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HOW DOES SPORT TEAM IDENTIFICATION COMPARE TO IDENTIFICATION WITH OTHER SOCIAL INSTITUTIONS?

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ABSTRACT

People generally identify with social groups within their environments. Individuals gain psychological benefits, such as increased self-esteem and psychological support, via identification. Extant research has examined identification with individual social groups, but no research study has examined the varying levels of identification with a number of social groups.

Participants were asked to indicate level of identification with a sport team, religion, employment, school activity, and form of community involvement. Analysis of 226 participants' responses indicated that identification with a sport team was stronger than identification with a religious group, school activity, and community involvement. Similar levels of identification were found between sport team, social activity, and employment.

The results also indicate that identification with a sport team significantly contributes to social psychological health above and beyond identification with all other social groups. Implications of the results are discussed.

INTRODUCTION

In general, people have a need to affiliate with others, and they spend a great deal of time with others in pursuit of this goal (Buunk, Zurraiga, Peiro, Nauta, and Molleman, 2005). They desire to form affiliations with others because they "classify themselves and others into social groups as a means of ordering the social environment and locating their place within it" (Mael and Ashforth, 2001, p. 198). Furthermore, people experience benefits, such as improved self-esteem, a feeling of belongingness, and increased ambitions, when they form relationships, or identify, with other people and groups (Mael and Ashforth, 2001).

Group identification is defined as the perceived oneness and belongingness an individual feels within a group of persons (Ashforth and Mael, 1989). Identification has been examined

in a number of different contexts, including identification with a sport team (Wann, 2006a; Wann, 2006b; Wann, 2006c), religion (Diener and Clifton, 2002; Diener, Suh, Lucas, and Smith, 1999; Ryan, Rigby, and King, 1993), occupation/employment (Haughey, 1993; Waters and Moore, 2002), and social group involvement (Argyle, 1999). Individuals value identification with social groups for the benefits it provides, such as psychological support (Wann, 2006c), enhanced self-esteem, and a sense of meaning in life (Mael and Ashforth, 2001).

While several researchers have examined individuals' levels of identification within different groups, no research has been performed that compares the identification formed among different groups in one's life to one another. For example, the identification one forms with a sport team has not been previously compared with the same individual's identification with his or her place of employment.

The purpose of the present study is to begin an evaluation of identification in order to develop a better understanding of the type of group with which individuals form the strongest identification. Identification with different social groups has been shown to have different benefits, depending on the group.

Sport team identification involves "a fan's psychological connection to a team" (Wann, 2006b, p. 332). Sport fandom is increasingly popular. A 2005 Gallup Poll found that 63% of Americans claim to be sports fans (Carroll, 2005). Individuals identify with a sport team for a variety of reasons, including distraction from daily events (Mael and Ashforth, 2001), being part of a larger social group composed of other fans of the same team in order to decrease loneliness and isolation (Wann, 2006b), and gaining a sense of achievement by categorizing a team's accomplishment as their own (Ashforth and Mael, 1989).

Research has indicated that identifying with a sport team has a number of benefits. These include social connectedness with other fans of the team (Wann, 2006b), higher levels of self-esteem (Wann, 1994), decreased levels of depression (Branscombe and Wann, 1991), better psychological adjustment (Wann, 2006c), and a vicarious sense of achievement (Mahony, Nakazawa, Funk, James, Gladden, 2002).

Religious identification can occur in two ways: by forming an identification with a religious deity and by forming a bond with a group of people who have similar value systems (Mael and Ashforth, 2001). Some have argued that "religious identification is the most compelling or understandable form of identification" (Mael and Ashforth, 2001, p. 208) because religious loyalty is believed to be the strongest form of loyalty people can have. A Gallup poll found that approximately eight of every ten Americans report that they identify with some form of religion (Newport, 2007).

These numbers may be misleading, however, because responses on a separate question within the same poll indicated that only 44% of Americans attend church on a regular basis. This difference indicates that, while many Americans indicate that they belong to a religious group, they do not necessarily spend time involved in the activities associated with that religion.

Religious identification has been found to provide individuals with a generally higher level of life satisfaction (Diener and Clifton, 2002), a method of explaining the unknown elements of the world (Goodenough, 1986), and a meaning that extends beyond the individual self (Mael and Ashforth, 2001). Religious identification can also serve as a source of comfort and cohesiveness in a time of crisis (Funder, 2002),

School activity identification is defined as an individual's feeling of belongingness with an organization based on a university campus. Organizations with which individuals may identify can include common interest groups (i.e., Gamers' Guild), departmentally-based organizations (i.e., Psychology Club), national organizations with college-campus chapters (i.e., American Society of Civil Engineers), and Greek organizations (i.e., Alpha Delta Pi sorority).

The majority of research has found that involvement in a school activity has positively affected students' social and academic lives. Socially, individuals gain a better sense of self-development (Bean and Creswell, 1980), have higher self-esteem and personal psychological adjustment to the college experience (Cameron, 1999), and are more likely to interact with their peers (Pike and Askew, 1990). Academically, those students more involved in groups or activities have a higher likelihood to achieve higher grades (Hartnett, 1965), put forth more effort when completing coursework (Pike and Askew, 1990), and are more likely to complete their bachelor's degree (Stoecker, Pascarella, and Wolfle, 1988).

Identification with a social group is defined as an individual's feeling of belongingness within a social organization. Social groups with which people may identify include groups such as the Knights of Columbus, American Legion, Lions Club, American Association of Retired Persons (AARP), and the National Association for the Advancement of Colored Persons (NAACP). While attendance at local chapters for these groups was more popular in the past, since the 1950s, it has sharply declined (Putnam, 2000). This decline in attendance does not appear to represent a decline in people's involvement in social organizations; however the type of participation has changed. Today, more people are members of organizations in which they do not personally know the other group members or meet on a regular basis to socialize. The popularity of these "faceless" nonprofit groups has caused the number of social organizations to expand from approximately 10,000 in 1968 to almost 23,000 in 1997 (Putnam, 2000).

Few researchers have examined the benefits individuals experience from identification with a social activity. It is speculated that identification provides individuals with a sense of commonality by being involved in a group of similar individuals with similar interests or beliefs, a sense of community for an individual involved in a social group that meets locally, and a sense of being valued within the group without fear of rejection.

Identification with an occupational identification is "the degree to which a member defines him or herself by the same attributes that he or she believes define" (Dutton, Dukerich, and Harquail, 1994, p. 239) his or her place of employment. Individuals identify with their place of employment on two bases: how the individual views the values and beliefs of the company and how the individual believes other people not involved in the company view the values and beliefs of the company (Dutton et al., 1994).

Identification with an occupation leads to benefits. Feelings of distinctiveness and superiority from other, similar companies arise from identifying with an occupation. Also, companies perceived to be appealing to people outside of the company cause an increase in an individual's self-esteem and self-worth (Dutton et al., 1994). A strong identification also benefits the company in that strongly identified employees put forth more effort and pride into their work and increase productivity (Hatch and Schultz, 2002).

Finally, identification with community is defined as an individual's feeling of connectedness to a volunteer activity performed for the purpose of improving his or her community. Examples of volunteer activities that are performed for the improvement of the

community include Habitat for Humanity, the Humane Society, the American Red Cross, and community help centers for homeless people. Participation in activities occurring within one's own community provides an individual with the opportunity to not only form connections with the other people, but also to gain a better sense of their community (Hughey, Speer, and Peterson, 1999), to form emotional attachments to their communities (McMillan and Chavis, 1986), and to socialize with people that they might not encounter in their everyday lives or in other social groups, thereby expanding their network of friends or connections around them.

One commonly found benefit individuals receive from identifying with one of the social groups discussed in this study is an improvement in one's psychological well-being. This well-being, also known as social psychological health, is developed through the social connections that people make when they identify with larger groups (Wann, 2006c).

Wann (2006c) has found that, within sport team identification specifically, the level of identification people form with sport teams is positively correlated with the amount of psychological benefit they experience. Therefore, the stronger the identification people form with a sport team, the more positive psychological well-being they experience. Wann (2006c) calls this theory the Team Identification-Social Psychological Health Model.

The existing research examines, individually, people's identification with a sport team, a religious group, a school activity, a social activity, occupation, and community involvement. However, little has been done to examine multiple levels of involvement. For example, the effect that one's involvement in a religious group has on his or her involvement in community activities has not been researched. Research comparing the strength of one's identification among multiple social groups is scarce. Additionally, research comparing one's identification with a sport team with one's identification with a religious group, a school activity, a social activity, occupation, or community involvement is nonexistent.

The current study addressed the limitations of past research concerning the levels of identification one forms within various social groups. One's identification with a sport team was compared to one's identification with a religion, school activity, social activity, occupation, and community involvement. In addition, an individual's need for affiliation and psychological well-being were evaluated vis a vis the individual's reported level of identification with each of the different types of activities.

This study serves as an exploratory study examining the types of social identity on which individuals place the greatest importance.

The primary focus of this study is to examine the level of identification people form with sport teams as compared to the identification they form with other social groups. The first hypothesis is that people will form a stronger identification with a sport team than a religious group, a school activity, a social activity, an occupation, or a community-related activity. A corollary of this hypothesis is that, because participants are more highly identified with a sport team, they will spend more hours per week participating in activities associated with that sport team than they will in activities related to the other categories.

Additionally, this study examines the psychological benefits people receive from social identification. Hypothesis two is that identification with a sport team more strongly contributes to people's psychological health than identification with a religious group, a school activity, a social activity, an occupation, or a community-related activity.

METHOD

Participants

The study sample consisted of 226 participants (149 women and 77 men). The mean age was 24.16 years ($SD = 11.57$). The sample included 197 (87.2%) Caucasian participants, 15 (6.6%) African American participants, 4 (1.8%) Asian participants, 1 (0.4%) Hispanic/Latino participant, and 9 (4.0%) participants who identified themselves as “other.” There were 109 (48.0%) college freshmen, 43 (18.9%) college sophomores, 19 (8.4%) college juniors, 13 (5.7%) college seniors, 13 (5.7%) college graduates, 10 (4.4%) graduate students, 12 (5.3%) graduate school graduates, and 5 (2.2%) high school graduates in the sample. The majority of the participants, 185 (81.9%), identified themselves as single, while 34 (15.0%) reported being married, 1 (0.4%) was widowed, 5 (2.2%) were divorced, and 1 (0.4%) was separated.

Measures

Demographics. Participants completed a demographics section assessing the aforementioned age, gender, race, education level, and marital status variables.

Stress. The Perceived Stress Scale (PSS; Cohen, Kamarck, and Mermelstein, 1983) provides a measure of the stress individuals experienced over the past month using a 14-item scale. Participants indicate their response to each item by circling either *never*, *almost never*, *sometimes*, *fairly often* or *very often*. An example item is, “In the last month, how often have you felt that things were going your way?” The items on the scale were summed; high total scores indicate low levels of perceived stress, and low total scores indicate high levels of perceived stress. The PSS has exhibited good internal constancy, with a coefficient alpha of .85 (Cohen et al., 1983). In the present study, Cronbach’s Alpha was .82.

Self-Concept. Self-concept was measured using a subscale of the Collective Self-Esteem Scale (CSES; Luhtanen and Crocker, 1992). The identity subscale was used to assess the value individuals place on their social group memberships and how important the group memberships are to their self-concept. Participants responded to the four questions by circling one of seven responses presented in a Likert-type scale consisting of *strongly disagree*, *disagree*, *disagree somewhat*, *neutral*, *agree somewhat*, *agree*, and *strongly agree*. An example item is, “The social groups I belong to are an important reflection of who I am.” The four items were summed to create a total score. High total scores indicate that group memberships are important to the individual’s self-concept. The CSES identity subscale has high internal consistency reliability, with a Cronbach’s alpha within a range of .83 to .88 (Luhtanen and Crocker, 1992). In the present study, Cronbach’s Alpha was .69.

Need for Affiliation. Need for affiliation was measured by the 16-item Affiliation Orientation Scale (AOS; Buunk, Nauta, and Molleman, 2005). The items were divided into four areas measuring an individual’s desire to spend time with others, a lack of desire to spend time with others, a desire to complete tasks alone, and a desire to work with others to complete tasks. Participants indicated their response to each item by circling either *strongly agree*, *agree*, *disagree*, or *strongly disagree*. Examples of the items include, “I prefer to go my own way alone,” “In my leisure time, I prefer to do things together with others,” and “I

don't like to undertake something totally on my own." Items are summed to create a total score. Higher total scores indicate higher affiliation orientations. The need for affiliation scale has high internal consistency reliability, with Cronbach's alpha of .84 (Buunk et al., 2005). In the present study, Cronbach's alpha was .83.

Identification with Social Institutions. Identification with a sport team, religious group, school activity, social/community activity, occupation, or community involvement was measured using an identification scale consisting of three statements (Crisp, Stone and Hall, 2006). For the purposes of this study, the items were modified to measure each area of identification, resulting in six sets of statements. Examples of the statements include "I identify strongly with other fans of this team," "Being a member of this religious group is an important part of who I am," and "I feel strong ties with other members of this social activity." Each of the scales was summed separately, and high total scores indicated low levels of identification with the social group, while low total scores indicated high levels of identification with the social group. With a Cronbach's alpha of .91, the identification scales have high internal consistency reliability (Crisp et al., 2006). In the present study, Cronbach's alpha was .85 for sport team identification, .89 for religious identification, .90 for school activity identification, .85 for social activity identification, .84 for occupation identification, and .83 for community involvement.

Procedure

Participants, both in person or online, first read the informed consent document and demonstrated consent to participation by providing responses to items in the questionnaire packet. Participants completed the questionnaire packet in the following order: Demographics, the PSS, the CSES Identity Subscale, the AOS and the Identification Scales modified to measure identification with a sports team, religion, school activity, social activity, occupation, and community-involvement. After completing the questionnaire, participants were debriefed on the purpose of the study.

RESULTS

To begin, the items from the PSS, CSES, AOS, and each of the identification measures were summed to create total scores for each measure. The first hypothesis under study was that participants would report a stronger identification with a sport team than a religious group, a school activity, a social activity, an occupation, or a community-related activity. To evaluate this hypothesis, a series of paired *t*-tests were performed. Table 1 includes the means and standard deviations of each of the areas of identification.

In order to avoid probability pyramiding, Bonferroni's correction (Pedhazur and Schmelkin, 1989) was used, setting $\alpha = .0017$. Among the comparisons of social identification groups, there were significant differences between sport team identification and religious identification, $t(175) = 4.20, p < .00$, sport team identification and school activity identification, $t(112) = 3.31, p = .0012$, and sport team identification and community activity identification, $t(80) = 4.51, p < .00$. No significant differences were found between sport team

identification and social activity identification, $t(68) = .92, p = .36$, and sport team identification and occupation identification, $t(140) = 2.18, p = .03$.

Table 1. Means and Standard Deviations for Areas of Identification

Type of Identification	Level of Identification	Hours per week spent on activity
Sport ID	6.23 (2.17)	3.09 (3.09)
Religion ID	5.13 (1.84)	2.89 (2.98)
School Activity ID	5.94 (2.28)	7.30 (9.79)
Social Activity ID	6.10 (2.26)	2.61 (4.60)
Occupation ID	5.52 (1.73)	2.13a (4.76)b
Community Activity ID	5.42 (1.71)	2.15 (2.09)

Notes: Standard deviations appear in parentheses beside each mean.

^aMean of hours spent at occupation above and beyond what is required of job.

^bStandard deviation of hours spent at occupation above and beyond what is required of job.

Table 2. Beta, change in R², t- values and p- values of group identification (ID) effects on psychological well-being for sport team identification

Psychological Well-being	Beta	Change in R ²	<i>t-value</i>	<i>p-value</i>
Scale				
Step One				
Perceived Stress Scale				
Religion ID	.24			
School ID	-.16			
Social ID	.21			
Occupational ID	-.11			
Community ID	-.39			
Self-Esteem Scale				
Religion ID	-.17			
School ID	-.06			
Social ID	-.04			
Occupational ID	-.29			
Community ID	-.15			
Step Two				
Perceived Stress Scale	-.38	.068	-1.63	.12
Self-Esteem Scale	-.22	.031	-.88	.39

Analyses were also performed on the number of hours the participants indicated that they spend involved with each of the groups. As shown in Table 1, there were significant differences between sport teams and school activities, $t(114) = -4.58, p < .000$, sport teams and social activities, $t(116) = 2.44, p < .05$, and sport teams and community activities, $t(112)$

= 2.20, $p < .05$. There were no significant differences between sport teams and religions, $t(191) = -.67, p = .50$, and sport teams and occupations, $t(44) = -1.18, p = .24$.

The second hypothesis under study was that identification with a sport team more strongly contributes to people's psychological health than identification with a religious group, a school activity, a social activity, an occupation, or a community-related activity. To assess this hypothesis, a stepwise linear regression analysis was performed. In the first step of the regression analysis, the affiliation scores for all of the areas of identification, except for sport team identification, were entered into the analysis. In the second step, sport team identification was included in the analysis. The dependent variables for analysis were the scores from the perceived stress scale and the self-esteem scale completed by the participants. Table 2 shows the betas of step one and step two and the change in R squared as well as the t -values and the p -values of the social group identifications effect on psychological well-being.

After controlling for affiliation and the other forms of identification, sport team identification did not predict either participants' perceived stress levels, $R^2 = .34, F(7,30) = 1.72, p = .15$, or self-esteem, $R^2 = .20, F(7,30) = .84, p = .56$. The change in R squared was .08, which was not significant, $F(1,23) = 2.68, p = .12$.

DISCUSSION

The purpose of this study was to examine the identification that individuals form with sport teams as compared to the identification they form with other social groups. Additionally, this research examined how much sport team identification contributes to an individual's psychological well-being.

The first hypothesis under study stated that participants would be more highly identified with a sport team than a religious group, school activity, social activity, occupation, or community activity. Results supported this hypothesis. Individuals reported that they were more highly identified with sport teams than with a religion, school activity, or community-related activity. Individuals reported that they were as identified with social activities and occupations as they were with sport teams.

The results that individuals more highly identify with a sport team than with a religion, school activity, or community-related activity indicates that sports have surpassed the allure of some of the other social groups within people's lives. This increase could be due to the ease with which people can access information regarding sport teams on television, on the Internet, and in publications devoted to the sports world (see Gantz, Wilson, Lee, and Fingerhut, 2008). Further, this increase in attachment to sport teams comes at time when connections to other important social structures are decreasing. For example, in recent years, there has been a decrease in participation in organized religion. According to the United States Religious Landscape Survey (The Pew Forum, 2008), 16% of American adults are not currently involved in a religious group. This number is double the number of American adults who reported not being involved in a religious group in the 1980s. Although religious groups saw an increase in attendance following the September 11, 2001, attacks, most of those people have since discontinued their involvement. According to interviews conducted by Goodstein (2001), religious leaders believe the cause of the influx of parishioners after 9-11 was to be around other people in a time of crisis. Once the anxiety associated with the crisis receded, however, people stopped attending the services (Zelizer, 2002).

Decreased involvement with school groups could be explained by the increase of social networking on the Internet. College students are spending more of their time online, chatting with friends or making social connections on social networking sites such as Facebook or MySpace, than attending meetings in person on campuses (Quan-Haase and Young, 2010; Wellman, Haase, Witte, and Hampton, 2001). In-person communication is quickly being replaced by online communication, perhaps because of the breadth of online interactions offered by today's social sites and the existence of social groups that are similar to the groups that one would historically find on the campus. Online interactions allow individuals to communicate at a time that is convenient for them. Furthermore, individuals are allowed a certain sense of anonymity online, which allows them to discuss topics that might be difficult to discuss in person (Bargh and McKenna, 2004). Cellular telephone technology has also increased to the point where people can communicate with each other without a need to be face to face (Borae and Namkee, 2010).

Making time to participate in a community activity may not be possible or not an appealing enough activity for many people (Hummon, 1986). Additionally, individuals may fulfill their sense of community involvement by providing money to a charitable group or a community cause instead of devoting time to the activity (Putnam, 2000). Furthermore, community activity is a common action among religious groups (Putnam, 2000). Therefore, as religious involvement decreases, community activity also decreases. Finally, it is possible that people see identification with a local sport team as part of community involvement and decrease their activities elsewhere to attend sporting events.

Results from the present study also indicated that individuals form similar levels of identification with social activities and occupations as they do with a sport team. Individuals may have a higher identification with social activities because of the increased availability of social groups both in their community and through the Internet. People can now go online and find groups of people with whom they can communicate and form friendships with relative ease (Bargh and McKenna, 2004). Social networking is an important part of the college culture, and individuals can often find groups of supportive people for numerous interests when there may not be a similar group available in their surrounding community. Because of the unique quality of these online groups, individuals may form a strong identity with these groups and consider these groups a strong part of who they are. Thus, they find they are strongly attached to and identified with the social activity.

These findings are also important from a marketing perspective as social networking media have become effective marketing tools for promotion of a wide range of products and services. The multiple forms of identification (i.e., religion, school activities, etc.) that one carries speak to the relevance or importance of the activity in one's life. As such, sport marketers may want to investigate expanding their social media marketing campaigns to involve these other spheres of life. Such an approach could help strengthen the rapport and loyalty of the consumer by taking a multidimensional approach to communication with target publics (Gil-Or, 2010). In essence, the sport organization could seek to build a web of social media contact points that capitalize on the various forms of identification that one possesses with these other areas of life, thus broadening contact with their potential customer base.

Occupation was found to be another source of high identification. This increased identification could be the result of people spending a great deal more time and effort in their work environments than in the past. Americans worked an average of 42.5 hours a week in 2006, an increase of five hours per week from 2003 (Napsha, 2008). While part of this

increase may be due to technological advances that allow for people to work in different places (i.e., home) other than the office, the increased time and effort expended in job-related activities may bring about a higher level of investment in the job and, in turn, form a high level of identification with the occupation. It should be no surprise, then, that sport organizations have attempted to capitalize on this occupational identification by designing areas of their facilities to better address the needs of the business customer. Examples of amenities that help facilitate work activities “at the stadium or arena” include wireless Internet access, conference facilities, and luxury suites with business centers present (Fried, 2010). Sport organizations have adapted their entertainment environment to better meet the needs of a core customer base, one that is likely highly identified with this other aspect of their life (i.e., work). Thus, a wide array of consumer needs (or identification with multiple targets) is met, which potentially increases attendance patterns. Marketers should consistently highlight these attributes in their campaigns.

Findings from the current study also have important implications for sport marketers looking to secure partnerships with potential sponsors. As Gwinner and Bennett (2008) and Richelieu and Lopez (2008) note, it is important for sponsors and sport organizations to communicate appropriate “fit” between the sponsor and the sport organization to their consumer base. They also note that sport identification can positively influence the perceptions of fit that one has towards sponsoring partners. As a result, cultivating relationships that cross over into other areas of life that consumers find important may reap increased attachment to a sport brand.

For example, the National Football League’s (NFL’s) support of United Way as one of their primary charities may also play into the identification that people have with both their sport team and community activity, albeit the latter occurs from a third person perspective. Consequently, it is possible that the visible support that the league provides for the charity may help the identified fan meet their perceived need for connection to the sport brand and community activity, resulting in strengthened identification with both targets. This would seem to support Kwon, Trail, and Lee’s (2008) assertion that sport marketers must increase team identification through a wide variety of means and methods, but further research is necessary to better elucidate the effects of these and other similar sponsor partnership outcomes on different forms of identification.

The average amount of time participants spend on activities related to each social group was examined as well. The number of hours per week devoted to each activity seems low considering the strength of the identification formed with each social group. For example, participants indicated that they spend an average of only 3.09 hours per week involved in activities related to a sport team, an activity with which they were, generally, highly identified. For a social group that received a lower identification rating, such as community involvement, participants indicated that they still spent an average of 2.15 hours involved in activities related to this area. Therefore, it does not appear that there is a linear relationship between level of identification and the time spent on each social group.

The second hypothesis stated that identification with a sport team more strongly contributes to people’s psychological health than identification with a religious group, a school activity, a social activity, an occupation, or a community-related activity. The results did not support this hypothesis. After accounting for the effects of identification with the other social groups, identification with a sport team did not significantly influence social psychological health. This finding generally contradicts Wann’s (2006c) Team Identification-

Social Psychological Health Model (TI-SPH), which hypothesized that the stronger the identification with a sport team an individual forms, the more positive psychological well-being he or she will experience. However, the TI-SPH hypothesizes that the benefits from team identification arise through identification with a local team. It is unclear—and beyond the scope of the present study—whether participants identified with local or distant teams. It is possible, and quite likely, that many participants reported identifying with a distant team.

Some limitations of the study must be noted. First, the ability to generalize this study's results to the American population is restricted due to the majority of the participants being college-age individuals. Furthermore, the participants were quite similar in age, ethnicity, and marital status. In future studies, it would be beneficial to collect data from throughout the community rather than on a college campus. Second, this study was conducted using participants generally from the same geographical region of the United States. To further strengthen the results, this study could be conducted in other regions in order to compare the identifications of people from across the nation.

CONCLUSION

The results of the present study indicate that, overall, sport teams are a valuable part of people's lives and are considered as or more important than some social groups that have previously been viewed as playing a substantial role in people's lives, including occupation, religion, and community activities. This study demonstrates the value that involvement in social groups adds to an individual's life aside from purely entertainment purposes. This involvement, though, does not appear to influence the number of hours people spend participating in activities related to the social group. Further, identification with a sport team does not provide psychological health benefits above and beyond identification with other social institutions; however, future research should further investigate this relationship. Finally, an understanding of the identification that exists with these varied social institutions can help guide marketers in developing multidimensional strategies that both build and cauterize sport team identification within the consumer.

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THE IMPACT OF GAMBLING PROXIMITY ON GAMBLING ATTITUDES, SUBJECTIVE NORMS, GAMBLING INTENTIONS, AND GAMBLING BEHAVIOR OF COLLEGE ATHLETES

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ABSTRACT

The purpose of this study was to examine the impact of proximity to a gaming venue on the subjective norms, attitudes, intentions and gambling behaviors of student athletes. Two universities were chosen for the study, one with close proximity to gambling venues and one without gambling venues in the area. The results indicated that proximity to gaming venues did not impact subjective norms, attitudes, intentions, or gambling behaviors. This result was inconsistent with much of the prior research on other demographic groups that indicated that proximity did have an impact on gambling activities. Further examination of the measuring instrument suggests that proximity may be better measured in venue preference rather than distance.

Keywords: Gambling Venue Proximity, Gambling Attitudes, Subjective Norms, Gambling Intentions, Gambling Behavior, Theory of Reasoned Action

INTRODUCTION

Because of their desire for competition, college student athletes may be highly susceptible to the excitement of gambling. In fact, Cullen and Latessa (1996) found 25% of Division I football and basketball players indicated they had bet on college sports and Cross and Vollano (1999) found over 45% gambled on sports while attending college. Although the National Collegiate Athletic Association (NCAA) has rules strictly prohibiting athletes from participating in gambling, cases of reported gambling by athletes continues to increase.

More opportunities to gamble may exasperate this problem (Kassinove, 1998). In fact, research suggests a positive link between proximity of gambling opportunities and problem

gambling (Eadington, 1989; Lesieur, 1992; National Gambling Impact Study, 1999; Shaffer and Hall, 1997; Whyte, 1997). Moreover, Volberg (1994) and others (Gerstein, Volberg, Toce, and Howard, 1999; Shaffer, LaBrie, and LaPlante, 2004) have found that proximity or accessibility (Gilliland, 2003; Marshall, 2004) of gambling activities is linked to higher rates of pathological gambling. Therefore, it is very important to determine if proximity to a gambling venue affects college student athletes. Understanding the potential link between proximity and gambling among athletes is key for colleges and universities across the United States.

REVIEW OF THE LITERATURE

Definition of Gambling

Gambling, especially problem or pathological gambling, is of major concern in the United States. Pathological gambling was formally recognized as a mental disorder in 1980 (American Psychiatric Association, 1980). In 1994, the American Psychiatric Association published a new set of criteria for evaluating excessive gambling habits in its Diagnostic Statistical Manual IV (DSM-IV). A person was diagnosed as a “compulsive gambler” with five “yes” responses to 10 items, which together indicate a persistent and recurrent maladaptive behavior. The DSM-IV also classifies gamblers as:

1. Recreational gamblers or those who can gamble merely for recreational purposes and do not develop problem gambling habits,
2. At-Risk gamblers or those who gamble more than once a week and use the means of gambling as a money making opportunity, and
3. Pathological gamblers or those who gamble continuously with hopes of hitting the big one. They risk personal relationships, employment opportunities, and other life conditions in order to gamble.

College Student Athletes and Gambling

While student athletes are not the only students involved in gambling on college campuses, and not all are pathological or even at-risk gamblers, more attention is given when they get caught. This can have a negative impact on the players, the athletic department, and the image of the university. Over the years, there have been highly publicized incidents involving athletes at major universities, including the University of Maryland, Boston College, Northwestern University, and Arizona State University. The issue of gambling, and especially sports wagering, has been of significant importance to the NCAA membership for the entire existence of the Association (NCAA, 2004). Even an isolated incident can undermine the integrity of a sport. Thus, there remains a strong commitment by NCAA institutions to educate those associated with college sports about the dangers of gambling (NCAA, 2004). The NCAA has a no tolerance policy, whereby the athlete is removed from competition as a result of gambling involvement.

In addition, to the negative impact on the athlete, the concern about gambling by college athletes also stems from the substantial economic investment of colleges and universities and associated businesses in intercollegiate athletics (Cross, Basten, Hendrick, Kristofic, and Schaffer, 1998) and the potential of a negative impact. The integrity of college sports and the continuation of the associated economic rewards depend on the assurance the games are being played straight (Cross et al., 1998). In other words, colleges and universities could face huge economic loss from scandals relating to gambling. These losses could result from a reduction in national television appearances by athletic teams during the regular season, post season tournaments and bowl games, ticket sales, alumni donations, and corporate sales.

Although it is true anyone can fall victim to gambling, the majority of college gamblers have some common traits. First, college gamblers are almost always men. They share an obsession with sport, they live in a community where they can share their gambling tales, and they are generally aware of their actions. The typical college bettor will begin with relatively low bets, always thinking they will win. These bets are often made in the form of football parlay cards. Generally, small bets turn into larger ones regardless of whether the gambler wins or loses. This process known as "chasing" can lead the college student to problems. Pathological gambling among students has been associated with low grades, skipping classes, and parental problems (Ladouceur and Mireault, 1988; Lesieur and Klein, 1987).

While the rates of pathological gambling are high for college students the rates for the subpopulation of college student athletes have been posited to be even higher (Rockey, Beason, Lee, Stewart, and Gilbert, 1997). Weiss (1995) compared obsessive modalities between athletes and non-athletes and discovered athletes are more likely than non-athletes to exhibit maladaptive behaviors, which included gambling. However, there has been little research to determine what may impact college student-athletes as a group. In other words, are there factors that would increase the chances that they would participate in gambling activities?

Proximity/Accessibility to Gambling

Increasing the number of opportunities to gamble may be one factor that would increase the chances that student-athletes would participate in detrimental gambling activities (Kassinove, 1998). Proximity has a number of dimensions which may all lead to increased gambling activity, including: (a) total number of gambling opportunities; (b) how gambling opportunities are arranged spatially is very important to accessibility; (c) conditions of entry into gambling opportunities; (d) location of the gambling opportunities; (e) hours of operation of gaming venues; (f) social accessibility; (g) ease of use; and (h) initial outlay of the gambling participant. When gambling opportunities are closer, this could lead to increased gambling activities for two reasons. First, it is simply easier to gamble if the opportunities are closer than if one has to drive a long distance in order to participate. Second, there may be more exposure to gambling opportunities when there is more gambling in the local area. In fact, Zojanc (1968) demonstrated that simply exposing subjects to a familiar stimulus led them to rate it more positively than other, similar stimuli which had not been presented.

While research about the connection between proximity and gambling behavior is still fairly limited, the results of the studies that have been conducted suggest a positive relationship between gambling proximity and gambling behavior. Volberg (1994) compared

prevalence rates of problem gambling among five U.S. states with differing levels and histories of proximity, and found those with a longer history of legally available gambling had higher levels of problem gambling. A meta-analysis of 34 studies of gambling problems among adults in North America from 1977 to 1997 (Shaffer and Hall, 1997) suggested problem gambling has increased over time as gambling proximity has increased in the United States. The report of the United States National Gambling Impact Study Commission (Gerstein et al., 1999) used a large micro dataset to examine the link between location and the prevalence of problem gambling. They found the availability of a casino within 50 miles (versus 50 to 250 miles) is associated with approximately double the prevalence rate of problem and “pathological gamblers.” Campbell and Lester (1999) found a positive and significant link between a measure of the prevalence of problem gambling in parishes in Louisiana and the density of video poker machines. Engwall, Hunter, and Steinberg (2003) examined student gambling in Connecticut, which has a pro-gambling culture with many gambling opportunities. In Connecticut, the state lottery is available in approximately 2,900 locations, pari-mutuel wagering is available at various sites across the state, and two major tribal casinos are located in the southeastern part of the state. The results indicated nearly half of the Connecticut college students participated in some gambling activities.

However, recent research by Sevigny, Ladouceur, Jacqese, and Cantinotti (2008) found gambling proximity in itself may not always explain the rate of gambling-related problems. Sevigny et al. (2008) investigated the relationship between casino proximity and gambling participation in two studies. Results indicated a positive link between proximity and gambling participation, but casino proximity in itself does not appear to explain the rate of gambling or gambling-related problems. They concluded it is necessary to continue prospective research on exposure and adaptation theories as potential explanations for the development of problem gambling (Sevigny et al., 2008).

The Theory of Reasoned Action

In order to examine the impact of proximity on college student athletes, the current study used the Theory of Reasoned Action (TRA) (Ajzen and Fishbein, 1980), which is a widely accepted and tested behavioral model that examines the determinants of consciously intended behaviors (Davis, 1989). The ultimate goal of the TRA is to predict and understand an individual’s behavior (Ajzen and Fishbein, 1980). The TRA defines three determinants of human behavior: behavioral intention, and its antecedents, attitudes and subjective norms (Ajzen and Fishbein, 1980).

According to the TRA, a person’s intention is a function of two basic determinants, one personal in nature and the other reflecting social influence (Ajzen and Fishbein, 1980). The personal factor is the individual’s positive or negative evaluation of performing the behavior or attitude toward the behavior (Ajzen and Fishbein, 1980). Attitudes refer to the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question (Ajzen, 1988). The second, social, determinant of intention is the person’s perception of the social pressures put on him to perform or not perform the behavior in question (Ajzen and Fishbein, 1980). The TRA then views a person’s intention to perform (or not perform) a given behavior as the immediate determinant of the action (Ajzen and Fishbein, 1980).

The TRA has been used in prior research on gambling. Moore and Ohtsuka (1999) conducted a study to characterize attitudes and social norms among gamblers in Australia and to evaluate whether gambling behavior (frequency) and problem gambling could be predicted by combining attitudes and social influences. Intention to gamble was significantly predicted by attitudes and subjective norms in their study and the use of the TRA was moderately supported. In a more recent study conducted by Thrasher, Andrew, and Mahony (2007), the TRA was deemed to be a valuable tool in the assessment of college student gambling behavior. Simple linear regression was used to determine if gambling attitudes would predict gambling intentions, if subjective norms would predict gambling intentions, and if gambling intentions would predict gambling behavior. The results supported the TRA because all three hypotheses were supported by significant and positive relationships between the variables. The study also modified the TRA by adding two moderating variables: motivation and locus of control in hopes of making the TRA a more viable instrument to be used in gambling research.

Conceptual Framework of the Study

Despite increased awareness of the need to begin educating college students, in particular college student athletes, about the potential dangers of gambling, empirical knowledge related to problem gambling among this group is scarce. This paper poses the question of whether or not the variable of proximity has an impact on subjective norms, attitudes, intentions, and gambling behavior of college student athletes. Proximity and exposure are common and are potentially linked when studying gambling behavior. It is possible that an area saturated with gambling venues would contain more exposure from television, radio, newspaper, and many other types of commercialized advertising, thus increasing the risk of college student athletes developing different subjective norms, gambling attitudes, gambling intentions, and gambling behavior than they would in an area that is void of this type of exposure.

Research Hypotheses

The current study addressed the following hypotheses:

- H1: College athletes at a university within 10 miles of a legalized gambling opportunity will report more positive attitudes related to gambling compared to college athletes at a university with no legalized opportunities to gamble within 10 miles.
- H2: College athletes at a university within 10 miles of a legalized gambling opportunity will report higher subjective norms related to gambling compared to college athletes at a university with no legalized opportunities to gamble within 10 miles.
- H3: College athletes at a university within 10 miles of a legalized gambling opportunity will report greater gambling intentions compared to college athletes at a university with no legalized opportunities to gamble within 10 miles.
- H4: College athletes at a university within 10 miles of a legalized gambling opportunity will report more gambling behavior compared to college athletes at a university with no legalized opportunities to gamble within 10 miles.

METHODS

Participants

Participants ($N = 221$) were recruited from the student population at two NCAA Football Bowl Subdivision (formerly Division I-A) universities in the southeast United States after receiving approval from each institution's Human Subjects Committee. Participants ($n = 164$) at the first university had ample gambling opportunities surrounding the campus, including legalized pari-mutuel gambling, lottery gambling, charitable gambling, and casino-style gambling. Participants ($n = 57$) at the second university had no gambling opportunities in the immediate vicinity such as the lottery, casino-style gambling, pari-mutuel gaming, and charitable gaming. At both universities, participants were recruited from classes in a department that offered numerous health- and sport-related programs of study (e.g., physical education, health education, sport administration). These classes were selected because they included students from the freshman through senior level, and it was thought that they may contain a relatively high numbers of varsity athletes. Varsity athletes were asked to volunteer after they had been briefed on the study by the researcher. There was no penalty for nonparticipation.

Instrumentation

The questionnaire included demographic questions, an abbreviated South Oaks Gambling Screen (Lesieur and Blume, 1987), the Intention to Gamble Scale (Moore and Ohtsuka, 1999), the Subjective Norms Scale (Moore and Ohtsuka, 1999), and the Gambling Attitude Scale (Moore and Ohtsuka, 1999). All scales were adapted to a seven-point Likert-type scale (1 = strongly disagree; 7 = strongly agree) for consistency purposes.

Demographics. Demographic questions included age, gender, ethnicity, and class standing.

Gambling attitude scale. This measure consisted of 12 items used to predict positive gambling attitudes. The attitude measure of Moore and Ohtsuka (1999) incorporated both the belief and the cost/element of the Theory of Reasoned Action through the use of evaluative belief statements. Higher scores on this measure represent positive attitudes towards gambling. The Cronbach's alpha reliability for this scale was measured at .79 in Moore and Ohtsuka (1999). In a recent study conducted by Thrasher et al. (2007) the Cronbach's alpha for the Gambling Attitude Scale was .81.

Subjective norms scale. This measure consisted of 16 items about perceived family and peer norms with respect to gambling. High scores on this measure indicate a perception of positive social norms towards gambling and the desire to fit in with these norms (Moore and Ohtsuka, 1999). In Moore and Ohtsuka's (1999) study, the Cronbach alphas were .78 for the family normative beliefs scale and .75 for the peer normative scale. To provide a measure of subjective norms, the normative beliefs items and the motivation to comply items were combined in the manner suggested by Ajzen and Madden (1986), that is, by multiplying the beliefs of each specific referent group (family, friends) by the motivation to comply with those referents. The two measures were added together to form a single measure of subjective

norms, a process undertaken by Moore and Ohtsuka (1999) that resulted in a reported Cronbach alpha reliability of .69. The Cronbach's alpha from Thrasher et al. (2007) was .83.

Gambling intentions scale. Moore and Ohtsuka's (1999) study provided seven intentions to gamble in the future. The Gambling Intentions Scale represents on average, disagreements with statements about a participant's intentions to gamble. Intentions to gamble have been significantly predicted by attitudes and subjective norms (Moore and Ohtsuka, 1999). The scale was based on gambling intentions measured on weekly, monthly, and yearly gambling. The Cronbach's alpha for Moore and Ohtsuka (1999) was .71, and the Cronbach's alpha from Thrasher et al. (2007) was .90.

South oaks gambling screen. The South Oaks Gambling Screen (SOGS) is a reliable, valid indicator of gambling problems (Lesieur and Blume, 1987; Volberg and Banks, 1990). The SOGS is scored on a 20-point scale as follows: zero = no problem, one to four = some problems, five or more = probable pathological gambler (Lesieur and Blume, 1987). The SOGS was initially developed and intended for diagnostic use with adults in a clinical setting (Rossen, 2001). The SOGS correlates highly with the Diagnostic Statistical Manual-III-R and the Diagnostic Statistical Manual-IV and has demonstrated validity and reliability among university students (Beaudoin and Cox, 1999; Ladouceur, Boisvert, and Dumont, 1994; Lesieur and Rosenthal, 1991).

A wide selection of validation strategies have been employed to demonstrate the validity of the SOGS. These include the use of single-stage (e.g., Gambino, 1997; Poulin, 2000) and multiple-stage (e.g., Abbott and Volberg, 1996; Gambino, 1999a) designs, a description of the mathematical models for evaluating the accuracy of estimates based on these designs (Gambino, 1997, 1999a), and methods for evaluating the precision and cost-efficiency of these designs (Gambino, 1999b). Other investigators have employed statistical modeling techniques for the purpose of validation, including factor analysis (Winters, Stinchfield, and Fulkerson, 1993), logistic regression (Poulin, 2000; Welte, Barnes, Wieczorek, Tidwell, and Parker, 2001), Rasch analysis (Strong, Lesieur, Breen, Stinchfield, and Lejuez, 2004), and stratification analysis (Tavares, Zilberman, Beites, and Gentil, 2001).

The SOGS was used to measure respondent gambling behavior. The original SOGS was modified from a 20-item scale to a 2-item scale to fit the needs of this study. This approach corresponds with that taken by Moore and Ohtsuka (1999). Other researchers (e.g., Cullen and Latessa, 1996) have used a modified version of the SOGS. Research on the performance of the SOGS has shown the lifetime screen is very effective at detecting pathological gambling among those who currently experience the disorder.

The SOGS accomplishes three purposes. First, it provides information on the extent to which the respondents have participated in specific types of gambling activities. Secondly, it gauges the probability the respondent may be a problem or pathological gambler. Finally, the screen provides insights into the respondent's association with gambling. Reliability of the instrument was verified with an internal consistency check showing the SOGS to be highly reliable (Cronbach's alpha = .97, $p < .001$) and a test-retest correlation coefficient yielded a significant ($p < .001$) positive correlation of .71 (Lesieur and Rosenthal, 1991). The Cronbach alpha for this modified scale was .87 (Moore and Ohtsuka, 1999). In Thrasher et al.'s (2007) study, the SOGS had a Cronbach's alpha of .815.

Data Analysis

Descriptive statistics were calculated for each of the demographic variables. Cronbach alpha coefficients were calculated for each measurement scale to verify internal consistency. Nunnally and Bernstein's (1994) recommended alpha value of .70 was utilized to evaluate the internal consistency of each subscale. Finally, a one-way multivariate analysis of variance (MANOVA) was calculated to determine if the dependent variables of gambling attitudes, subjective norms, gambling intentions, and gambling behavior varied on the basis of the independent variable, proximity to gambling opportunities.

RESULTS

Demographics

The convenience sampling resulted in a total of 221 student participants. The sample was 52.9% male (117) and 47.1% female (104). The age of the subjects ranged from 18 to 27 with a mean age of 19.7 ± 1.9 years, and the minimum legal gambling age for all forms of gambling in the affected state was 18 years. The majority of the sample was White American (68.8%), with the remainder of the sample as follows: African American (19%), Hispanic American (0.5%), Native American (3.2%), Asian American (2.3%), and Others (6.3%). The sample was representative of four class groups with 43.4% freshmen, 20.8% sophomores, 19.5% juniors, and 15.4% seniors. The samples collected at the two universities did not significantly differ on the basis of gender, age, ethnicity, or class standing.

Reliability of the Survey Instrument

The instrument used in this study was composed of subscales validated by previous researchers. Cronbach's alpha coefficients were calculated for the components of each measurement survey instrument to verify internal consistency. The internal consistency estimates for every component of each of the scales are featured in Table 1.

Table 1. Reliability Estimates of Instrument

Scale	Alpha Level
Gambling Attitude Scale	.726*
Subjective Norms Scale	.874
Gambling Intentions Scale	.924
South Oaks Gambling Screen	.851

*Resulting reliability when items 3 and 8 deleted.

The gambling attitude scale was only reliable (defined as $\alpha > .70$) after the deletion of items 3 and 8; therefore, these two items were deleted from further analysis. Items 3 and 8 of the gambling attitude scale contain statements concerning a respondent's perceptions of whether others need professional help to control their gambling behavior. Since these items

are highly situation-specific compared to the other scale items, their inclusion adversely affected overall scale reliability.

ANALYSIS OF HYPOTHESES

- H1.* Hypothesis 1 proposed college athletes within close proximity of legalized gambling opportunities would report more positive attitudes related to gambling than college athletes at a university without close proximity of legalized gambling opportunities. Hypotheses 1 was not supported [$F(1, 218) = 1.595; p = .190$]. Gambling attitudes of athletes within ten miles of a legalized gambling opportunity (3.590 ± 1.019) did not significantly differ from athletes with no legalized opportunities to gamble within ten miles (3.786 ± 0.762).
- H2.* Hypothesis 2 proposed college athletes within close proximity of legalized gambling opportunities would report higher subjective norms related to gambling than college athletes at a university without close proximity of legalized gambling opportunities. Hypotheses 2 was not supported as the analysis was significant [$F(1, 219) = 6.503; p = .017$], but in the opposite direction than was hypothesized. Subjective norms of athletes within ten miles of a legalized gambling (3.145 ± 1.033) reported significantly lower subjective norms than athletes with no legalized gambling opportunities within ten miles (3.537 ± 1.121).
- H3.* Hypothesis 3 proposed college athletes within close proximity of legalized gambling opportunities would report greater gambling intentions than college athletes at a university without close proximity of legalized gambling opportunities. Hypotheses 3 was not supported as the analysis was significant [$F(1, 219) = 12.648; p = .022$], but in the opposite direction than was hypothesized. Gambling intentions of athletes within ten miles of legalized gambling opportunities (5.365 ± 1.429) reported significantly lower gambling intentions than athletes with no legalized gambling opportunities within ten miles (5.912 ± 1.823).
- H4.* Hypothesis 4 proposed college athletes within close proximity of legalized gambling opportunities would report more gambling behavior compared to college athletes at a university without close proximity of legalized gambling opportunities. Hypotheses 4 was not supported [$F(1, 219) = 13.912; p = .342$]. Reported gambling behaviors of athletes within ten miles of a legalized gambling opportunity (16.152 ± 3.895) did not significantly differ from athletes with no legalized opportunities to gamble within ten miles (15.579 ± 3.914).

DISCUSSION AND CONCLUSION

The current study focused on the impact of proximity on student-athlete's attitudes, subjective norms, intentions, and gambling behavior. The findings were not supportive of the four hypotheses. In other words, increased proximity did not lead to more positive attitudes toward gambling, subjective norms, intentions to gamble or actual gambling behavior. These findings were not consistent with previous research (Abbott and Volberg, 1999; Gerstein et al., 1999; Shaffer, Hall, and Vander Bilt, 1997; Wildman, 1998). All of these studies found a

positive link between gambling behavior and proximity to gambling venues. While it seems logical that residing within ten miles of a gambling venue (proximity) would lead to more positive subjective norms, attitudes, intentions, and specific gambling behavior among student-athletes, this was simply not the case in the current study. The increased exposure and ease of reaching gambling opportunities did not have a positive impact on any of these variables.

In fact, two of the variables, subjective norms and intentions to gamble were significant in the opposite direction. Student athletes at the university without close proximity to legalized gambling opportunities had more positive subjective norms and intentions to gamble than those at the university with closer proximity. Taken together, these results are surprising, both because they are in conflict with prior research and because they appear inconsistent with the theory that the close proximity and increased exposure would increase all of these variables.

While it is not possible to know for sure why these results occurred in the current study, there are a couple of possible reasons. Recently there has been a nationwide increase in internet gambling, including internet poker playing (Thrasher et al., 2007). These internet gambling services focus their advertising on individuals who are most likely to gamble, which includes college students in general, and student-athletes in particular. Because we would expect student athletes at both universities to be regular users of the internet, the differences in exposure that would have existed in the past may have been negated by the gambling advertising on the internet. Moreover, instead of having to go to a gambling venue within ten miles of campus, the computer has established a gambling venue right on the campus and often in the student athlete's room.

Although this may help explain why the student athletes with close proximity were not significantly more positive on any of the gambling variables, it does not explain why the subjective norms and gambling intentions were significantly greater for the student athletes at the university without close proximity. However, it is possible that there may be differences in the education provided to student athletes about gambling. In fact, it would be quite logical that the university with close proximity may provide a more thorough education program precisely because of fears that the close proximity may make their athletes more vulnerable to gambling opportunities and problem gambling. If this is the case, the results of the current study would suggest their efforts are having an impact and are reducing the subjective norms and the gambling intentions. Still, it is important to note this is not something that we know for sure based on the results of the current study. It is possible there are other reasons why proximity did not have the impact expected in the current study, including differences in factors among the athletes at the two institutions that existed before they even entered the university.

Overall, there is still a need for further research to better understand what predicts gambling attitudes, subjective norms, gambling intentions and gambling behavior among college student athletes. Researchers should continue to develop studies which compare gambling prevalence rates among student athletes and to seek to determine the reasons for the differences. The current study suggests that two areas in particular may be worth exploring further. First, researchers should examine the impact of the internet, particularly internet gambling advertising and websites, on gambling attitudes, subjective norms, gambling intentions and gambling behavior. College students are particularly heavy users of the internet so the impact on them may be greater than on other demographic groups.

Second, future research should examine the impact of various educational programs related to gambling and other services to assist athletes who are susceptible to gambling problems. It is important to identify what elements of these programs and services increase their effectiveness so that universities can be more proactive in reducing gambling problems among student athletes. It may also be important to teach university administrators about the warning signs for problem gamblers so they might be better prepared to handle the situations. Such efforts could be beneficial to both the university and the athletes. It is in everyone's best interest to reduce problem gambling among student athletes. While the current study did not find support for the hypotheses presented, it is important to note that most of the athletes at both institutions participated in some form of gambling, so more research is still needed to both understand and ultimately reduce gambling athletes among college student athletes.

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RE-EXAMINING THE ROLE OF ANTECEDENT ORIENTATION IN SOCIAL PSYCHOLOGICAL WELL-BEING THROUGH TEAM IDENTIFICATION

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ABSTRACT

While myriad avenues exist into which individuals can identify with sport teams and organizations, a dearth of research has thoroughly examined the intricate process between these antecedents and the eventual resulting outcomes. As these avenues of connection, Robinson and Trail (2005) defined seven points of attachment (e.g. team, organization, athletes, community) while Trail and James (2001) presented motives for sport consumption, such as knowledge acquisition, escape, social interaction, and vicarious achievement. Further, these antecedents were positioned within the Team Identification-Social Psychological Health Model (Wann, 2006), which focuses on the social psychological well-being derived from team identification. However, no research has examined the potential interaction of points of attachment and motives upon social psychological well-being through team identification, particularly in the context of intercollegiate athletics which is uniquely available through numerous motives and points of attachment. To explore this notion using the motive of vicarious achievement and the points of attachment of university and team identity, data were collected from undergraduate students across 41 NCAA Division I institutions at the BCS level. Initial results showed vicarious achievement returning a significant, but negative relationship with the social psychological well-being variable of student adjustment. Team identity and university identity showed a significant and positive contribution to adjustment. However, a follow-up regression analysis showed the significant presence of a vicarious achievement-team identification interaction, thus suggesting more to the process than seen before in previous research.

INTRODUCTION

Consumer research in sport management has long sought after the varied antecedents and outcomes of consumers of teams and sporting events. Including, namely, the attitudes and behaviors of sport consumers, a plethora of literature have focused on the psychological connection of individuals to sport teams and organizations. This psychological connection has been operationalized from identity (Wann and Branscombe, 1993), commitment (Kahle,

1996), and attachment (Funk and James, 2006), to loyalty (Pritchard, Havitz, and Howard, 1999) and allegiance (Funk and James, 2001). Because of the immense impact of the psychological connection upon numerous salient outcomes in sport, vast research efforts have examined the many social factors that influence new connections between sport teams and individuals, from acquiring or maintaining relationships with fans (e.g. Mahony, Madrigal, and Howard, 1999); including geographic location and team success (Wann, Tucker, and Schrader, 1996) and key socializing agents such as family and friends (Kolbe and James, 2000). Further, the intricacies of the connection with sport teams and organizations have also been examined, such as with the Psychological Continuum Model (Funk and James). In this model, the connection between fan and team ranges along a hierarchical arrangement including Awareness, Attraction, Attachment, and Allegiance. In the initial state of Awareness, an individual becomes aware of a team's existence, but little or no interest exists. Awareness is accomplished through media images or other socializing agents such as friends, classmates, or family members. The second stage of Attraction recognizes actual opinions, attitudes, or interests that are starting to form for a particular team or organization. This interest is often derived from social factors, hedonic motives, or situational factors salient to the specific context (Funk and James, 2001, 2006). From there, the psychological connection elevates to Attachment, where an alignment of values and attitudes exist with the team and a meaningful psychological connection is established. At Attachment, the connection enters a dynamic state and taps into the affect of the individual. There, sport teams are connected with stronger attitudinal evaluations (Funk, Haugvedt, and Howard, 2000). Finally, and in the highest level, Allegiance occurs when the connection is tested, stands the test of time, and impacts both cognition and behavior. Here, Funk et al. suggested the transition between Attachment and Allegiance is marked by attitude formation and change. Behavior impact might be noted through amounts of time and money spent on direct or indirect consumption of the particular team. At the final two stages, the individual-team relationship prospers because of the individual process-orientation, rather than earlier hedonic motives and situational factors (Funk and James). Other research efforts have suggested that lying beyond the highest levels of psychological connection would be overall team identification, where an individual begins to construct and maintain part of one's social identity with the team (e.g. Dutton, Dukerich, and Harquail, 1994; Fink, Trail, and Anderson, 2002; Wann and Branscombe, 1993).

Aside from the complex process of psychological connection between a team and an individual, past research has also explored the *intention* of fans to engage in this connection. Perhaps supporting a local team may satisfy one's need for belonging and provide opportunities for social interaction (Funk, Mahony, and Ridinger, 2002). Local teams may also provide a sense of community solidarity of which individuals strive to belong (Funk and James, 2006). Most motives, however, can be summated into serving either social or psychological needs of the consumer. Sloan (1989) encompassed most motives for attending sporting events under one of a number of theories: the salubrious effects theory, stress and stimulation theories, catharsis and aggression theories, entertainment theory, or achievement seeking theories. Of these, achievement seeking theories are the most examined regarding an individuals' need to feel a sense of achievement through the identification or connection one develops through a team or event. Trail and James (2001) further explicated a typology of motives of consumers into vicarious achievement, acquisition of knowledge, aesthetics, social interaction, drama/eustress, escape, family, physical attractiveness of participants, and

physical skill of participants. As with Sloan's theories of motives, the vicarious achievement dimension has been seen as the prime motive for connecting to a team (Robinson and Trail, 2005; Trail, Robinson, Dick, and Gillentine, 2003) and has even registered as the primary indicator of team identification (Fink, Trail, and Anderson, 2002). Because of this, the current study set out to explore the relationship between the two distinct constructs of vicarious achievement and team identification, particularly regarding the unique contribution of vicarious achievement – beyond that of team identification – to salient outcomes of social well-being. This aim was directed at the area of intercollegiate athletics in the National Collegiate Athletic Association (NCAA). There, the balance of multiple identities (e.g. team or university) is one that creates a unique interplay of antecedents and outcomes.

This interplay can be outlined around Robinson and Trail's points of attachments, where, rather than only one access point of a team with which sports fan's identify, the authors propose seven points by which individuals can identify with a team, including the team itself, but also the players, the coach, the community, the sport, the university, and the level of sport. Intercollegiate athletics offers a unique compilation of numerous points of attachment by which organizational members can identify with the teams (Robinson, Trail, Dick, and Gillentine, 2005). While students most often identify directly with the team itself, students are also in classes with individual players, often have high-profile coaches with which to identify, and may be involved in the overall university and community.

VICARIOUS ACHIEVEMENT

Defined as the sense of self-esteem that one derives by being a part of a successful organization or team (Fink, Trail, and Anderson, 2002), vicarious achievement draws upon Cialdini et al.'s (1976) seminal work on the BIRG effect, or Basking in Reflected Glory. The BIRG effect illuminates individuals' need for affiliating with successful teams, thus using terms of "we" and "us" and wearing one's favorite team's logos and apparel more often following victories than at any other times. Vicarious achievement also builds upon Maslow's (1943) hierarchy of needs and, in particular, McLelland's needs theory (Kreitner and Kinicki, 2010). Each of which point to an inherent need of individuals to garner a sense of one's existence upon what one can achieve. The notion of achieving vicariously through a team also represents a person's desire for social prestige, self-esteem, and a sense of empowerment through that affiliation (Fink et al.; Mahony, Madrigal, and Howard, 2000). In terms of Funk and James' (2001) Psychological Continuum Model, vicarious achievement lies within the Attraction level and correlates with the deeper level of Attachment and has also impacted commitment and behavior (Backman and Compton, 1991). Vicarious achievement is highly correlated with team identification (Fink et al., 2002), moderately correlated with players (Funk et al., 2002), low to moderately correlated with identification with sport (Funk et al.) and moderately correlated with identification with coach, community, and university (Robinson and Trail, 2005; Trail et al., 2003). Moreover, individuals are more likely to pick a successful team as their favorite, at least in part because of the opportunities for feelings of vicarious achievement are higher when one supports a successful team (e.g. Branscombe and Wann, 1991; Mahony, Howard, and Madrigal, 2000). Notably, while vicarious achievement has no connection with the length of time one has spent as a fan of one team, it has with the frequency of attending sporting events of that team (Mahony, Nakazawa, Funk, James, and

Gladden, 2002). This increased frequency of attendance enhances the likelihood, and quality of, social interaction amongst the fans seeking vicarious achievement. The increasing social interaction suggests a potential for connection to numerous social-psychological health outcomes that are predicated upon quality social interaction.

Team Identification

Overall, team identification is constructed upon Social Identity Theory (Tajfel and Turner, 1986), where an individual's concept of self is comprised of multiple roles and identities. The roles and identities of individuals are balanced via identity salience, or the personal importance that an individual places upon a role identity, and of which impacts these role related behaviors (Ervin and Stryker, 2001). Further, while personal identity consists of distinctive attributes, social identity is comprised of notable group categories that can be based upon various classifications or organizational memberships (Tajfel and Turner, 1986; Turner, 1987). One of these social identities which often receives salience among those who possess it is team identity. The extent to which one identifies with a team has exhibited a positive relationship with personal self-esteem and the frequency of experiencing positive emotions while team identification is negatively related with depression, alienation, and frequency of experiencing negative emotions (Wann, 1991). Team identification is also connected with a collective self-esteem, which is one's evaluations and perceptions of one's group (Wann, 1994). These benefits of team identification also extend to increases in personal self-esteem and energy (Wann et al., 1999), in addition to extroversion, openness, and conscientiousness (Wann, Dunham, Byrd, and Keenan, 2004). In the university context, team identification is connected with integration into, and perceptions of, the university (Wann and Robinson, 2002), as well as with overall academic and social integration (Clopton, 2009).

Conceptual Framework

The initial impetus for this study was framed across the Team Identification-Social Psychological Health Model, or TISPHM (Wann, 2006). The basis for the model is the idea that positive social relationships are the best predictors of psychological well-being (Compton, 2005), and that these relationships can be created and enhanced through team identification. Those individuals identifying highly with a sports team have garnered tangible psychological benefits due to their associations with teams because social activities often lead to a sense of belongingness with others and a connection to society (Mael and Ashforth, 2001). These individuals have also demonstrated significantly higher levels of social well-being (e.g. Wann and Pierce, 2005). Particularly noteworthy here, team identification is also a significant predictor of social integration and social coherence, a finding that further augments the overall social health and well-being of the individual (Wann and Weaver, 2009).

The TISPHM is constructed, in part, upon the two dimensions of temporary and enduring social connections, of which team identification will lead depending upon the context (Wann, 2006). Enduring social connections result from residing in an environment where other fans are readily recognizable, such as the athletics team on a college campus, a local professional

team, or a local high school (Wann). This context also increases the likelihood of a high identity salience. Here, there is a strong psychological well-being that accompanies an increased sense of connectedness. Enduring social connections tie individuals within a particular community together and foster a feeling of camaraderie. On a college campus setting, team identification has even been shown to enhance one's social capital (Clopton and Finch, 2010).

The second dimension, more transient in nature, is a temporary social connection where team identity is not in an enduring environment. This is typically a displaced fan of a team in a new city or area. These social connections are a function of the salience of the connections themselves and result in limited benefits to one's social psychological health (Wann, 2006; Wann et al., 2004). Even regarding enduring social connections, it is still unclear as to the extent of salience required in order for those social connections to become enduring, and to deliver positive outcomes to one's health.

The second aspect of this study's conceptual framework utilizes the aforementioned motives (Trail and James, 2001) and points of attachment (Robinson and Trail, 2005) in one context to explicate potential improvements to social psychological health from these connections. Individuals following a team can identify with numerous elements of the sport environment (Trail et al., 2003). Past research has indicated students as fans may feel a sense of attachment to their university (van Leeuwen, Quick, and Daniel, 2002), the actual sport played by their school's particular team (Hill and Green, 2000), or the individual athletes on the team (Mahony, Nakazawa, Funk, James, and Gladden, 2002). Points of attachment and motives are interrelated in that, for example, the motives of aesthetics and drama are not significantly connected to organizational points of attachment, including team, coach, community, university, or players (Trail et al., 2003). Vicarious achievement is connected to most organizational points of attachment, however, as fans at the NCAA Division I level are more likely to be motivated by vicarious achievement than at any other level (Robinson et al., 2005). Because of the unique level of competition played at most NCAA Division I institutions, most college students have never been scholarship athletes, have not had the opportunity to compete on comparable stages, or perform at that level of competition. Thus, by vicariously affiliating with their school's athletics teams these students can derive an extended sense of empowerment and an increase in self-esteem (Robinson, et al.).

Still, while extant literature supports a direct connection in benefits from vicarious achievement motivation and from team identification, a dearth of research exists exploring the interplay of the two and the extent to which benefits are aligned with the organization. That is, because of the unique landscape of colleges and universities competing at the NCAA Division I level, a disconnect sometimes exists between the academic mission and the athletics mission. No research has examined the extent to which students vicariously achieving through athletics actually impacts academic and social outcomes within the university. Recent literature suggests these results are mixed. For example, while students involved as fans have reported higher grade point averages in the past (e.g. Schurr, Wittig, Ruble, and Henriksen, 1993), recent research utilizing a multi-campus study showed team identification detracting from one's grade point average (Clopton, 2009). Further, because of the varied points of attachment for college students to identify with the team, it might be anticipated that greater academic and university-related benefits might be derived should university attachment be the prime point attachment rather than team, players, or coach. Still, according to the TISPHM, while the attachment points may differ, the benefits and outcomes

stem from the quality of the social connections to others, regardless of the antecedents. To this point, Wann (2006) has called for the need for research to examine if and how these attachments are related to social psychological health.

To explore this notion, the current study utilized social adjustment (Baker and Siryk, 1999) as the selected measure of social psychological health. Similar constructs of social integration and cohesion (e.g. Wann and Robinson, 2002; Wann and Weaver, 2009) are connected with team identification and support the TISPHM model. Because the vicarious achievement motive leads to strong team identification, irrespective of points of attachment, and that this identification in a local setting will lead to enduring social connections through the Team Identification-Social Psychological Health Model, it was anticipated that – beyond the contribution of team and university identity in the model – vicarious achievement would lead to greater social adjustment of the college students.

METHOD

As part of a larger study assessing the impact of intercollegiate athletics upon the college campus community, the population was limited to traditional-aged, undergraduate students attending schools at the NCAA Division I level as members of the Bowl Championship Series (BCS). Of the total population, 41 institutions maintained active and accessible online campus directories and were included in the study.

To select the sample for the study, student names and email addresses were randomly chosen out of online campus directories. Once a complete list of names and e-mail addresses was established, the subjects were uploaded into www.surveymonkey.com for each institution.

Instrumentation

Demographical information for each respondent was collected through individual responses to race, gender, age, state residency status, school year, grade point average, campus residence, membership in a Greek organization, membership on a varsity sport team, any hours spent per week working on campus. Age responses were used to limit the sample and work hours and grade point average were utilized as a continuous variable in the regression. The remaining demographical variables were dummy-coded into the regression analyses as control variables.

Student Adaptation to College Questionnaire (SACQ)

To examine the social psychological health outcome, the Student Adaptation to College Questionnaire (SACQ) was utilized (Baker and Siryk, 1999). The use of the SACQ in assessing college student adjustment is widespread (Taylor and Pastor, 2007), as adjustment has been examined with social support, self-esteem, and stress (Freidlander, Reid, Shupak, and Cribbie, 2007), expectations (Agliata and Renk, 2008), and student gender (Enochs and Roland, 2006), among others. For the purposes of the current research, then, 19 items were adapted from the original SACQ across four subscales: Academic Adjustment (*i.e.* I have

been keeping up to date on my academic work), Social Adjustment with Other People (*i.e.* I have been busy meeting and making friends since coming to college), Personal/Emotional Adjustment (*i.e.* I have been feeling tense or nervous lately), and Goal Commitment/Institutional Attachment (*i.e.* In general, I am glad to be a student of this university). Further, each subscale reported reliability estimates of .85, .83, .80, and .85, respectively.

Vicarious Achievement (VIC)

The motive of vicarious achievement was assessed through the Motivation Scale for Sport Consumption (MSSC). The complete MSSC consists of nine subscales – each a motive of sport consumption – with each subscale consisting of three items (Trail and James, 2001). The subscales include achievement, knowledge acquisition, aesthetics, drama, escape, family, physical attraction, physical skill, and social interaction. Trail et al. (2003) has subsequently suggested the family subscale be eliminated due to its lack of substance as a sport-salient motive.

The original loading of the MSSC exhibited strong internal reliability with an overall α of .87 and subsequent research has confirmed both the reliability and validity of the instrument (e.g. Fink, Trail, Anderson, 2002; Robinson and Trail, 2005; Trail et al., 2003). For the purpose of the current study, the vicarious achievement measurement was taken from the MSSC's three-item subscale on achievement.

The scale included such items as “I feel a sense of achievement when the team does well,” and “I feel like I have won when the team wins.” Echoing the reliability of previous research efforts, the current vicarious achievement scale showed strong reliability with $\alpha = .90$.

Collective Self-Esteem Scale (CSES)

Using the CSES, university identity was defined as the extent to which each student identified as a member of his or her college or university. Students responded to 16 items assessing their level of identification with a group along a seven point Likert scale (Luhtanen and Crocker, 1992).

The CSES has an original Cronbach's α of .85 and has been used for university identification in past research (e.g. Clopton, 2008). Further, with four sub-scales of membership identity, private identity, public identity, and overall identity, the CSES contains statements like “In general, I am glad to be a member of the social groups to which I belong,” or “I am a cooperative participant in the social groups to which I belong.”

Sport Spectatorship Identification Scale (SSIS)

The second instrument was the Sport Spectatorship Identification Scale (SSIS; Wann and Branscombe, 1993), which measures the extent to which individuals identify with a sports team or program. This seven-item, seven-point Likert scale asks the subjects such questions as “How important to you is it that the (school's teams) win?” “During the season, how

closely do you follow the (school's teams)?" and "How much do you dislike (the school's) greatest rivals?" (Wann and Branscombe, 1993). With a Cronbach's $\alpha = .91$, all of the seven items were significantly interrelated and the average item-total correlation was .59 (Wann and Branscombe, 1993). The SSIS has been used in many research studies to assess an individual's team identification level and the extent to which that affects such measures as integration into, and perceptions of, the university (Wann and Robinson, 2002), and alumni contributions (Wann and Somerville, 2000).

Pre-notification letters for participation were sent electronically to 6,150 randomly-selected students from the 41 BCS institutions chosen for this study. From the pre-notification letter, a total of 1,350 students declined to participate.

Subsequently, survey links were sent to 4,800 students for completion. The surveys were completed by 1,578 students for an overall response rate of 32.90%, a low, but acceptable, online response rate (see Crawford, Cooper, and Limias, 2001).

Further, subjects were eliminated ($n=326$) that either failed to fit within population parameters (i.e., age, full-time status, undergraduate, etc.) or failed to complete more than one instrument. The final tally of responses came to 1,252 for a final usable response rate of 26.10%. Of the total sample included in this study ($n = 1,252$), a slight majority, 52.08%, of the respondents were women ($n = 652$) while the remaining subjects were men (47.92%; $n = 600$).

Notably, males ($M=4.79$, $S.D.=1.70$) showed significantly higher levels of team identification ($t[1250]=5.87$, $p<.001$) than did their female counterparts ($M=4.25$, $S.D.=1.62$). Further, an overwhelming majority of the sample were white students ($n=1074$), a finding that brought significance as white students showed greater levels of team identity ($M=4.56$, $S.D.=1.67$) than the non-white students ($M=4.08$, $S.D.=1.71$; $t[1249]=-3.26$, $p<.01$).

The sample of college students also established an average age of 20.07 ($S.D.=1.69$) with half of the respondents living off-campus ($n=626$). Overall, the college students in the sample reported moderately-high levels of social capital ($M=5.35$, $S.D.=0.88$) across the 41 institutions. The sample of students also displayed a moderate level of team identity ($M=4.51$, $S.D.=1.68$).

Analysis of Data

To analyze the data for the relationship between vicarious achievement, team identification and social adjustment, a hierarchical regression equation was constructed utilizing the subject variable (vicarious achievement) to predict the dependent variable (social adjustment).

The hierarchical regression equation was constructed based off of Astin's (1993) Input-Environment-Outcome (I-E-O) Model for research on college students. Using I-E-O, then, variables were arranged via separate models beginning with *input* characteristics: gender, race, and age; *environment* characteristics: campus residence, membership in a social fraternity or sorority (i.e. Greek), athlete status, GPA, university identity, team identity, and vicarious achievement; and *outcome*: student adjustment. Results are displayed in Table 1.

Table 1. Summary of Hierarchical Regression Analysis for Overall Student Adjustment (n = 1251)

Variable	Regression Equation Predicting Adjustment from Input and Environmental Variables (Step 2 values)			Regression Equation Predicting Integration from Vicarious Achievement (Step 3 values)			Regression Equation Predicting Integration with Interaction (Step 4 values)		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Step 1									
Gender	0.71	0.53	0.03	0.79	0.53	0.03	0.69	0.53	0.03
Race	1.16	0.83	0.03	1.15	0.83	0.03	1.14	0.83	0.03
Age	0.01	0.17	-0.001	-0.03	0.17	-0.01	-0.01	0.17	<0.001
Step 2									
Campus Residence	-0.86	0.52	-0.04	-0.81	0.52	-0.04	-0.70	0.52	-0.03
Greek Membership	-3.68	0.71	-0.10***	-3.78	0.71	-0.11***	-3.75	0.71	-0.11***
Athlete	0.48	1.08	0.01	0.46	1.08	0.01	0.46	1.07	0.01
Grade Point Average	1.24	0.52	0.05*	1.09	0.52	0.04*	1.12	0.52	0.04*
University Identity	0.63	0.02	0.67***	0.64	0.02	0.69***	0.64	0.02	0.68***
Team Identity	0.04	0.04	0.02	0.15	0.05	0.10**	0.34	0.08	0.22***
Step 3									
Vicarious Achievement	-----			-0.26	0.08	-0.10**	0.09	0.14	0.03
Step 4									
Vicarious Achievement X Team Identity	-----			-----			-0.02	0.01	-0.25**

Note. $R^2 = .01$, $p < .01$ for Step 1; $R^2\Delta = .49$, $p < .001$ for Step 2; $R^2\Delta = .01$, $p < .01$ for Step 3; $R^2\Delta = .003$, $p < .01$ for Step 4.

*values significant at the .05 level ** values significant at the .01 level *** values significant at the .001 level.

RESULTS

The hierarchical regression displayed numerous noteworthy findings suggesting that the process of deriving social psychological health outcomes via team identification through diverse motives and points of attachment is an intricate one. Interestingly, with input and environmental control variables entered into models one and two of the regression analysis, team identification showed no significant connection with overall student adjustment. However, a significant connection existed between university identity ($\beta = .63$, $p < .001$) and the overall model displayed a moderate amount of variance in predicting overall student

adjustment ($R^2 = .51$, $F[9, 1241] = 140.04$, $p < .001$). This initial finding resonates with recent research findings indicating the overall impact of team identification may have little impact on salient academic and social outcomes when examined beyond the context of university identity (author, in review).

In the final model, the motive of vicarious achievement showed a nominal, though significant, amount of connectivity to the social psychological health outcome of student social adjustment ($R^2\Delta = .004$, $F[1, 1240] = 10.04$, $p < .01$). However, the significant relationship between vicarious achievement and overall student adjustment ran counter to expectations as vicarious achievement exhibited a negative impact upon the adjustment variable ($\beta = -.26$, $p < .01$). Further, with the vicarious achievement motive included in the final model, team identification showed a positive and significant contribution to overall student adjustment ($\beta = .15$, $p < .01$), as did university identity ($\beta = .65$, $p < .001$). Among the other environmental variables assessed, academic production (i.e. grade point average) showed significant contribution to student adjustment ($\beta = 1.09$, $p < .05$), while membership in fraternities or sororities actually detracted from adjustment ($\beta = -3.78$, $p < .001$). No other environmental variables (living on campus or participating in athletics) nor input variables (gender, race, or age) provided any significant connection to adjustment. The findings of Greek participation and vicarious achievement, both of which suggest multiple points of attachment to the overall university organization, suggest that perhaps there is more to the connection between organizational identification and attachment and the social connections generated and maintained pertaining to them. These results imply that, in fact, the orientation of these attachments do matter in terms of the direction of derived social psychological benefits from the resulting social connections. The varied orientations of these two variables in the university environment (e.g. Greek membership and vicariously achieving through athletics) may lead to a more polarized or divided social atmosphere that is not conducive to overall social integration, cohesion, or adjustment. Further, the counter-directional relationship of vicarious achievement and team identification, when assessed beyond the presence of university identification, also indicates additional intricacies in the TISPHM, as potential outcomes may depend more on the antecedents and motives towards team identification than previously proposed. These results are discussed further in the following section.

The intricate relationship between point of attachment and motive was further confirmed when a follow-up regression analysis revealed a modest, but significant, interaction between team identification and vicarious achievement in predicting overall student adjustment ($\beta = -.02$, $p < .01$). Again, this significant, and negative, detraction from social adjustment occurred beyond the positive contribution of university identity ($\beta = .64$, $p < .001$). While the outcomes stemming from the interaction are not entirely conclusive, numerous potential ramifications exist, including a need for future research to begin to untangle some of these relationships between the myriad antecedents of the TISPHM and resulting outcomes.

CONCLUSION

While the Team Identification – Social Psychological Health Model has been confirmed throughout much of previous research (e.g. Wann, 2006), current results suggest there might be additional processes occurring within the model to deliver particular outcomes related to

social psychological well-being. When applying the TISPHM to the current study, a specific point of attachment and motive as antecedents appeared to confound the anticipated outcome of social adjustment, thus, seemingly running counterintuitively to the model. While conclusions from this chapter should be generalized with caution, findings here do seem to support the notion that there is more to the Wann's (2006) model – particularly when applied specific, and unique, contexts like intercollegiate athletics in the United States and at the NCAA Division I level. It is at this level of competition which embodies numerous points of attachment with which to identify. Because of this, identity *salience* (Ervin and Stryker, 2001) might be approaching identity *competition* within this context. In a certain situation where athletics might be perceived as too professional or commercialized, or not academic in nature anymore, the benefits derived from attaching, connecting, or identifying with athletics might also lose their academic benefits. However, if the prime point of attachment for the students is the overall university itself, any sub-point of attachment might exist in a context defined by the overarching point of attachment and each subsequent connection supports the one above. Motives, such as vicarious achievement, provide more evidence as to the specific point of attachment an individual is pursuing towards team identification. Because the vicarious achievement variable used in this chapter was taken directly from the MSSC scale, items were framed in an athletics context. Results might be different if the items were framed within the overall university context (i.e. "I feel a sense of achievement when my university is lauded with academic/research awards").

Additionally, these results seem to refute some of the previous findings and assumptions across the research dealing with vicarious achievement and team identification. First, Mahony et al., (2002), found a direct connection between vicarious achievement and the frequency of attending sporting events of the local sports team. From this, increased social interaction would presumably lead to positive social psychological outcomes such as integration, cohesion, and adjustment. That assumption did not hold true in this study, suggesting that additional processes might be impacting these results. Also, Wann (2006) iterated the importance of the social connections derived from team identification itself over the role of the attachments utilized to obtain these connections. Again, the current findings seem to suggest otherwise, at least to the extent that there might be a dependency to contextualize each social connection according to the points of attachments or motives used to develop them. Further research is necessary to uncover this heretofore unexplored interaction of points of attachment and motives and their role in the team identification – social psychological health process. Still, current findings do support the TISPHM overall as team identification was found to contribute to overall student adjustment. However, as previously mentioned, this contribution is limited to its specific antecedents.

This chapter contributes to the extant literature by extending the use of the Team Identification – Social Psychological Health Model, thereby iterating the salience of antecedents – namely points of attachment and motives – within the process. While researchers and practitioners should exercise caution when drawing conclusive generalizations from the findings, results here do seem to merit further analysis into the ability of team identity to facilitate certain social and psychological well-being outcomes in certain contexts. From a marketing standpoint, risks of drawing upon vicarious achievement as a motive to stimulate interests of sports consumers are well documented. Being able to utilize winning and prestigious teams programs to draw supporters through enhanced self-esteem and ego opportunities certainly exist. However, should no other connection develop

with the team and the team fails to be successful, the individual will be likely to disassociate him or herself (e.g. Fink et al., 2002). This fact is even more prevalent in colleges and universities in the United States, and throughout the NCAA Division I level of competition. Luring potential students to campus by tapping into their self-esteem and need for achievement through the vicarious platform of athletics carries with it significant implications should the athletics teams fail to achieve as anticipated or should the vicarious connection fail to foster salient academic and social outcomes such as integration, involvement, or adjustment.

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HEAT-RELATED ILLNESS IN INTERSCHOLASTIC FOOTBALL: WHAT COACHES AND ATHLETIC ADMINISTRATORS NEED TO UNDERSTAND

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ABSTRACT

At the start of high school football seasons reports surface that interscholastic football players had succumbed, in practice session, to varying levels of heat-related illnesses. While most of these athletes are able to recover from heat-related illnesses, some are not as lucky as there were four heatstroke deaths at the high school level as recently as 2008. In 2009, an interscholastic high school football coach was indicted on the charge of reckless homicide after one of his players fatally collapsed due to heat stroke during a practice.

Because severe heat-related illnesses are entirely preventable (Binkley, Beckett, Casa, Kleiner, Plummer, 2002; Godek, Godek and Bartolozzi, 2005; Howe and Bowden, 2007), dialogue as to whether head football coaches and athletic administrators are aware of the issues that may cause the heat-related death of a player at the interscholastic level is warranted. There is a great deal of judgment involved in coaching sports and it is doubtful that any two coaches will provide the same instructions. However, there are some basics that coaches and athletic administrators need to aware. Preseason interscholastic football practices start in August each year to prepare for the upcoming season. In fact, Gilchrist, Haileyesus, Murphy, Comstock, Collins, McIlvain, and Yard (2010) study revealed that time-loss heat illnesses happened most often in the month of August to high school football players in competition or practice. These required practices are physically demanding for a number of reasons, not the least being that they are held in the hottest and most humid portion of the year in many areas around the United States which may increase the risk of athletes succumbing to heat-related illnesses. This analysis discusses the effects of heat-related illness on interscholastic football players; address negligence issues due to heat-related illnesses that may lead to litigation, propose that the culture of football may provide potential reasons why interscholastic coaches and athletes ignore the environmental effects of heat; and identify risk management approaches that can assess potential threat, identify potential vulnerabilities, and recognize symptoms of heat-related illnesses; as well as ways to implement risk management practices to increase athlete safety in interscholastic football.

Within the first two days of practice in 2010, it was reported that at least nine high school football players were taken to the hospital for heat-related illness in Alabama and Kentucky (Cherundolo, 2010). Five high school football players were transported to a Central Florida hospital and another was treated with heat-related illnesses (Ubina, 2010). Two Arkansas high school football players were treated for heat-related illness after an August practice (The Saline Courier, 2010). Fourteen Maryland high school football players were released from area hospitals after receiving treatment for heat-related symptoms (Parsons, 2009). While these athletes were able to recover from heat-related illnesses, some are not as lucky as there were four heatstroke deaths at the high school level in 2008. One of the most publicized was that of Max Gilpin, 15, offensive lineman for Pleasure Ridge Park High in Louisville, Kentucky.

Although guidelines are developed and promoted by national governing bodies such as the National Federation of High School Associations (NFHS) and National Athletic Trainers Association (NATA) regarding the management of heat-related illnesses in interscholastic football such occurrences are still reported as viewed in the previous paragraph. It is hoped that this qualitative study will extend the importance of following these guidelines and assist high school football coaches and athletic administrators in understanding the risks regarding heat-related illnesses interscholastic athletics. Risks such as the effects of heat-related illness on high school football players, litigation faced by coaches due to heat-related illness resulting in player deaths, the culture of football that may contribute toward heat-related illnesses, and how to proactively manage such risks. By comprehending these risks, high school football coaches and athletic directors may continue, or initiate, programs that may protect the coaches and athletes by educating them about the signs, symptoms, and effects of heat-related illnesses.

The first section of this paper will provide excerpts of reports that occurred between the Louisville police, the interscholastic football coaches and athletic director at Pleasure Ridge Park High School. The second part will discuss the effects of heat-related illness specifically on interscholastic football players. This section will also present previous cases involving three instances in which interscholastic football players died due heat-related illnesses incurred during practice. The third part will address negligence issues due to heat-related illnesses that may lead to litigation. The fourth part proposes that the culture of football may provide potential reasons why interscholastic coaches and athletes ignore the environmental effects of heat. The fifth part will identify risk management approaches that can assess potential threat, identify potential vulnerabilities, and recognize symptoms of heat-related illnesses. This part further considers heat-related illnesses in the context of modern developments in risk management as well as ways to implement risk management practices to increase athlete safety in interscholastic football.

REPORTS FROM THE GILPIN COLLAPSE

In 2009, an interscholastic high school football coach was indicted on the charge of reckless homicide after one of his players fatally collapsed due to heat stroke during a practice (*Commonwealth of Kentucky v. David Jason Stinson*, 2009). The football practice in question began at 4 pm. In an interview following the incident the head football coach reported that at 3:45 pm he took note of the “temperature and heat readings at that point on

my board, mark ‘em down, put ‘em in the shed, where we always keep our temperature heat readings during practice” (Louisville Metro Police Department, 2008d, p. 4). The high school athletic director also stated that on the day in question he took a hygrometer reading that registered a heat index of 94 degrees around 5:15 pm. Allegations were made in the case that the coaching staff denied the players water breaks on that day. Although Adam Donnelly, an assistant coach, indicated that the first water break was given after drills had been conducted, he stated he was not specifically sure exactly when. “I believe it was somewhere between 4:30 and 4:45” (Louisville Metro Police Department, 2008c, p. 3). When asked how many minutes the football players were allowed to get a drink of water, the assistant coach responded that, “There is no time put on it, they just know they’re supposed to drink...they just know they’re supposed to go over and get it and get back” (Louisville Metro Police Department, 2008c, p. 4). After the players watered themselves to their satisfaction, they could come back to the field. It should be noted that while practicing, the only water available is the watering area at the, the soccer field approximately 400 yards from the football practice field. Additionally, no trainer or water bottles were available to players during practice (Louisville Metro Police Department, 2008c,). A third water break was ... “between 5:20 and 5:25, and they were at water till 5:30” (Louisville Metro Police Department, 2008c, p. 8). According to Coach Donnelly, he did not notice whether Gilpin was among the football players who took part in getting water. Donnelly further stated that the head coach, David Stinson, told the team to line up for conditioning drills, also known as “gassers” at 5:30 pm. A gasser is defined as running...“approximately a 200-meter sprint, where they have to run the width of the football field, which is approximately 50 meters” (Louisville Metro Police Department, 2008c, p. 10). When asked if the players were dressed in full uniforms while running gassers, Donnelly responded that they were allowed to take some equipment off, but he could not definitively state how long the players had to run gassers before doing so. According to the head coach,

we put ‘em on the line and each day we usually run between six and eight in full gear. That day we ran 12 full gassers. We ran eight with our equipment on, then after the eighth one we took their helmets off...and set those down. We ran two more and then we took their shoulder pads off...and then we ran two more. So that day they ran about 30% more than they would on a normal day (Louisville Metro Police Department, 2008d, p. 20).

When asked if he noticed anything wrong with Gilpin, Stinson replied:

I walked past Max. And this is probably 6:05, to 6:10, somewhere in that nature. So I walk past Max. At this point, Max is finished running. He finished...he finished what we asked him to do. He’s walkin’, he’s breathin’, he’s sweatin’, he never says coach, I don’t feel good. Coach, nothin’s goin’ on. He walks, he’s walkin’ with the rest of ‘em (Louisville Metro Police Department, 2008d, p. 26).

However, shortly after 6:00 pm Gilpin, a back-up offensive tackle, began staggering in the middle of the field. It isn’t until two other players began to assist Gilpin that an assistant coach notices the situation unfolding. The assistant coach told the players to let Gilpin walk on his own (Louisville Metro Police Department, 2008a). When they informed him that he

couldn't, the assistant coach ran out to Gilpin and told him to lie down. According to the school's athletic director the students who were assisting,

... were having difficulty holding Max, because he was real sweaty and slippery, ... I assessed the kind of situation that was going on, Max was making a grunting sound, but he was breathing, he had a pulse, so I automatically thought we had maybe a heat situation here. We disconnected the hose that, that is hooked up to the, the watering station, and so it had just a direct flow of water, and that was placed around his neck and at the back of his head where it could just completely run down his body (Louisville Metro Police Department, 2008a, pp. 16-17).

When the athletic director was asked to describe the sound Gilpin, he commented that it "...wasn't a real labored breathing, but it was more of a continuous grunt" (Louisville Metro Police Department, 2008a, p. 17). Because Gilpin had a pulse and was breathing, although unconscious, no cardiopulmonary resuscitation (CPR) was deemed necessary (Louisville Metro Police Department, 2008e). The athletic director indicated that the emergency medical team (EMT) was called five minutes after getting Gilpin off of the field. The head coach, Stinson, verified that the EMT's arrive somewhere between 6:20 pm and 6:30 pm. The EMT's transported Gilpin to the hospital where three days he died from septic shock, multiple organ failure and complications from heat stroke according to a coroner's report (Associate Press, 2009).

In the aftermath the head football coach, David Jason Stinson, faced charges on reckless homicide and wanton-endangerment for denying water to the players in training, causing the death of Max Gilpin (Associate Press, 2009a). The lawsuit represented what appears to be the initial occurrence of an interscholastic head football coach being criminally charged for the death of player due to a heat-related illness (Associated Press, 2009a). Stinson was eventually acquitted of all charges in the matter. Certainly a lot of hard work, practice, and conditioning go into a high school football team, however, heat stroke and heat over exposure can and does occur.

HEAT-RELATED ILLNESS AND INTERSCHOLASTIC FOOTBALL PLAYERS

Overall, heat-related illness has been recognized as the third leading cause of death of interscholastic athletes in the United States behind cardiac disorders and head and neck trauma (Barrow and Clark, 1998; Chiong and Stitt, 1995). Of an approximate 7.5 million students that participate in high school sports annually, heat illness during practice or competition is a primary cause of death and disability among U.S. high school athletes (Mueller and Cantu, 2008). Recently, Gilchrist, et al., (2010) investigated the incidence and characteristics of heat illness among interscholastic athletes between 2005-2009. Specifically, the study addressed time-loss heat illness which was defined as the dehydration or heat exhaustion/heat stroke that occurred during participation in a school-sanctioned practice or competition; was assessed, but not necessarily treated by a medical professional; and resulted in more than one day of time loss from athletic activity. The study further explained that if an interscholastic athlete incurred a heat illness and returned or was permitted to go back to

practice or competition the following day, the heat illness incident was not included. The results of the study indicated that 118 heat illnesses among high school athletes resulted in more than 1 day of time-loss heat illness or time lost from athletic activity by the athletes (Gilchrist, et al., 2010). This figure equates to a rate of 1.6 per 100,000 athlete-exposures and an average of 29.5 time-loss heat illnesses per school year (Gilchrist, et al., 2010). According to the Gilchrist, et al., study the highest rate of time-loss heat illness was found to be among football players at a rate 10 times higher than the average rate for other interscholastic sports such as boys wrestling, soccer, baseball, and basketball or girls' volleyball, soccer, basketball, and softball.

Participation in interscholastic football in the United States has become increasingly popular and widespread (Mueller and Colgate, 2009). However, along with this increase comes the potential for unintentional injuries or indirect fatalities. According to Mueller and Colgate (2009) indirect fatalities are "...caused by systemic failure as a result of exertion while participating in football activity or by a complication which was secondary to a nonfatal injury" (p. 3). Football has been identified as the sport with the greatest number of associated catastrophic injuries for male athletes and the greatest number of heat stroke fatalities (Mueller and Colgate, 2009). Citing statistics from the University of North Carolina's National Center for Catastrophic Sport Injury Research, Hekmat (2002) reported that 105 high school and college football players died as a result of heat exhaustion from 1955 to 2001. Further, between 1995 and 2009, an average of 2 high school football players per year died, reportedly due to heat exhaustion (Mueller and Colgate, 2009). Importantly, in 2008 alone, seven indirect fatalities occurred in interscholastic football of which four were related to heat stroke (Mueller and Colgate, 2009). Thus, it is not startling that such occurrences have prompted questions about the scope of coaching negligence over the years (Hurst and Knight, 2003; Meier, 2002; Rhim, 1997).

Because severe heat-related illnesses are entirely preventable (Binkley, Beckett, Casa, Kleiner, Plummer, 2002; Godek, Godek and Bartolozzi, 2005; Howe and Bowden, 2007), dialogue as to whether head football coaches are aware of the issues that may cause the heat-related death of a player at the interscholastic level is warranted. For example, during the trial experts testified that Gilpin suffered from exertional heat stroke, which led to his death. One of the witnesses testified Gilpin could have been saved if he'd been immersed in ice water almost immediately after collapsing (Lovan, Cappiello Blake and Knox, 2009). However, medical experts for the defense stated little could have been done to save Gilpin because his temperature was too high for too long prior to arriving at the hospital (Lovan, Cappiello Blake and Knox, 2009).

There is a great deal of judgment involved in coaching sports and it is doubtful that any two coaches will provide the same instructions. However, there are some basics that coaches need to be aware of. Preseason interscholastic football practices start in August each year to prepare for the upcoming season. In fact, Gilchrist, Haileyesus, Murphy, Comstock, Collins, McIlvain, and Yard (2010) study revealed that time-loss heat illnesses happened most often in the month of August to high school football players in competition or practice. These required practices are physically demanding for a number of reasons, not the least being that they are held in the hottest and most humid portion of the year for many areas around the United States which may increase the risk of athletes succumbing to heat stroke.

Maintaining a normal state of hydration is thought to be critical for the prevention of heat-related illness because dehydration is believed to play a role in hyperthermia (Godek, et

al., 2005). However, because of their relative lack of physical maturity, it is not easy to maintain an equilibrium when dealing with young football players practicing in hot and humid conditions (Bergeron, et al., 2005; Binkley, et al., 2002; Coriss, Ramirez, and van Durme, 2004; Howe and Bowden, 2007). The intensity, length, number, and time of practices may be considered foreseeable elements in proactively addressing the likelihood of athletes incurring heat-related illnesses.

The Gilpin case indicates the dangers of football practice in the heat of the summer for interscholastic athletes. Although the Gilpin incident is the most recent, three cases that have occurred previously are eerily similar involving the deaths of interscholastic football players due to heat-related illnesses have previously occurred. These cases: *Mogabgab v. Orleans Parish School Board* (1970); *Roventini v. Pasadena School District* (1997); and *Stowers v. Clinton Central School Corporation* (2006) and will be discussed further.

Mogabgab v. Orleans Parish School Board (1970)

Mogabgab v. Orleans Parish School Board (1970) presented a situation where a lack of emergency protocol caused a high school football player succumbed to heat stroke and died. Mogabgab's parents sued the school board and high school coaches following the death of their son due to the heat exhaustion and heat stroke during a football practice. The Mogabgab's alleged that their son's death was a result of the negligence of the coaches and others. Specifically they failed to exercise their duty to provide all necessary and reasonable safeguards to prevent injuries. Furthermore, they did not follow the recommendations of the American Medical Association for the prevention of heat stroke and heat exhaustion during football. The key in *Mogabgab* was the lack of a reasonable standard of care in which the coaches delayed getting medical treatment for their son.

Although the *Mogabgab* case occurred more than 40 years ago, coaches are still unaware of how to manage heat-related illnesses. This may be evidenced not only by the Gilpin case in 2009 as well as the following cases but also a case in which an Arkansas high school football player who died from a heat-related illness in August of 2010 (Associated Press, 2010). Conceivably, the most dreadful fact concerning heat stroke deaths in interscholastic football players is that the condition is entirely preventable. However, the preventable nature of heat stroke offers coaches and athletic administrators an opportunity to manage the risks of these occurrences and decrease their likelihood.

Roventini v. Pasadena School District (1997)

Donald R. Roventini, Jr. died of heat stroke while practicing with the Dobie High School football team in suburban Houston, Texas. In the lawsuit against the coaches and school district, Roventini's parents alleged that during the four hour pre-season workouts, the coaches and trainers did not acclimatize their son to the hot weather, did not give him enough rest, and did not offer him enough water to avoid dehydration. Similar to Gilpin, at the end of practice, the players ran gassers as a disciplinary measure. The parents' alleged that although their son complained to his coaches of his "... discomfort, exhibited signs of heat exhaustion, heat stroke, and dehydration but the coaches continued to push him (*Roventini v. Pasadena*

School District, 1997, p. 1016). The plaintiffs also alleged that in the middle of the “gassers” the coaches ignored their son’s collapse. The School’s athletic trainer was not present on the field and the only people who attempted to assist their son were untrained, volunteer teenage team managers. As such, they argued, the School failed to maintain proper emergency medical procedures.

While a motion to dismiss on grounds of sovereign immunity was granted in part the court allowed the case to go forward against the coaches on a “negligent discipline” claim (*Roventini v. Pasadena School District*, 1997). In the subsequent trial, the court granted the parties motion to vacate as the allegations were withdrawn and the complaint dismissed (*Roventini v. Pasadena School District*, 1998).

Stowers v. Clinton Central School Corporation (2006)

Travis Stowers was a 17 year old student-athlete football player at Clinton Central High School in Indiana. On the first day of football practice, which was hot and humid, Stowers did not suffer any harmful reaction to the heat. On the second day of practice, July 31, 2001, the heat index was over 105 degrees (temperature of 91 and humidity at 60%) (*Stowers v. Clinton Central School Corporation*, 2006) The head coach checked the local weather television and radio reports prior to practice. It is important to note that on that day, there were no means of measuring the on-field temperature and humidity to determine the heat index on the day of the incident, despite being provided charts by the state high school association and the Indiana Department of Education that could be used for that purpose. The head coach posted information circulated by the state high school association regarding heat-related illnesses near the scales in the locker room. The coaches left it up to the players to observe their water weight loss by weighing in every morning, weighing out every afternoon and documenting their weights on a chart. If any significant weight loss occurred, the athlete was to report it to the coaches. From the first start of the first practice to the start of the second practice Stowers lost two pounds.

The coaches as well as the team athletic trainer emphasized the significance of being hydrated during practices to the players. Additionally, the players were told to report any illness to a coach or athletic trainer immediately. Although the players were provided water breaks every fifteen to twenty minutes during the practice they were required to keep their helmets on while they were on the football field until they reached the water station area during a break. During morning practice on the day Stowers died, the head coach notice him having the “dry heaves”. Stowers reportedly stopped the activity but soon resumed and was monitored by the coach. After the completion of the same morning practice, two assistant coaches, saw Stowers vomit. Stowers later indicated to both coaches that he felt better. This was substantiated as Stowers was able to keep food down after lunch. In the meantime, the coaches discussed the vomiting incident and agreed they would watch him during the afternoon practice.

Prior to the afternoon practice Stowers indicate that he was fine after the head coach again asked him if he was doing alright. During the afternoon session some of Travis’s teammates purportedly stated that he appeared to be dizzy during the drills, although his coach did not notice Stowers having any problems. About ten or fifteen minutes before practice was to end, Stowers informed a coach that he did not feel well. The coach reported

that he did not notice any indication that Stowers was ill or suffering from any heat-related problems. Yet, within minutes afterward several players called for the coach because Stowers had collapsed. The coaches took him to a cool shower and called 911. However, he never regained consciousness.

The parents alleged in the lawsuit that the coaches were negligent since they did not recognize that Travis Stowers was suffering from heat stroke and returned him to practice without further examination despite the “high risk” of heat-related illness and the fact that he had vomited earlier in the day. The defendants argued that they had monitored Stowers correctly and that he voluntarily continued to practice. The trial court found in favor of the school. The Indiana Court of Appeals found that the coaches and trainers in the Stowers case had “repeatedly stressed the importance of proper fluid intake and information disseminated by the IHSAA regarding heat-related illnesses was posted in the locker room” (*Stowers v. Clinton Central School Corporation*, 2006 p. 747). Thus, the court ruled that the coaches were not negligent in their conduct. In all of these cases, the main claim against the defendants was that the coaches were negligent in their conduct towards the student-athlete. Negligence, as it applies to football coaches in a legal context will be presented in the following section.

NEGLIGENCE

Football, like many other sports, provides situations where athletes may get injured. High schools are not required to insure the safety on their student-athletes, nor are they held strictly liable for their injuries (Dobbs, 2000). However, if a student-athlete perceives that they have been wronged the must prove that the school or coach committed an act of negligence in order to recover for their injuries (Dobberstein, 2007).

As a general rule, “Coaches must be aware of preventable risks to their athletes and they must take measures to properly supervise and care for their players” (Hurst and Knight, 1996, p.37). Most lawsuits against coaches for sports related injuries are usually based upon the theory of negligence (Karns, 1986; van der Smissen, 2007). Negligence is an unintentional tort comprised of four elements: 1) duty; 2) breach of that duty; 3) proximate cause; and 4) damage. All four elements must exist for negligence to be present (Dobbs, 2001).

Duty

A duty is a special relationship between two or more parties that may be created by statute, contract, or common law (Dobbs, 2001). With regard to negligence, as applied to coaches, “while a coach generally will not be held liable in negligence for conduct involving risks inherent to a sport, liability may ensue when a coach’s conduct amounts to something more than simple negligence” (Davis, 2008, p. 573). Although coaches do not owe a duty to their athletes to totally eliminate risks that arise from a sport, they do owe a duty of care not to increase risks that are inherent in a sport (*Kahn v. East Side Union High School District*, 2004; *Knight v. Jewett*, 1992). Specifically related to the duty owed by football coaches, a concurring opinion in *Kahn* stated that:

... a school football coach, while far from being the insurer of students' safety, is also very differently situated in knowledge, training, experience, and responsibilities from the casual football player whose duty we considered in *Knight*. It might be said that a participant's extreme departure from the degree of care shown by an ordinarily prudent person is an inherent risk of certain vigorous competitive sports, for in the heat of a game or the excitement of a race a contestant may lose sight of virtually everything except his or her goal. But a coach or instructor stands somewhat apart from the fray; the coach's role includes observing and directing the competition, and he or she is expected to keep a cooler head than the competitors themselves. When the instructor or coach is a school teacher, moreover, the safety of the minor students will usually be a primary consideration (p. 1020).

Thus, although coaches do not owe a duty to their athletes to totally eliminate risks that arise from a sport, negligence and sports related cases agree with the general proposition that a defendant owes a duty not to foreseeably *increase* the risks inherent in the sport (*Kahn v. East Side Union*, 2003).

Foreseeability of Heat-Related Illness

The critical assessment of the existence of a duty to use due care is created in the foreseeability that harm may result if care is not exercised (*Perodeau v. City of Hartford*, 2002). If a duty exists under negligence law, foreseeability of harm also exists and the duty serves as a predicate for fault (*Griggs v. BIC Corporation*, 1992). In *Mintz v. State* (1975) the theory of foreseeability was utilized to determine the proximate cause of the injuries instead of delineating the extent of the duty owed. In essence, if a dangerous situation was foreseeable and an individual was harmed, the lack of safety may be the reason or proximate cause of the damage rather than the particular mechanism of the injury (*Turpin v. Granieri*, 1999).

Breach of Duty

In order to prevail under a negligence theory, a plaintiff must establish that the defendant owed a duty and that duty was breached. According to the court in *Hemady v. Long Beach Unified School District* (2006):

In the area of sports activities, the court decides the existence and scope of a defendant's duty of care as a question of law. The applicable duty of care depends on the nature of the sport at issue and the parties' general relationship to the sport (p. 468).

A coach would breach that duty by failing to act as a reasonable person would in the position of coach. The determination of whether a defendant has breached that duty is a question of fact for the jury (*Kleinknecht v. Gettysburg College*, 1993).

An empirical study reported that breach of duty was the focus of the majority (65%) of the decisions and accounted for the highest success rate for plaintiffs (50%) (Chitwood Smith, 2005). According to the court in *Knight v. Jewett* (1992):

A sports instructor may be found to have breached a duty of care to a student or athlete only if the instructor intentionally injures the student or engages in conduct that is reckless in the sense that it is “totally outside the range of the ordinary activity” involved in teaching or coaching the sport (p. 318).

Pre-existing injuries aggravated by the alleged breach of duty, may be included in the claim (Hekmat, 2002). As such, a plaintiff can establish that the defendant breached his or her duty of care by providing evidence that the defendant’s conduct failed to conform to a reasonable standard of care.

Proximate Cause

Owens (2007) stated that “...proximate cause assumes the existence of actual causation and inquires into whether the relationship between the wrong and harm was sufficiently close - whether the causal link was proximate rather than remote” (p. 1674). As with duty, proximate cause is a jury question as to “Whether a principal’s or teacher’s failure to supervise a student was the proximate cause of injuries suffered by a student is the issue most consistently litigated in negligent school supervision cases” (*Broward County School Board v. Ruiz*, 1986, p. 478). Proximate cause occurs when the breach by the defendant actually and proximately cause the plaintiff’s injury. It should be noted that defendant may still be liable even if his or her breach is not sole cause of injury, but makes significant contribution to the incurred damage (Hekmat, 2002).

Damage

Damage is the most obvious element of negligence (Hekmat, 2002). Damage refers to the harm a person suffers as a proximate result of another person’s breach of duty (Fischer, 1999). The damage must substantially impact the victim as a nominal injury is not sufficient to prove damages (*Griggs v. BIC Corporation*, 1992). It is important to realize that the majority of negligence cases hinge not upon this element of negligence but rather upon duty of care and breach of that duty (Meier, 2001). As such the damage incurred by an athlete would have to be a foreseeable result of the coach’s breach of duty. For example, a reasonable person in the position of the coach would have anticipated the athlete’s exposure to harm (*Kahn v. East Side Union*, 2003). Hekmat (2002) described the reasonable person standard as minimum level of care that “... requires a person to avoid creating unreasonable risks of injury to others” (p. 616).

Assumption of Risk

An important question when dealing with issues such as heat-related illnesses in a sport such as football is: should the athlete assume the risk of suffering a heat-related illness? In football, there are inherent risks of injury involved in participating in the game. A football player can be tackled, blocked, or stepped on. These are risks that athletes assume as they are integral to essence of the game. In other words football would not be football if the players

were not tackled or blocked. As a result the player should not only be aware of the potential risks of the sport but also assume responsibility for those risks. Although a person may assume the risks that are inherent and integral to the game, they cannot be held liable for risks that they cannot foresee due to the lack of education or experience (Holmes, 1881/2000). According to the Indiana Court of Appeals in *Mark v. Moser* (2001);

... voluntary participants in sports activities assume the inherent and foreseeable dangers of the activity and cannot recover for injury unless it can be established that the other participant either intentionally caused injury or engaged in conduct so reckless as to be totally outside the range of ordinary activity involved in the sport (p. 23).

The general concept behind assumption of risk defense is that the plaintiff, by proceeding to participate in an inherently dangerous activity, either relieves the defendant of a duty of care that would have otherwise been owed to the plaintiff or was partly responsible for his or her injuries (Drago, 2002). Under the doctrine of primary implied assumption of risk those associated with the sport such as athletic trainers, directors and coaches are under no duty to protect their players from the inherent risks associated with their respective sports. Traditional examples of inherent risk include physical contact, falling down, and fatigue (*Benitez v. New York City Board of Education*, 1989). Because many courts have used the assumption of risk doctrine inconsistently, some have suggested abandoning the doctrine (*Knight v. Jewett*, 1992). However, a number of courts have been reluctant to abandon the assumption of risk doctrine altogether, particularly in sports-related cases (Drago, 2002; Meier, 2002). After all, high school athletes should know that practicing in the heat of the day could cause dehydration which may lead to a heat-related illness. Interscholastic student-athletes may not understand the potential health issues of participating in full pads and helmet in the heat of the day. According to Howe and Boden (2007) athletes with heat stroke regularly advance through heat exhaustion without recognition of the condition, although teammates or coaches may have observed vomiting, fatigue, or loss of athletic ability that progressed to confusion or agitation. This misunderstanding may be especially applicable to Gilpin (2009) as two of the assistant football coaches reported that the athletes were on their own during water breaks with no supervision from the coaching or training staff (Louisville Metro Police Department, 2008b; 2008c). The question remains as to why such practices do occur. Perhaps an explanation may lie in the expectations of being a football player.

THE CULTURE OF FOOTBALL

Vince Lombardi once exclaimed that fatigue makes cowards of us all. Many interscholastic football team preseason practices include at least two-a-day practices (one in the morning and one in the afternoon). If the football players are given a chance to be acclimatized to the conditions, their core body temperatures are affected by the intensity and duration of practice as well as the weather conditions present during the practices (Godek, Godek, and Bartolozzi, 2005). However, if the football players are not provided time to acclimatize to the environmental conditions, especially if they are not physically fit, put players at an increased risk for sustaining heat-related problems during the early preseason practice practices. For example, in *Stowers v. Clinton Central School* (2006) the court

reported that the football player had a number of opportunities to visit with the athletic trainer when he was not feeling well but choose not to do so. Additionally, each time a member of the coaching staff inquired as to well-being, Travis Stowers stated he was fine. At its core, negligence is the "... failure to use reasonable care – doing something which a reasonably prudent person would not do, or the failure to do something which a reasonably prudent person would do under the same or similar circumstances" (Dobbs, 2001, p. 1). According to the Jefferson County (Ky.) Commonwealth's attorney in the Gilpin case, the reckless homicide charge meant that although the grand jurors didn't find that Stinson's actions were intentional or malicious, "... a reasonable man should have realized something like this could have occurred" (Associated Press, 2009b). As such, questions have been raised which ask if the regularity of heat-related illness in football signifies potentially greater problems (Lemons, 2002). Yet, dealing with heat-related issues during football practices are thought of as being "part of the game". In July, 2010 an interscholastic athlete student was approximately 90 minutes into a practice that included weight training and running when he collapsed (High school football player collapses, 2010). At the time of the incident the temperature was approximately 93 degrees with a heat index of about 100. According to police reports, no water was provided during practice. Although the athletic director disputed the allegations that the athlete collapsed, however, two assistant coaches each received a misdemeanor summons for second-degree reckless endangerment (High school football player collapses, 2010). The athlete was released from the hospital the day after the occurrence. Bergeron, McKeag, Casa, et al., (2005) stated that:

... the media has highlighted a number of similar incidents, as well as other heat-related problems with young players on the football field, such as exertional collapse. Despite the recognized benefits of sufficient fluid intake and precautionary measures to optimize performance and reduce the risk of heat illness, heat- and dehydration-related problems persist on the football field--particularly in preseason practice (p. 1421).

Athletes, who are over-motivated, may become overheated by doing too much too fast or trying or trying to persist in the activity too long. The machismo culture of football which has been described as "uniformly aggressive and humourlessly chauvinistic" (Giulianotti, 1999, p. 155), could contribute to athletes being over-motivated thereby pushing themselves beyond their normal physical capabilities at the time. On numerous occasions, football players, coaches, or broadcasters refer to the sport creates the perception of a warrior mentality. Often those who succumb to heat stroke are portrayed as "the hardest worker on the team" or determined to prove himself "to be the best." However, that mindset can work against such a player on hot and humid days. Additionally, some perceive that authority figures such as coaches push players too hard in hot environments which may lead to heat exhaustion and other non-contract injuries (Charnley, 2005). Freeman (2003) alleged that, "[a] perverse, insidious and deadly culture has existed and continues to exist among NFL coaches, which unreasonably subjects players to heat-related illness during practices, ostensibly out of the twisted belief that players benefit from being subjected to such working conditions" (p. D2).

Athletic coaches often attain results by employing methods that could legally be thought of as "wanton" or "grossly" negligent in any other context (Hurst and Knight, 2003). Others believe that it requires 110% player effort to be a great football player so they push past their physical limitations in exchange for a chance at huge salaries, national attention, and

superhero position (Kriedler, 2001). Steve Mariucci, former coach of the San Francisco 49er's stated that: "Part of that conditioning is pushing through it. Athletes don't stop because they're a little sweaty, you know? Some of 'em [sic] are so darned tough that they ignore the symptoms - try to push through it." (Kriedler [quoting Mariucci], 2001).

Coaches often have to push their athletes to allow them to reach new levels of competence and to achieve the best results for the team. According to Kahn v. East Side (2003), coaches should be permitted to push their players to levels that may beyond their abilities and that the improper application of potential legal liability would deter the coaches from doing their jobs. In other words, a coach should not be held liable for merely encouraging the student attempt to reach a new level of competency since this would leave an undesirable "chilling" effect on teaching and learning new skills.

Since coaches are often hired because of their experience and knowledge of the sport and because they have increased duty to decrease the risk of injury to all participants, it is not a stretch that they should possess an advanced level of injury foreseeability and provide the appropriate reasonable standard of care. Some courts have imposed a heightened duty of care on authority figures, especially when those in control supervise or conduct an inherently dangerous activity. Because of their lack of knowledge of the symptoms of heat exhaustion, young athletes need to be monitored since it has been asserted that because of the "... nature of their jobs, sports coaches bear the special heightened duty of minimizing the risk of injury to all participants, especially those under their control" (Hekmat, 2002, p. 619). Given the previous reports (Mueller and Cantu, 2008; Mueller and Colgate, 2009) and incidents of interscholastic football players being negatively affected by the heat, effective management of heat-related illnesses is paramount. The next section will discuss risk management practices for consideration to protect the athlete and school.

HEAT-RELATED ILLNESS RISK MANAGEMENT

At an operational level, risk management becomes ineffective when there is not a clearly articulated view of the risk policy and its relationship to overall strategy and policy. As such, it is important to emphasize that present-day risk management is developed and implemented as a broad process for assessing and addressing risks – a process in which operational risk management is but one part. This approach, often referred to as Enterprise Risk Management (ERM), varies from the traditional risk management practices in several ways. First, it seeks to identify and assess the widest possible range of risks in organizational or less structured settings (Miller, Wendt, and Young, 2010). ERM provides an opportunity to advance a wide-ranging organizational policy for managing risks. National governing bodies for interscholastic athletics have established policy standards designed to minimize the risks of heat illness. The National Federation of High School Associations (NFHS) (2001) stressed that heat-related illnesses were:

... second only to spinal cord injury, is one of the primary causes of activity-related death in high school athletes. Football players wearing full pads and uniform, combined with the hot, humid weather in many regions in the late spring and early autumn, are particularly susceptible to heat-related pathologies (p. 35).

Enterprise Risk Management establishes a process for the continual assessment of risks with the final goal of making it an accepted part of the organizational culture (Miller, Wendt, and Young, 2010; Young and Tippins, 2000). To accept ERM as part of the organizational culture there are three key characteristics to consider for its' effective application regarding heat-related illnesses. First, top management such as the school superintendent, school principal, and athletic directors must be engaged in the establishment of the risk policy. In order to determine the level of safety needed to protect an athlete's well-being life the upper management of the school system should assess a wide number of factors related to the event. According to the NFHS early warning signs of heat-related illness include: exhaustion, headache, muscle cramping, dizziness, nausea, thirst, incoherence, visual disturbances, vomiting, stomach cramps, and heart palpitations. Additionally, the NFHS (2001) identified such risk factors that may increase the likelihood of experiencing heat-related illness:

1. *Environment* - Air temperature, combined with humidity, wind speed and the amount of radiant heat can decrease heat dissipation.
2. *Clothing* - Dark uniforms absorb heat and protective equipment can make heat dissipation very difficult.
3. *Age* - younger people heat more slowly and are less effective in regulating body heat than adults.
4. *Dehydration* - thirst is a poor indicator of hydration.
5. *Pre-activity hydration status* - if alcohol or supplements were consumed.
6. *High percent of body fat* - individuals with a high body fat have greater difficulty in dissipating heat.
7. *Acclimatization/fitness levels* - individuals not yet acclimatized to the heat or inadequately conditioned are at increased risk.
8. *Febrile Illness* -athletes who currently or recently exhibit a fever may be at increased risk.
9. *Medications* – diuretics and stimulants may increase risk.
10. *Sickle Cell Trait* - presents an increased susceptibility to heat illness.

When attaching responsibility to a risk management decision-making model several assessments must be analyzed by the administrators. The first assessment to be analyzed is the significance of the threat (threat assessment). The second assessment relates to the potential vulnerabilities in and around the sport facility (vulnerability assessment). The third assessment prioritizes the vulnerabilities and implements action to diminish the likelihood of harmful incidences (criticality assessment). Once these assessments have been analyzed, the upper administrator should be able to apply appropriate risk management measures. Should organizational decision-makers overlook the perceived importance of these assessments, lack risk awareness or simply ignore the need to develop, implement and enforce safeguards, it may be only a matter of time before an incident happens (Alston, 2003).

A key characteristic to consider for ERM's application regarding heat-related illnesses involves the risk policies being communicated regularly to all coaches, especially if they are impacted by outside environmental conditions such as heat. Early recognition and prompt treatment are essential elements to the prevention of morbidity and mortality from heat illness. Although coaches may observe athletes' vomiting, becoming fatigued, confused or agitated, individuals with heat stroke often progress through heat exhaustion without

recognition of the condition. As mentioned previously, coaches have a responsibility to not to *increase* the risks inherent in the sport by being able to foresee potential exposure of harm to the athlete. In order to do so, they must understand the elements of the risk management plan as well as how to implement it on the field of play or practice. This last statement is important as reported that heat illnesses occurred most frequently while practicing or playing football (Gilchrist, et al., 2010; Mueller and Cantu, 2008; Mueller and Colgate, 2009).

Another feature for an effective ERM involves the understanding and adherence of all coaches as managing of heat-related illness risks as part of the scope of their general responsibilities. Doleschal (2006) stated that coached must have an emergency response plan that can be immediately implemented. In addition to being experienced in the activity it is highly advisable, especially at the high school level, that coaches are qualified in first aid, CPR and athletic training (Doleschal, 2006). Further, if a coach does not possess such qualifications, the deficiencies should be noted and a time frame established for completing training.

Thematically, ERM approaches risks as a highly interconnected assortment of risks that need to be managed, not just in response to the individual characteristics of a particular risk, but with a specific eye on understanding the interrelationships of all risks in question (Andersen and Schröder, 2010). For example, if top management is not engaged in the establishment of the risk policy or policies are not communicated to the coaches, the likelihood of coaches attaining or maintain appropriate life-saving qualifications is minimal. Various models of risk management have been put forth to epitomize the relationships between risk perceptions and behavior (Adams, 2001; Slovic and Peters, 2006). For example, Adams (2001) explored the perception of risk management actions and the response to them. Whereas the traditional operational view of risk management has tended to consider responses to be uniformly favorable (athletes perceiving that coaches recognize the symptoms of heat-illness or), Adams has shown that perceptions can lead to undesirable responses (athletes eschewing water because they perceive the coach will recognize if they are in trouble).

In the case of heat-related illness, the undesirable responses would most likely be risk migration due to misperceptions (athletes do not drink to toughen themselves) or risk shifting from the coaches to the athletes (athletes know how much they should drink, no supervision is necessary). This insight tends to emphasize that modern risk management not only entails the consideration of the interconnectiveness of risks but also anticipation of what is called “risk reflexivity” – that is, that responses to risk management measures do not just occur in favorable terms. Thus a kind of multi-dimensional game-theory approach to risk management becomes more necessary.

CONCLUSION

The number of interscholastic athletes is increasing annually, especially in football. Due to the nature of the football season, practices begin in what may be considered the hottest and most humid month of the year throughout much of the United States. According to previous reports an average of three football players die each year as a result of heat-related illness. However, some heat-related illnesses can kill by damaging hearts, livers, and kidneys that cease hours or even days after being exposed to the heat. Additionally, heat-related illnesses

can incapacitate a person by permanently injuring the brain and other organs. Thus, it is likely that the actual number of heat-related deaths and/or internal injuries in football may surpass three players per year.

Although the NFHS and NATA have promoted safety regulations nationally, it would be wise for school districts to implement a risk management plan dealing with heat-related illnesses. Baron (2004) stated that risk management should be used to assist decision-makers in providing a reasonably safe environment for their patrons. As a managerial strategy, Sharp, Moorman and Claussen (2007) stated, "The safety and well-being of all your constituents should be one of your core values, and risk management is an important tool to carry out that imperative" (p. 17). The development of an effective risk management plan should not be episodic. Rather it should be dynamic in ascertaining potential problems. Organizations that intend to practice risk management in its most modern incarnation should spend a good deal of time clarifying the overall risk management goals and objectives. For example, are those goals consistent with the overall goals of the organization/operation? Are they clearly understood by the coaches? Can those policy goals be translated into action?

As such, risk management may be perceived as constituting a fundamental way in which decisions makers solve problems (Miller, Wendt, and Young, 2010). The duty to provide emergency care requires training of coaches that is extensive enough to prepare them for the heat-related illness that could happen in their sports. This requirement creates an emphasis on the top management a school district to make certain that all of its coaches maintain their emergency certification. Thus, ERM generates a cycle of responsibility in the development and effective implementation of risk management. For example, without the management of the school district engagement in the establishment of the risk policy there would be no communication to the coaches. Without such communication, the coaches most likely would not consider the importance of attaining or maintaining emergency qualifications. As a result, should an interscholastic athlete suffer a heat-related illness during an athletic event or practice, and insufficient or incorrect aid is provided to the athlete, the school could face costly litigation due to the factors described earlier in this article.

As explained in this article the coaches and administration have legal duties in providing a reasonably safe environment for interscholastic football players to participate. While some cases may have succeeded in which the facts pointed towards a coaches' total disregard for a player's well-being, the courts have been often been timid in applying liability to the coach or school, on the general principle that "the law should not place unreasonable burdens on the free and vigorous participation in sports" (*Foronda v. Hawaii International Boxing Club*, 2001). As a result, it would probably be very difficult to find a jury that would find such a coach liable for death of an athlete unless the conduct was in total disregard to the athlete's health. However, this lack of success should not mitigate the proper education of coaches and administrators as well as the implementation of a risk management plan for heat-related illnesses. In the view of medical experts, perhaps the most tragic fact surrounding heat-related deaths such as Max Gilpin is that the condition can be totally averted. Ironically, the preventable nature of heat-related deaths among interscholastic football players provides the opportunity to prepare for the potential occurrences and decrease their frequency.

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