



Research

A blue and white pennant flag with the "NCAA" logo on it, positioned diagonally across the right side of the slide.

Trends in NCAA Student-Athlete Gambling Behaviors and Attitudes

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Study Investigators

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Study Overview

- The NCAA has conducted four national surveys of student-athlete gambling behaviors and attitudes (2004, 2008, 2012 and 2016). This report summarizes notable national trends.
- Data collection and analyses were conducted in Divisions I, II and III.
- More than 84,000 student-athlete surveys were analyzed. Sample sizes by year:
 - 2016 = 22,388
 - 2012 = 22,935
 - 2008 = 19,371
 - 2004 = 19,354

Methods Overview

- All NCAA institutions were approached to participate in each survey:
 - Asked to survey one to three squads.
 - Teams were selected by the NCAA via a stratified random sampling protocol designed to provide sufficiently large and representative samples within sports/divisions.
 - Faculty athletics representatives (FARs) asked to facilitate survey administration.
 - NCAA assisted with campus IRB approval.
- Study protocols were designed to standardize the administration and maximize the anonymity of participating student-athletes and schools.
- As a result, not only do we not know the identities of the student-athlete participants, we do not know which NCAA schools took part in the study.
- Based on the number of surveys received, we estimate that 60% or more of schools participated in each study.

Comparing Responses over Time

- Comparisons are not available across all administrations for all items. Trend data are shown when the same item is available across multiple surveys and when there are notable changes observed over time.
- Since survey sampling strategies were somewhat different in 2004 versus the other three administrations, several steps were taken to equate results as best possible in this report:
 - Comparisons are limited to 22 sports (11 men's sports and 11 women's sports) that were adequately sampled in each NCAA division within each administration.
 - When results were aggregated across sport, gender and/or division, the sample data for 2004, 2008, 2012 and 2016 were weighted in comparison to 2008 national participation rates within the 22 sports/3 divisions. This ensured that over- or under-sampling student-athletes from a particular sport and/or division in a given year would not confound the results.

Data Cleaning

- A high data cleaning standard was applied, which is especially important for the analysis of certain low-baserate items.
- Data were reviewed extensively via a series of validity checks to identify questionable patterns of response.
- Cases were excluded from analyses if strong evidence existed of insincere response (e.g., respondent claims to be a non-gambler in the first half of the survey and a heavy gambler in the second half; respondent endorses a combination of items with a statistical likelihood of close to zero).
- Similar data cleaning standards were applied across all four administrations of the wagering study. Data were then weighted in comparison to national participation rates within the sampled sports. These weighting functions effectively account for differences in sampling proportions within each cohort and then scale results in relation to national participation figures.

Why the NCAA Historically Has Been Concerned about Student-Athletes Gambling

- Student-athlete well-being.
- Contest integrity.

Key Questions for the NCAA

1. Are student-athletes engaging in gambling behaviors that violate NCAA bylaws or put their well-being in danger?
2. As gambling technology and availability change, how are student-athlete gambling behaviors shifting over time?
3. What are student-athlete attitudes toward gambling and sports wagering?
4. Are there particular subgroups of student-athletes whose gambling behaviors should be of concern?
5. How can the NCAA and member schools best support student-athletes (e.g., educational programming and prevention)?

Gambling Behaviors

Genesis of Gambling Behaviors

- Among current student-athletes who have ever gambled for money, 88% of men and 69% of women had their first gambling experience before entering college:

First Time Gambled for Money	2008 Study (Men Women)		2012 Study (Men Women)		2016 Study (Men Women)	
Before HS	26%	13%	33%	18%	31%	14%
HS	66%	63%	59%	57%	57%	56%
College	8%	24%	8%	25%	12%	31%

- Currently, the most typical entry point for NCAA men is (1) card playing for money, (2) sports wagering, and to a lesser degree, (3) bets on games of personal skill. Compared to four years ago, sports wagering has become a more frequent first gambling activity for men. Men are most likely to gamble with teammates or friends.
- Among NCAA women, the most frequent first gambling experience was buying or receiving lottery/scratch tickets. Slots, card playing and sports wagering were the next most likely entry points. Women are much more likely to gamble with a significant other or family members than with teammates.

First Gambling Activity

2016 Study	Men
Played cards for money	35%
Sports wagering	26%
Bet on game of personal skill	14%
Lottery/scratch tickets	7%
Other	5%
Slots	4%
Horses, dogs or similar	4%
Dice/craps	4%
Bingo	1%
Stocks (e.g., day trading)	1%

2016 Study	Women
Lottery/scratch tickets	27%
Played cards for money	18%
Slots	18%
Sports wagering	14%
Horses, dogs or similar	8%
Bingo	5%
Bet on game of personal skill	4%
Other	3%
Dice/craps	2%
Stocks (e.g., day trading)	<1%

Note: Percentages among those who have ever gambled. Respondents were limited to one choice.

Most Likely Gambling Companions

2016 Study	Men	Women
Gamble alone (including online gambling)	6%	5%
Boyfriend, girlfriend, spouse or family member(s)	16%	63%
Teammates or other people I know through sports	39%	12%
Friends outside of sports	39%	21%

Note: Percentages among those who have ever gambled. Respondents were limited to one choice.

Percentage of Student-Athletes Gambling for Money During the Previous 12 Months

		2008 Study	2012 Study	2016 Study
Men	Overall	66%	57%	55%
	Div. I	58%	50%	48%
	Div. II	67%	56%	54%
	Div. III	73%	65%	61%
Women	Overall	39%	39%	38%
	Div. I	31%	30%	32%
	Div. II	40%	41%	35%
	Div. III	45%	46%	44%

Gambling Behaviors among NCAA Men

	2004 Study		2008 Study		2012 Study		2016 Study	
	Past Year	Monthly+	Past Year	Monthly+	Past Year	Monthly+	Past Year	Monthly+
Played cards for money	46.8%	20.6%	45.9%	14.3%	27.4%	6.1%	22.9%	5.7%
Bet horses, dogs	9.8%	2.0%	8.5%	1.4%	6.5%	1.5%	6.3%	1.2%
Games personal skill	39.7%	16.3%	33.1%	13.0%	25.4%	9.9%	23.3%	9.5%
Dice, craps	13.4%	4.3%	11.7%	3.9%	7.8%	2.5%	7.7%	2.7%
Slots	19.8%	3.6%	15.1%	2.0%	11.9%	1.8%	11.8%	2.0%
Lottery tickets	36.2%	11.1%	31.4%	9.1%	35.2%	11.1%	36.4%	10.3%
Played stock market	10.2%	4.7%	9.2%	4.5%	7.4%	3.6%	8.5%	4.1%
Commercial bingo	6.5%	0.9%	6.9%	1.1%	5.3%	1.2%	5.0%	1.3%
Gambled in casino	--	--	22.9%	3.8%	18.7%	3.3%	18.6%	3.2%
Bet on sports	23.5%	9.6%	29.5%	9.6%	25.7%	8.3%	24.3%	8.9%
Casino games on Internet for money	6.8%	2.8%	12.3%	4.7%	7.5%	1.9%	6.7%	1.8%

Note: Percentages displayed are cumulative rather than independent. A student-athlete reporting having wagered 'monthly+' is also included in the 'past year' figure.

Gambling Behaviors among NCAA Women

	2004 Study		2008 Study		2012 Study		2016 Study	
	Past Year	Monthly+	Past Year	Monthly+	Past Year	Monthly+	Past Year	Monthly+
Played cards for money	19.0%	4.4%	10.7%	1.3%	5.3%	0.6%	4.2%	0.4%
Bet horses, dogs	4.8%	0.4%	3.2%	0.1%	2.8%	0.2%	2.7%	0.2%
Games personal skill	14.1%	3.2%	7.2%	1.2%	4.0%	0.7%	2.8%	0.4%
Dice, craps	3.5%	0.7%	2.2%	0.3%	2.0%	0.3%	1.4%	0.1%
Slots	14.3%	1.3%	9.9%	0.5%	8.4%	0.6%	7.2%	0.3%
Lottery tickets	29.7%	5.4%	24.0%	3.5%	30.5%	5.1%	30.9%	3.7%
Played stock market	3.5%	1.3%	2.1%	0.6%	1.1%	0.4%	1.7%	0.6%
Commercial bingo	7.3%	0.8%	6.8%	0.8%	6.2%	0.8%	5.3%	0.7%
Gambled in casino	--	--	11.0%	0.6%	9.4%	0.6%	7.7%	0.4%
Bet on sports	6.7%	1.5%	6.6%	0.8%	5.2%	0.6%	4.5%	0.5%
Casino games on Internet for money	2.1%	0.8%	1.9%	0.2%	1.8%	0.3%	1.3%	0.1%

Note: Percentages displayed are cumulative rather than independent. A student-athlete reporting having wagered 'monthly+' is also included in the 'past year' figure.

Largest One-Day Gambling Loss among Student-Athletes Who Have Ever Gambled for Money

2016 Study	Men	Women
Less than \$10	31%	55%
\$10 - \$49	34%	32%
\$50 - \$99	14%	8%
\$100 - \$299	13%	4%
\$300 - \$499	3%	1%
\$500 - \$999	2%	<1%
\$1,000 +	2%	<1%

Gambling Severity (DSM Classification)

Men	2004 Study	2008 Study	2012 Study	2016 Study
Non-gambler	29.3%	33.7%	42.3%	45.3%
Social gambler	66.7%	62.5%	55.8%	52.8%
At-risk gambler	2.9%	1.8%	1.2%	1.1%
Probable pathological gambler	1.1%	2.0%	0.7%	0.7%

Women	2004 Study	2008 Study	2012 Study	2016 Study
Non-gambler	51.1%	61.4%	61.3%	62.4%
Social gambler	48.6%	38.2%	38.6%	37.5%
At-risk gambler	0.3%	0.2%	< 0.1%	< 0.1%
Probable pathological gambler	< 0.1%	0.2%	< 0.1%	< 0.1%

Percentage of Student-Athletes Reporting That They Played Simulated Gambling Activities in the Past Year

Men	2012	2016
Played a simulated gambling activity via a <u>videogame console</u>	18%	15%
Played a simulated gambling activity via a <u>social media website</u>	12%	8%
Played a simulated gambling activity via an <u>Internet gambling website or a specific app on your cell phone/tablet</u>	--	14%
Played a free simulated <u>sports betting or bracket game</u> on the Internet	12%	12%
Women	2012	2016
Played a simulated gambling activity via a <u>videogame console</u>	5%	4%
Played a simulated gambling activity via a <u>social media website</u>	4%	3%
Played a simulated gambling activity via an <u>Internet gambling website or a specific app on your cell phone/tablet</u>	--	5%
Played a free simulated <u>sports betting or bracket game</u> on the Internet	2%	3%

Sports Wagering Behaviors

Genesis of Sports Wagering Behaviors

- Women are much less likely than men to have ever wagered on sports. However, among both men and women who have ever placed a sports bet, their first experience with sports wagering tended to occur before entering college.

First Time Wagered on Sports	2012 Study (Men Women)		2016 Study (Men Women)	
Before HS	29%	24%	25%	17%
HS	63%	60%	65%	66%
College	7%	16%	10%	18%

Percentage of NCAA Men Reporting That They Wager on Sports (by NCAA Division)

<u>Occasional</u> (Past Year)	2004 Study	2008 Study	2012 Study	2016 Study
Division I	17.1%	22.4%	18.7%	16.5%
Division II	20.6%	27.9%	25.9%	22.8%
Division III	30.7%	36.9%	31.9%	32.1%

<u>Frequent</u> (Monthly+)	2004 Study	2008 Study	2012 Study	2016 Study
Division I	6.6%	6.8%	5.9%	5.8%
Division II	8.7%	9.4%	8.5%	8.4%
Division III	12.8%	12.1%	10.4%	12.1%

<u>Heavy</u> (Weekly+)	2004 Study	2008 Study	2012 Study	2016 Study
Division I	2.8%	1.9%	2.1%	2.0%
Division II	4.1%	2.9%	3.3%	2.7%
Division III	6.7%	3.2%	3.1%	4.5%

Note: Percentages displayed are cumulative rather than independent. A student-athlete reporting having wagered 'weekly+' is also included in the 'monthly+' and 'past year' figures.

Percentage of NCAA Women Reporting That They Wager on Sports (by NCAA Division)

<u>Occasional</u> (Past Year)	2004 Study	2008 Study	2012 Study	2016 Study
Division I	4.6%	4.1%	2.7%	2.8%
Division II	7.9%	6.2%	5.4%	3.5%
Division III	8.1%	9.1%	7.3%	6.7%

<u>Frequent</u> (Monthly+)	2004 Study	2008 Study	2012 Study	2016 Study
Division I	0.9%	0.6%	0.3%	0.4%
Division II	2.1%	0.7%	0.5%	0.6%
Division III	1.7%	1.0%	0.8%	0.5%

<u>Heavy</u> (Weekly+)	2004 Study	2008 Study	2012 Study	2016 Study
Division I	0.3%	0.1%	0.1%	0.2%
Division II	1.0%	0.1%	0.0%	0.2%
Division III	0.7%	0.2%	0.1%	0.1%

Note: Percentages displayed are cumulative rather than independent. A student-athlete reporting having wagered 'weekly+' is also included in the 'monthly+' and 'past year' figures.

Percentage of NCAA Men Reporting That They Wager on Sports at Least Monthly

(Divisions Combined within Sports)

Men's Sports	2004 Study	2008 Study	2012 Study	2016 Study
Baseball	12.3%	12.7%	9.5%	10.3%
Basketball	9.9%	10.0%	8.4%	8.2%
Football	8.6%	9.0%	8.3%	10.6%
Golf	14.2%	19.6%	20.2%	18.2%
Ice Hockey	12.1%	7.6%	8.9%	14.2%
Lacrosse	13.9%	10.1%	5.6%	10.6%
Soccer	10.9%	10.6%	9.7%	6.7%
Swimming	5.7%	4.3%	3.5%	3.7%
Tennis	8.8%	8.4%	7.8%	5.8%
Track / Cross Country	4.9%	5.4%	4.4%	4.1%
Wrestling	12.4%	6.2%	6.0%	5.0%

Note: In 2016, the women's sports with the highest % of participants reporting that they wagered on sports at least monthly were golf (1.2%) and lacrosse (1.0%).

Percentage of Division I Student-Athletes Reporting That They Wager on Sports at Least Once/Month

Men's Sports Division I	2004 Study	2008 Study	2012 Study	2016 Study
Baseball	8.2%	9.5%	9.3%	5.8%
Basketball	6.1%	4.5%	5.9%	3.2%
Football	5.4%	6.0%	4.6%	6.2%
Golf	14.4%	20.5%	21.3%	14.0%
Ice Hockey	9.2%	4.2%	7.8%	10.0%
Lacrosse	9.7%	5.6%	4.3%	14.6%
Soccer	6.5%	6.9%	7.0%	4.1%
Swimming	4.1%	3.4%	3.0%	2.9%
Tennis	9.9%	6.7%	3.4%	2.4%
Track / XC	4.6%	5.3%	3.1%	4.2%
Wrestling	8.5%	6.4%	2.7%	2.7%

Women's Sports Division I	2004 Study	2008 Study	2012 Study	2016 Study
Basketball	0.9%	0.5%	0.9%	0.3%
Field Hockey	0.9%	0.0%	0.0%	0.0%
Golf	0.7%	1.7%	2.1%	0.9%
Gymnastics	0.0%	0.0%	0.0%	0.0%
Lacrosse	1.2%	0.0%	0.0%	0.5%
Softball	0.3%	1.1%	1.1%	0.4%
Soccer	0.9%	0.2%	0.0%	0.4%
Swimming	1.2%	0.6%	0.0%	0.0%
Tennis	1.2%	0.8%	0.0%	0.0%
Track / XC	1.3%	0.7%	0.2%	0.4%
Volleyball	0.7%	0.0%	0.0%	0.8%

Percentage of Division II Student-Athletes Reporting That They Wager on Sports at Least Once/Month

Men's Sports Division II	2004 Study	2008 Study	2012 Study	2016 Study
Baseball	8.5%	9.4%	8.4%	8.3%
Basketball	6.9%	9.9%	6.3%	6.2%
Football	9.0%	10.0%	10.1%	11.4%
Golf	14.4%	16.7%	19.0%	18.7%
Ice Hockey	--	--	--	--
Lacrosse	3.9%	8.8%	6.9%	11.3%
Soccer	13.6%	10.0%	8.2%	5.3%
Swimming	7.4%	6.3%	6.4%	1.2%
Tennis	5.9%	6.2%	10.2%	3.6%
Track / XC	4.6%	5.6%	2.8%	2.5%
Wrestling	10.0%	7.8%	4.4%	5.0%

Women's Sports Division II	2004 Study	2008 Study	2012 Study	2016 Study
Basketball	0.6%	1.1%	0.8%	0.5%
Field Hockey	--	1.7%	0.0%	1.2%
Golf	--	0.0%	1.0%	0.8%
Gymnastics	--	--	--	--
Lacrosse	--	--	2.1%	0.5%
Softball	3.2%	0.6%	0.3%	0.8%
Soccer	1.9%	0.9%	0.6%	0.0%
Swimming	1.1%	1.1%	0.0%	0.8%
Tennis	3.5%	2.3%	0.0%	0.0%
Track / XC	1.2%	0.0%	0.3%	1.2%
Volleyball	1.0%	0.0%	1.0%	0.4%

Note: Within-sport percentages not shown or combined with other divisions if n < 50.

Percentage of Division III Student-Athletes Reporting That They Wager on Sports at Least Once/Month

Men's Sports Division III	2004 Study	2008 Study	2012 Study	2016 Study
Baseball	18.8%	18.1%	10.5%	15.7%
Basketball	14.4%	14.0%	11.5%	13.0%
Football	11.8%	11.7%	11.3%	15.0%
Golf	13.9%	20.8%	20.1%	21.9%
Ice Hockey	14.2%	9.9%	9.8%	17.0%
Lacrosse	18.5%	12.6%	5.8%	8.6%
Soccer	11.9%	12.8%	11.8%	8.6%
Swimming	6.8%	4.6%	3.2%	5.2%
Tennis	9.2%	10.6%	10.0%	9.5%
Track / XC	5.3%	5.5%	7.1%	5.1%
Wrestling	18.3%	5.1%	10.7%	7.5%

Women's Sports Division III	2004 Study	2008 Study	2012 Study	2016 Study
Basketball	2.4%	1.9%	1.4%	0.6%
Field Hockey	1.3%	0.0%	0.5%	0.0%
Golf	--	1.8%	0.9%	2.0%
Gymnastics	--	--	--	--
Lacrosse	3.6%	0.5%	0.9%	1.4%
Softball	1.8%	1.6%	1.5%	0.4%
Soccer	2.2%	0.8%	0.8%	0.5%
Swimming	0.0%	1.3%	0.7%	0.0%
Tennis	2.4%	0.0%	1.2%	0.7%
Track / XC	0.5%	0.7%	0.2%	0.3%
Volleyball	1.2%	1.0%	0.0%	0.7%

Note: Within-sport percentages not shown or combined with other divisions if n < 50.

Wagering Behaviors among Men's Golf Student-Athletes

	2016 Study Men's Golf			2016 Study All Other Men (No Golf)		
	Past Year	Monthly+	Weekly+	Past Year	Monthly+	Weekly+
Played cards for money	41.1%	13.8%	3.5%	22.1%	5.3%	1.4%
Bet horses, dogs	11.7%	2.9%	0.8%	6.0%	1.1%	0.3%
Games personal skill	52.0%	35.0%	18.3%	22.1%	8.4%	2.7%
Dice, craps	10.3%	2.8%	0.7%	7.5%	2.7%	1.1%
Slots	14.9%	3.9%	1.0%	11.7%	1.9%	0.4%
Lottery tickets	39.5%	14.7%	3.4%	36.3%	10.1%	2.6%
Played stock market	14.1%	8.4%	3.7%	8.2%	3.9%	1.8%
Commercial bingo	7.6%	1.9%	0.6%	4.9%	1.3%	0.5%
Gambled in casino	28.4%	7.2%	1.4%	18.2%	3.1%	0.6%
Bet on sports	41.7%	18.2%	7.1%	23.5%	8.5%	3.0%
Casino games on Internet for money	11.6%	3.2%	1.7%	6.5%	1.7%	0.5%

Note: Percentages displayed are cumulative rather than independent. A student-athlete reporting having wagered 'weekly+' is also included in the 'monthly+' and 'past year' figures.

Placing Bets on Sports

Wagering Targets of Student-Athletes who Reported Sports Wagering in Past 12 Months

Men	2016 Study			Women	2016 Study		
	No	Yes, not frequently	Yes, frequently		No	Yes, not frequently	Yes, frequently
NFL	35%	38%	27%	NFL	56%	37%	7%
College Basketball	45%	37%	18%	College Basketball	57%	40%	4%
NBA	68%	20%	12%	College Football	88%	11%	1%
College Football	70%	19%	11%	NBA	89%	10%	2%
Major League Baseball	82%	10%	8%	Major League Baseball	93%	6%	1%
NHL	87%	7%	5%	Other Pro/College	94%	5%	1%
UFC, MMA, Boxing	88%	9%	3%	NHL	96%	3%	2%
Golf	90%	6%	4%	Golf	97%	2%	1%
Soccer	91%	6%	3%	Auto Racing	98%	2%	1%
HS or Youth Sports	96%	3%	1%	Soccer	98%	1%	2%
Other Pro/College	96%	3%	1%	UFC, MMA, Boxing	98%	1%	1%
Tennis	97%	2%	1%	HS or Youth Sports	98%	1%	1%
Auto Racing	97%	2%	1%	Tennis	99%	1%	<1%

Note: Tables for men and women sorted by % who had wagered on that sport.

How NCAA Men who Bet on Sports During the Past Year Placed Those Bets

Men – 2016 Study	No	Yes, not frequently	Yes, frequently
Bet with a bookie	91%	6%	3%
Bet with friends	20%	59%	21%
Bet electronically via an Internet site or an app on phone/tablet	68%	20%	12%
Bet via a casino, sports book or sports lottery	82%	14%	4%

How NCAA Women who Bet on Sports During the Past Year Placed Those Bets

Women – 2016 Study	No	Yes, not frequently	Yes, frequently
Bet with a bookie	96%	3%	1%
Bet with friends	30%	66%	4%
Bet electronically via an Internet site or an app on phone/tablet	85%	12%	3%
Bet via a casino, sports book or sports lottery	91%	9%	<1%

Largest One-Day Sports Wagering Loss among Student-Athletes Who Have Ever Wagered on Sports

2016 Study	Men	Women
Less than \$10	41%	70%
\$10 - \$49	38%	25%
\$50 - \$99	11%	3%
\$100 - \$299	6%	1%
\$300 - \$499	2%	<1%
\$500 - \$999	1%	<1%
\$1,000 +	1%	<1%

Forms of Sports Betting Undertaken by NCAA Men who Wagered on Sports During the Past Year

Men	2016 Study
Participated in a <u>season-long</u> sports fantasy league for money	50%
Pools or bracket contests	49%
Bet on individual games (e.g., point spread, win/loss, over/under)	46%
Participated in online <u>daily or weekly</u> fantasy sports contests (e.g., via DraftKings or FanDuel)	32%
Live in-game betting	13%
Parlays	10%
Prop Bets	8%

Forms of Sports Betting Undertaken by NCAA Women who Wagered on Sports During the Past Year

Women	2016 Study
Pools or bracket contests	46%
Bet on individual games (e.g., point spread, win/loss, over/under)	28%
Participated in a <u>season-long</u> sports fantasy league for money	14%
Participated in online <u>daily or weekly</u> fantasy sports contests (e.g., via DraftKings or FanDuel)	10%
Live in-game betting	4%
Prop Bets	2%
Parlays	1%

Fantasy Sports

Participation in Fantasy Sports

Men	2004 Study	2008 Study	2012 Study	2016 Study
Ever participated in <u>free</u> fantasy league	37.6%	50.0%	50.7%	51.1%
Participated in fantasy league with <u>entry fee</u> and <u>prize money</u> in the past year	15.5%	17.0%	18.7%	19.7%
Consider participation in a fantasy league with and entry fee and a prize to be gambling?	--	34.3%	19.9%	24.1%

Women	2004 Study	2008 Study	2012 Study	2016 Study
Ever participated in <u>free</u> fantasy league	5.5%	8.4%	8.4%	10.3%
Participated in fantasy league with <u>entry fee</u> and <u>prize money</u> in the past year	2.7%	2.4%	1.8%	3.1%
Consider participation in a fantasy league with and entry fee and a prize to be gambling?	--	37.6%	17.7%	20.1%

Fantasy Sports for Money

(Past 12 Months)

Men	2016 Study
Participated in fantasy league with <u>entry fee and prize money</u>	19.7%
Participated in a <u>season-long</u> sports fantasy league for money	17.1%
Participated in online <u>daily or weekly</u> fantasy sports contests (e.g., via DraftKings or FanDuel)	10.6%

Women	2016 Study
Participated in fantasy league with <u>entry fee and prize money</u>	3.1%
Participated in a <u>season-long</u> sports fantasy league for money	2.7%
Participated in online <u>daily or weekly</u> fantasy sports contests (e.g., via DraftKings or FanDuel)	2.4%

Note: Overall figures (row 1) based on study participants who reported season-long (row 2) or daily/weekly (row 3) fantasy play. Although 10.6% of men and 2.4% of women participated in daily or weekly pay-fantasy contests during spring 2016, these participants overlapped substantially with those who reported playing season-long fantasy games.

Total Money Spent on Fantasy Sports among Student-Athletes Who Played Pay Fantasy in the Past Year

2016 Study	Men	Women
Less than \$10	21%	44%
\$10 - \$49	46%	47%
\$50 - \$99	18%	3%
\$100 - \$499	14%	6%
\$500 - \$999	1%	0%
\$1,000 +	1%	0%

Basketball Pools

Participation in NCAA Men's Basketball Pools/Brackets

Men	2008 Study	2012 Study	2016 Study
Ever participated in <u>free</u> NCAA MBB tournament pool	52%	46%	45%
Ever participated in NCAA MBB tournament pool with <u>entry fee and prize money</u>	32%	25%	23%
Consider participation in an NCAA MBB tournament pool with and entry fee and a prize to be gambling?	27%	23%	25%

Women	2008 Study	2012 Study	2016 Study
Ever participated in <u>free</u> NCAA MBB tournament pool	21%	17%	18%
Ever participated in NCAA MBB tournament pool with <u>entry fee and prize money</u>	8%	5%	5%
Consider participation in an NCAA MBB tournament pool with and entry fee and a prize to be gambling?	19%	20%	23%

Highest Entry Fee Ever Paid for an NCAA Men's Basketball Tournament Pool or Bracket Contest

(Among Those Who Have Ever Participated in a Pool or Bracket)

2016 Study	Males	Females
There was no fee	29%	59%
Less than \$10	32%	29%
\$10 - \$49	35%	11%
\$50 - \$99	3%	1%
\$100 +	2%	<1%

Behaviors Related to Contest Fairness

Notes on Analysis of Low-Baserate Behaviors

1. The study authors stress that the items described in this section, which ask student-athletes directly about contest fairness, be judged within a rigorous statistical context due to the difficulty in obtaining statistically reliable results from questions of this nature.
2. In our judgment, there are two main factors that lead to difficulties precisely estimating national percentages on these types of low-baserate contest fairness items. One factor may push the sample percentages higher and the other could push them lower:
 - We see some item endorsement that we can determine statistically to be a likely insincere response;
 - Despite lengths taken to ensure participant anonymity, persons engaging in illegal or eligibility-jeopardizing activity may still perceive an extreme risk in honestly answering certain questions.
3. Any population estimate for a question with an extremely low baserate (e.g., only one to two percent of student-athletes endorsing) can easily be incorrect by a large relative margin due to the factors described above or to other research/statistical confounds.
4. Determining whether a rate is truly different from zero (or some other meaningful baseline) or whether a change in the rate has occurred should be assessed using appropriate tests of statistical significance.

Notes on Analysis of Low-Baserate Behaviors

5. The following tables show endorsement of behaviors related to contest fairness among student-athletes in Division I men's basketball and football. As a comparison, similar self-report rates are shown for all other men in aggregate (all men in Divisions I, II and III outside of Division I men's basketball and football).
6. Examination of rates for Division I men's basketball and football in comparison to such a baseline group may tell a more meaningful story than evaluating whether the rates are statistically different than zero.
7. Comparison with this baseline group of men highlights two issues: (a) given changes in the betting landscape (e.g., existence of betting lines in sports outside of Division I men's basketball and football), it is possible that movement on these items for this comparison group could be meaningful; (b) even employing extensive methodologies for identifying insincere responses on these items, a certain percentage of college men will indicate their contests are unfair even when it is clear that is unlikely (e.g., a Division III cross country runner is likely not being asked to change the outcome of a contest).

Summary of Findings on Behaviors Related to Contest Fairness

- It is difficult, if not impossible, to get a true point-estimate of the percentage of Division I men's basketball and football players involved in behaviors such as providing inside information, betting on their team's own games or altering play for wagering purposes.
- That said, there are several areas where responses are worth mentioning (see slide footnotes for additional result interpretation).

Percentage of Division I Men's Basketball and Football Players Reporting Having Been Contacted by Outside Sources to Share Inside Information

	2004 Study	2008 Study	2012 Study	2016 Study
Division I Men's Basketball	1.2%	3.8%	4.6%	3.4%
Division I Football (FBS or FCS)	2.0%	3.5%	2.2%	2.2%
All Men in Divisions I, II and III (DI men's Basketball and Football Excluded)	0.6%	1.4%	1.6%	1.6%

Note: In aggregate, MBB and MFB players in Division I were more likely to report being contacted than other NCAA men (Fisher's Exact Test, $p < .01$). FBS=Football bowl subdivision, FCS=Football championship subdivision.

Percentage of Division I Men's Basketball and Football Players Claiming to Have Provided Inside Information to Outside Sources

	2004 Study	2008 Study	2012 Study	2016 Study
Division I Men's Basketball	1.2%	0.9%	0.8%	0.0%
Division I Football (FBS or FCS)	2.5%	1.1%	0.3%	0.8%
All Men in Divisions I, II and III (DI men's Basketball and Football Excluded)	0.8%	0.7%	0.5%	0.6%

Note: MBB and MFB players in Division I were no more likely than other NCAA men to report in 2016 that they provided inside information (Fisher's Exact Test, $p=ns$).

Percentage of Division I Basketball and Football Players Who Report Ever Having Posted What Could be Considered Inside Information on Social Media

	2012 Study	2016 Study
Division I Men's Basketball	8%	2%
Division I Women's Basketball	14%	6%
Division I Football (FBS or FCS)	6%	2%

Note: In 2016, football and M/W basketball players in Division I reported posting less “information during the season on social media about how you or your teammates are feeling, how the team is looking in practice or how you’re preparing for an upcoming game.”

Percentage of Division I Basketball and Football Players Who Report Being Told by a Coach Not to Post Certain Information on Social Media

	2012 Study	2016 Study
Division I Men's Basketball	19%	14%
Division I Women's Basketball	29%	24%
Division I Football (FBS or FCS)	18%	15%

Note: In 2016, football and M/W basketball players in Division I were slightly less likely than in 2012 to report being told by a coach not to post certain information about you or your team on social media.

Percentage of Division I Men's Basketball and Football Players Reporting Having Been Asked to Influence the Outcome of a Game

	2004 Study	2008 Study	2012 Study	2016 Study
Division I Men's Basketball	2.4%	1.6%	2.1%	0.6%
Division I Football (FBS or FCS)	2.3%	1.2%	1.2%	1.6%
All Men in Divisions I, II and III (DI men's Basketball and Football Excluded)	1.0%	1.1%	1.0%	0.8%

Note: Although the reported percentages for 2016 were very low, MFB players in Division I were more likely to report being asked to Influence the outcome of a game than other NCAA men (Fisher's Exact Test, $p < .01$).

Percentage of Division I Men's Basketball and Football Players Reporting Having Bet on Their Own Team

	2004 Study	2008 Study	2012 Study	2016 Study
Division I Men's Basketball	2.7%	2.0%	0.8%	0.6%
Division I Football (FBS or FCS)	2.9%	2.2%	1.3%	1.5%
All Men in Divisions I, II and III (DI men's Basketball and Football Excluded)	1.7%	2.2%	2.2%	1.4%

Note: MBB and MFB players in Division I were no more likely than other NCAA men to report in 2016 that they had bet on their own team (Fisher's Exact Test, $p=ns$).

Percentage of Division I Men's Basketball and Football Players Reporting Having Bet on Another Team at Their School

	2004 Study	2008 Study	2012 Study	2016 Study
Division I Men's Basketball	1.8%	1.4%	1.5%	1.2%
Division I Football (FBS or FCS)	4.9%	3.4%	2.6%	3.1%
All Men in Divisions I, II and III (DI men's Basketball and Football Excluded)	4.1%	2.6%	2.3%	2.0%

Note: In the 2016 study, 9.8% of Division I men's golf participants reported betting on another team from their school. The football percentage (3.1%) is statistically higher than the 2.0% baseline (Fisher's Exact Test, $p < .01$).

Percentage of Division I Men's Basketball and Football Players Reporting That They Have Ever Known a Bookie

2016 Study	Known a Bookie	Known Student-Athlete Bookie at College
Division I Men's Basketball	0.9%	0.3%
Division I Football (FBS or FCS)	2.6%	1.0%
All Men in Divisions I, II and III (DI men's Basketball and Football Excluded)	5.2%	1.6%

Note: In the 2016 study, 15.7% of Division I men's golf participants reported having ever known a bookie; 3.8% reported knowing a student-athlete bookie at their school.

Other Items Related to Contest Fairness

(2016 Study)

- 1.8% of Division I football players reported being asked by a team member for help in influencing the outcome of a game. However, this figure is not statistically different than the baseline percentage of NCAA men across all sports/divisions reporting the same (1.1%).
- On the following items, endorsement was below 1% for both Division I football and men's basketball, and not statistically discrepant from the baseline endorsement of NCAA men across all sports/divisions :
 - Known of a teammate who was asked to try to influence the outcome of a game,
 - Known of a teammate who accepted money or other reward for playing poorly,
 - Asked a teammate to influence the outcome of a game,
 - Accepted money or other reward for playing poorly,
 - Been helped by anyone to pay a gambling debt,
 - Received help for a gambling addiction.

Other Items Related to Contest Fairness

(2016 Study)

- Percentage of players reporting that they have ever bet on a college game in their sport (but not involving their team):
 - Division I men's basketball – 4.9%,
 - Division I football – 10.5%.

Education and Enforcement

Have You Received Information on the NCAA Rules Concerning Gambling?

(Student-Athlete Self-Report)

	2008		2012		2016	
	Men	Women	Men	Women	Men	Women
Division I	77%	83%	72%	76%	76%	82%
Division II	63%	68%	59%	59%	72%	73%
Division III	62%	61%	57%	58%	68%	64%

Student-Athlete Self-Report of the Most Effective Ways to Influence Student-Athletes not to Wager on Sports

(Across Division – Among SAs who Wagered on Sports in Past Year)

2016 Study Rank	Men (Wagered on Sports Past Year)	Women (Wagered on Sports Past Year)
1	Coach (3.59)	NCAA Penalties (3.97)
2	NCAA Penalties (3.50)	Teammates (3.88)
3	Teammates (3.45)	Coach (3.87)
4	Presentation from Former Athlete (3.17)	Presentation from Former Athlete (3.56)
5	Parents (3.14)	Law Enforcement Presentation (3.42)
6	Athletics Dept. Info/Presentation (3.10)	Athletics Dept. Info/Presentation (3.42)
7	Law Enforcement Presentation (2.98)	Parents (3.24)
8	NCAA Educational Materials (2.82)	NCAA Educational Materials (3.16)
9	Former bookie/gambler presentation (2.65)	Former bookie/gambler presentation (2.95)

Note:

- Number in parentheses represents group average on 0-5 scale (2=somewhat disagree, 3=somewhat agree, 4=agree).

Beliefs about Gambling and Sports Wagering

Perceived Belief among Student-Athletes that Coaches or Teammates Would Be Aware if a Team Member Was Gambling on Sports

(Across Division – Among SAs who Wagered on Sports in Past Year)

Men	2012	2016
Coaches generally aware	33%	44%
Teammates generally aware	67%	73%

Women	2012	2016
Coaches generally aware	42%	52%
Teammates generally aware	70%	78%

Personal Beliefs of Student-Athletes about Sports Wagering

(Across Division – Among All SAs)

2016 Study	Men	Women
Most college SAs violate NCAA rules that prohibit sports wagering	45%	26%
Sports wagering is acceptable so long as you wager on a sport other than the one in which you participate	43%	21%
I think sports wagering is a harmless pastime	54%	31%
If I chose to wager on sports, I could consistently make a lot of money	34%	13%
Coaches take NCAA rules against sports wagering seriously	72%	77%
It makes me uncomfortable that people bet on college sports	27%	33%
I don't think gambling entities should advertise at college sporting events or during college sports telecasts	46%	60%

Note: Percentage endorsing “Somewhat agree” or higher (top three scale points on six-point scale).

Personal Beliefs of Student-Athletes about Sports Wagering

(Across Division – Among SAs who Wagered on Sports in Past Year)

2016 Study	Men	Women
Most college SAs violate NCAA rules that prohibit sports wagering	66%	52%
Sports wagering is acceptable so long as you wager on a sport other than the one in which you participate	64%	45%
I think sports wagering is a harmless pastime	76%	61%
If I chose to wager on sports, I could consistently make a lot of money	49%	23%
Coaches take NCAA rules against sports wagering seriously	74%	73%
It makes me uncomfortable that people bet on college sports	20%	18%
I don't think gambling entities should advertise at college sporting events or during college sports telecasts	42%	50%

Note: Percentage endorsing “Somewhat agree” or higher (top three scale points on six-point scale).

Personal Beliefs of Student-Athletes about Sports Wagering

(Division I Football and Men's Basketball Players)

2016 Study	DI Football	DI Men's Basketball	Other DI Men
Most college SAs violate NCAA rules that prohibit sports wagering	43%	34%	42%
Sports wagering is acceptable so long as you wager on a sport other than the one in which you participate	43%	38%	42%
I think sports wagering is a harmless pastime	51%	43%	53%
If I chose to wager on sports, I could consistently make a lot of money	37%	37%	32%
Coaches take NCAA rules against sports wagering seriously	65%	70%	73%
It makes me uncomfortable that people bet on college sports	30%	35%	26%
I don't think gambling entities should advertise at college sporting events or during college sports telecasts	42%	47%	46%

Note: Percentage endorsing "Somewhat agree" or higher (top three scale points on six-point scale).



Research

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