletes indicated that sports boys at times get tired after playing sports that they miss classes. Also 19(82.6%) of the athletes also indicated that classes at times take place when

sports boys are playing for their school which 82.6% of the non-athletes supported. These instances largely discourage students who are not naturally intelligent or gifted academically from playing sports to the detriment of their academics.

From the discussions above, it can be said that generally; athletes of Mfantsipim Senior High School have good perceptions about students participating in sports for the school. Athletes do not see participation in sports for the school as a factor that could affect their academic performance. This could be because the athletes still perform well academically so they do not see participating in sport as having negative effects on them. However, sports should not be held concurrently with studies such that athletes would miss lessons.

The findings are in line with Casey 1989, Parker and Johnson (2000), Melnick, et al., (1992), and Rasmussen (2000) who were of the view that sport participation improves students' achievement, motivation, improves students' grades, keeps them in school, raises their educational aspirations helps them appreciate health, exercise and fitness, helps them learn about themselves and to handle adversity, and helps them experience team work and sportsmanship.

### **Research Question Two**

What are the Perceived Benefits that Students of Mfantsipim Senior High School Derive from Participating in Sports?

This research question sought to indentify benefits students of Mfantsipim derived from participating in sports. The responses on the five point Likert scale



(strongly agree, agree, undecided, disagree and strongly disagree) were reduced to three points (agree, undecided and agree) to facilitate the analysis and discussions.

**Table 4: Perceived Benefits of Participating in Sports**

Statement	Respondents	Agree		Undecided		Disagree	
		No.	%	No.	%	No.	%
I undertake sporting activities to keep myself fit	Athletes	20	86.9	2	8.7	1	4.3
	Non-athletes	20	86.9	1	4.3	2	8.7
Sporting activities cannot help me release tension	Athletes	2	8.7	2	8.7	19	82.6
	Non-athletes	2	8.7	3	13	18	78.3
I undertake sporting activities to improve upon my skills	Athletes	20	86.9	1	4.3	2	8.7
	Non-athletes	18	78.3	3	13	2	8.7
Sporting activities do not give me pleasure	Athletes	0	0	2	8.7	21	91.2
	Non-athletes	9	39.1	3	13	12	52.2
Engaging in sporting activities do not refresh me for studies	Athletes	2	8.7	2	8.7	19	82.6
	Non-athletes	4	17.4	3	13	16	69.6

**Source: Field Data (2012)**

It can be deduced from Table 4 that, equal proportion of athletes and non-athletes 20(86.9%) agreed that they undertake sporting activities to keep themselves fit. In addition, 19(82.6%) of athletes and 18(78.3) of non-athletes disagreed that sporting activities could not help them release tension. Both

athletes (86.9%) and non-athletes (78.3%) agreed that they undertake sporting activities to improve upon their skills. However, 21(91.3%) of the athletes and 12(52.2%) of the non-athletes disagreed that sporting activities did not give them pleasure. Both athletes (82.6%) and non-athletes (69.6%) disagreed that engaging in sporting activities did not refresh them for studies.

It can thus be concluded from the findings that athletes of Mfantsiman Senior High School undertake sporting activities to keep fit, release tension, and improve upon their sporting skills. This implies that athletes are more likely to continue participating in sports so as to keep themselves strong, release tension and improve upon their skills. The findings confirm related literature reviewed on benefits derived from participating in sports. Literature suggests that people engage in sports for enjoyments, personal satisfaction and the opportunity to attain victory or obtain rewards (Kuh, 2001; Richards & Aries, 1999).

Popovic (1999) was of the view that, exercise and physical activity can provide something worthwhile in life. Something that one really enjoys, that gives a goal to aim for and a sense of purpose. Popovic listed some benefits of engaging in sports as: less tension, stress and mental fatigue, a natural energy boost, improved sleep, a sense of achievement, focus in life and motivation, less anger or frustration, a healthy appetite, better social life, and having fun (Rowland, 1990).

### **Research Question Three**

What is the Difference in the Academic Performance of Students who Engages in Sports and Non-Sports Students?

This research question sought to ascertain the differences in the academic performance of students who engage in sports and their counterparts who do not

engage in sports. This was to help establish the difference between students who engage in sports and their academic performance.

To answer the research question, the results of athletes and non-athletes were analysed comparing the mean scores of the students in a standardized test that is the West African Secondary School Certificate Examination for 2011 and 2012, in four core subjects (English, Social Studies, Mathematics and Science). The results of 100 students were used in the analysis, 50 of which were engaged in school sports and the other 50 non-sports students.

Students were graded on a nine point grade from A1, B2, B3, C4, C5, C6, D7, E7 and F9 with A1 being an excellent score and F9 representing failure. Grade A1 was scored 1 point; B2 was scored 2 points, C3 for 3 points respectively to F9 which was scored 9 points. The raw scores of the students were entered onto the SPSS programmes and analysis run to determine the differences in the mean scores of the students in the four subjects. The analysis of the students' performance is presented in Tables 5 and 6.

**Table 5: Analysis of Students' Performance**

Subject	Student Group	No.	Mean score	Standard Deviation
Social Studies	Athletes	50	2.10	1.25
	Non-athletes	50	2.96	1.82
English	Athletes	50	3.32	1.33
	Non-athletes	50	3.60	1.53
Mathematics	Athletes	50	3.50	2.13
	Non-athletes	50	4.05	2.42
Integrated Science	Athletes	50	3.26	2.19
	Non-athletes	50	3.72	2.62

It can be observed from Table 5 that students who engaged in sports performed better than their counterparts in all the four core subjects used for the analysis. The students-athletes performed better in Social Studies, English, Mathematics and Science as compared to non-athletes who did not participate in sports. This could be that the athletes were naturally intelligent or academically good and so they always performed better academically. It could also be that athletes realizing they might have missed lessons due to participating in sport may sit up to read and catch up with their counterparts who did not miss class for sport. Thus, the athletes going the extra mile the studying will obviously lead to better academic performance.

The findings confirmed that of Hanks (1979) who opined that participating in high school athletics have a basically salutary effect on the educational achievement of high school students where the educational performance of athletes was better than that of non-athletes.

Also, Phillips and Schafer (1971) indicated that athletes tend to exceed comparable non-athletes in their achievement of education goals.

**Table 6: Independent t-Test for Equality of Means**

Subject	Mean		Mean difference	t	Sig
	Athletes	Non-athletes			
Social Studies	2.10	2.96	0.86	2.76	0.03
English	3.32	3.60	0.28	0.98	0.04
Mathematics	3.50	4.04	0.54	1.98	0.12
Integrated Science	3.26	3.72	0.46	1.03	0.41

**Source: Field Data (2012)**

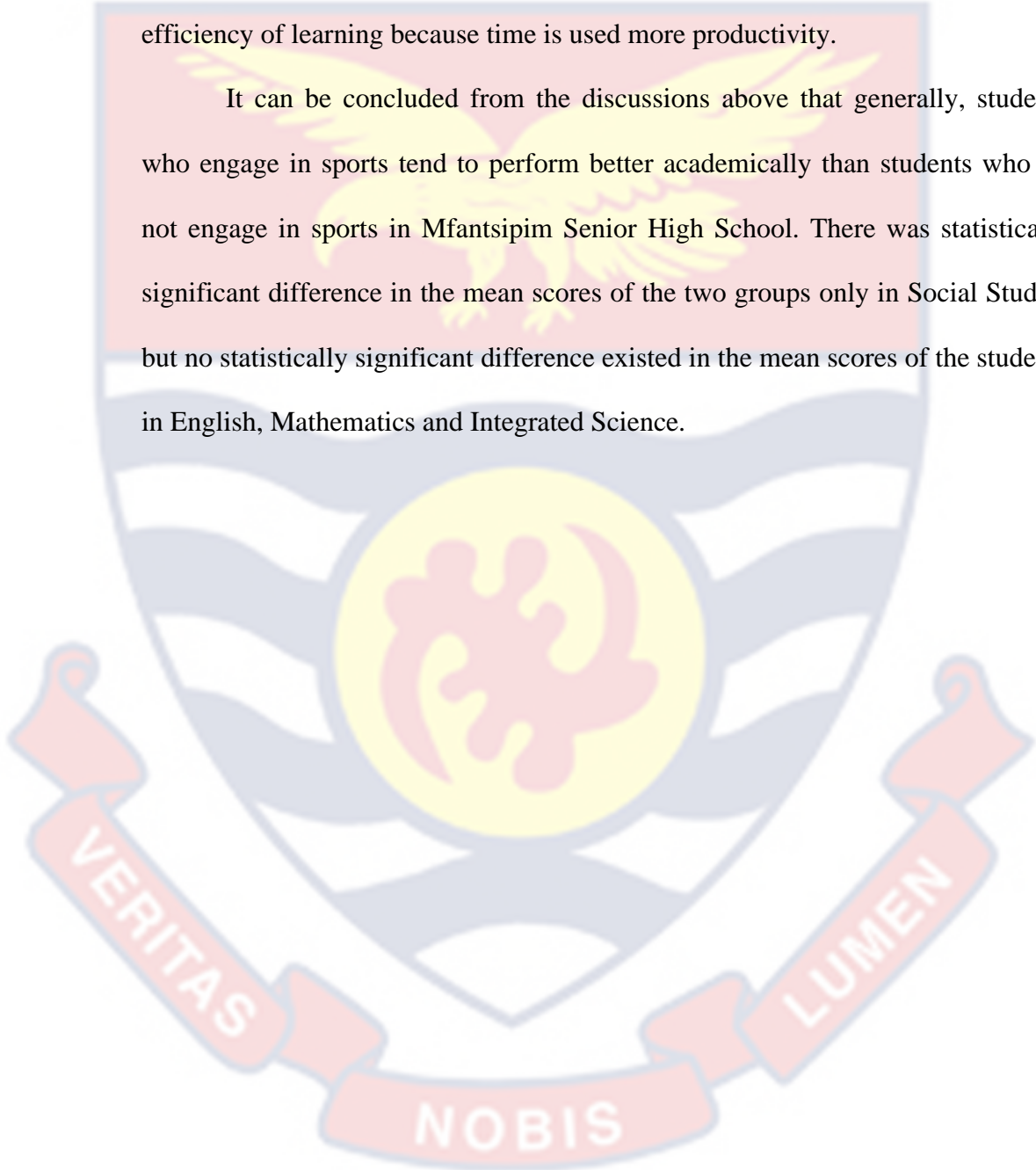
The data was further analysed to test for statistically significant difference in the mean scores among the two groups using the independent sample t-test. Table 6 presents the statistical significant differences between athletes and non-athletes. There was statistical significant difference in the mean scores of athletes (M=2.1, SD=1.25) and non-athletes (M=2.96, SD=1.82;  $t=.03$ ) in Social Studies at p value of 0.005. In addition, there was significant difference in the mean score of athletes (M=3.32, SD=1.33) and non-athletes (M=3.6, SD=1.53;  $t=.041$ ) in English at a p value of 0.005.

However, there was significant difference in the mean scores of students in Mathematics and Integrated Science. Athletes had (M=3.5, SD=2.13) and non-athletes (M=4.04, SD=2.42;  $t=.115$ ). Integrated Science, athletes (M=3.26, SD=2.19) and non-athletes (M=3.7, SD=2.6;  $t=.411$ ). Athletes being significantly better than non-athletes in English and Social Studies could be as a result of athletes' taking advantage of the environment to explore and learn from peers and other people they interact with during participating in sports. The athletes tend to broaden their horizon and enrich their language since they use English as the medium of interaction with other athletes.

This confirms the assertion of Micklewright (2002) who was of the view that athletes performed better academically than non-athletes. Sport teaches soft skills like taking orders, leadership, teamwork, performing in a regulating system, and socializing. Sport can help to form the character of young people because it teaches behavioral habits like motivation, discipline, tenacity, competitive spirit, responsibility, perseverance, confidence, and self-esteem, which cannot always be

acquired in classroom. Hanks' (1979) said that these behavioral aspects should lead to reduced truancy, increase the willingness to succeed in school, and encourage social interaction with other students, which are associated higher efficiency of learning because time is used more productivity.

It can be concluded from the discussions above that generally, students who engage in sports tend to perform better academically than students who do not engage in sports in Mfantshipim Senior High School. There was statistically significant difference in the mean scores of the two groups only in Social Studies but no statistically significant difference existed in the mean scores of the students in English, Mathematics and Integrated Science.



## CHAPTER FIVE

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter presents the summary of the study, conclusions drawn from the study and recommendations made about students' engagement in sporting activities and the effects on their academic performance.

#### Summary of the Study

The objective of the study was to compare the academic performance of athletes and non-athletes of Mfantshipim Senior High School in the Central Region of Ghana and determine whether there was any effect on the academic performance of students who engaged in school sports. The study adopted the causal comparative survey design which involved 50 students in Mfantshipim Senior High Schools in the Central Region. Both purposive and random sampling techniques were used in selecting athletes and non-athletes who responded to items on questionnaires.

The study was guided by the following research questions: what is the perception of students of Mfantshipim Senior High School towards participation in sports? What are perceived benefits Mfantshipim Senior High School students derive from sports participation? And what is the difference in the academic performance of students who engage in sports and non-sports in Mfantshipim Senior High School?

Literature was received under the following themes: concepts of sports participation, the need, aims and importance of sports participation in schools and

sports participation and academic performance. The results of students at the West Secondary Certificate Examination in Social Studies, English, Mathematics and Integrated Science in 2011 and 2012 were used in the study. The instrument was pilot tested to ascertain the reliability. The Chrombach Alpha coefficient of reliability was determined to be 0.76, an indication that the instrument was good enough to be used to collect data for the study.

### **Key Findings**

The major findings of the study were as follows:

1. The perception of the students about participating in sports was that playing sports had no negative influence on their academic performance and was not time wasting.
2. The perceived benefits derived from sporting activities by the students include keeping fit, release of tension, and improve upon sporting skills.
3. There was statistically significant difference in the mean scores of athletes and non-athletes in Social Studies and English, but there were no statistically significant differences in the mean scores of athletes and non-athletes in Mathematics and Integrated Science in their WASSCE results.
4. Athletes at times get tired after participating in sports that they miss classes and at times classes take place concurrently when athletes are participating for the school.

### **Conclusions**

The study concludes that students have good reasons for playing sports and do not see playing sports to be negatively affecting their academic performance.



However, students who play sports for the school were sometimes disadvantaged because they at times get too tired or miss class while playing sports for the school. The academic performance of the athletes in subjects like English and Social Studies was better as compared to their counterparts.

### **Recommendations**

In the light of the findings and conclusions of the study, the following recommendations are made:

1. It is recommended that students are encouraged to actively take part in sporting activities while they are in school since their involvement in sports has no negative effect on their academic performance.
2. It is recommended that students should be encouraged to take part in sports so as to help them keep fit, release tension, and improve upon their sporting skills.
3. School authority should help both athletes and non-athletes in the area of Mathematics and Int. Science
4. Students should learn to properly apportion time for sports and studies so that they do not over do one to the detriment of the other (sports and academics).

### **Suggestions for Further Research**

There is the need to conduct further studies in other senior high schools and other subjects since the debate is still ongoing as to whether engaging in sports activities affect students' academic performance or not. Further studies on the topic should be done on gender basis to find out whether there would

be differences in academic performance between female athletes and male athletes.



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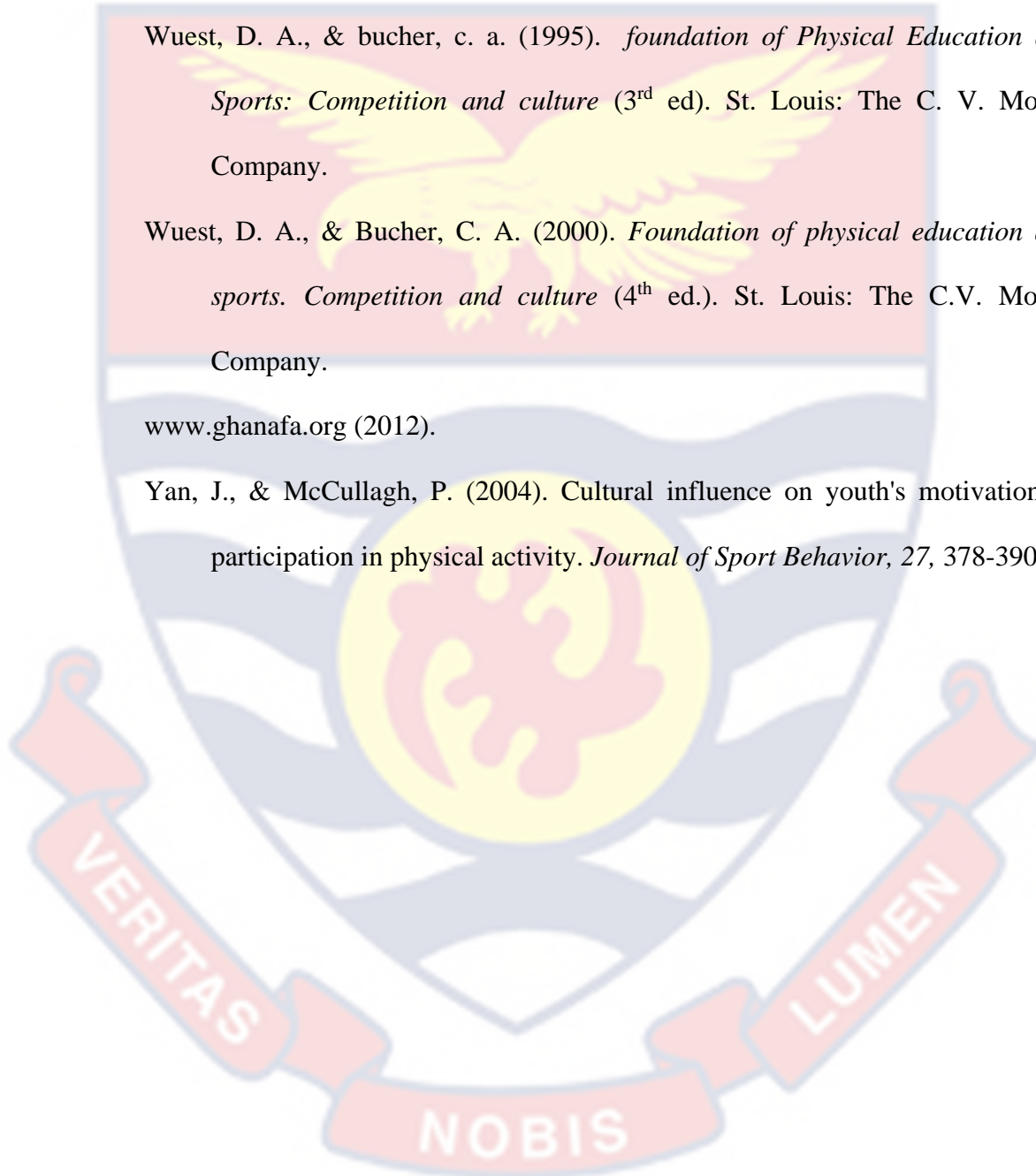
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**APPENDIXES**



**APPENDIX A**

UNIVERSITY OF CAPE COAST

FACULTY OF EDUCATION

DEPARTMENT OF HEALTH, PHYSICAL EDUCATION AND  
RECREATION**QUESTIONNAIRE FOR STUDENTS**

This study seeks to compare the academic performance of athletes and non-athletes in Mfantsipim Senior High School in Cape Coast. It will be very much appreciated if you could answer all the questions honestly. You assured of anonymity and the use of the data solely for academic purpose. Thank you.

**Section A: Back ground characteristics of respondents**

Please respond by ticking [] in the appropriate box provided.

1. Class:            Form 1 []      Form 2 []      Form 3 []
2. Age :    14 – 15 []      16 – 18 []      19 -21 []      22 and above []
3. What is your grade in B.E.C.E.? .....
4. Do you like sports?
  - a. Always []
  - b. Not always []
  - c. Not at all []
5. Did you play sports in Junior High School?    A. Yes []      b. No []
6. Do you participate in sports currently?      A. Yes []      b. No []

**Section B: Why students participate in school sports**

Respond to the reasons why students participate in sports by ticking one of the options. Key: SA – Strongly Agree, A- Agree, U – Undecided, D- Disagree, SD – Strongly Disagree.

Reason for participating in sports	A				D
1. Participating in school sports affect academic performance					
2. Playing sports has no negative influence on one's academic performance					
3. Playing sports has no positive influence on one's academic performance					
4. Participating in sports is a waste of time					
5. All students should participate in sports because it improves one's social stature					
6. Some teachers discourage me from participating in school sports					
7. My friend think my participation in sporting activities will affect my studies					
8. Engaging in sporting activities affect my studies					
9. Playing sports results in poor academic performance					
10. Sports boys at time get tired after playing sports					

that they miss classes					
11. Classes at times take place when sports boys and girls are playing for their school					

**Section C: Benefits for sports participation**

Please respond to the reasons why students participate in sports by ticking one of the options. Key: SA – Strongly Agree, A- Agree, U – Undecided, D- Disagree, SD – Strongly Disagree.

Benefits for participating in sports	A				D
1. I undertake sporting activities to keep myself fit					
2. Sporting activities cannot help me release tension					
3. I undertake sporting activities to improve upon my skills					
4. Sporting activities do not give me pleasure					
5. Engaging in sporting activities do not refresh me for my studies					

Thank you for being part of the study.

**APPENDIX B****Scores of Students at the West African Secondary School Certificate****Examination****Scores of athlete students at the West African Secondary School Certificate****Examination 2011**

<b>Code</b>	<b>Social Studies</b>	<b>English</b>	<b>Mathematics</b>	<b>Integrated Science</b>
001	A1	B3	B3	B3
002	B3	C4	A1	A1
003	A1	B3	B3	B3
004	C5	C4	C5	C6
005	B2	B3	C5	C6
006	A1	C4	C5	B3
007	B3	B3	E8	B7
008	B2	C4	B2	B2
009	B3	C5	E8	E8
010	A1	A1	B3	A1
011	B2	C5	D7	C4
012	B2	B3	B3	C4
013	B2	C4	D7	D7
014	B3	B3	A1	A1
015	B2	C4	C4	C4
016	C5	C5	C5	D7
017	B3	C4	C5	B3
018	A1	B2	A1	A1
019	B3	C4	D7	E8
020	A1	B3	A1	A1

**Scores of non-athlete students at the West African secondary school  
certificate examination 2011**

<b>Code</b>	<b>Social Studies</b>	<b>English</b>	<b>Mathem atics</b>	<b>Integrat ed science</b>
001	A1	B3	B3	B3
002	A1	C4	B3	B2
003	A1	B2	C5	B3
004	D7	C6	C6	F9
005	C5	B3	B2	D7
006	C5	C6	D7	C4
007	B3	B3	A1	B3
008	C6	C6	F9	D7
009	C5	C4	B3	B3
010	B3	B3	C6	C4
011	A1	B3	A1	B2
012	A1	B3	B3	B3
013	C4	C4	C6	C6
014	B3	C5	C6	C6
015	A1	B3	A1	A1
016	C4	D7	C5	E8
017	B3	B3	B2	B3
018	D7	C5	E8	D7
019	B2	C4	C4	C5
020	C5	C5	D7	C6

**Scores of athlete students at the West African secondary school  
certificate examination 2012**

<b>Code</b>	<b>Social Studies</b>	<b>English</b>	<b>Mathematics</b>	<b>Integrated science</b>
001	B2	C4	C6	B3
002	B3	C4	B3	B2
003	B3	B3	B3	C6
004	A1	B2	A1	A1
005	A1	B3	B3	B3
006	B3	D8	C6	C6
007	A1	B2	A1	A1
008	B2	B3	B3	C6
009	B3	B3	B2	B2
010	B2	B3	B2	B2
011	B3	B3	C4	C4
012	A1	B3	B3	B3
013	A1	A1	A1	A1
014	B2	B2	A1	A1
015	A1	B3	B2	B3
016	A1	B3	C4	B3
017	B2	C4	C4	A1

018	D7	E8	F9	E8
019	A1	B3	C5	B3
020	A1	B2	A1	A1
021	A1	B3	C4	A1
022	A1	A1	A1	A1
023	A1	B3	B2	A1
024	B2	B3	B3	B3
025	B2	B3	B3	B2
026	B3	C4	B3	B3
027	A1	B2	A1	A1
028	A1	B3	B3	B3
029	B3	B3	B3	C4
030	B3	B3	B3	C4



**Scores of non-athlete students at the West African secondary school  
certificate examination 2012**

<b>Code</b>	<b>Social Studies</b>	<b>English</b>	<b>Mathematics</b>	<b>Integrated science</b>
001	B3	B3	B3	B2
002	A1	B3	B3	B1
003	A1	A1	A1	A1
004	B3	C6	C5	B3
005	B3	C5	B3	B3
006	B2	C5	D7	C6
007	B2	B3	B3	B3
008	B3	B2	B3	A1
009	B2	B3	B2	B3
010	C6	C6	E8	D7
011	B3	B3	E8	C5
012	B2	B3	F9	C6
013	A1	A1	A1	A1
014	B2	A1	A1	A1
015	B2	B3	B3	B2
016	B2	B3	B3	B3
017	A1	B2	A1	A1
018	C4	B3	C4	B3



019	B3	C5	C5	D7
020	B2	B3	B3	B3
021	A1	B2	B3	A1
022	B2	B3	B3	B2
023	B3	B3	D7	C6
024	C6	C6	C6	B3
025	E8	C5	C6	C5
026	B2	B3	B2	A1
027	B3	B3	D7	C6
028	B3	C6	B3	C6
029	B2	B3	A1	A1
030	A1	A1	A1	A1

