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Assessing The Myth: A Study Of Eligible Athletes' Grade Point Averages

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Introduction

There is a common notion that athletes are not highly intelligent. For instance, the label "dumb jock" is often applied to an athletic competitor, and the phrase "big like tractor, dumb like tractor" has been used to describe linemen in football. There is little question about society's view of athletes, however what is debatable is just how valid these stereotypes are.

This research project is a study of athletes during a one-year period at Northern State University in Aberdeen, S.D. (hereafter referred to as NSU). The institution of higher learning is located in the upper midwest in an agricultural environment, with approximately 3,000 students. The study attempted to assess the accuracy of the public perception that athletes are poorer students, using NSU as a case study.

Literature Review

Conflicting reports on athletes' academic performance were found in the research literature. In some cases the athletes' GPA was higher than the non-athletes, while other data indicated that athletes struggle with academics.

One study of Ball State students indicates that students who either participated in athletics, or were involved in athletics as spectators, obtained better grades than those who were not involved (Henriksen 1989: 19). As the study notes, "social involvement' seems to be important for retention" (Henriksen 1989: 20).

The notion that athletic involvement leads to good grades is not

limited to Ball State. In a study of the University of California at Davis during the 1970s, it was discovered that male athletes' and male non-athletes' grade point averages were "essentially the same" (MacKenzie 1981: 1). However, it also stated that "Research literature on student retention indicates that students who participate in extra curricular activities are more likely to persist in college. Thus, varsity athletes may have persisted in the first place because they had interest in continuing athletic participation" (MacKenzie 1981: 7). In a study conducted at San Joaquin Delta College recently, it was determined that athletes have a higher grade point average than non-athletes (Lewis and Marcopulos 1989: 3).

Tempers flare when studies have found that athletes have lower grades than non-athletes. While no one is willing to take the blame for producing academic failures, the problem still persists. "It is difficult to imagine that a faculty of a serious university would tolerate an academic program in which, for every student who graduated, nine others did not. Yet, in several athletic programs, these levels of failure, and some even worse, were endured" (Weistart 1988: 59).

So why would some institutions allow athletes to compete without graduating or have lower academic standards? Part of it may be the rewards of having an outstanding team. "The temptation by any means becomes greater as the rewards to a campus reach 'megabuck' proportions. The pressures to succeed result in illegal recruiting tactics, in 'hiding' athletes in easy classes, and in other actions that detract from the sense of 'fair play' that dominates our society's response to sports (and life in general) (McKerrow and Daly, 1990: 43). Another study of 4,083 random students across the nation found that athletes have a "slightly lower" grade point average than do students involved in other extra curricular activities (Bower 1988: 357).

While there may be doubt as to the allegations of the lower intelligence of athletes, there is little question as to which gender of athlete attains better grades. In a comparison of female and male basketball players,

the females were considered the better students (Bedker Meyer 1990: 48). There were three reasons given: 1) that males have an opportunity to play basketball professionally and don't need to rely on academics; 2) that males believe that they need less education than females in order to obtain a high-salary job; and 3) some males see themselves as athletes only and not as students (Bedker Meyer, 1990: 48).

The study also indicated that females and males also differed on their viewpoints of athletics. While females believed that athletics "forced them to be more disciplined in academic areas," males thought that athletics were too demanding "leaving little time for scholastic endeavors" (Bedker Meyer, 1990: 49).

While the viewpoints between the genders may vary, there is a case to be made that athletics do take up time that could be spent on academics. In the aforementioned Bower study, it was noted that athletes spend more time in activities related to sports "than they spend preparing for and attending class combined" (Bower, 1988: 357).

At NSU, the subject of this study, the graduation rate supplied by the men's basketball coach indicates that almost all of the students who participate in athletic programs also graduate. Of the 336 athletes who competed in athletics during a 10-year period, 307 of them (91.4%) received a degree (Olson, 1990). This is in sharp contrast to the findings of Weistart.

Why does NSU have such a relatively high graduation rate? Part of it could be a monitoring system designed to alert coaches should an athlete be in danger of becoming ineligible. Another reason could be the supervised study sessions which are not mandatory for athletes, but rather "at the discretion of the coach," according to NSU athletic director Dr. James Kretchman (Kretchman 1990). Currently three athletic programs on campus have some form of academic support system.

NSU's athlete graduation rate looks good. How about the grades that athletes attain within that graduation rate? Do NSU's athletes, and

NSU's athletic academic support system, produce significantly different grades than non-athletes? Much of the published research compares the total of athletes (or specific sports' athletes), with the total of the student body (or total of non-athlete student body). These are studies of groups which are of questionable comparability, because "athletes" identified for a study are usually defined as "eligible athletes". For example, at NSU, eligible athletes must earn a "C" average for a minimum of 12 credits per semester. This is not the total universe of athletes. Thus, to identify a comparable non-athlete student group, only non-athletes with a "C" average should be included. Using these comparable groups, the research questions for this project were: Are NSU athletes' grade point averages different from non-athletes' grade point averages; and do NSU grade point averages differ between genders and athletes competing in different sports?

Methodology

This research was a study of athlete/non-athlete grade point averages at NSU. Anonymous data on grade point averages (both athletes and non-athletes), sports, sex and major field of study, were obtained from University records. At no time was a student's and/or athlete's name made available to the researcher.

Athletic eligibility, and therefore the definition of an athlete at NSU, was defined as: anyone who took 12 or more credit hours, maintained a 2.0 grade point average and was involved in an organized athletic program. To draw a like-comparison for this research project, a non-athlete was defined as anyone who took 12 or more credit hours, maintained a 2.0 grade point average and was not involved in an organized athletic program. Also, the students had to attend both the Fall of 1989 and Spring of 1990 semesters to be included in the study.

A two-tailed T-Test was used to determine if the differences in GPA were statistically significant. Thus, if a statistically significant difference (.05)

in grade point average was found, a null hypothesis would be rejected.

Seven null hypotheses were tested in this study. They were:

Null H-1: The mean GPA of all *athletes* is not significantly different from the mean GPA all *non-athletes* at NSU.

Null H-2: The mean GPA of *male athletes* is not significantly different from the mean GPA of *male non-athletes* at NSU.

Null H-3: The mean GPA of *female athletes* is not significantly different from mean GPA of *female non-athletes* at NSU.

Null H-4: The mean GPA of *athletes with Health, Physical Education and Recreation (HYPER)* majors is not significantly different from the mean GPA of *athletes with non-HPER majors* at NSU.

Null H-5: The mean GPA of *female athletes* is not significantly different from the mean GPA of *male athletes* at NSU.

Null H-6: The mean GPA of *female athletes* is not significantly different among the *female athletes competing in various sports* at NSU.

Null H-7: The mean GPA of *male athletes* is not significantly different among the *male athletes competing in various sports* at NSU.

Results

Population Description

This study of 1,928 students includes: 1,098 (56.9%) female non-athletes, 65 (3.4%) female athletes, 609 (31.6%) male non-athletes and 156 (8.1%) male athletes. The population size indicates that NSU had a little more than 1,000 students not in the study population (did not attend NSU both semesters, did not take 12 credits, or did not attain a GPA of 2.0+). The average grade point for all students in the population was 2.845 (on a scale of 0 to 4.0 with 4.0 indicating an "A" average). Female students in the population had a GPA of 2.932 and males had a GPA of 2.713. Thus women at NSU

have significantly higher average GPA than men (+0.219 GPA, significant=0.0001).

The ranking of athletes' mean GPA in various sports were as follows:

- | | |
|-----------------------------------|----------------------------------|
| (1) Women's Golf (3.250) | (9) Men's Basketball (2.643) |
| (2) Women's Cross Country (3.085) | (10) Men's Wrestling (2.628) |
| (3) Women's Tennis (2.940) | (11) Men's Track (2.608) |
| (4) Women's Track (2.804) | (12) Men's Football (2.574) |
| (5) Women's Basketball (2.785) | (13) Men's Tennis (2.548) |
| (6) Women's Volleyball (2.737) | (14) Men's Cross Country (2.525) |
| (7) Women's Softball (2.722) | (15) Men's Baseball (2.498) |
| (8) Men's Golf (2.721) | |

Hypothesis Testing

Table #1		
Test of Null H-1:		
Description	Mean GPA	Probability
Athletes	2.471	0.0275
Non-Athletes	2.567	
Difference	-0.096	

The null hypothesis was rejected. Table #1 indicates that athletes at NSU have a small (-0.096 GPA), but statistically significant (<.05) lower grade point average than non-athletes.

Table #2		
Test of Null H-2:		
Description	Mean GPA	Probability
Male athletes	2.588	0.0001
Male non-ath	2.746	
Difference	-0.158	

The null hypothesis was rejected. Table #2 indicates that male athletes at NSU have a significantly lower grade point average (-0.158) than male non-athletes.

Table #3		
Test of Null H-3:		
Description	Mean GPA	Probability
Female ath	2.877	0.3549
Female non-ath	2.935	
Difference	-.058	

We failed to reject the third null hypothesis. Table #3 indicates that female athletes at NSU do not have a significantly different grade point average than female non-athletes.

Table #4		
Test of Null H-4:		
Description	Mean GPA	Probability
Athletes with HPER Major	2.423	0.0488
Athletes with Non HPER	2.561	
Difference	-.138	

The null hypothesis was rejected. Table #4 indicates that athletes with Health, Physical Education and Recreation (HPER) majors at NSU have a small, but significantly lower grade point average (-0.138) than athletes with non-HPER majors.

Table #5

Test of Null H-5:

Description	Mean GPA	Probability
Female ath	2.893	.0001
Male ath	2.593	
Difference	+ .300	

The null hypothesis was rejected. Table #5 indicates that female athletes at NSU have a significantly higher grade point average (+.300) than male athletes.

Table #6

Test of Null H-6:

Description	Female		Prob.
	MEAN GPA	Difference in GPA	
Female Non-Athlete	2.965		
Women's Basketball	2.785	-.180	0.1418
Women's Cross Country	3.085	+ .120	0.4608
Women's Volleyball	2.737	-.228	0.0093
Women's Softball	2.722	-.272	0.0411
Women's Golf	3.250	+ .285	0.2496
Women's Tennis	2.940	-.025	0.9073
Women's Track	2.804	-.161	0.3070

Male

Description	MEAN GPA	Difference in GPA	Prob.
Male Non-Athlete	2.756		
Men's Basketball	2.643	-.113	0.3060
Men's Cross Country	2.525	-.231	0.0187
Men's Baseball	2.498	-.258	0.0088
Men's Football	2.574	-.182	0.0014
Men's Golf	2.721	-.035	0.7239
Men's Wrestling	2.628	-.128	0.3005
Men's Tennis	2.548	-.208	0.1725
Men's Track	2.608	-.148	0.1183

As Table #6 indicates, we failed to reject the null hypotheses of no significant difference between athletes and non-athletes for each different sport in ten of fifteen cases. The null hypothesis was rejected for: 1) women's volleyball (-0.228 GPA lower than female non-athletes); 2) women's softball (-0.272 GPA lower than female non-athletes); 3) men's cross country athletes (-0.231 lower than male non-athletes); 4) men's baseball athletes (-0.258 GPA lower than male non-athletes); and 5) men's football athletes (-0.182 lower than male non-athletes).

Conclusions

Using comparable groups (2.0 and higher GPA, and taking 12 credits or more per semester), and a significance level of .05, this study found that: 1) women earned higher grade point averages than men (all athletes and all non-athletes); 2) all men athletes earned lower average grade points than all men non-athletes; and 3) all women athletes were not significantly different from all women non-athletes. That is, only male athletes were significantly lower.

However, when athletes in each sport are considered, it was found

that for women, the volleyball and softball athletes were significantly lower in grade point average than women non-athletes. (There was no significant difference in grade point averages between women athletes and women non-athletes for: basketball, cross country, golf, tennis or track.) For men athletes compared to men non-athletes, the differences were significantly lower grade point averages for athletes in: cross country, baseball and football. (There was not a significant difference between men athletes and men non-athletes for: basketball, golf, wrestling, tennis or track.)

Athletes that had a major in Health, Physical Education and Recreation had significantly lower grade point averages than athletes that majored in other areas at the university. If a more restrictive .01 level of statistical significance were used, only two associations remained significant: 1) male athletes had a lower grade point average than male non-athletes; and 2) female athletes had a higher grade point average than male athletes.

It should also be noted that even though statistically significant differences in GPAs were found, the differences in the real world were not great. That is, a "C" grade point average is 2.00, and a "B" average is 3.00, a difference of 1.00. So a difference of 0.500 is a half of a grade difference: a difference never attained in this study. A significant difference of a quarter of a grade point or more (0.250) found female athletes higher than male athletes, and women's softball and men's baseball lower than the same gender non-athletes.

This research calls into question the validity of much of similar research in the literature. That is, any comparison of all athletes/non-athletes is not valid since: 1) gender confounds the total comparison -- women generally attain higher GPAs than men (both athletes and non-athletes), and the greater number of athletes are men; 2) very often only athletes who maintain their eligibility are identified as athletes -- comparing these "identified athletes" with non-athletes is valid only if the same criteria are used to identify "non-athletes" (GPA = 2.0+, and registered for 12 credits or more

for both semesters); and 3) different sports may attract significantly different types of students. Thus, grade point average comparisons between athletes and non-athletes should be controlled for many other variables to make the comparisons valid. Now, maybe someone should pry into the myth of the physical conditioning of the "book worm."

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