

CHAPTER II

REVIEW OF RELATED LITERATURE

The present chapter covers the available literature pertaining to the studies made on sports performance, academic achievements and economic status. The review of literature has been collected from a number of studies undertaken by the physical education and sports scientists. Numerous experimental studies and journal articles addressing the relationship between physical activity and academic performance have been completed and professionally published. The majority of the studies are cross sectional, however, a few longitudinal studies have been conducted as well. Because of the multitude of studies only few are cited here, however, an inclusive table summarizing studies that generally depict positive relationship between physical activity academic performance and economic status can be listed here. Considering the purpose of the present study the reviews have been classified into the following sub-sections.

a. Sports performance and academics

b. Sports performance and economic status

Recent literature in the area of sports performance and academics is reviewed below:

2.1 a. Studies related to sports performance and academics

Marsh (1988) studied that participation in too many activities produced diminishing returns participation in sports and other extra curricular activities was consistently beneficial but participation in sports and other extra curricular 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 education goal. Sports involvement was not necessarily detrimental to academic pursuits. Influence of sports involvement was particularly strong for boys who were not otherwise predisposed to attending college sports involvement tended to engender high perceived peer status which in turn stimulated a desire for further status acquisition through college attendance.

Reith (1989) studied that through a survey of a large national sample. The hispanic high school female students who participated in sports were found to be more likely to score well on achievement tests to study in high school and continue their education in colleges than their non athletic peer's in contrast black female high school athletes were found to have fewer special benefits from sports participation. They reported higher popularity than non-athletes and were more involved in extra curricular activities but the urban black female students who participated in sports and went directly to do work who after high school actually fared worse in their careers than the non athletes did.

Braddock and Royster (1991) conducted a study of the impact of participation in sport activities an academic resilience among african-american 8th grade students and their analyses indicated that sport participation for these students was positively related to their aspirations to enroll in college preparatory programmes in high school to have definite plans to complete high school and enter college. Both interscholastic and intramural sport participants derived social status advantages (i.e., popularity and

sense of importance) among their schoolmates which were directly, related to their involvement in sports. They were less likely to be involved in.

Trent & Braddock (1992) found that sports could facilitate positive racial, ethnic relations as well as positive inter-group attitudes and behaviours among northern and southern desegregated schools. Crain (1981) reported similar findings number of researchers focused on the influences of sport participation on various psychosocial aspects of high school students as a literature shows one such benefit is that participation in sports activities could provide extrinsic reward to students and help them form.

A report on the condition of education United States Department of Education, National Center for Education Statistics in 1995 found that participation in extra curricular activities may affect academic performance, attachment to school and social development. The report further stated that almost every high school in the United States offers some type of extra curricular activity such as music, academic clubs and sports. These activities provide opportunities for students to learn the values of teamwork a channel for reinforcing skills and the opportunities to apply academic skills in other arenas as a part of a well rounded education

PCPFS Research digest (1996) focused on physical activity for youth. Physical activity and sports involvement are important developmental opportunities for both boys and girls as they learn to move and move to learn about themselves, their bodies and their social contexts. Contributions include increased strength and power better cardiovascular functioning, enhanced immune system responses, opportunities to develop moral reasoning, positive self concepts and social interaction skills. There are

however unique dimensions of the sport experience for girls in terms of physiological and psychological/emotional development and the challenges which sometimes exist between socially influenced expectations (i.e. idealized body physique) and the health benefits of regular exercise (body composition, body weight, menstrual functioning etc).

McCarthy and Jones (1997) found that high school students who participated in interscholastic activities had an overall grade point average of over 3.0 on a 4.0 scale while the non-participants' average GPA was under 2.5 on the 4.0 scale (National federation of state high school association, 2002). Another study done in 2000 reported statistical significance in the higher G.P.As of athletes compared to non athletes. Data collected also indicated that athlete's academics improved during their season of play. Females reporting high participation had higher G.P.As and class ranks than those male and female students with low participation or no participation.

Shephard (1997) studied curricular physical activity and academic performance. Advocates of quality daily physical education for prepubescent children frequently encounter the argument that such initiatives will harm academic progress the impact of daily physical education upon the academic performance of primary school students is thus reviewed with particular references to studies conducted in Vanves (France), Australia and Trois Rivières (Quebec) when a substantial proportion of curricular time (14- 26 %) is allocated to physical activity learning seems to proceed more rapidly per unit of classroom time. So that academic performance matches and may even exceed that of control students. Children receiving additional physical education show an acceleration of their psychomotor development and this could provide a mechanism include increased cerebral blood flow greater arousal

changes in hormone levels enhanced nutrient intake, changes in body build and increased self esteem. Academic teachers may also favor the enhanced physical education programme creating halo effects and the resulting release time may enhance their academic teaching irrespective of mechanisms the implication for public policy is that daily required physical education can be introduced when a child enters primary school without compromising academic development. Give the importance of establishing positive health habits from an early age school boards should be encouraged to follow a policy of required daily physical activity in primary schools.

Symons et al., (1997) studied bridging student health risks and academic achievement through comprehensive school health programmes in the national action plan for comprehensive school health education representatives for over 40 health education and social service organizations viewed education and health as independent system participation concluded that healthy children learn better and they cautioned that no curriculum can compensate for deficiencies in student health issues confronting today students school face enormous pressure to improve academic skills. Local school leaders and stakeholders often remain unconvinced that improving student's health represents a means to achieving improved academic outcomes. A rich body of literature confirms a direct link between student health risk behaviour and education outcomes education behavior and student attitudes about education school that offer physical activity programmes that meet those standards report positive effects an academic achievement including concentration improved mathematics reading and writing test scores and reduced disruptive behaviour even when time for physical education reduces the time for academics providing more opportunity for increased physical activity leads to improve test scores.

Melnick, et al., (1992) found that athletic participation was significantly related to lower dropout rates for minority youth. Moreover, the researchers state that although athletic involvement does not correlate with greater academic gains in this group, it is helpful in keeping high risk youth engaged in the educational system.

Dexter (1999) conducted a study on the relationship between sport knowledge, sport performance and academic ability: empirical evidence from GCSE (General Certificate of Secondary Education). The literature concerning links between sport knowledge, sport performance and academic ability is reviewed and related to empirical evidence obtained from a GCSE examination in Physical Education, together with GCSE Mathematics and GCSE English grades. For most sports examined, there was a small but significant positive correlation between sport performance and GCSE Mathematics and English grades, confirming the findings of most previous research. Using a multilevel multivariate model, average sport performance, academic ability and sex were important explanatory variables for sport knowledge, yet only academic ability was an important explanatory variable for the concept of physical education knowledge. Ability in game sports, rather than athletics, was related to sport knowledge. Males scored higher for sport knowledge than females, after taking into account sport performance and academic ability. The effects of sport performance and academic ability on sport knowledge were stable across schools, but there was some evidence that the effect of sex varied across schools. These findings support theories of a role for sport knowledge in sport performance; that such a role should be greater in game sports; that academic ability is important for gaining such knowledge; and they highlight differences in sport knowledge between the sexes.

Trudeau and Shephard (2008) reviewed the relationships of academic performance and some of its determinants to participation in school-based physical activities, including physical education (PE), free school physical activity (PA) and school sports. Quasi-experimental data indicate that allocating up to an additional hour per day of curricular time to PA programmes does not affect the academic performance of primary school students negatively, even though the time allocated to other subjects usually shows a corresponding reduction. An additional curricular emphasis on PE may result in small absolute gains in grade point average (GPA), and such findings strongly suggest a relative increase in performance per unit of academic teaching time. Further, the overwhelmingly majority of such programmes have demonstrated an improvement in some measures of physical fitness (PF). Cross-sectional observations show a positive association between academic performance and PA, but PF does not seem to show such an association. PA has positive influences on concentration, memory and classroom behaviour. Data from quasi-experimental studies find support in mechanistic experiments on cognitive function, pointing to a positive relationship between PA and intellectual performance. Given competent providers, PA can be added to the school curriculum by taking time from other subjects without risk of hindering student academic achievement. On the other hand, adding time to "academic" or "curricular" subjects by taking time from physical education programmes does not enhance grades in these subjects and may be detrimental to health.

Linder (1999) studied school children and youth from grade 5 to 7 (average age range 9 to 18 years) in Hong Kong completed a sports participation questionnaire and rated their own academic performance. Results indicated that frequency and

extent of participation tended to be significantly higher for students with high self ratings than for students with less satisfactory self reported performance and that this trend was significantly stronger in females than males and present in all age groups. The correlations between participation and academic performance were generally significant but low. These results indicate that those who perceive themselves to be the better achievers in academic subjects are as a group the more frequent participants with stronger motives for involvement in sports and physical activity.

Sallis et al., (1999) studied the effects of health related school physical education programme on standardized academic achievement scores and assessed in 759 children who completed metro politech achievement test before and after the program schools were randomly assigned to condition (a) specialists taught the sports, play and active recreation for kids curriculum (b) classroom teachers were trained to implement the curriculum and (c) controls continued their usual programmes. The trained teacher condition was superior to control on language, Reading and basic battery. The specialist condition was superior to control on reading but inferior on language. Despite devoting twice as many minutes per week to physical education as controls, the health related physical education programme did not interfere with academic achievement health related physical education may have favourable effects on students academic achievements.

Scheuer and Mitchell (1999) studied a positive relationship of physical activity and academic performance has been explored through several studies. Different from the above studies test of measurements Linder used a questionnaire to gather data on both physical activity and academic performance of 4690 at the age group of 9-18

year old students in Hong Kong both tests were administered by trained data collectors to classrooms of students. Each student personally completed her questionnaires by rating their own physical activity and academic performance. After data analysis through the state view computer programme result showed a significant but low correlation indicating that students who perceive themselves to have high academic performance generally participate in more physical activity (Linder 1999). It is obvious that no direct correlations can be assumed from this study however a positive relationship between physical activity and perceived academic performance was found enhanced brain function energy levels of body builds / perception self esteem, and behavior have been attributed to physical activity and to improve academic performance one cannot make direct correlations from the information offered. However it is obvious that many positive relationships have been suggested perhaps instead of decreasing physical activity school officials should consider developing enhanced physical activity programmes.

Daley and Ryan (2000) studied the relationship between adolescents academic performance and participation in physical activity 232 boys and girls (from ages 13 - 16 years) were randomly selected and their academic performance was assessed on previous examination scores in English, mathematics and science. Participants were also asked to list all the sports based physical activities in which they normally participated during a typical week and to indicate how many times per week they took part in each activity and the duration of each overall no significant correlations were found, although weak negative correlations were recorded between the amount of time (in minutes) in sport and exercise and English scores for children ages 13, 14 and

16 years. A similar association was also noted for science scores of children from 16 years old.

Quiroz et al., (2000) conducted a survey of 4800 high school students in Minnesota discovered that 91 percent of the students reported those who participate in school athletics and activities tend to be the school leaders and role models 92 percent reported that activities provided an opportunity to develop self discipline (NFHS 2002) in addition to the positive effects of participation lack of participation has been shown to have damaging effects. An analysis of national data showed that students who have not spent any time in extra curricular activities are 57 percent likely to have dropped out of school by the time they were seniors, 49 percent more likely to have tried drugs, 37 percent more likely to have become teen parents and 27 percent more likely to have been arrested than those who spend over four hours per week in extra curricular activities (NFHS 2002).

Lindner (1999) studied. A representative sample of 2998 students from Hong Kong secondary school completed a questionnaire about their involvement in sports and physical activity students assessed their own academic performance and actual academic grades were obtained for about half (1448) of the students.

The finding confirms those from Lindner's first study and shows that students who are active sports participants are more confident about their academic ability; this research also shows that sports participation does not adversely affect students actual academic performance. The study did not find a strong positive link between sports participation and actual academic results. So although playing sport does not

necessarily make young people better students, the study certainly shows that sport does not harm most students' academic results.

Wood (2001) studied that California schools with high percentage of students who did not routinely engage in physical activity and healthy eating habits has smaller gains in test scores than did other schools. Schools that offer intense physical activity programmes have seen positive effects on academic performance and achievement (e.g., improved mathematics reading and writing test scores less disruptive behaviour even when the added physical education time takes away from class time for academics. A recent national survey of 500 teachers and 800 parents conducted and found that 90 percent of teachers and 80 percent of parents are convinced that physically active children are better able to learn.

Lindner (2002) studied the relationship between academic performance and physical activity participation using objective measures of scholastic achievement and the effect of banding (academic tracking). The sample comprised 1447 students (aged 13-17 years) in secondary grades (736 boys, 711 girls). Academic records were collected from the schools and a participation questionnaire was administered to the students. School banding was found to be a significant predictor of participation time, and students from higher banded schools had generally greater participation time than lower band students conversely perceived academic performance and potential tended to be higher for students with more participation time in physical activity. However for actual academic grades this positive association was not found when banding was taken into consideration. No relationship was found for the middle and high band students while a slight negative relationship was observed for the low band students.

Paul and Angelo (2003) studied the relation of sports participation to academic performance of high school students. Data were collected on 2081 randomly selected male and female high school students identified as athletes or non athletes and ten public senior high schools in the Miami country public schools district the results of the overall analyses showed a positive and significant relationship between athletes were absent fewer days from school per year than non-athletes and athletes earned a significantly higher cumulative grade point average than their non athlete peers a significant statistical differences was also found in the tenth grade FCAT test scores in both reading and mathematics were used as co-variables athletes earned significantly higher grade 10 FCAT test scores in both reading and mathematics than non athletes.

Although cause and effect cannot be inferred from this study the findings do indicate the potentially beneficial value of athletic programmes in public secondary education. The study concluded the Florida high school graduation requirements might seriously considered the role of inter-scholastic athletic programmes as a valid and essential extra-curricular activity.

Lane (2003) studied the relationship between self efficacy and dissertation performance among a sample of undergraduate sports studies students sixty level 3 student volunteers completed an open ended questionnaire to assess competencies needed for dissertation success qualitative results identified that self efficacy was conceptualized in six themes 1. Maintaining motivation 2. Planning 3. Obtaining support 4. Understanding theory 5. Organizing time and 6. Effectively writing the dissertation and these themes were developed in to a 3 item questionnaire findings

lend support to previous research that shows self efficacy can significantly predict academic performance.

Trost (2006) summarises the relationship between physical activity and academic performance among children and adolescents yields the following insights sacrificing physical education for classroom time does not improve academic performance. Kids who are physically active and fit are likely to have stronger academic performance. Active breaks can improve cognitive performance and class room behaviour. Kids who are more physically active tend to perform better academically. Short activity breaks during the school day can improve student's concentration skills and class room behaviour.

A natural study conducted in 2006 analyzed data collected from 11957 adolescents across the U.S to examine the relationship between physical activity and academic performance adolescents who reported either participating in school activities such as PE and team sports or playing sports with their parents were 20 percent more likely than their sedentary peers to earn an 'A' in maths or English.

Harvard researcher Barros reported in the journal of school health (Feb 2009) that the more physical fitness tests children passed the better they did on academic tests the study of 1800 middle school students suggests that children can benefit academically from physical activity during gym class and recess. A small study of children with attention deficit hyperactivity disorder last year found that walks outdoors appeared to improve scores on tests of attention and concentration. Notable children who took walks in natural settings did better than those who walked in urban areas, according to the report published in the journal of attention disorders.

Taylor, Kuo et al., (2001) a child environment and behaviour researcher at the landscape and human health laboratory at the University of Illinois says other research suggests that all children not just those with attention problems can benefit from spending time in nature during the school day the reason may be that the brain uses two forms of attention 'Directed' attention allows us to concentrate on work reading and tests while 'involuntary' attention takes over when we distracted by things like running water, crying babies, a beautiful view or a pet that crawls onto our lap or wild animals,.

It's pretty clear that all human beings experience attention fatigue. Taylor said out attention has to be restored from the fatigue and there is a growing body of research evidence that nature is one way that seems particularly effective at doing it.

Hood et al. (1992) also studied student athletes at the college level. However, they looked at the impact of athletics, part-time employment, and other activities on academic achievement. Specifically, they studied the affects of these things on college freshman. Participants of this study were athletes that were on a University of Iowa athletic team during their freshman year between 1980-1986. The study was done in two parts: (1) admissions data was examined and (2) students returned a mailed survey. The study found that the high school GPA, ACT scores, and university GPA were significantly lower for male revenue athletes. However, when looking at college GPA alone, with the exception of football players, both revenue and non-revenue athletes achieved academic grades similar to their corresponding groups. The results of Hood et al. (1992) survey found that there was a relationship between the number of hours spent studying and the mean grade point average. Overall, this study found

that the participation in athletic, whether revenue or non-revenue, had no major impact on the academic achievement of student athletes during their freshman year.

Kanter and Lewis (1991) studied the academic performance of student athletes in community colleges in California. This study looked at GPA, course taking pattern, and performance by gender and ethnicity. Eleven community colleges participated in the study, giving transcripts of athletes who participated in women's volleyball, softball and basketball, as well as, men's basketball, football, and track in 1987. The colleges also gave the transcripts and demographic data for a set of students to be used as a comparison group. The comparison group should not be mistaken as a control group because they weren't matched for demographical characteristics. There are multiple limitations to this study, which should be considered:

1. The sports selected may not represent all students in athletic programmes.
2. There are more male athletes in the study.
3. There is no true control group.

Even with these limitations the study found that women athletes earned a higher GPA than male athletes. Women athletes also completed more credits than men and took less remedial courses. Athletes completed more credits than the comparison students, but earned a slightly lower GPA 2.50 compared to 2.62. Another finding of the study was that female athletes earned a 2.63 GPA compared to a 2.59 GPA for comparison students. However, if we look at the demographical breakdown of race only, White students actually earned a higher GPA than their comparison group (2.72 compared to 2.69 GPA). Yet, when White female athletes and the comparison group

were compared to each other the athletes earned a 2.72 GPA while the comparison group earns a 2.70.

Stephens and Schaben (2002) did a study on the effect of interscholastic sports on academic achievement of middle school students. The participants in the study were 8th grade athletes and non-athletes; during the 1998--1999 school year at an urban middle school in Nebraska. School records were obtained for GPA, maths grade, California Assessment Test score, and gender. Then, students also filled out a questionnaire describing their participation in sports. The results of this study were quite different than those of collegiate athletes. In this study, athletes had significantly higher GPA than non-athletes. For all athletes the mean GPA was 3.15 and for non-athletes the mean GPA was 2.40. When looking at gender male athletes had higher GPAs than non-athletes, and so did the female athletes. The study found that sports not only seemed to enhance academic performance, but it also helped students develop discipline, set goals, manage time, and develop self-confidence. If athletes transferred these skills to their academics they were generally successful, and the effects of their athletic participation reached beyond the classroom and gym walls. Although this study had some very interesting findings there were two major limitations to the study:

1. The size of the sample is rather small.
2. There is a lack of control for socioeconomic status.

Even with these limitations it still seemed that the fact remained athletes have higher GPAs than non-athletes.

Ballantine (1981) did a secondary study on the correlation between athletic participation and academic achievement. The question that the study dealt with was, does athletic programme influence the academic achievement of the participants? This study looked briefly at past studies done on high school and collegiate athletes. However, the main focus of the study was on Junior High School students. Data was then collected on 158 boys looking at three specific factors:

1. Difference in GPA of athletes and non-athletes.
2. Relationship of socioeconomic status and previous GPA.
3. Measures of athletic involvement and academic achievement.

The 158 boys were then matched in to 63 pairs based on athletic status, socioeconomic status, and previous GPA. After, the statistical analysis results showed that there was a significant relationship between athletes and non-athletes GPA. The findings also showed that the higher the socioeconomic status, the higher the GPA, and the greater the chances of him being an athlete and doing well academically. Thus, there is a correlation between participation in sports and academic achievement.

Naomi (1994) studied the relationship between participating in high school sports and student outcomes, such as, grades, self-concept, discipline problems, and educational aspirations. The sample was a group of sophomores in 1990 that were in the 8th grade in 1988. The data for each student was gathered through four questionnaires, which was given to students, parents, teachers and schools. For this study, the independent variable was athletic participation. The dependent variables were grades, self-concept, and locus of control, discipline problems, and educational aspirations. In order to examine the statistics a multiple regression analysis was used

to look at the relationship between background, independent variables and dependent variables. Through statistical analysis she found students who were more involved in school sports had higher grades, higher self-concept, more internal locus of control, higher educational aspirations, along with less discipline problems while in school. Although, the effects in the study weren't large, they were statistically significant and very consistent across all of the analyses.

Dumais (2009) did a study that examined the relationships between sophomore year activities and senior year math achievement and college expectations, for two cohorts (sophomores in 1990 and 2002). The dependent variables within this study were 12th grade math achievement test scores and expectations of a bachelor's degree. While, the independent variable was the participation in 10th grade activities, specifically time spent on school activities, hanging out with friends, working, watching TV, and using computers. This study found that the 2002 cohorts spent more time than their 1990 peers participating in all non-work activities. School activities were positively associated with both math and bachelor's degree expectations for students from both groups. The data also showed that females in the 2002 group were more likely than males to expect to earn a bachelor's degree. As a result we also found that although there were not many gender differences in the effect of activities, all differences showed that males were more affected by their use of time than females. Perhaps, most importantly it showed that school-sponsored activities were found to be beneficial for both math achievement and for college expectations.

In a study that compared the academics of athletes and non-athletes in a rural high school Zaugg (1998) compared 134 high school students (52 athletes and 82 non-athletes) during the 1996-97 school year. Of the athletes there were 24 males and 28 females, while of the non-athletes there were 42 males and 40 females. This study compared the mean mid-term and final grades for all students by discipline, school behavior, and the estimated time commitment of the athletes. This study was only conducted over the first semester, and once all of the data was gathered paired t-tests were used to compare the mean scores of the athletes' and non-athletes' mid-term grades, final grades, disciplinary visits, and absences. The results of this study found that the only significant differences in mid-term grades were found in science, in which, the athlete group was significantly higher than the non-athlete group. The same finding also resulted for the final grades. There was also no significant difference between the two groups on disciplinary visits. Yet, there was a significant difference in which the athletes had missed fewer classes than the non-athletes. Although this study had some interesting results it also has its limitations: the school size was small, parental support, difference in high profile sports, and a longitudinal study would probably highlight fluctuations during and after the season. Even with these limitations Zaugg (1998) found that athletes were matching or exceeding non-athletes' academic and behavioural performances while participating in sports.

Eitle (2005) completed a study on the relationship between sports participation and achievement, which looked specifically at whether or not gender and race mattered. The sample for this study was a random drawing of 25 8th graders from each of the approximately 1,000 randomly selected middle schools nationwide that participated in the national education longitudinal survey in 1988. Those students

were then given surveys two years later when they were sophomores in high school. The measures that she looked at during this study were sports participation, family and individual factors, and academic achievement. In order to find the associations between sports participation and academic achievement domains a multivariate analysis was conducted. The analysis of the data found that when controlling for family resources and academic orientation of friends the participation of sports in 10th grade had a positive effect on all achievement domains for females, but only a positive effect on math achievement for males. T-tests were used to determine if there were gender differences in the effect of sports participation. Those t-tests revealed that only in the effect of sport on reading achievement test scores was there a significant gender difference. Overall, the effects of sports participation on achievement were still significant even after including controls for other factors related to achievement.

Hanson and Kraus (1998) completed a study using the high school and beyond (HSB) study which looked at the role that sports played in science achievement for women who were in high school in the 1980s. Due to being interested in the relationship between sports and science achievement in high school, the study was limited to the base year and follow-up year, in which the students were sophomores and seniors. Only the 11,683 students who participated in all phases of the study were used for this analysis. Due to outside influences on students' experiences: demographics, family characteristics, school variables, and individual characteristics were all controlled. In order to complete the statistical analysis of data t-tests and ordinary least squares regression analysis were used. The analyses found that:

1. Men were more likely than women to participate in sports as sophomores.
2. The participation in sports was more likely to have a significant effect on the science experiences of the female than male students.
3. Senior year participation in sports had a significant positive effect on female students / access to and attitudes toward science.
4. Not all women benefited equally from involvement in sports.

Although we had many impressive findings there were many things that happened in the past 10 years that may have affected the results of this study. For example, since the early 1980s sports opportunities for young women have increased and the negative stigma associated with women athletes has decreased.

Robst and keil (2010) found that student-athletes at the NCAA Division III level have lower GPAs than non-athletes. However, they also found that the athletes at the Division III institution had lower high school GPAs and SAT scores upon entering than non-athletes. Another discovery at the college level is that female athletes are more engaged, report greater gains and maintained similar grades to their non-athlete counterparts according to Umbach et al., (2006).

In secondary educational institutions it has been found that elite high school athletes were 2 times more likely to earn a post-secondary degree within 8 years of graduation than their non-athlete counterparts according to Carlson and Scott (2005). In the same study they also found that athletes are half as likely to smoke and more likely to be employed full-time and earn a higher income than their non-athlete counterparts 8 years after graduation. On the other hand, according to Carlson &

Scott athletes were 1.5 times as likely to drink alcohol and binge drink as the non-athletes.

The impact of athletics on academic achievement has been researched on many levels, mostly at the college level and dealing with male athletes. Robst and Keil (2010) found that athletics affects students psychologically, which may strengthen competitive drive in non-athletic areas, boost self-confidence, and reinforce self-discipline necessary for academic success.

All over the country students are calling themselves student-athletes, and rightfully so. After having looked at existing data that studied the effect of athletics on academic achievement we found that there is a significant relationship between the two. On all levels, from NCAA to middle school to high school, athletes are performing as well or better than their non-athlete counterparts.

2.2 b. Studies related to sports performance and economic status

Feltz and Weiss (1984) found that socioeconomic level and extent of activity involvement were factors contributing to most of the differences between groups in which higher SES levels and higher levels of involvement were predictive of higher ACT scores. These findings were opposite to the notion that involvement only in athletics was detrimental to educational achievement for female students. SES levels and extent of extra curricular involvement were influential other than student's participation categories on female's academic achievement. In another study Snyder and Spreitzer (1977) analyzed survey data on participation in sports as related to educational expectation among high school girls. They focused on athletic participation, and serious involvement in music as socialization experiences within the school context the researchers found positive relationship between both types of extra curricular participation and educational expectations this stage seems to suggest that sports for these high school girls die not appear to be dysfunctional.

Kay & Jackson (1991), Jackson & Henderson (1995) studied socio economic conditions often destruct women in their ability to reach optimum levels of physical activity and lifestyle the physical activity profile, lifestyle pattern socio economic status and constraint profiles of south African women have not been well documented in research. The objective of this study was to determine profiles of leisure – time physical activity lifestyle socio economic status and constraints to participation for south African women between the ages of 30 and 65 years of age residing in Potchefstroom the respondent comprised 440 women who were randomly selected from the Potchefstroom area data regarding demographic information physical

activity participation, lifestyle socioeconomic status and constraints to participation were collected from the respondents overall the women's income and physical activity participation profiles could be classified as below average health declines with age and trends also exist which may indicate future health deterioration should the physical activity participation lifestyle socioeconomic status and traditional constraints of these women remain unchanged.

Calfas and Taylor (1994) effects of physical activity on psychological variables in adolescents to identify the most consistent relationship among psychological variables and physical activity in youth (ages 11-21 years) 20 articles on depression, anxiety, stress, self esteem, self concept, hostility anger intellectual functioning and psychiatric disorders were reviewed physical activity was consistently related to improvements in self esteem, self concept depressive symptoms and anxiety stress. The evidence for hostility anger and academic achievement was inconclusive no negative effects of physical activity were reported. The literature suggests that physical activity in youth is psychologically beneficial more research is needed to confirm previous findings. Adolescents should engage in moderate or vigorous aerobic activity approximately three times per week, for a total of at-least 60 minutes per week.

Hanushek (1997) studied school resources and student achievement in his survey he concluded that there is no systematic evidence that more resources such as higher teacher student ratio or per student expenditures would improve student learning. A basic problem in analyzing the effect of resources on student achievement is that resources are likely to be correlated with unobserved characteristics that affect

achievement typically poor school districts afford to spend less on education but it is not clear whether low spending levels or other characteristics of poor neighbourhoods are responsible for the low achievement levels in these schools on the other hand rural schools with small number of students often have smaller classes and higher per student spending the students in these rural schools may perform differently from urban schools for reasons unrelated to school resources.

Some recent studies rely on “Natural experiments” to create exogenous variation in class size. Angrist and Lavy (1999) identify the effect of class size from discontinuous changes in class size imposed by Maimonides rule that determines the relationship between school enrolment and class size in Israel. Hoxby, (1998) identifies the effect of class size from natural population variation in Connecticut school districts and no significant class size effects.

Kingston & Smith (1997) in their study of socio economic status and racial / ethnic differences in functional status associated with chronic diseases emphasize that household income and household wealth have sizable independent relationships with both the likelihood of experiencing a chronic condition and the number of functional limitations for these with these condition in addition to the relationships of income and wealth with these health outcomes are highly nonlinear with the greatest influence of these SES factors shown in the poverty and near-poverty population they found that income and wealth disparities associated with the presence / absence of a chronic condition and much larger among African American than among whites (based on a cross sectional analysis of a national sample of men and women aged 51 through 61 from the 1992 health and retirement survey).

Diego and Sanders (2001) studied eighty nine high school seniors were administered a questionnaire that gathered information on their exercise habit, relationship with parents and peers, depressive tendencies sports involvement drug use and academic performance students with a high level of exercise had better relationships with their parents (including greater intimacy and more frequent touching were less depressed spent more time involved in sports used drug less frequently and had higher grade point averages than did students with a low level of exercise).

Hyp (2003) studied academic performance of Korean children is associated with dietary behaviors and physical status the purpose of this study was to obtain a fuller understanding of the association of dietary behaviors physical status and socio economic status with academic performance in Korean teenagers. The subjects in this study were 6463 boys and girls in grade 5,8 and 11 in Korea a self administered questionnaire and the food frequency form were used. Grade point average (GPA) height, weight and physical fitness score for the year were recorded from the school record. The academic performance of the students was strongly associated with dietary behavior especially with regularity of three meals even after control for parents' educational level. Regular breakfast and lunch were more important in grades 5 and 8 while regular dinner was more related with academic performance in grade II small positive associations of height and physical fitness to academic performance were also found. The relative importance of regularity of meals was greater than that of socio economic status and physical status in older teenagers the results of this study suggest that accommodation of better dietary environment and nutrition education for three regular meals is recommended.

Baljit (2003) studied measures of socio economic status, are usually based upon people's occupational status. So in a survey of fifteen year olds conducted in their schools how can collect such information about their parents? The most convenient method is to ask the young people themselves to describe their parents' occupations. This method is cost-effective and does not require making contact with parents a stage which would be likely to increase non response of students to the survey as well as non response to the required questions. But one can trust the socio economic data obtained this way.

The OECD Programme for International Student Assessment (PISA) was conducted in 2000 students aged 15 to 16 were assessed in their literacy skills and a chief aim of this study was to see how socio economic status was associated with literacy. Students reporting of their parents' occupation and highest level of education was used as an indicator of parental social economic status. During the pilot study in England, conducted in 1999 the reliability of this proxy data was investigated students reported details of their parent occupation and education at school by self completion questionnaire. Interviews were then carried out by telephone with 307 mothers and 244 fathers of these student measures of socio economic status and educational attainment derived from both sources were compared.

This paper describes the reliability of student reporting and identifies areas of weakness. It also identifies implications for the analysis of data as the quality of reporting was related to students' literacy skills.

Buchmann and Diprete (2011) Studied in all societies the family plays a crucial role in shaping the educational experiences and achievement of children and

the transmission of status from one generation to the next throughout the world children of high status parents are more likely to get ahead in school three interrelated process, the transmission of financial capital the transmission of cultural resources and the transmission of social capital from parents to children are most often called on to explain this phenomenon.

Considine and Zappala (2010) conducted a study on the influence of social and economic disadvantage in academic performance of school students in Australia. The relationship between family socioeconomic status (SES) and the academic performance of children is well established in sociological research. Another important dimension is the factors that may influence educational outcomes within low SES families. This paper presents new data from a sample of over 3000 students from financially disadvantaged backgrounds to estimate the extent of socioeconomic, family, individual and contextual factors on school educational performance. Results obtained using binomial logistic regression techniques indicate that gender, unexplained absences, parental educational attainment, housing type, ethnicity and student age are all statistically significant variables and predictors of academic performance. In contrast, family structure, the main source of family income and geographical location do not significantly predict outcomes in school performance once other factors are controlled for. The findings support the notion that the 'social' and the 'economic' components of the socioeconomic status equation have distinct and separate influences on educational outcomes. While financial assistance to schools and families in need is important, policies and programmes that also assist low-income parents in providing appropriate psychological and educational support for their children should also be promoted.

Anne (2006) studied relationship between sports participation and self-esteem during early adolescence the main purpose of the present study was to examine the links between sports participation and self esteem with particular interest in the possible mediating role of physical self esteem the participants in this study were 382 student (167 boys; 215 girls) in grade 5-8 participants completed a series of paper and pencil measures detailing their sports participation as well as their self perceptions concerning physical and general self-esteem sports participation was related to all indices of self-esteem and this was equally true for boys and girls two distinct but related factors were identified as components of physical self-esteem (physical appearance and physical competence) Results supported a mediational model with physical self-esteem mediating the relationship between sports participation and general self-esteem significant sex difference were noted with regard to specific indications of physical self-esteem.