

ABSTRACT

The experience of college has been recognized to connection to depression, substance misuse, and excessive alcohol use. However, college athletes experience typical college stressors and additional sports-related stressors. This study investigates the relationship between athletic involvement in college and depression and substance use. The study aimed to examine whether athletes or non-athletes have higher rates of depression. The study also aimed to identify whether athletes or non-athletes use alcohol and other substances more. To test the relationship between substance abuse among college athletes and non-athletes, a Chi-square test was used. To determine the level of depression among college athletes and non-athletes a Kruskal-Wallis H test was used. The Chi-square test identified a significant relationship between athletes and binge drinking, prescription drug use, and steroid use. The Kruskal-Wallis H test yielded the unexpected result of a similar level of depression between athletic groups.

INTRODUCTION

Significance of Study:

Purpose of Research: The purpose of the study is to determine the difference in depression and substance abuse between athletes and non-athletes.

Research Questions:

1. What is the difference between depression among college athletes and non-athletes?
2. What is the difference between substance use among college athletes and non-athletes?

Hypothesis:

- College athletes suffer from higher rates of depression than non-college athletes.
- College athletes use more drugs than non-college athletes.

LITERATURE REVIEW

Environment of College Athletes and Non-athletes

- The National Collegiate Athletic Association recognizes that the increased stress places student-athletes at higher risk for behavior associated with depression (Armstrong, Burcin, Bjerke, & Early, 2015).
- Athletes strive for excellence within an elite competitive sports environment, which results in an identity constructed around their ability to perform in athletics (Doherty, Hannigan, & Camobell, 2016; Graupensperger, Benson, Bray, & Evans, 2019)

Substance Use

- Alcohol and substance use are common only associated with the college lifestyle (Ford 2008). This research found that one in two athletes binge drink (Green Nelson & Hartmann, 2014).
- Non-Athletes are more likely to report nonmedical prescription drug use than athletes (Ford, 2008).

Depression

The research shows that 73.4% of male athletes developed depression compared to the 65% of non-athlete males that developed depression (Ghaedi & Mohd, 2014).

Gaps

There is a lack of consistency in the literature. There has not been enough consistent research to establish a reliable trend in determining the difference in depression rates among athletes and non-athletes.

MATERIALS & METHODS

Research Design and Data Collection

- Secondary analysis of the data from the Athletic Involvement Study.
- 45- minute Self reporting surveys
- Cross-sectional Study
- Participant was awarded \$10.00 compensation

Sampling and Sampling Method

- The sample includes 795 undergrad students from a public university in the Northeastern region of the United States, enrolled in large -section lower-level sociology, communications, and economic courses at a large university
- The majority of participants were between the ages of 18 to 24, 416 males and 378 females.
- The sample includes individuals that racially identify as White, Black or African American, Native American/American Indian, Asian, Asian American or Pacific Islander, and Mixed Race.

Measures

- Depression was measured by ten variables from the Center for Epidemiologic Studies -Depression scale
- Substance use was measured using 6 items. Substance use is defined by the use of marijuana, inhalants, club drugs, prescription drugs without prescription, binge drinking and steroids without a prescription in the past 12 months. Substance use also includes binge drinking.
- Athletic involvement indicators were recoded and grouped into three groups did not play a sport, played a college sport only, played community sport only, and played both college and community sport.

RESULTS

Chi- Square Test

- A significant relationship between athletes and binge drinking was found ($\chi^2(14) = 33.026, p = .003$) while Cramer's V statistic suggested a weak relationship (.144)
- A significant relationship between athletic status and prescription drug use without prescription was established using the chi- squared test, ($\chi^2(4) = 9.846, p = .043$) while Cramer's V statistic suggested a weak relationship (.079).
- Significant relationship between athletic status and steroid use without prescription, ($\chi^2(4) = 16.144, p = .003$) while Cramer's V statistic suggested a weak relationship (.101).

Kruskal-Wallis H test

- Kruskal-Wallis H test was conducted comparing Depression scores among college athletes and non-athletes. A significant result was not found ($H(2) = 4.191, p = .123$, indicating a similar level of depression across the three groups

Figure 1
Differences in binge drinking among athletes and non-athletes

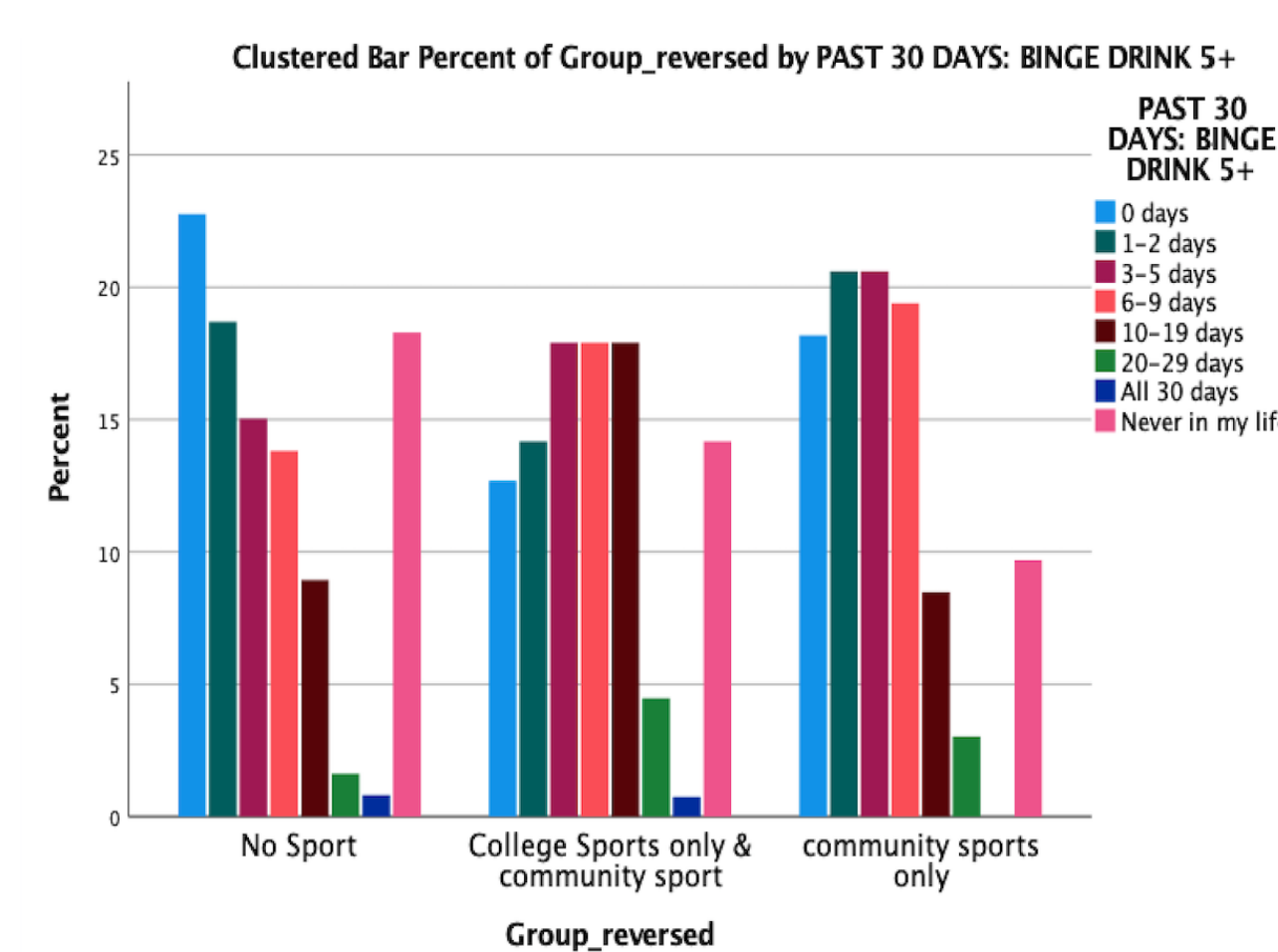


Figure 2
Differences in prescription drug use without among athletes and non-athletes

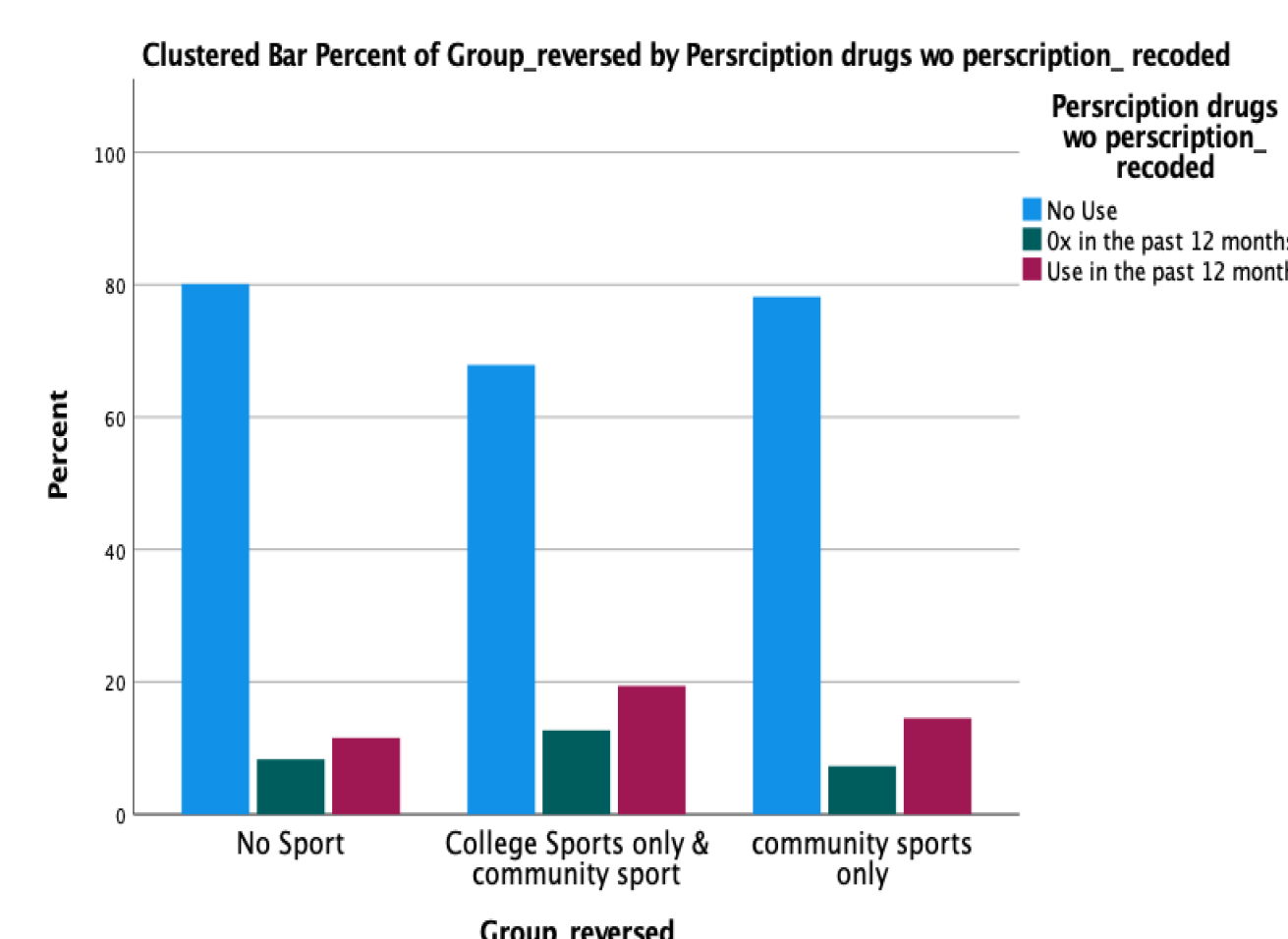


Table 1

Sample Characteristics (N=795)

Characteristic	f	%
Gender		
Male	416	52.3
Female	378	47.6
Age in Years		
18 years old	129	16.2
19 years old	248	31.2
20 years old	173	21.8
21 years old	136	17.1
22 years old	52	6.5
23 years old	26	3.3
24 or Older	31	3.9
Race		
Whit Caucasian	523	66.0
Black/ African American	79	10.0
Native American / American Indian	68	8.6
Pacific Islander/ Asian American	91	11.4
Mixed race	31	3.9
Year in College		
Freshman	235	29.6
Sophomore	263	33.1
Junior	184	23.2
Senior	103	13.0
Other	9	1.1
Ethnicity		
Hispanic	61	7.7
Non-Hispanic	732	92.3

Table 2

Descriptive Statistics: Study Variables (N=795)

Variables	f	%
Independent Variables		
Athletic Involvement		
No Sport	494	62.2
College sport only & Community sport	134	16.9
Community sports only	166	20.9
Dependent Variables		
Inhalants		
No Use	692	87.4
Use in the past 12 months	74	9.3
Use in the past 12 months	26	3.3
Club Drugs		
No Use	690	87.1
Use in the past 12 months	63	8.0
Use in the past 12 months	39	4.9
Steroids without Prescription		
No Use	494	62.2
Use in the past 12 months	134	16.9
Use in the past 12 months	166	20.9
Prescription drugs without prescription		
No Use	616	77.7
Use in the past 12 months	70	8.8
Use in the past 12 months	107	13.5
Marijuana		
0 times	128	16.1
1-2 times	103	13.0
3-11 times	97	12.2
12-50 times	72	9.1
51+ times	104	13.1
Never in my life	290	36.5
Binge drinking		
0 days	159	20.1
1-2 days	103	13.0
3-5 days	97	12.2
6-9 days	125	15.8
10-19 days	82	10.4
20-29 days	19	2.4
All 30 days	5	0.6
Never in my life	125	15.8
Depression	M=9.6	SD=5.56

DISCUSSION

Key Findings

- Consistent with the study's hypothesis, athletes binge drink more than non-athletes.
- Athletes drink five or more drinks in one sitting more frequently than non-athletes. Consistent with literature that notes that college athletes are more likely to binge drink than non-athletes (Armstrong, Burcin, Bjerke & Early, 2015).
- Prescription drug use in the past 12 months was highest among college athletes compared to individuals that do not play a sport.
- The findings were consistent with the study's hypotheses athletes use more drugs than those who do not play sports in college.
- More student-athletes used steroids without a prescription compared to students that did not play a sport.
- College athlete's use of steroids without a prescription in the past 12 months was highest compared to individuals that do not play a sport.

Limitations

- Cross-sectional design of the study
- Self-reporting survey
- Using single items to measure substance use instead of a scale
- Lack of diversity in athletic status

Strength

- Use of a scale to measure depression.
- Use of 3 groups to identify athletic status to determine the difference in the relationship between athletic status and substance use and depression

Implications for Research Practice

- Future research to focus on the context of the misuse and abuse of substances among college athletes.
- Future research will provide an understanding of specific characteristics that influence college athletes to drink more than non-athletes.

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ACKNOWLEDGEMENTS

I would like to thank Dr. Karen Lee for her guidance and patience she generously provided. I would also like to thank Brenda O., Tania C., and Zoe M., for support and availability through my journey.