Published in final edited form as:

Addict Res Theory. 2012 ; 20(1): 64–71. doi:10.3109/16066359.2011.562621.

Do coaches make a difference off the field? The examination of athletic coach influence on early college student drinking

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Abstract

Coaches can exert a considerable influence on the lives of their athletes. However, little is known about the influence of athletic coaches on athlete drinking behaviors. This study extends research on drinking influences in student-athletes. The relationship between athletic coaches and athlete drinking behaviors were examined. First-year college students ($N=362$) who had played high school sports were assessed on their relationships with their coaches as well as their alcohol use and problems. Findings revealed significant associations among the approval of and relationship with their athletic coaches and student drinking behaviors. These findings are discussed in the context of involving coaches in comprehensive strategies to reduce athlete drinking.

Keywords

Athlete; coach influences; alcohol

INTRODUCTION

Student athletes, particularly, are at a high risk for heavy drinking and alcohol-related consequences (e.g., Martens, Dams-O'Connor, & Beck, 2006; Turrisi, Mallett, Mastroleo, & Larimer, 2006; Turrisi, Mastroleo, Mallett, Larimer, & Kilmer, 2007). A recent review identified drinking was positively associated with athletic participation in 22 of 29 studies (Lisha & Sussman, 2010). Generally, research has shown athletes, when compared to their non-athlete peers, drink more (Leichliter, Meilman, Presley, & Cashin, 1998; Nelson & Wechsler, 2001; Wechsler, Fulop, Padilla, Lee, & Patrick, 1997), exhibit higher rates of heavy drinking (Turrisi et al., 2006), experience greater numbers of alcohol-related harms (Doumas, Turrisi, Coll, & Haralson, 2007), and have higher rates of academic problems and antisocial behaviors due to alcohol use (Thompson, 2007). These findings contrast the long-standing, common perceptions that athletic participation serves as a protective factor due to reduced unsupervised free time, greater time spent with adult role models, and the negative

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Declaration of interest: The authors report no conflicts of interest. The authors alone are responsible for the content and writing of this article.

impact of alcohol on sports performance (Eitle, Turner, & McNulty Eitle, 2003; Leonard, 1995; Strauss & Bacon, 1953).

Athletic coaches at both the high school and collegiate levels often act as influential role models in the athletic arena, regarding health behaviors, and beyond (e.g., Scofield & Unruh, 2006; S.E. Short & M.W. Short, 2005). Past studies have identified the influence coaches have on athletes uptake of dietary supplements (e.g., Scofield & Unruh, 2006), weight control (e.g., Griffin & Harris, 1996; Juzwiak & Ancona-Lopez, 2004), and athletic enhancing substance use (e.g., Ranby et al., 2009). Early studies identified that coaches' advice regarding college attendance was positively associated with players' decisions concerning college attendance (Snyder, 1972). Further, high school coaches have been identified as an embodying reference group for athletes by providing normative expectations, acting as a role model, and promoting value orientations (Kemper, 1968). Studies have also examined the coach-athlete relationship (e.g., Jowett, 2005; Jowett & Clark-Carter 2006; Poczwadowski, Barott, & Jowett, 2002) with most of this literature focused on athletic performance (e.g., Mageau & Vallerand, 2003; S.E. Short & M.W. Short, 2005). Despite these studies, one influential factor in an athlete's life that has been understudied is the impact of athletic coaches on alcohol-related problem prevention (Stainback, 1997). Martens et al. (2006) stated that the influence a collegiate coach has on an individual athlete's life may be greater than any other individual on campus. Anshel's (1991) review on drug abuse in sport identified coaches' tremendous influence on their athletes as the most important factor in preventing abuse. Thombs (2000) also noted that coaches' own drinking habits may act as a model for their athletes due to their role as a significant reference group. Finally, Wechsler et al. (1997) urged for research on the role of coaches in efforts to discourage heavy drinking in athletes. Despite these recommendations, to our knowledge there has been only one recent study exploring the role of coaches' attitudes toward drinking (Lewis, 2008). In a sample of collegiate athlete team leaders, nonbinge drinkers perceived more strictness in their coaches' attitudes towards alcohol and did not perceive greater risks related to drinking. In contrast, binge drinkers who were not team leaders tended to perceive greater leniency from coaches and identified greater drinking involvement among fellow athletes compared to nonbinge drinkers. Furthermore, stricter alcohol policies reduced drinking rates of team leaders, suggesting communication of alcohol expectations to team leaders may reduce athlete alcohol use.

The precise influence of coaches on athlete drinking remains unclear. It is possible that coaches represent a complex combination of adult-role models, possible surrogate parents, potential peers (depending on age differences), and possible prevention agents (Smith, 1983). Given that coaches may act like surrogate parents, one way to conceptualize the impact of the coach-athlete relationship on athlete drinking behavior is to adopt the parent influence model (Turrisi, Jaccard, Taki, Dunnam, & Grimes, 2001; Wood, Read, Mitchell, & Brand, 2004). Turrisi et al. (2001) examined a parent intervention model expecting to find that parental involvement would increase college students' resistance to influences that encourage heavy drinking. Wood et al. (2004) observed the relationship of parental variables (e.g., parental monitoring, parental attitudes) and college student drinking behavior. Both studies observed parental influence was significant in lowering drinking tendencies and consequences (Turrisi et al., 2001; Wood et al., 2004). Past research has supported evidence that parenting behaviors predict college student drinking outcomes even after students have left home and begun college (Kafka & London, 1991; Turrisi et al., 2001; Turrisi, Wiersma, & Hughes, 2000; Wood et al., 2004). Furthermore, Abar and Turrisi (2008) found that parental monitoring, approval, and knowledge influence teen's friends' selections and subsequent alcohol use in college. Regarding athletes, overall frequency of communication and discussing physical, legal, and social consequences of alcohol use were significant mediators of heavy drinking behaviors in a sample of athletes (Turrisi et al., 2007).

In sum, we propose research examining influences of parent monitoring, approval, and knowledge of drinking informs our understanding of the influence athletic coaches may have on matriculating college students' drinking behaviors. This period is especially important as a recent study found 79% of incoming college students identified past high school athletic participation when screened from a random sample of incoming college students (Turrisi et al., 2009). What is less clear is the role athletic coaches may have on establishing drinking behaviors both prior to, and during, the first year of college. Therefore, the purpose of this study was to explore the relationship of coach variables (e.g., coach monitoring, coach approval, coach satisfaction, and coach knowledge) as perceived by the athlete and associated drinking behaviors in a sample of high school athletes during college matriculation. We hypothesized that athletes would drink less if they reported that their coaches: (a) monitor their behaviors; (b) communicate disapproval of drinking; (c) have knowledge of their drinking; and (d) have a positive relationship with the athlete.

METHOD

Sample

The current sample was drawn from an initial pool of participants ($N=476$) involved in a larger research study at a large Northeast University (Mastroleo, Turrisi, Carney, Ray, & Larimer, 2010). Students completed measures within the first 2 weeks of arriving on campus and were paid \$20 for completing the survey. Student athlete classification was determined using a question about whether respondents had participated in an organized sports program in high school. Of the larger sample, 362 (76.1%) identified as high school athletes, creating the current sample. Only 16 individuals identified an intention to continue in sports at the collegiate varsity level. Participants were primarily White (91.1%), with 3.3% Hispanic, 3.6% Asian, 1.4% African American, and 2.2% as "other." The mean age of the sample was 18.1 ($SD=0.31$) years. Each participant completed an informed consent form before participating in the study, and this study was approved by the university IRB and was in compliance with APA ethical guidelines.

Measures

Drinking—Heavy drinking was assessed with five items. First, students were asked, "During the past 30 days (about 1 month), how many times have you gotten drunk, or very high from alcohol?" (Turrisi, 1999). Response options ranged from "Never" to "more than 9 times" on a six-point scale. Second, students were asked, "Think back over the last two weeks. How many times have you had 5 (4 for females) or more drinks in a row within two (2) hours?" Third, students were asked, "Think of the occasion when you drank the most in the past month. How much did you drink?" Finally, responses to weekend drinking items (Friday and Saturday drinking) on the Daily Drinking Questionnaire (DDQ; Collins, Parks, & Marlatt, 1985) were recorded and summed to create a weekend drinking index. The latter three questions were open-ended and students responded by writing in a number that reflected their answers. All questions were operationalized using the definition of a standard drink (i.e., 12 oz. beer, 4 oz. wine, and 1 oz. distilled liquor). Items were standardized and combined to create one index of heavy drinking ($\alpha=0.84$). Means and standard deviations (SDs) for the individual drinking items are listed in Table I.

Coach items

The items were developed specifically for this study to examine the domains of the coach–student relationship likely to impact student drinking behaviors. Questions were modeled after items used to examine similar constructs regarding parent monitoring, approval, relationship, and knowledge about drinking (Turrisi et al., 2001; Wood et al., 2004). Participants were asked to reflect on their relationships with the coach considered most

influential in their lives and their experiences with these coaches surrounding the below constructs. Means and SDs are presented in Table I.

Coach monitoring—Wording of the specific coach monitoring stem was: “How much does your coach try to know (1) what you do during your free time, (2) about your drinking, (3) where you go at night, and (4) where you are during the day?” Responses were made on a three-point scale with responses “He/She doesn’t try,” “He/She tries a little,” and “He/She tries a lot.” Items were combined to create a single item index of coach monitoring ($\alpha = 0.85$).

Coach approval—Wording of the specific coach approval stem was: “My coach (1) thinks it is okay if I drink alcohol on special occasions, (2) allows me to drink alcohol at parties when he/she is present, and (3) doesn’t mind if I drink alcohol once in a while.” Responses were made on a five-point scale with responses ranging from 1 = “Strongly disagree” to 5 = “Strongly agree.” Items were combined to create a single item index of coach approval ($\alpha = 0.83$).

Coach relationship—Wording of the specific coach relationship items were: “How satisfied are you with (1) the way you and your coach communicate with each other, (2) the emotional support your coach gives you, and (3) your overall relationship with your coach?” Responses were made on a five-point scale with responses ranging from 1 = “Very dissatisfied” to 5 = “Very satisfied.” Items were combined to create a single item index of coach relationship ($\alpha = 0.94$).

Coach knowledge—Wording of the specific coach knowledge items were: “How much does your coach really know (1) what you do during your free time, (2) about your drinking, (3) where you go at night, and (4) where you are during the day?” Responses were made on a three-point scale with responses ranging from “He/She doesn’t know” to “He/She knows a lot.” Higher scores reflected more knowledge. Items were combined to create a single item index of coach knowledge ($\alpha = 0.86$).

RESULTS

Statistical analysis

Multiple regression analyses were used to identify unique variance accounted for in the relationship between the coach influence variables and associated athlete drinking behaviors. Regressions were conducted using AMOS 18.0 (Arbuckle, 2009) due to non-normal distributions on some measures. Significance was established by examining the bootstrapped confidence intervals (95%) around the regression coefficient of the predictor variables. Significance at the $p < 0.05$ level was based on the confidence intervals not containing the value of zero. If the confidence interval around the regression coefficient contained the value zero, then the relationship between the predictor and outcome variables was deemed non-significant. This method was used because assessing the significance based on bootstrapped confidence intervals tends to be more conservative against erroneous effects relative to traditional linear regression which make normality assumptions underlying the sampling distributions. These bootstrapped confidence intervals were computed using 2000 bootstrap samples in AMOS. In addition, we examined descriptive statistics of the coaching influence variables by conducting a frequency analysis in SPSS (Tables II and III).

Missing data—Missing data on our variables were trivial (less than 1%). Thus, we subjected all of the variables in our analyses simultaneously to a maximum likelihood approach (EM in SPSS) recommended by Schafer and Graham (2002).

Coach influences frequencies

Frequency analyses were conducted to identify the nature and levels of communication between athletics coaches and athletes surrounding alcohol use and associated behaviors.

Coach monitoring and coach knowledge—Results indicated that athletes reported few monitoring behaviors by their athletic coaches in regards to their drinking and where they go at night and during the day. Athletes also perceived their coaches as not accurately knowing about drinking behaviors or where they go at night or during the day. Table II identified frequencies of coach monitoring and knowledge responses.

Coach approval—Just over half of athletes believed their coaches would disagree with their drinking on special occasions while the remaining percentage of athletes believed their coaches would be neutral to supportive of drinking. Although the majority of athletes believed their coaches would not allow them to drink alcohol at parties while they are present, almost half of athletes perceived their coaches would not mind if they drank alcohol once in a while (Table II).

Coach relationship—When asked about their level of relationship satisfaction with their coach the majority reported being moderately to very satisfied with the relationships, with a very small percentage reporting being dissatisfied with the relationships. Similarly, more than half of all athletes reported being satisfied with the way in which they communicate with their coach and the level of emotional support given by their coach (Table III).

Coach influences

A significant relationship emerged between coach influences and athlete drinking, $R^2 = 0.07$, $CI_{95L} = 0.70$, $CI_{95U} = 17.93$, $p < 0.05$. Athlete drinking regressed onto coach approval scores showed a positive relationship ($b = 0.98$, $CI_{95L} = 0.50$, $CI_{95U} = 1.48$, $p < 0.05$; semi-partial $r [sr] = 0.22$). Athlete drinking regressed onto coach knowledge scores identified a trend toward significance ($b = 0.96$, $CI_{95L} = -0.13$, $CI_{95U} = 2.06$, $p = 0.07$; $sr = 0.09$), while the coach relationship and monitoring variables were not significant ($p > 0.05$; $sr = -0.05$ and -0.06 , respectively).

We also conducted secondary analyses to examine whether gender moderated the relationship between coach influence variables and athlete drinking. Using product terms (Jaccard & Turrisi, 2003), analyses revealed no significant interaction effects involving gender. Therefore, the relationship between coach communication on drinking appear to be similar in both male and female athletes.

DISCUSSION

This study explored the relationship of coach monitoring, approval and knowledge of drinking on alcohol use in a high-risk sample of college students. The primary finding is that the more athletes believe their coaches approve of their drinking patterns, the more they drink. This result is consistent with research in which parent's approval of drinking behavior has been predictive of drinking outcomes (e.g., Turrisi et al., 2001). It is possible that the added approval from an adult role model may offer some understanding to the consistent finding that athletes have been found to drink at higher levels than non-athletes (e.g., Nelson & Wechsler, 2001). Related to this finding, previous research examining the role of injunctive norms (what student's friends consider is acceptable drinking behavior in terms of how often and how much) has shown a positive relationship with drinking behaviors. Past studies have identified as peer approval of drinking and perception of peers' alcohol consumption increased, so did heavy drinking (Turrisi et al., 2007). Specific to this study,

almost half of the athletes perceived their coaches would not mind if they drank alcohol once in a while. Combining current and past findings suggest perceived approval of alcohol use by parents, peers, and coaches may be related to heavy drinking behaviors of college students. This is the first study to examine coach approval of drinking and the relationship to athlete drinking behaviors, and provides initial support to more closely examine the impact of messages offered to athletes by their coaches regarding drinking behaviors.

Another outcome of interest was the relationship between a coach's knowledge of athlete's drinking and drinking behaviors. Although the relationship was not statistically significant, results identified an inverse relationship. It may be that the more athletes believe their coaches know of their drinking patterns, the less they drink. Additionally, 60% of respondents reported their coaches "do not try" to know about their actual drinking behaviors, indicating a disconnect between what coaches know about their athlete's drinking behaviors and the levels at which athletes actually drink. This suggests that athletic coaches can potentially have an impact on student-athletes' drinking behaviors through increased knowledge of behaviors, which may in turn reduce alcohol related problems. The current findings, along with previous research (Lewis, 2008), highlight the importance of further exploring coach communication of drinking expectations and the related drinking behaviors of athletes. If coaches were to ask more direct questions about their athlete's drinking behaviors, there is the potential to both communicate expectations around the use of alcohol, as well as, gain a more accurate picture of athletes' drinking behaviors. The combination of which may lead to lower drinking outcomes. Although it is unclear if incorporating coaches into prevention and intervention approaches will assist in reducing drinking behaviors of athletes, using the parent influence model to interpret the results of this study indicates a potential benefit of increasing communication and more clearly defining expectations surrounding alcohol use to reduce student-athlete drinking.

There has been concern regarding the dual relationship created by using coaches to deliver alcohol interventions to their athletes (Martens et al., 2006). That said, this study and previous research (Lewis, 2008) suggests that increasing communication about alcohol use between athletes and coaches may have important implications for preventing or reducing alcohol use among student-athletes. One potential approach may be to identify methods in which coaches can discuss alcohol use and team policies about drinking. This may have many benefits. First, clear and consistent messages about alcohol policies and expectations would be delivered directly to athletes from their coaches, rather than through team captains or teammate word of mouth. Second, it would open lines of communication between athletes and their coaches, which Lewis (2008) identified may reduce drinking in team leaders and could in turn, also reduce overall team member drinking. Finally, enhancing communication between coaches and athletes surrounding the use of alcohol may supplement established prevention and intervention approaches using peers, parents, and environmental influences to create a multifaceted approach.

The degree of perceived monitoring and the athletes' relationships with their coach and associated drinking behaviors did not appear to influence athlete drinking behaviors. It may be that very little communication surrounding alcohol use is exchanged between coaches and athletes, with the only conversations related to rules set forth by coaches. These rules may specifically state team members are not permitted to drink, resulting in athletes' compliance, thereby reducing alcohol use (Lewis, 2008). That is conjecture, however; more research is needed to more closely identify the types of coach-athlete interactions surrounding the use of alcohol. The use of focus groups including both coaches and athletes would be useful in obtaining a clearer sense of their interactions and communication surrounding alcohol use.

Despite the important findings of this study, several limitations deserve mention. First, although participants were asked to base their responses on the coach they felt was most influential, no data identifying which coaches were chosen or the ways in which they were influential were collected. Future research should explore more in depth the nature of the athlete–coach relationship and related alcohol use outcomes. Additionally, the relationship between the athletes and the coaches are likely past relationships where the current day-to-day contact is limited or nonexistent. Future research should explore active coach–athlete relationships and related drinking behaviors to identify more immediate influences on behaviors. Second, drinking behaviors collected were only reflective of the first few weeks on campus during the transition to college, and may not represent typical alcohol use. Longitudinal analyses of athlete drinking behaviors are needed to more clearly understand the nature of the relationship between athletic participation and drinking (Lisha & Sussman, 2010). Third, the self-report data collected may have been biased. That said, participants were assured of confidentiality through statements throughout the survey and consent form and individuals responded *via* a web-based survey rather than an in-person interview. Furthermore, a recent meta analysis found no evidence of under-reporting alcohol use in college student samples (Borsari & Muellerleile, 2009). Fourth, as this is the first study to explore the constructs of coach monitoring, approval, relationship satisfaction, and knowledge of drinking, established and validated measures were not yet available. Therefore, the coach measures were based on previously used measures examining identical constructs regarding parental influences on drinking (e.g., Turrise et al., 2001; Wood et al., 2004). Finally, the cross-sectional nature of the study limits our ability to make causative inferences about the relationship between the perceptions of coaches and the alcohol use of their athletes.

In sum, our findings suggest that coaches may exert significant influence on the alcohol use of their athletes. The athlete's perception of their coach's approval of alcohol use was strongly associated with drinking behaviors. Findings suggest the importance of future research focusing on incorporating the coach–athlete relationship in influencing drinking behaviors among student-athletes. Furthermore, as athletes matriculating to college are at high risk for heavy drinking and experiencing alcohol-related consequences, the role of coach communication and approval may have an impact on future drinking behaviors, leaving an opportunity to identify areas for intervention aimed at reducing drinking in this population.

Acknowledgments

This research was supported by grants F31 AA017012 and T32 AA7459-21 awarded to Nadine Mastroleo and R01 AA 12529 awarded to Rob Turrise from the National Institute on Alcohol Abuse and Alcoholism.

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Table I

Means and SDs for drinking and coach variables.

	Mean	SD
<i>Drinking variable</i>		
Past 30 days drunkenness	1.68	1.79
Peak	5.73	5.19
Binge	2.10	2.50
Weekend drinking	7.49	7.37
<i>Coach influences</i>		
Monitoring	5.87	1.96
Approval	8.78	3.60
Relationship	10.93	3.21
Knowledge	6.23	2.18

Note: Weekend drinking =Summed Friday and Saturday DDQ.

Table II

Frequencies of participant responses of coach monitoring and knowledge.

	Doesn't try (%)	Tries a little (%)	Tries a lot (%)	Mean	SD
<i>Coach monitoring</i>					
How much does your coach try to know					
What you do during your free time?	46.4	45.6	8.3	1.64	0.628
About your drinking?	64.9	32.1	3.3	1.4	0.550
Where you go at night?	69.3	26.8	4.1	1.36	0.556
Where you are during the day?	61.9	31.5	6.9	1.47	0.619
<i>Coach knowledge</i>					
How much does your coach really know					
What you do during your free time?	42.8	44.7	8.3	1.64	0.628
About your drinking?	60.8	31.4	3.3	1.4	0.550
Where you go at night?	65.6	26.1	4.2	1.36	0.556
Where you are during the day?	58.1	30.8	6.9	1.47	0.619

Table III

Frequencies of participant responses of coach approval and relationship.

	Strongly disagree (%)	Moderately disagree (%)	Neither agree or disagree (%)	Moderately agree (%)	Agree (%)	Mean	SD
<i>Coach approval</i>							
My coach							
Thinks it is okay if I drink alcohol on special occasions	40.5	15.6	29.1	12.7	2.5	2.22	1.18
Allows me to drink alcohol at parties when he/she is present	68.8	8.6	20.2	1.9	0.8	1.59	0.927
Doesn't mind if I drink alcohol once in a while	36.6	16.8	31.8	11.9	3.3	2.3	1.19
How satisfied are you with	Very dissatisfied (%)	Moderately dissatisfied (%)	Neither satisfied or dissatisfied (%)	Moderately satisfied (%)	Very satisfied (%)	Mean	SD
<i>Coach relationship</i>							
The way you and your coach communicate with each other	5.2	5.8	30.9	35.9	21.3	0.70	0.958
The emotional support your coach gives you	6.3	5.5	31.8	34.5	21.0	0.66	0.984
Your overall relationship with your coach	5.8	5.3	24.3	34.5	30.4	0.89	0.977