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ABSTRACT

This study looked at 1992 high school seniors to see how many of them would have met the new National Collegiate Athletic Association's (NCAA) Proposition 16 eligibility requirements for freshman participation in Division I college varsity sports. The new, stricter requirements are based on a combination of the high school grade point average in 13 core courses and specified Scholastic Assessment Test or American College Testing Program scores. These requirements were applied to the transcripts of a National Education Longitudinal Study of 1988 sample of 1992 college-bound high school seniors. Findings revealed that: (1) 83.2 percent met earlier NCAA standards while only 64.7 percent met the Proposition 16 requirements; (2) only 46.4 percent of black and 54.1 percent of Hispanic students in the sample met the stricter requirements as compared to 67 percent of white and Asian seniors; (3) college-bound high school seniors from the lowest of the socioeconomic status levels were the least likely to meet the requirements with only 42 percent qualifying to participate; and (4) college-bound high school athletes met the requirements at the same rate as non-athletes. Contains two tables and five figures. (Author/JB)

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# NATIONAL CENTER FOR EDUCATION STATISTICS

Statistics in Brief

July 1995

## Who Can Play? An Examination of NCAA's Proposition 16

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Effective August 1, 1996, new academic provisions specified in the National Collegiate Athletic Association's (NCAA) Proposition 16 will be fully implemented. These provisions will replace those in effect under Proposition 48. Under Proposition 16 the eligibility requirements for freshman participation in Division I college varsity sports are more strict than the current Proposition 48 requirements. The new criteria are based on a combination of high school grade point average (GPA) in 13 core courses and specified SAT (or ACT) scores.<sup>1</sup> The purpose of this report is to study 1992 high school seniors to see how many meet these new NCAA requirements. The requirements are applied to the transcripts of a sample of 1992 high school seniors who (1) have graduated with their high school class on schedule, (2) have applied to one or more colleges, and (3) have taken the SAT and/or ACT college entrance examinations. Students who met these three conditions are referred to in this report as college-bound.<sup>2</sup> Findings from this study reveal that:

- Five-sixths (83.2 percent) of 1992 college-bound high school seniors met the NCAA Proposition 48 freshmen eligibility requirements for athletic participation as freshmen; when the stricter Proposition 16 provisions were invoked, the percent qualifying dropped to about two-thirds (64.7 percent).
- Only about half of the black (46.4 percent) and Hispanic (54.1 percent) college-bound high school seniors met the Proposition 16 requirements, as compared to approximately 67 percent of white and Asian college-bound high school seniors.
- College-bound high school seniors from the lowest of the socioeconomic status (SES) levels were the least likely to meet the Proposition 16 requirements, with only 42 percent qualifying to participate in varsity sports as freshmen.
- College-bound high school athletes met the requirements at the same rate as non-athletes.

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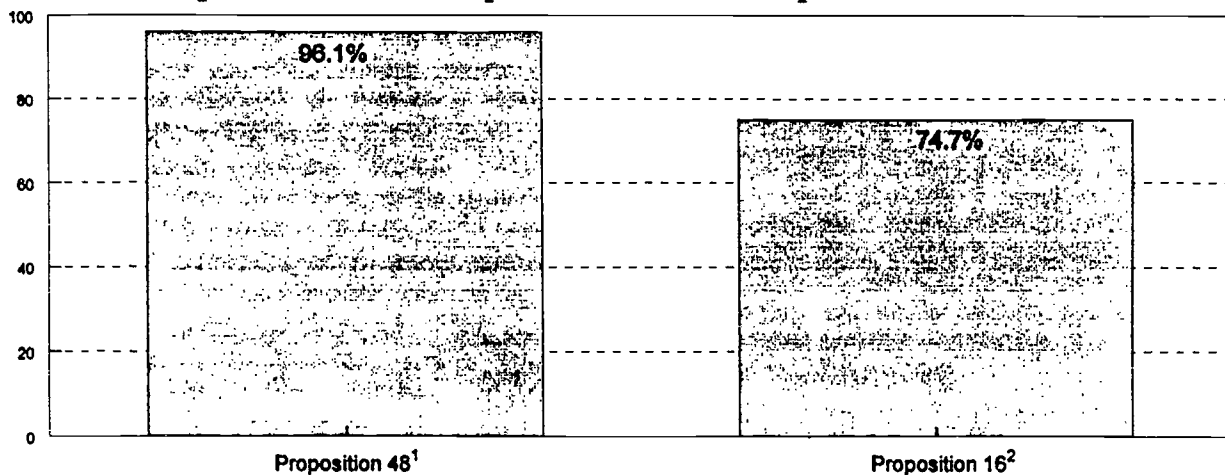
## ERRATA

The Statistics in Brief entitled *Who Can Play? An Examination of the NCAA's Proposition 16*, published in July 1995, contained several errors.

Page 2                      In column 2, the last two lines should read: "...physical sciences, 2 years of social sciences, and 2 years of additional academic courses (see figure 1). However, under Proposition 16, as..."

Page 2                      Figure 1 and its footnotes were incorrect. The corrected figure is provided below.

**Figure 1—Percentage of 1992 college-bound high school seniors meeting Proposition 48 and Proposition 16 course requirements**



<sup>1</sup>Completed 11 core courses including 3 years of English, 2 years of math, 2 years of natural or physical sciences, 2 years of social sciences, and 2 additional academic courses.

<sup>2</sup>Completed 13 core courses including 4 years of English, 2 years of math (including algebra and geometry), 2 years of natural or physical sciences, 2 years of social sciences, 1 additional academic course in English, mathematics, or natural or physical science, and 2 years of additional academic courses in any of the above areas or foreign language, computer science, philosophy, or non-doctrinal religion.

Page 6                      In the last column of table 1 (Meets Prop 16 "96" Rqmnts), Female athletic eligibility under Proposition 16 was listed incorrectly as 6.4 percent. The Entry should read 66.4 percent.

## Background for NCAA legislation leading up to Proposition 16

In 1984 the NCAA passed Proposition 48, resulting in mandated academic eligibility requirements for freshman varsity athletes. Proposition 48 required student athletes to have a minimum SAT score of 700 (ACT score of 17) and a minimum GPA of 2.0 in at least 11 courses in core subjects. In 1992, delegates to the 86th NCAA Annual Convention strengthened the academic requirements for student athletes with the passage of Proposition 16. The new requirements will be implemented in two stages. In stage 1 (effective August 1, 1995), Proposition 48 core course work requirements will be increased from 11 to 13 courses, with the addition of two academic electives, but the SAT/ACT and GPA requirements will remain the same. In stage 2 (effective August 1, 1996), one of the academic electives is moved to English, thus the number of English courses within the 13 required core courses will increase from 3 to 4 and math requirements will explicitly include algebra and geometry. Also effective on August 1, 1996, a sliding scale that combines SAT/ACT scores and GPA in at least 13 core courses will be implemented. With the sliding scale, a student athlete with an SAT score of 700 (ACT of 17) must have a GPA of at least 2.5; alternatively, a student athlete with an SAT

score of 900 (ACT score of 21) must have a GPA of at least 2.0<sup>3</sup>.

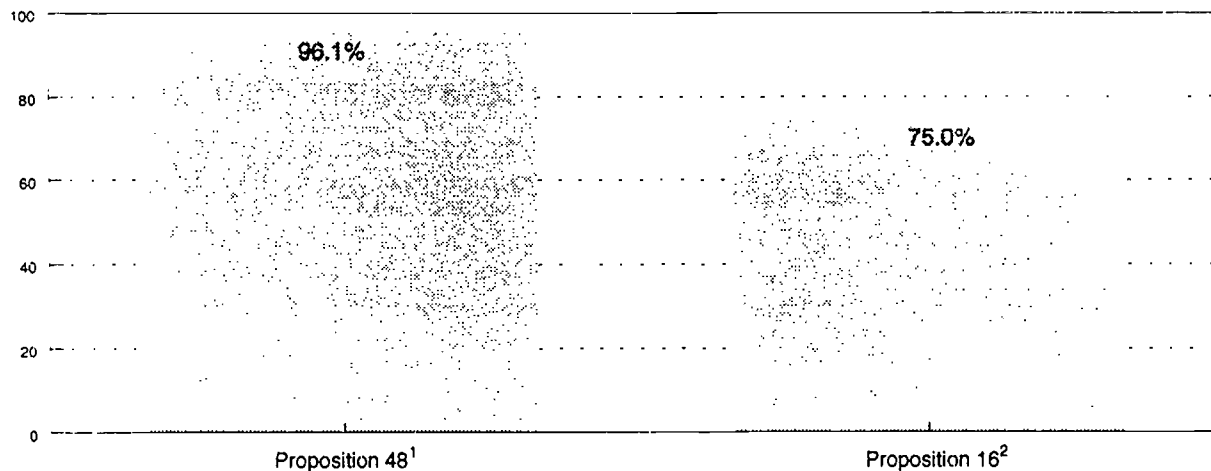
## Application of NCAA criteria to a national sample of 1992 seniors

In this report, data from the National Education Longitudinal Study of 1988 (NELS:88) are used to study 1992 college-bound high school seniors. For each student, high school transcripts are examined to determine (1) courses completed, (2) course grades, (3) SAT/ACT test scores, and (4) high school graduation dates. The academic eligibility requirements of both Proposition 48 and Proposition 16 are used to classify 1992 college-bound high school seniors in this report<sup>4</sup>. For purposes of comparison, a measure of high school athletic participation and selected demographic and social characteristics of the college-bound seniors are also included in this report.

### Proposition 48 vs. Proposition 16

Nearly all college-bound seniors (96.1 percent) met the Proposition 48 requirement of the completion of at least 11 core courses, including 3 years of English, 2 years of math, 2 years of natural or physical sciences, and 2 years of social sciences (see figure 1). However, under Proposition 16, as

**Figure 1—Percentage of 1992 college-bound high school seniors meeting Proposition 48 and Proposition 16 course requirements**



<sup>1</sup>Completed 11 core courses including 3 years of English, 3 years of math, 3 years of natural or physical sciences, and 2 years of social sciences

<sup>2</sup>Completed 13 core courses including 4 years of English, 2 years of math (including algebra and geometry), 2 years of natural or physical science, 2 years of social science, 2 years of additional courses in English, math, or natural or physical science, and 1 additional academic course.

mentioned earlier, the number of English classes increases to 4, the 2-course mathematics requirement is changed to explicitly include algebra, geometry, or a higher-level mathematics course, and 1 additional academic elective is included. Approximately 75 percent of the college-bound seniors in 1992 met this criteria; as a result, under Proposition 16, a full 25 percent of the 1992 college-bound seniors would be excluded from freshman varsity athletics solely on the basis of course work. As student athletes become aware of the Proposition 16 changes, the percent of college-bound seniors meeting the increased course requirements might logically be expected to increase.

Academic performance (GPA) and college admission test scores further reduce the number of college-bound seniors eligible to participate in freshman varsity athletics. Under the Proposition 48 requirements of a GPA of 2.0 in at least 11 core subjects and an SAT of 700 (ACT of 17), 83.2 percent of all 1992 college-bound seniors were eligible for participation in Division I freshman varsity athletics. The sliding scale included in the Proposition 16 provisions reduces the percentage of eligible freshmen to 64.7 percent (down from 75 percent who met the Proposition 16 coursework requirement), thus another 10 percent (or 35 percent in total) of 1992 college-bound seniors would not be eligible for Division I freshman varsity athletics under Proposition 16 (see figure 2).

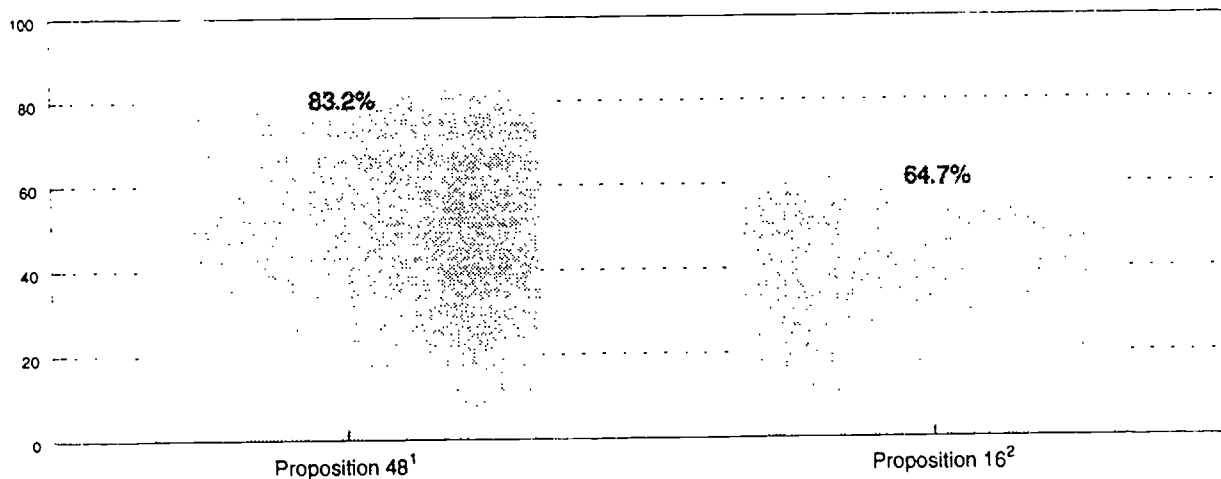
## Overall eligibility using Proposition 16

While 64.7 percent of all 1992 college-bound high school seniors met Proposition 16's combined sliding scale standard, higher percentages scored above the minimums for the separate components. For example, 87.5 percent had SAT scores of 700 (ACT scores of 17) or higher; 74.7 percent had taken the required 13 core courses; and 94.7 percent of those who met the 13 core course requirement had GPAs of 2.0 or higher (see table 1). It must be remembered though that a student-athlete who scores at the minimum level for both the SAT/ACT and GPA will not pass the Proposition 16 standard. By definition, the sliding scale formula requires that students with a GPA of 2.0 must have an SAT score of 900 (ACT score of 21) or higher. Although almost two-thirds of all 1992 college-bound high school seniors met all of the Proposition 16 criteria, this proportion was not the same for all groups when categorized by race/ethnicity or socio-economic status (SES).

## Eligibility by race/ethnicity

Two-thirds of Asian (67.7 percent) and white (67.4 percent) college-bound seniors met the NCAA Proposition 16 requirements, compared to about one-half of black (46.4 percent) and Hispanic (54.1 percent) college-bound seniors who met the same eligibility requirements (see figure 3). This same relationship also held for the SAT/ACT component

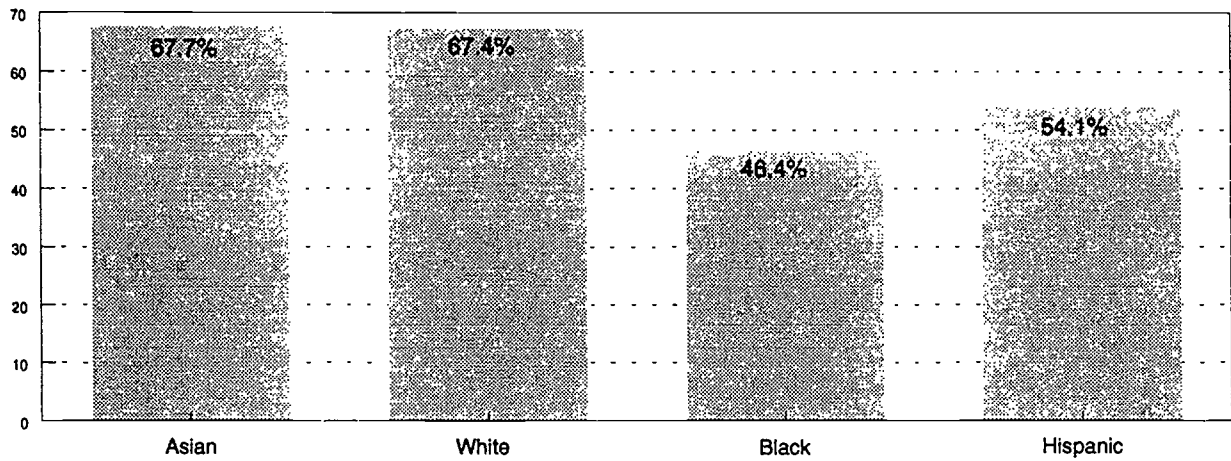
**Figure 2—Percentage of 1992 college-bound high school seniors eligible to participate in Division I college sports as freshmen under Proposition 48 and Proposition 16.**



<sup>1</sup>GPA of 2.0 in at least 11 core subjects and SAT of 700 (ACT score of 17).

<sup>2</sup>Uses sliding scale (combination of GPA in 13 CORE courses and SAT/ACT scores) to determine eligibility.

**Figure 3—Percentage of 1992 college-bound high school seniors meeting Proposition 16 eligibility requirements by race/ethnicity.**



of the formula when it was considered separately. Almost twice the percentage of Asian and white college-bound seniors had an SAT score of at least 900 (ACT score of 21 or above) as compared to black and Hispanic college-bound seniors (61.8 percent and 61.3 percent as compared to 29.4 percent and 34.6 percent). When the lower end of the scale was considered, that is an SAT score of at least 700 or an ACT score of at least 17, the same relationship held, but a substantially higher percentage of each group met the criteria (91.1 percent of whites and 88.5 percent of Asians as compared to 67.4 percent of blacks and 71.1 percent of Hispanics).

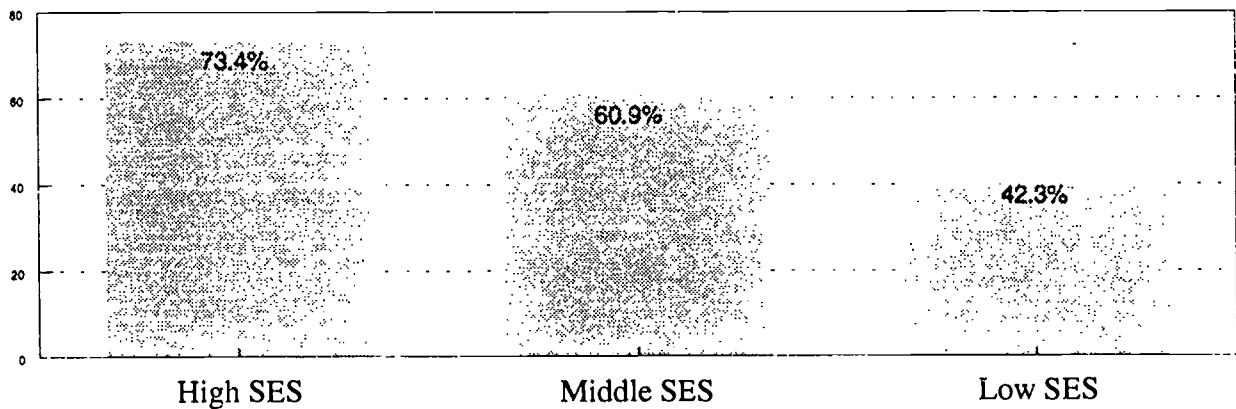
The results are not as clear cut for the GPA criteria for those who met the 13 core course requirement. Some 93.2 percent of Asians, 84.4 percent of whites, and 76.0 percent of Hispanics as compared

to 60.8 percent of black college-bound seniors had GPAs of 2.5 or higher in the required core courses. Higher percentages met the GPA requirement of 2.0 or higher—the lowest percentage is 83.8 percent for blacks, with percentages for Asians, whites, and Hispanics of 95 percent or better.

**Eligibility by SES**

Using a measure of socio-economic status<sup>5</sup>, it was found that students from higher SES groups were classified as being eligible to participate in sports in higher proportions than those from lower SES groups. For example, 73.4 percent of high SES college-bound seniors met the Proposition 16 eligibility requirement as compared to 60.9 percent for middle SES and 42.3 percent for low SES college-bound seniors (see figure 4). When the individual SAT/ACT and GPA components were

**Figure 4—Percentage of 1992 college-bound high school seniors meeting Proposition 16 eligibility requirements by social-economic status.**



examined for these groups, it was found that the SAT/ACT component was a major limiting factor. For example, high SES students were over three times as likely to have an SAT score of 900 (ACT score of 21) as were low SES students (72.2 percent as compared to 24 percent) (see figure 5). Although significant, this same relationship was not as strong for the comparison between high and low SES students meeting the Proposition 16 course requirements (79 percent as compared to 61.5 percent). Similarly, within the subset of students who met the course requirements, 87 percent of the high SES students compared to 76.2 percent of the low SES students had GPA's of at least 2.5. Overall, 47 percent of the low SES students met the Proposition 16 course requirements and achieved a GPA of at least 2.5 ( $76.2\% \times 61.5\% = 46.8\%$ ); compared to the 24 percent who met the upper end of the Proposition 16 college admission test requirements (SAT of 900/ACT of 21).

### Eligibility by participation in high school athletics

For purposes of this analysis, 1992 college-bound high school seniors were classified into one of three groups depending on the level of participation in high school sports.

These groups were:

1. Athletes (varsity level)
2. Other athletes
3. Non-athletes

The first group (athletes) included individuals who reported participation in varsity level high school sports during their sophomore and senior years or who reported participation in varsity sports during their senior year and also were named captain or most valuable player. The second group (other athletes) included individuals who did not meet the criteria for group 1, but who did report participation in high school junior varsity or varsity athletics. Group 3 (non-athletes) included individuals who did not report participation in high school junior varsity or varsity athletics.

In comparing these three groups, significant differences were not found between the groups in regard to overall eligibility, proportion scoring above 700 SAT (17 ACT), proportion scoring above 900 SAT (21 ACT), proportion earning above a GPA of 2.0 or higher, or proportion earning a GPA of 2.5 or higher.

**Figure 5—Percentage of 1992 college-bound high school seniors scoring at or above SAT scores of 700 and 900 (ACT Score of 17 and 21 respectively) by socio-economic status.**

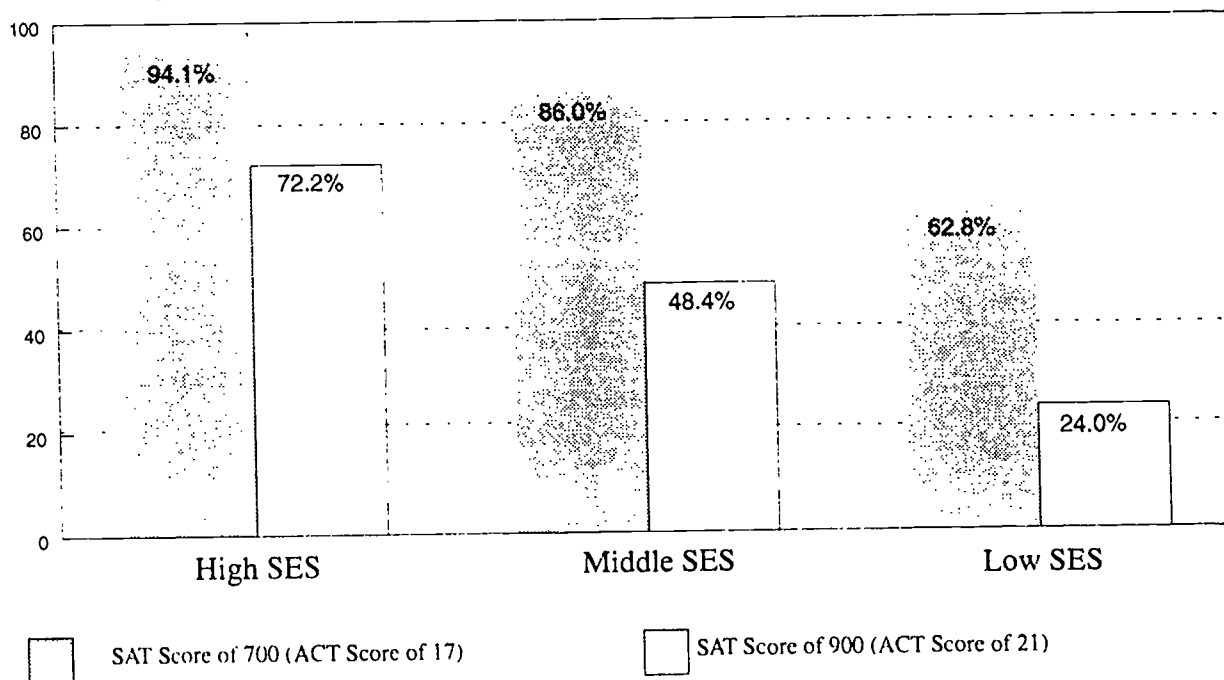


Table 1.— Percentage of 1992 college-bound high school seniors meeting the NCAA Proposition 48 and Proposition 16 eligibility requirements, by gender, race/ethnicity, socio-economic status, and level of participation in high school athletics.

	Test Scores		Proposition 48		Proposition 16			Athletic Eligibility			
	ACT >=17 SAT >=700	ACT >=21 SAT >=900	Earned 11 Or More Core Credits	For Those Who Earned 11 Or More Core Credits GPA >=2.0    >=2.5		Earned 13 Or More Core Credits <sup>1</sup>	For Those Who Earned 13 Or More Core Credits GPA >=2.0    >=2.5		Sliding Scale of GPA & SAT/ACT <sup>2</sup>	Meets Prop 48 Rqmnts	Meets Prop 16 '96' Rqmnts
Total %	87.5%	56.8%	96.1%	95.3%	82.5%	74.7%	94.7%	82.3%	79.9%	83.2%	64.7%
(standard error)	(0.98)	(1.56)	(0.46)	(0.88)	(1.10)	(1.39)	(0.71)	(1.09)	(1.13)	(1.09)	(1.49)
(unwtd N)	(6724)	(6724)	(6714)	(6418)	(6418)	(6714)	(4928)	(4928)	(6714)	(6714)	(6714)
Gender											
Male	88.2	59.1	95.7	92.8	77.1	72.7	92.4	77.3	78.5	82.5	62.6
	(1.77)	(2.61)	(0.64)	(1.84)	(2.11)	(2.24)	(.28)	(1.97)	(1.98)	(1.91)	(2.41)
	(3104)	(3104)	(3097)	(2948)	(2948)	(3097)	(2229)	(2229)	(3097)	(3097)	(3097)
Female	86.9	54.8	96.5	97.4	87.2	76.3	96.5	86.4	81.1	83.7	6.4
	(0.96)	(1.68)	(0.51)	(0.37)	(0.92)	(1.44)	(0.73)	(1.14)	(1.15)	(1.07)	(1.53)
	(3620)	(3620)	(3617)	(3470)	(3470)	(3617)	(2699)	(2699)	(3617)	(3617)	(3617)
Race/Ethnicity											
Asian	88.5	61.8	96.4	99.4	89.8	73.7	99.3	93.2	86.6	86.6	67.7
	(1.90)	(4.29)	(1.27)	(0.54)	(1.78)	(3.15)	(0.47)	(1.94)	(2.11)	(2.15)	(3.26)
	(587)	(587)	(587)	(563)	(563)	(587)	(443)	(443)	(587)	(587)	(587)
Hispanic	71.1	34.6	96.8	95.5	80.0	75.4	94.8	76.0	64.2	67.5	54.1
	(4.27)	(4.61)	(1.04)	(1.30)	(3.94)	(3.55)	(1.51)	(5.47)	(4.40)	(4.21)	(4.53)
	(467)	(467)	(467)	(452)	(452)	(467)	(339)	(339)	(467)	(467)	(467)
Black	67.4	29.4	95.9	89.9	64.0	72.5	83.8	60.8	53.3	64.2	46.4
	(3.98)	(4.76)	(1.30)	(1.97)	(3.46)	(4.46)	(3.37)	(4.44)	(3.82)	(4.19)	(4.45)
	(415)	(415)	(415)	(394)	(394)	(415)	(289)	(289)	(415)	(415)	(415)
White	91.1	61.3	96.1	95.6	84.3	75.0	95.5	84.4	83.7	86.4	67.4
	(1.09)	(1.80)	(0.55)	(1.09)	(1.29)	(1.62)	(0.77)	(1.17)	(1.25)	(1.23)	(1.70)
	(5209)	(5209)	(5199)	(4967)	(4967)	(5199)	(3831)	(3831)	(5199)	(5199)	(5199)
Amer Indian/ Alaskan	53.3	19.6	95.8	96.5	58.8	57.8	Low-N	Low-N	40.1	49.5	26.1
	(10.08)	(6.33)	(3.87)	(3.55)	(12.56)	(10.80)	(Low-N)	(Low-N)	(8.85)	(9.77)	(7.36)
	(32)	(32)	(32)	(30)	(30)	(32)	(19)	(19)	(32)	(32)	(32)
Socio-Economic Status											
Low	62.8	24.0	93.4	90.6	74.3	61.5	95.2	76.2	54.6	58.8	42.3
	(3.70)	(2.21)	(1.35)	(3.12)	(3.33)	(3.42)	(1.35)	(3.67)	(3.55)	(3.54)	(3.58)
	(590)	(590)	(590)	(552)	(552)	(590)	(371)	(371)	(590)	(590)	(590)
Medium	86.0	48.4	95.7	94.8	80.2	73.2	92.5	78.6	78.5	80.8	60.9
	(1.00)	(1.92)	(0.63)	(0.72)	(1.41)	(1.65)	(1.28)	(1.72)	(1.40)	(1.25)	(1.87)
	(2842)	(2842)	(2842)	(2709)	(2709)	(2842)	(2034)	(2034)	(2842)	(2842)	(2842)
High	94.1	72.2	97.1	96.8	86.7	79.0	96.7	87.0	88.8	90.6	73.4
	(1.73)	(2.16)	(0.57)	(1.73)	(1.92)	(2.11)	(0.80)	(1.39)	(1.87)	(1.80)	(2.24)
	(3264)	(3264)	(3254)	(3131)	(3131)	(3264)	(2506)	(2506)	(3254)	(3254)	(3254)
Level of High School Athletic Participation											
Varsity Athletes	86.8	56.9	96.5	91.8	80.8	74.4	93.7	82.3	78.8	82.1	64.8
	(2.42)	(2.74)	(0.63)	(2.56)	(2.62)	(2.63)	(1.45)	(1.68)	(2.55)	(2.49)	(2.77)
	(2363)	(2363)	(2359)	(2254)	(2254)	(2359)	(1765)	(1765)	(2359)	(2359)	(2359)
Other Athletes	87.9	55.6	96.7	96.8	82.0	75.6	94.2	79.7	79.7	84.3	64.7
	(1.44)	(2.91)	(0.54)	(0.48)	(1.72)	(2.06)	(1.29)	(2.23)	(1.83)	(1.58)	(2.48)
	(1959)	(1959)	(1957)	(1877)	(1877)	(1957)	(1423)	(1423)	(1957)	(1957)	(1957)
Non-Athletes	87.7	56.7	95.7	96.5	84.6	71.8	96.3	83.4	81.1	83.1	62.5
	(1.25)	(2.06)	(0.67)	(0.67)	(1.22)	(2.03)	(0.90)	(1.75)	(1.45)	(1.43)	(2.15)
	(1464)	(1464)	(1464)	(1395)	(1395)	(1464)	(1058)	(1058)	(1464)	(1464)	(1464)

<sup>1</sup>Met Proposition 16 August 1996 Core Credit requirements

<sup>2</sup>Does not factor in Core Course requirements

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-up Student Survey and High School Transcripts



## Conclusions

Lower proportions of minority (blacks and Hispanics) and low SES college-bound high school seniors met the eligibility requirements for freshman varsity athletics participation under Proposition 48 and the proportions drop further under Proposition 16. For any high school student athlete who aspires to participate in Division I college athletics, the planning process must begin early in the student's high school career. Student athletes, guidance counselors, parents, and coaches must all be aware of the NCAA eligibility requirements. To meet these requirements, each athlete must undertake and successfully complete the 13 core course requirements during the course of the typical four-year high school career. In addition, like all college-bound seniors, high school athletes need to understand the roles that GPA and scores on college admissions tests play in college admission (and varsity sports eligibility) decisions.

## Endnotes

1. Using the following eligibility index (as defined by Sections 14.3.1.1 and 14.3.1.1.1 of the 1995/96 NCAA Manual), freshmen may establish eligibility for participation in Division I collegiate athletics by meeting or exceeding one of the combinations of GPA and entrance exam scores specified below.

Core GPA *	SAT	or	ACT**
2.500 or above	700		17
2.475	710		18
2.450	720		18
2.425	730		18
2.400	740		18
2.375	750		18
2.350	760		19
2.325	770		19
2.300	780		19
2.275	790		19
2.250	800		19
2.225	810		20
2.200	820		20
2.175	830		20

2.150	840	20
2.125	850	20
2.100	860	21
2.075	870	21
2.050	880	21
2.025	890	21
2.000	900	21

\* GPA is based on a minimum grade-point average in a successfully completed core curriculum that includes at least 13 academic courses in the following areas:

- > English: 4 years
- > Mathematics: 2 years [one year of algebra and one year of geometry (or one year of a higher-level mathematics course for which geometry is a prerequisite)]
- > Natural or physical science: 2 years [including at least one laboratory course, if offered by school]
- > Additional courses in English, mathematics, or natural or physical science: 2 years
- > Social science: 2 years
- > Additional academic courses: 1 year [in any of the above areas or foreign language, computer science, philosophy, or non-doctrinal religion (e.g., comparative religion) courses]

\*\* SAT — Scholastic Aptitude Test; ACT — American College Testing Program

2. College-bound—The NELS:88 student sample used for this study included all graduating high school seniors who met the following criteria: (1) graduated by June of 1992; (2) transcripts were collected as part of the second follow-up data collection activities; (3) the transcript included records of courses taken in 9th, 10th, 11th, and 12th grades; (4) the transcript reported at least 16 credits; (5) the results of SAT or ACT tests were included on the transcript, and (6) the student indicated that he/she had applied to one or more postsecondary schools (variable F2S60A). It should be pointed out that not all of these college-bound students have applied to Division I colleges; some have applied to Division II and two-year colleges.

3. The SAT test has been recentered by the Educational Testing Service for tests taken in April 1995 and thereafter. Because of this recentering, the NCAA has approved a recentered score of 820 to be equivalent to a score of 700 on previous tests. For this publication, an SAT score of 700 will be used as the cut-off because the tests were administered prior to 1993.

4. The actual NCAA application process involves (1) the high school attended by the high school student athlete, (2) the student athlete, and (3) the NCAA Clearinghouse. The clearinghouse serves as the gatekeeper in the process by evaluating information provided by the high school and the student-athlete applicant. This group determines who is a qualifier, partial qualifier, or nonqualifier (see 1995-96 NCAA Manual, Section 14.02.9). Information provided by the applicant's high school includes descriptions of the courses offered by the school. The NCAA Clearinghouse evaluates these course listings and makes a determination as to which can be used to satisfy the 13 core courses required by Proposition 16. The student athlete applicant must also fill out an application that states the applicant's intention to participate in varsity sports at the collegiate level. The NCAA Clearinghouse keeps applicants advised as to their status on meeting the freshman eligibility requirements. In addition, applicants can use the NCAA automated phone number by entering their personal ID number to receive a message as to their status. For those students who do not meet the core course or GPA requirements at the end of eight semesters in high school, the student athlete loses one year of eligibility at Division I schools. Student athletes are allowed to take summer courses during their freshman, sophomore, and junior years and still be in the eight semester limit. They are also allowed to take the SAT or ACT tests more than once with the highest scores on the separate tests being used to determine athletic eligibility.

5. Definitions for Socio-Economic Status (SES) and other variables are included in the technical appendix.

#### **Appendix: Technical notes for NELS:88**

The NELS:88 Baseline comprised a national probability sample of all regular public and private 8th-grade schools in the 50 states and the District of Columbia in the 1987-88 school year. During the base year data collection, students, parents, teachers, and school administrators were selected to

participate in the survey. A total of 24,599 8th-grade students participated in the base-year survey (93 percent response rate).

The NELS:88 first follow-up survey was conducted during the spring of 1990. Students, dropouts, teachers, and school administrators participated in the follow-up, with a successful data collection effort for 17,424 individuals in the student survey (approximately 93 percent response rate). Prior to data collection, the sample was freshened with 10th-grade students who did not have the opportunity (e.g., out of country) to be in the 8th-grade sample during the base-year.

During second follow-up data collection activities (1992), data were collected from students, dropouts, parents, teachers, school administrators, and extant high school transcripts. Again, as was done in the first follow-up, the sample was freshened. In addition, transcripts were collected from 13,173 respondents who had graduated by the fall of 1992. For the analysis presented in this report, 6724 respondents were classified as college-bound with complete transcript data (used for this report), 242 were classified as college-bound with missing transcript data (not used in this report), 3742 were classified as not college-bound high school graduates, and 2277 were classified as unknown (missing data). The analytical sample used in this report is considered to be representative of high school seniors who have applied to one or more colleges (e.g., Division I, Division II, or two-year) and have taken the SAT/ACT tests.

#### **Characteristics of the sample used for this report**

The student sample used for this study included all graduating seniors who met the following criteria: (1) graduated by end of June 1992; (2) transcripts were collected as part of the second follow-up data collection activities; (3) the transcript included records of courses taken in 9th, 10th, 11th, and 12th grades; (4) the transcript reported at least 16 credits, (5) the results of SAT or ACT tests were included on the transcript, and (6) the student indicated that he/she had applied to one or more postsecondary schools (variable F2S60A). For purposes of this analysis, the second follow-up transcript weight was used.

#### **Characteristics of retained and excluded students**

Table 2 presents the characteristics of 1992 high school graduates who were (1) retained

**Table 2.— Characteristics of NELS:88 students who graduated by the summer of 1992 and participated in transcript study.**

	1992 High school graduates				College-bound	
	Total	College-bound*	Not college-bound**	Unknown***	Complete cases	Not complete cases
# of Cases (unwtd)	12985	6966	3742	2277	6724	242
	Weighted Percents					
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Gender:						
Male	50.0	46.4	55.8	50.0	46.1	53.3
Female	50.0	53.6	44.2	50.0	53.9	46.7
Race/Ethnicity						
Asian	4.4	4.9	3.1	5.3	5.0	4.5
Hispanic	9.1	6.51	2.1	11.3	6.6	4.2
Black	11.1	8.1	13.2	15.9	8.1	9.7
White	74.5	79.9	70.6	66.2	79.9	79.7
Socio-Economic Status						
Low	17.3	9.02	5.6	25.8	9.0	10.5
Middle	51.9	46.9	58.0	55.5	46.7	51.9
High	30.8	44.1	16.4	18.7	44.3	37.6

**\*College-bound:** Includes following two groups.

**Complete cases:** Students classified into this category had graduated by June 1992 and participated in the transcript study. In addition, the transcript included complete SAT/ACT scores, course-work at 9th, 10th, 11th, and 12th grades, and at least 16 total credits. The student also indicated via variable F2S60A that he/she had applied to one or more postsecondary schools.

**Not complete cases:** Two criteria needed to be satisfied for a student to be classified as missing. First, the student had graduated by June 1992, indicated that he/she had applied to one or more postsecondary schools, participated in the transcript study, and had taken the SAT/ACT tests. Second, the transcript included incomplete SAT/ACT scores or missing course data by year or the total credits summed to less than 16.

**\*\*Not college-bound:** Same definition as college-bound except the student did not indicate that he/she applied to any colleges.

**\*\*\*Unknown:** Includes those 1992 high school graduates for whom a determination of college-bound status could not be ascertained with the variables that were used in this analysis (e.g., missing response to 'applied to one or more postsecondary schools' or indicated one or more schools applied to, but missing SAT/ACT test scores).

college-bound students (column labeled "Complete cases"); (2) excluded college-bound students who had incomplete transcript data (column labeled "Not complete cases"); (3) excluded non-college bound students who did not have immediate plans for postsecondary education (column labeled "Not college-bound"), and (4) excluded respondents who had missing data (column labeled "Unknown"). In comparing college-bound students who were included in the study (column 5) vs. all college-bound students (column 2), table 2 indicates that there does not seem to be any systematic bias in that the proportion of the subgroups having complete data is similar for both groups (see columns 2 and 5) by gender, race/ethnicity, and by SES. It should also be pointed out that the groups labeled "Not college-bound" and "Unknown" are very similar when compared by SES status.

### Sampling errors

The data were weighted using the second follow-up transcript weight (F2TRSCWT) to reflect the sampling rates (probability of selection) and adjustments for unit nonresponse. The complex sample design was taken into account when a Taylor series approximation procedure was used to compute the standard errors in this report. The standard error is a measure of the variability of a sample estimate due to sampling. It indicates, for a given sample size, how much variance there is in the population of possible estimates of a parameter. If all possible samples were selected under similar conditions, intervals of 1.96 standard errors below to 1.96 standard errors above a particular statistic would include the true population parameter being estimated for about 95 percent of these samples (i.e., 95 percent confidence interval). Comparisons noted in this report are significant at the 0.05 level and were determined using Bonferroni adjusted t-tests.

Standard errors for all of the estimates are presented in table 1. These standard errors can be used to produce confidence intervals. For example, an estimated 64.7 percent of college-bound high school graduates met the Proposition 16 requirements (see table 1). This figure has an estimated standard error of 1.49 percent. Therefore, the estimated 95 percent confidence interval for this

statistic is approximately 61.7 percent to 67.7 percent.

### Definitions of criteria used

(1) NCAA sliding eligibility scale - In creating this variable, the following components were used:

- Core credits - Courses from the student high school transcript were summed if the courses were (1) taken for a grade and (2) classified using the Secondary School Taxonomy (SST) as being in English, mathematics, science, social studies, foreign language, or comparative religion. The sum of these courses expressed in Carnegie units had to be greater than or equal to 13, and meet the course taking pattern specified in endnote 1.

NOTE: One Carnegie unit is equivalent to a one-hour class that meets 5 days a week for one school year.

- GPA - The grade point averages were calculated from the core courses with the highest grades, within each of the defined course taken pattern categories (e.g., mathematics), until the unit criteria was met or exceeded.

—As were worth 4 points.

—Bs were worth 3 points.

—Cs were worth 2 points.

—Ds were worth 1 point.

—Fs were not used in the calculation of GPA or in the summing of Carnegie units.

No additional points were given for pluses "+" or minuses "-".

After the 13 Carnegie credits had been met, the remaining highest courses in the "Another additional" category were used if they raised the GPA higher.

- SAT/ACT scores - SAT and ACT scores were taken from the NELS:88 high school transcripts. If a student transcript had both SAT and ACT scores, the higher score was used for this analysis.
- Sliding scale - Students met this criteria when the criteria for Core Credits was met and one of

the following was true:

(GPA = 2.5 AND (ACT = 17 OR SAT = 700)) OR  
((2.475 GPA 2.5) AND (ACT = 18 OR SAT = 710))  
OR  
((2.450 GPA 2.475) AND (ACT = 18 OR SAT =  
720)) OR  
((2.425 GPA 2.450) AND (ACT = 18 OR SAT =  
730)) OR  
((2.400 GPA 2.425) AND (ACT = 18 OR SAT =  
740)) OR  
((2.375 GPA 2.400) AND (ACT = 18 OR SAT =  
750)) OR  
((2.350 GPA 2.375) AND (ACT = 19 OR SAT =  
760)) OR  
((2.325 GPA 2.350) AND (ACT = 19 OR SAT =  
770)) OR  
((2.300 GPA 2.325) AND (ACT = 19 OR SAT =  
780)) OR  
((2.275 GPA 2.300) AND (ACT = 19 OR SAT =  
790)) OR  
((2.250 GPA 2.275) AND (ACT = 19 OR SAT =  
800)) OR  
((2.225 GPA 2.250) AND (ACT = 20 OR SAT =  
810)) OR  
((2.200 GPA 2.225) AND (ACT = 20 OR SAT =  
820)) OR  
((2.175 GPA 2.200) AND (ACT = 20 OR SAT =  
830)) OR  
((2.150 GPA 2.175) AND (ACT = 20 OR SAT =  
840)) OR  
((2.125 GPA 2.150) AND (ACT = 20 OR SAT =  
850)) OR  
((2.100 GPA 2.125) AND (ACT = 21 OR SAT =  
860)) OR  
((2.075 GPA 2.100) AND (ACT = 21 OR SAT =  
870)) OR  
((2.050 GPA 2.075) AND (ACT = 21 OR SAT =  
880)) OR  
((2.025 GPA 2.050) AND (ACT = 21 OR SAT =  
890)) OR ((2.000 GPA 2.025) AND (ACT = 21 OR  
SAT = 900))

(2) Participation in high school athletics—For purposes of this analysis, 1992 college-bound high school seniors were classified into one of three groups depending on the level of participation in high school sports. The first group (varsity athletes) included individuals who reported participation in varsity level sports during their sophomore and senior years or who reported participation in varsity sports during their senior year and also were named

captain or most valuable player. The second group (other athletes) included individuals who did not meet the criteria for group 1, but who did report participation in high school junior varsity or varsity athletics. Group 3 (non-athletes) included individuals who did not report participation in high school athletics at the junior varsity or varsity level. The following variables were used to create the athletic participation variable.

F1S8H='NAMED MOST VALUABLE PLAYER ON  
SPORT TEAM'

F1S41AA='PLAYED BASEBALL/SOFTBALL AT  
SCHOOL'

F1S41AB='PLAYED BASKETBALL AT SCHOOL'

F1S41AC='PLAYED FOOTBALL AT SCHOOL'

F1S41AD='PLAYED SOCCER AT SCHOOL'

F1S41AE='PARTICIPATED ON SWIM TEAM AT  
SCHOOL'

F1S41AF='PLAYED OTHER TEAM SPORT'

F1S41AG='PLAYED AN INDIVIDUAL SPORT'

F2S29G='NAMED MOST VALUABLE PLAYER  
ON SPORT TEAM'

F2S30AA='PARTICIPATED ON A TEAM SPORT AT  
SCHOOL'

F2S30AB='PARTICIPATED IN INDIVIDUAL  
SPORT AT SCHOOL'

#### Other variables used in analysis

Gender of student (F2SEX)—F2SEX is based on the first follow-up (F1SEX) composite and is augmented by second follow-up new student supplement information (in F2N2) if appropriate or, if still missing, by imputation from students' first names.

Student's race/ethnicity (F2RACE1)—F2RACE is based on F1RACE (first follow-up race/ethnicity variable) and is supplemented when appropriate with second follow-up new student supplement data (in F2N17). If F2RACE1 was still missing, available information from the contractor's Survey Management System was used to fill in missing values.

Socio-economic status of student's family (F2SES1Q)—Indicates the quartile into which F2SES1 falls (level 1 = bottom 25 percent; level 2 = middle two quartiles; and level 3 = high 25 percent). F2SES1 was constructed using base year parent questionnaire data, when available. The following parent data were used: Father's education level, mother's education level, father's

occupation, mother's occupation, and family income (data coming from BYP30, BYP31, BYP34B, BYP37B, and BYP80). See page H-12 in NELS:88 Second Follow-up User's Manual for a detailed description of procedures used to create the SES variable.

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