

**A Comparison Of The Educational Performances Of
Athletes
And Nonathletes In 133 North Carolina
High Schools**

**Roger L. Whitley
Camden Middle School**

**James S. Pressley
East Carolina University**

We are grateful for the loyal support of our subscribers and members that make this website possible. **National FORUM Journals** is one of the few professional journals that provide free access to published articles. Your contribution of any amount will ensure continued free access to the published articles of our family of journals. Donations may be sent to: National FORUM Journals, 4000 Lock Lane Suite 9/KL, Lake Charles, LA 70605

Abstract

The purpose of this study was to determine if there was a difference in the educational performance of high school athletes and nonathletes in the North Carolina high schools. Through the voluntary compliance of 133 (44%) of the 301 member schools of the North Carolina High School Athletic Association who were eligible to participate in this study, quantitative data were gathered on 126,700 students in grades 9 through 12 from across the state for the 1994-95 school year. The grade point averages (GPAs), attendance rates, discipline referral rates, dropout rates, and graduation rates for the athletes and nonathletes from the schools who participated in the study were compared. Paired *t*-tests were used to determine if there were any differences in grade point averages and attendance between: athletes and nonathletes, black males athletes and nonathletes, black male athletes and black male nonathletes, white male athletes and nonathletes, white male athletes and white male nonathletes, black female athletes and nonathletes, black female athletes and black female nonathletes, white female athletes and nonathletes, white female athletes and white female nonathletes. Discipline referrals, dropout rate, and graduation rates were compared for athletes and nonathletes only, because the computer program utilized to gather the data for this study generated only percentage figures for the major groups, athletes, nonathletes, and all students. The number of discipline referrals, dropouts, and graduates for each subgroup were recorded and could prove to be relevant for future studies, but were not determined to be directly germane to this study. Paired *t*-tests were used rather than independent *t*-tests, because of the dependent measures within each school were correlated. This pairing of data within each school alleviated the problem of between school comparisons where dependent measures may have differed, because of individual differences in curricula offerings and the recording of discipline referrals. The results of this study led to the conclusion that those students who participated in interscholastic athletics in the North Carolina high schools surveyed in this study outperformed their nonathlete counterparts in the high school setting. This finding was consistent with the related literature on other studies conducted relative to this topic.

Introduction

Both Soltz (1986) and Nuhn (1991) reported that athlete GPAs were consistently higher than those of nonathletes. The analysis figures for GPA in this study support the findings of Soltz and Nuhn. There was a marked difference in the mean GPA for athletes and nonathletes. The athletes in this study maintained a mean GPA that was significantly higher than the mean GPA of the nonathletes. The athletes' average GPA was 21.6% higher than that of the nonathletes. The analyses of the subgroup data on GPA support the finding of the athlete and nonathlete comparison. Not only did each subgroup have a higher GPA than the nonathlete group, but three out of the four subgroup GPAs, white male athletes, black female athletes, and white female athletes, were significantly higher. Only the black male athlete subgroup did not have a significantly higher GPA than the nonathlete group. In addition, all four athlete subgroups possessed significantly higher GPAs than their corresponding nonathlete subgroups.

The analyses of the data in this study also revealed that nonathletes averaged missing almost a week and a day (5.97 days) more than the athletes. The comparisons of the attendance data in this study support Patranella's (1987) finding that extracurricular activity participants' attendance rates were significantly higher than those of nonparticipants. The findings of this study were markedly higher than those reported in a Minnesota High School League survey in 1983. The Minnesota survey reported the nonathletes in Minnesota missed 1.32 days more per school year than the athletes.

The comparisons of the athlete subgroup attendance data with the nonathlete group and subgroups yielded the same type of results as the GPA comparisons. Each of the athlete subgroups missed significantly fewer days than the nonathlete group and their corresponding nonathlete subgroups.

Landers and Landers (1978) reported that there is a definite connection between athletic participation and lower incidences of delinquent behavior. The analyses of the data on discipline referrals in this study supported that conclusion. For the schools who recorded their discipline referrals on the Student Information Management System (SIMS) in this study, a significantly smaller percentage of athletes got in trouble than nonathletes. The mean average referral rate for the athlete group was 30.3% as compared to the mean average referral rate of 39.9% for the nonathlete group. This means that 9.6% more of the nonathlete populations in the reporting schools were referred and had discipline incidents recorded in SIMS than the athlete populations.

The result of the analyses of the data on the dropout rates of athletes and nonathletes in this study lend support to what Schafer and Armer reported in 1968. They found that 9.2% of the nonathletes dropped out of school before graduating, as compared to only 2% of the athletes (Schafer & Armer, 1968). In this study, the percentage of dropouts was significantly lower for athletes than the nonathletes. The mean dropout percentage for the athletes in this study was less than 1% (.7%), while the mean dropout percentage for the nonathletes was just over 9% (9.1%).

There is currently no directly related research on the graduation rates of athletes and nonathletes. However, it follows that, based on the research on dropout rates, the percentage of athletes who graduate would be higher than the percentage for nonathletes. The results of the analyses of the data in this study supported that notion. The percentage of graduates was significantly higher for the athletes than the nonathletes. The comparison of the mean graduation percentages for athletes and nonathletes revealed that the athletes had a 4.9% higher graduation rate than the nonathletes.

-

Limitations of the Study

There were six areas in which this study was limited:

1. This study did not deal with cause and effect.
2. The participation of the member schools of the NCHSAA was voluntary.
3. The data collection instrument generated only certain data.
4. The racial subgroup analyses were limited to black and white.
5. The possible impact between-school differences on the dependent variables of grade point average and discipline referral.
6. Threats to the validity of the study must be recognized.

This study did not deal with cause and effect. In the review of literature, the researchers found authors who speculated as to why athletes do or do not perform better in school than nonathletes. Researchers have cited factors such as socioeconomic status, the impact of athletic training and discipline, the college aspirations of athletes, the desire of athletes to remain academically eligible to participate, the time constraints placed on athletes due to participation in sports, and the psychological and social impact of athletic participation as being factors that influence the educational performance of athletes. Even the contexts of the school and community in terms of their size and location have been cited as factors that might influence the quality

and amount of participation in extracurricular activities programs. There may be merit in each of these assertions, but this study was not designed to test those merits. As previously stated, the purpose of this study was to determine quantitatively if there was any difference in the educational performances of athletes and nonathletes.

Attempting to gather the data created the second limitation of this study. The North Carolina High School Athletic Association (NCHSAA) is the governing body for athletics for the public high schools in North Carolina. Through the Association, 301 high schools were asked to participate and 133 chose to respond. The goal was 100% participation on the part of the schools, but since participation in this study was voluntary, that goal was not reached. Still the nonrandomized sample of schools utilized in this study represents a fairly accurate cross section of both the size, in terms of the number of students enrolled, and geographic location of the high schools in North Carolina.

The third limitation occurred as a result of the instrument utilized to gather the data for this study. A computer program was designed, tested, and then distributed to the schools surveyed in this study. The participating schools installed the program on their (SIMS) computers and were able to access the grade point averages, attendance records, discipline referral records, dropout records, and graduation statistics for their students. Each respondent submitted a data report for analysis. The program did not break down the athlete group according to participation in a particular sport, nor was it possible to classify a student athlete as being an active participant in a sport or not at any particular time during the year. Once a student's name was listed on a roster for a sport sent by the school to the NCHSAA, either varsity or junior varsity, the student was considered to be a member of the athlete group. Participation by students in more than one sport was not delineated in this study. The computer program also did not access any information on End Of Course test results or Scholastic Aptitude Test scores.

The fourth limitation involved the analyses of minority data. The computer program did generate numbers for American Indian, Asian, and Hispanic students and those figures were included in the tabulations done on the two major groups, athletes and nonathletes. However, the actual subgroup numbers for these minorities were so small that their subgroup comparisons were not analyzed in this study. Only the data for blacks and whites were examined in this study. In addition, this study did not compare performances across racial or gender lines. Only the performance within race and gender was examined.

The fifth limitation was between school differences on the measurement of grade point average and discipline referral. Four factors were related to potential between school differences. First are the differences in curricular offerings from school to school. Though a core curriculum is in place in all North Carolina High Schools, the courses offered in addition to the core curriculum in different high schools across North Carolina vary greatly. This variance is due in part to the second factor noted in this study, which is the difference in the amount of state and local funding that high schools across North Carolina receive. These differences in funding result from the amount of state funding given to school systems, which is based on school enrollment, and the amount of local funding as determined by local tax bases. The third factor is the subjective nature of grading systems employed by different teachers within and between schools. Students are not all evaluated on the same course content, nor are the evaluation instruments or schemes the same from teacher to teacher or school to school. The final factor present in this study relates to the recording of discipline referrals by the individual schools. Each school develops its own discipline regulations, decides which incidents will be recorded, and is allowed the option of recording violations of those regulations on SIMS. There were disparities in the data received from the different schools on discipline.

The sixth limitation was the threats to the validity of this type of study. First, there is the problem of assuming that participation in an activity influences all who participate in the same way (Kleese, 1994). As Holland and Andre (1987) noted, different types of activities and different levels of success in those activities cause variance in the effects of participation on those involved in the activities. Brown (1988) pointed out that individual differences affect the influence of the activity on those who participate. Selection of the unit of analysis is another problem that occurs when doing this type of study. Grouping students into classes, clubs, or athletic teams produces interactions among members of the group that

influence the behavior of the individual members (Holland & Andre, 1987). The most serious methodological problem in research on the relationship of extracurricular participation and academic achievement is the self-selection of students into participant and nonparticipant groups (Kleese, 1994). Preexisting differences among individuals may account for observed differences among participating and nonparticipating groups (Holland & Andre, 1987). Brown (1988) stated that the effects of extracurricular participation on a secondary school student's academic achievement and personal development are probably positive, but the impact is definitely mitigated by the student's social and intellectual background.

Findings

In spite of the limitations noted, the results of this study supported Hanks' (1979) notion 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 nonathletes. This finding held true when analyses were conducted along both racial and gender lines. The analyses of the data for the different subgroups showed that all of the athlete subgroups outperformed the nonathlete group as a whole, as well as their nonathlete subgroup peers. Each of the following null hypotheses, which were based on the premise that there is no difference in the educational performance of athletes and nonathletes, were rejected:

1. There is no difference in the grade point averages (GPA) for athletes and nonathletes.

There is no difference in the GPAs for the subgroups of:

black male athletes and nonathletes.

black male athletes and black male nonathletes.

white male athletes and nonathletes.

white male athletes and white male nonathletes.

black female athletes and nonathletes.

black female athletes and black female nonathletes.

white female athletes and nonathletes.

white female athletes and white female nonathletes.

2. There is no difference in attendance for athletes and nonathletes.

There is no difference in the attendance for the subgroups of:

black male athletes and nonathletes.

black male athletes and black male nonathletes.

white male athletes and nonathletes.

white male athletes and white male nonathletes.

black female athletes and nonathletes.

black female athletes and black female nonathletes.

white female athletes and nonathletes.

white female athletes and white female nonathletes.

3. There is no difference in the number of discipline referrals for athletes and nonathletes.
4. There is no difference in the dropout rates for athletes and nonathletes.
5. There is no difference in the graduation rate for athletes and nonathletes.

In all but one case, the comparison of the black male athlete subgroup's mean GPA to the nonathletes' mean GPA, the performance of the athletes was significantly better than the nonathletes. In that case, although the mean GPA of the black athletes was higher than that of the nonathletes, the p -value generated by the comparison was not equal to or less than the conservative p -value used in this study.

The athletes significantly outperformed the nonathletes in 20 of the 21 comparisons made in this study, which led to the rejection of the primary null hypothesis of this study which was:

There is no difference in the overall educational performance of athletes and nonathletes in the North Carolina High Schools that responded to the survey utilized in this study.

For each of the five variables examined in this study, the performances of the athletes were significantly better than the performances of the nonathletes. First, the fact that the mean GPA for the athletes was .86 higher on a 4-point scale than the mean GPA of the nonathletes is an indication that those students who participated in interscholastic athletics in the schools represented in this study generally did much better academically than students who did not participate in interscholastic athletics. Second, athletes averaged missing over one week less of school during 1994-95 school year than the nonathletes. Third, 9.5% fewer athletes were referred for discipline problems than the nonathletes. Fourth, the mean average dropout rate for athletes was 12 times lower than that of the nonathletes. Finally, the athlete group had a 4.9% higher graduation rate than the nonathlete group.

Recommendations

Although this study demonstrated that the educational performance of interscholastic athletes was significantly better than that of nonathletes, no intent or attempt was made to determine why. This study simply answered the question, is there a difference in the educational performance of athletes and nonathletes in the North Carolina High Schools that participated in this study. Future research might focus on why participation in interscholastic athletics impacts the educational performance of athletes, and, in broader context, how and why participation in extracurricular activities impacts the educational performances of students. An extension of the research conducted by Feltz and Weiss (1984) might shed some light in this area.

Other research might be based on controlling for the various factors related to between school differences mentioned in this study. Studies that controlled differences in courses taken by the students, differences in financial allotment to schools, unit of analysis, and self-selection of subjects would shed light on the amount of influence these factors have on student performance.

Another avenue of research in this area that might be explored would be the replication or expansion of the study conducted by Schafer and Armer (1968). They found that greater media exposure caused greater attraction to certain sports and more subsidization. These influences generated greater participation in the sports by young people from lower socioeconomic backgrounds (SES). Is there a correlation between SES and the types of activities in which young people choose to participate and does the difference in the type of participation generated by SES impact educational performance?

The influence of media exposure and subsidization on certain activities creates another potential area for research. Do administrator, teacher, and community attitudes toward extracurricular activities in general and athletics in particular have an impact on the amount of participation in these activities or affect the educational performances of the participants in the activities? Developing and testing hypotheses based on demographic variables like the geographic location of a school, the racial make-up of the school community, population density, or per capita income levels, and primary sources of income might shed light on why students participate in certain extracurricular activities, as well as how they perform in the classroom.

In relation to this particular study, further research needs to be conducted. Now that the data from the participating schools in this study have been analyzed, the data for remaining schools in the state need to be gathered and analyzed. Before a general conclusion can be reached on the educational performance of athletes and nonathletes in North Carolina high schools, data from all the member schools of the NCHSAA must be gathered and analyzed. Once these data are analyzed, the logical progression would be to expand the study beyond North Carolina's borders. Finally, as the percentages of American Indian, Asian, and Hispanic students enrolled in North Carolina high schools increase, the time is soon approaching when the analyses of these subgroups data will become useful.

References

- Brown, B.B. (1988). *The vital agenda for research on extracurricular influences: A reply to Holland and Andre*. **Review of Educational Research**, 58(1), 107-111.
- Feltz, D.L., & Weiss, M.R. (1984). *The impact of girls' interscholastic sport participation on academic orientation*. **Research Quarterly for Exercise and Sport**, 55(4), 332-339.
- Hanks, M. (1979). *Race, sexual status and athletics in the process of educational achievement*. **Social Science Quarterly**, 160(3), 482-493.
- Holland, A., & Andre, T. (1987). *Participation in extracurricular activities in secondary school: What is known, what needs to be known?* **Review of Educational Research**, 57(4), 437-466.
- Kleese, E.J. (1994). **Student activities: The third curriculum**. Reston, VA.: National Association of Secondary School Principals.
- Landers, D.M., & Landers, D.M. (1978). *Socialization via interscholastic athletics: Its effects on delinquency*. **Sociology of Education**, 51, 299-303.
- Nuhn, G.C. (1991). *An analysis of academic achievement comparing athletes and non-athletes in selected small, rural schools*. **Dissertation Abstracts International**, 54(07), 2400.
- Patranella, K.W. (1987). *Academic performance, attendance, and schedule rigor of extracurricular participants and nonparticipants*. **Dissertation Abstracts International**, 48(06), 1413.
- Schafer, W.E., & Armer, J.M. (1968). *Athletes are not inferior students*. **Transaction**, 6, 21-26, 61-62.
- Soltz, D.F. (1986). *Athletics and academic achievement: What is the relationship?* **NASSP Bulletin**, 70(492), 20, 22-24.