

## ACADEMIC PERFORMANCE OF KENYAN SECONDARY SCHOOL ATHLETES AND NON-ATHLETES

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*This study investigated the relationship between participation in competitive sports and academic performance of secondary school students in Kenya. It was hypothesized that athletes will have better academic performance than non-athletes. Gender, type of school, social economic status (SES), Kenya Certificate of Primary Education (K.C.P.E.) marks and participation in competitive sports were used as independent variables, while academic performance was regarded as the dependent variable. Data were collected from 490 subjects randomly selected from 15 secondary schools within Nairobi Province of Kenya. Questionnaires, interviews and school records were used for data collection. Data were analysed through MANOVA and Tukey H.S.D. tests. Findings revealed that athletes consistently performed better than non-athletes. It was also found that SES, K.C.P.E. and type of school correlated positively with academic performance while sex did not. It was recommended that competitive sports be emphasized in secondary schools because it is not detrimental to academic performance.*

**Key words:** Secondary school students, competitive sports, academic performance, athletes, non-athletes, Kenya.

### INTRODUCTION

The belief that athletic training was conducive to intellectual development existed in the civilisations of ancient China and India. This belief is also evident in the Greek philosophy of "men sano in corpore sano" which has survived through the ages and today provides a philosophical basis for many health and fitness programmes, and sporting activities (Bucher, 1979).

Over the years, many research studies have been conducted on the possible correlations between participation in sports and academic attainment, but the results have been conflicting. For instance, Arnold (1972) and Hendry (1978) contended that the level of physical fitness is related to intellectual accomplishments, particularly mental alertness and concentration. Similarly, Clarke and Clarke (1978) argued that a person's general learning potential for a given level of intelligence is increased or decreased in accordance with his physical fitness.

**Submitted:** 25th August 1998

**Revision accepted:** 5th November 1998

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At high school and college levels, Jable (1986) noted that athletes tended to have better attendance records, lower drop out rates and less involvement in drugs than do non-athletes. Significant positive relationship between sports participation and academic achievement have been reported over the years (Spady, 1970; Schaters & Armers, 1975; Hanks & Eckland, 1976; Otto & Alwin, 1977; Lauenders, Feltz, Obermeir & Brouse, 1978; Hausser & Lueptow, 1981; Branddock, 1981; Feltz & Wess, 1984; Howell, Miracle & Rees, 1984; Kiveu, 1986; Melnick, Vanfossen & Sabo, 1988; Synder & Spreitzer, 1990; Marsh, 1993). Coleman (1961) and Spady (1971) however, suggested that participation in competitive sports is detrimental to academic achievement. More particularly, Coleman propounded the "spend-drain" theory which postulated that concentrating on sports expends one's time and energy so that resources are not available to achieve success in educational pursuits.

With the above contrasting findings, this study investigated the hypothetical correlation between participation in competitive sports and academic performance of secondary school students in Kenya. This was particularly apt as there is the erroneous view in developing countries especially in Africa that those who take part in competitive sports are "academically bankrupt" and intellectually "never-do-wells". This has prompted several parents to discourage their children from taking part in school sports.

Furthermore, in presenting a view from the south on this controversial issue of participation in competitive sports and academic achievement, it is necessary to control for such factors as sex, type of school, social economic status which have been documented as factors affecting academic performance (Eshiwani, 1986; Kathuri, 1984; Maundu, 1988). The study was guided by the following objectives: First, to compare the academic performance of athletes and non-athletes. Second, to establish the possible influence of gender, type of school, socio-economic status and scholastic aptitude on academic performance of athletes and non-athletes.

## METHODS AND PROCEDURE

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**Sample:** A total of 490 subjects drawn from secondary schools within Nairobi Province in Kenya took part in the study. Schools within Nairobi have continued to fare very well in the national secondary school competitions and comparatively performed well in national examinations without much variations over the years.

**Questionnaire:** A direct contact questionnaire was used for data collection due to its suitability for establishing rapport with respondents and minimal wastage of time (Borg



& Gall, 1983). A closed-ended questionnaire was used to seek athletes' and non-athletes' background information as well as the socio-economic background of their parents.

### **Socio-economic Status (SES)**

SES was determined using father's or mother's occupational status (whichever was higher) plus the higher of either parent's educational level. Estimates of occupational status and educational level were added together to provide a more discriminating index of SES. This information led to the classification of students into three main SES classes: upper, middle and lower as suggested by Robertson (1973).

### **Kenya Certificate of Primary Education (K.C.P.E) Marks:**

The K.C.P.E. examination is normally scored out of 700 and is used as a measure of scholastic aptitude to recruit the students into the national, provincial, district and private schools. For ease of statistical analysis, the students' K.C.P.E. marks were classified into three groups: A (536-646) B (423-535) and C (310-422).

### **Interview Guide**

An interview schedule was conducted with the gamesmasters of the sampled schools where they responded and confirmed the students' participation in competitive sports. From the responses obtained, a student was categorised as an athlete if they have represented the school in trial competitions on various games during their studentship days. A student who had not represented the school team in any external sporting competition was categorised as a non-athlete. School records were examined and they revealed information pertaining to the end-of-term mark which each student obtained during the 1996 and 1997 academic years with a validity of 0.60 and reliability of 0.85.

### **Data analysis:**

The subjects' end-of-term marks were standardized using the method recommended by Ebel (1979). The means of the five terms were added together and divided by five to get the overall mean which was used in subsequent data analysis. The data were summarised and presented using tables and percentages. The relationship between participation in competitive sport and academic performance (where academic performance is influenced by sex, type of school, SES and K.C.P.E. marks) was compared using MANOVA (multi-factorial analysis of variance) and the Tukey post hoc test. The hypothesis was tested at .05 level of significance.

## Results

The results of the MANOVA indicated significant main effects of type of school, SES and K.C.P.E. marks while gender did not yield any significant main effects. Table 1 presents main and interaction effects of MANOVA on gender, type of school, SES and K.C.P.E. marks.

**Table 1:** Main and interaction effects of MANOVA on gender, type of school, SES and K.C.P.E. marks

Effects	df	F-ratio	Probability
Gender	1	1.14	P>0.05
School type	1	311.68	P<0.05*
SES	2	113.69	P<0.05*
K.C.P.E. marks	2	156.11	P<0.05*
<b><u>Interaction effects</u></b>			
Gender X Athletic Status	1	151.15	P>0.05
School Type X Athletic	1	11.75	P<0.05*
Status	2	10.37	P<0.05*
SES X Athletic Status	2	13.21	P<0.05*
K.C.P.E. X Athletic Status			

\* Significant at 0.05

## GENDER

**Table 2A:** The main effects of gender and athletic status on academic performance

GENDER	STATUS			MAIN EFFECT OF GENDER
	ATHLETES		NON-ATHLETES	
Male	52.38	4	48.28	50.38
	<u>13.78</u>		<u>7.32</u>	<u>1.12</u>
Female	66.16	19.2	40.96	51.5
Main effect of athletic status	54.26	6.6	47.67	50.97



**Table 2B:** Summary of the MANOVA on gender and athletic status on academic performance.

SOURCE	S.S	df	Ms	F
Athletic Status	5336.2	1	5336.1	40.62*
School type	149.7	1	149.7	1.14
Athletic Status X Sex	19852.64	1	19852.64	151.15*
Error	63832.93	486	131.34	
Total	89170.93	489		

\*P&lt;0.05

The results showed that there were differences in the performance of athletes and non-athletes, as well as males and females in academic performance (Table 2A and 2B)

### TYPE OF SCHOOL

**Table 3A:** The main effects of athletic status and type of school on academic performance.

Type of School	ATHLETIC STATUS			Main Effect of School
	Athletes	Non-Athletes		
National	64	1.22	62.78	63.39
	13.34		<u>20.37</u>	<u>16.86</u>
Provincial	50.66	<u>8.26</u>	42.4	46.53
Main effect of athletic status	57.33	4.74	52.9	54.96

**Table 3B:** Summary of the MANOVA on athletic status and type of school on academic performance

SOURCE	S.S	df	Ms	F
Athletic Status	2752.27	1	2752.27	26.26*
School type	35670.98	1	35670.98	311.68*
Athletic Status X School	1231.63	1	1231.63	11.75
Error	50946.2	486	50946.2	
Total	89170.93	489		

\*P&lt;0.05

Athletes performed better than non-athletes in academic performance, and students from the National Schools performed better than those from Provincial Schools (Table 3A and 3B).

**Table 4A:** The main effects of athletic status and SES on Academic performance.

Type of School	Athletic Status			Main SES
	Athletes	Non-Athletes		Effect
Upper	57.45	8.92	48.53	52.99
	<u>4.1</u>		<u>-.16</u>	<u>1.97</u>
Middle	53.35	<u>4.66</u>	48.69	51.02
	<u>2.81</u>		<u>0.86</u>	<u>1.84</u>
Lower	<u>50.54</u>	<u>2.71</u>	47.83	49.18
Main effect of athletic status	53.78	<u>5.43</u>	48.35	51.06

**Table 4B:** Summary of the MANOVA on athletic status and SES on academic performance.

SOURCE	S.S	df	Ms	F
Athletic Status	3612.45	1	3612.45	360.88*
SES	1132.93	2	1132.93	113.17*
Athletic Status X SES	103.89	2	103.89	10.37
Error	4839.25	484	10.01	
Total	9698.52	489		

\*P<0.05

The results (Tables 4A and 4B) showed that athletes from higher socio-economic status did better than the non-athletes on academic performance.



**Table 5A:** The main effects of athletic status and intelligence on academic performance.

K.C.P.E. Marks	Athletic Status			Main K.C.P.E. Marks Effect
	Athletes	Non-Athletes		
A. (536-646)	65.10 6.56	<u>1.58</u>	63.52 11.95	63.31 <u>8.25</u>
B. (423-535)	58.54 11.78	<u>6.97</u>	51.57 12.12	55.06 <u>11.964</u>
C. (310-422)	46.76	<u>7.31</u>	39.45	43.10
Main effect of athletic status	57.14	<u>5.63</u>	51.51	54.32

**Table 5B:** Summary of the MANOVA on Athletic Status and KCPE marks on Academic Performance.

SOURCE	S.S	df	Ms	F
Athletic Status	3883.44	1	3883.44	17.69*
Intelligence	34265.09	2	34265.09	156.11*
Athletic Status X Intelligence	2901.23	2	2901.23	13.21*
Error	106233.69	484	219.49	
Total	147283.45	489		

\*P&lt;0.05

Results also showed that there was a significant difference in the mean academic performance of athletes and non-athletes with different K.C.P.E. marks (Table 5A and 5B).

## DISCUSSION

In this study the male athletes performed poorer than the female athletes on measures of academic achievement. This is in agreement with the findings reported in a previous study by Spady (1970) who contended that male high school students who participated only in athletics lack the academic skills necessary to fulfil their higher educational aspirations. On the other hand, the female athletes performed significantly better than non-athletes contrary to Feltz & Weiss' (1984) observation that participation in competitive sport has a greater influence on the academic achievement for males than females. Interaction effects of both athletic status and gender revealed that athletes

performed better than non-athletes regardless of their sex. This is in agreement with the findings of Coakley (1986) and Kiveu (1986).

This study also revealed that national students performed better than their provincial counterparts, thus corroborating Eshiwani (1986), and Maundu's (1988) assertion that higher performance of national school students is due to the disparity in provision of boarding and teaching - learning resources. However, across the board, athletes performed better than non-athletes and Coakley's (1986) contention that athletes make more efficient and effective use of their limited time and energy seems to be supported by the findings of this study.

The effect of athletic status was more pronounced among the athletes in upper classes. Though the effect of SES on academic performance of students was more pronounced among the non-athletes, it was evident that athletes from the upper socio-economic class scored higher than the athletes from middle and lower classes. These findings are in agreement with observations by Feltz & Weiss (1984) that individuals from homes with higher SES were more likely to obtain higher ACT scores than those lower on the SES continuum. Similarly, Coleman *et al.* (1966) concluded that SES accounts for more of the variance in educational aspirations than involvement in schools activities.

In this study, there was no significant difference in academic performance among the non-athletes from different SES classes although previous studies on male academic orientation suggest that athletics may be an important means for the achievement of higher educational aspirations by individuals of lower SES (Buhrman, 1972; Picou & Curry, 1974).

Also in this study the effect of K.C.P.E. scores on students academic performance was influenced by the students' athletic status and therefore athletes who had higher K.C.P.E. scores, scored higher than those with lower K.C.P.E. scores. Thus Coakley's (1986) contention that physical fitness associated with participation in interscholastic sports would have a direct impact on the intellectual abilities of adolescents holds true in this study. The secondary school athletes of this study performed significantly higher on academic performance than non-athletes. This is also in agreement with Synder and Spreitzer's (1978) argument that athletes are physically and mentally superior to non-athletes.

According to Coakley (1986), the most logical explanation for higher grades among athletes is that inter-scholastic sports attract students with self-confidence, above



average academic abilities, and favourable attitudes towards schooling. Therefore, this probably explains why the athletes performed better than non-athletes. Furthermore, Maundu (1988) had shown that secondary school entry qualifications are important determinants of school achievement. Thus, K.C.P.E. scores are good predictors of success in secondary education.

## CONCLUSION AND RECOMMENDATIONS

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It is apparent from past research on academic orientation as well as from the findings of this study that the stereotype of “dumb jock” (Feltz & Weiss, 1984; Sailes, 1993) is a misnomer as athletes consistently performed better than non-athletes on measures of academic performance. Therefore, competitive sports should be emphasized at all levels of Education as sports participation is not detrimental in any way to academic achievement. Athletes from national schools exhibited better academic performances than those from provincial school. Therefore, it is recommended that there should be equality in the provision of both instructional and sporting infrastructure to all Kenyan schools without bias.

The study has revealed that social background factors are becoming increasingly important in determining scholastic success. It is therefore, deemed appropriate that parents should socialize their children into sport and encourage them to take part in sports without prejudice to “status” sports. Since the scholastic aptitude of athletes is a determinant factor of success in secondary schools, it is imperative that policy-makers should ensure that pupils are thoroughly prepared for the secondary education.

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Submitted: 21 June 1998

Revision accepted: 25 July 1998

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