JIIA JOURNAL OF ISSUES IN INTERCOLLEGIATE ATHLETICS

# Impact of Team Identification on College Adjustment in Division II College Students

**Evan A. Davis**
*The Ohio State University*

**Richard Hsiao**
*Indiana University of Pennsylvania*

**Leeann M. Lower-Hoppe**
*The Ohio State University*

**James O. Evans**
*Viterbo University*

**Elaine A. Blair**
*Indiana University of Pennsylvania*

**Robert E. Alman**
*Indiana University of Pennsylvania*

*Intercollegiate athletics are often praised for the intangible benefits they provide their institutions, such as improving the sense of community on campus. Research on team identification has shown that students who highly identify with their teams are likely to have improved self-esteem and social capital, which help them adjust to college life. The purpose of this study was to add to previous findings, by exploring how team identification affected students' personal self-esteem, social adjustment, and emotional adjustment to college, in the Division II context. The Division II context was chosen due perceived differences in student attachment to athletic teams at lower levels of collegiate athletics. Data were collected from undergraduate students at a Division II university and analyzed through confirmatory factor analysis and structural equation modeling. Findings indicated that team identification did not affect a students' personal self-esteem, social adjustment, or emotional adjustment, however personal self-esteem had a positive impact on students' social and emotional adjustment to college. These findings have serious implications for Division II administrators, regarding the value of intercollegiate athletics in serving the broader campus community and what can be done to create more engaging spectating experiences.*

*Keywords: Personal self-esteem, social adjustment, emotional adjustment, sport fans*

With intercollegiate athletics becoming increasingly more expensive (Gurney, Lopiano, & Zimbalist, 2016; NCAA, 2019), and university budgets tightening (Mitchell, Leachman, & Masterson, 2019; Murakami, 2020), universities need to have sound reasoning for funding athletic programs. Intercollegiate athletics have long been cited for the intangible benefits they bring to their universities, such as the promotion of social cohesion (Clopton, 2008). Scholars have continuously noted that intercollegiate athletic events serve as venues for community-building activities, where students can become acclimated to the campus environment through social interactions with peers, alumni, and faculty (Toma, 1998). Attending athletic events provides students with the opportunity to create a stronger affiliation to the university and its members, through attachment to their university's athletic teams.

An individual's attachment to an athletic team is commonly referred to as their level of team identification, which is, "a fan's psychological connection to a team, that is, the extent to which the fan views the team as an extension of his or herself" (Wann et al., 2001, p. 4). When a fan becomes highly identified with a team, they have a greater number of opportunities to integrate with other social groups' members (Wann, 2000, 2006b; Wann & Pierce, 2005). These social interactions have been identified as beneficial for highly identified fans' psychological well-being (Branscombe & Wann, 1991; Wann 2000, 2006b). More specifically, fans who highly identify with their teams have been found to have higher personal self-esteem, lower feelings of alienation, lower depression, and lower loneliness (Branscomber & Wann, 1991; Wann, 2006b).

Social identity theory describes the psychological benefits that individuals receive through social group membership (Tajfel, 1981; Tajfel & Turner, 1979). It posits that individuals place a level of emotional attachment and value to their social group membership (Tajfel & Turner, 1979). A group that an individual belongs to is referred to as their in-group, while groups they do not belong to are known as out-groups. Individuals who have a strong affiliation to their in-group will enhance their self-esteem through favorable comparisons between the in-group and an out-group, emphasizing their membership in a group that is perceived as superior (Tajfel, 1981; Tajfel & Turner, 1979). In the sporting context, a sport team serves as an in-group, where fans may be viewed as the community members of the team (Heere & James, 2007). Therefore, college students who become fans of their university's athletic teams can build social connections and enhance their personal self-esteem through affiliation with other identified fans (Koo, Sung, & Martinez, 2015; Wann & Branscombe, 1991).

Universities seeking to improve their retention rates should take note of the positive affects intercollegiate athletics can have on students' personal self-esteem and social connections, as both have been linked to college adjustment. Assisting students with their adjustment to college is one of the most crucial ways for universities to improve retention (Credé & Niehorster, 2012; Gerdes & Mallinckrodt, 1994; Hiester, Nordstrom, & Swenson, 2009). Research has indicated that personal self-esteem and social support (Awang, Kutty, & Ahmad, 2014; Credé & Niehorster, 2012; Friedlander et al., 2007), as well as a sense of belonging (Pittman & Richmond, 2007, 2008), are crucial predictors of a student's social, emotional, and overall adjustment to college life. Social support may be the most important factor, as students rely heavily on their university peers for emotional support, even more so than their own families (Awang et al., 2014). Therefore, the formation of new on-campus social support networks are key to predicting a successful college adjustment. Ultimately, universities need to identify

avenues for assisting students in the development of on-campus support networks if they want to enhance their retention numbers, and more importantly the student experience.

Intercollegiate athletics play an important role in helping students become socially acclimated to college life. More specifically, intercollegiate athletics serve as a facilitator for students' socialization into the university and a tool for enhancing campus involvement (Heere & Katz, 2016; Katz et al., 2017). Athletic events serve as an initial point of attachment for students to the university (Katz et al., 2017). By attending athletic events, students can enhance their sense of belonging on campus (Heere & Katz, 2014; Katz & Heere, 2016; Sung, et al., 2015), improve their overall social capital (Clopton, 2007, 2008; Clopton & Finch, 2008), and help students' adjustment to college (Koo et al., 2015; Sung et al., 2015).

While research has provided significant evidence that intercollegiate athletics can assist students in their adjustment to college, most of this research pertains to the Division I level of the National Collegiate Athletic Association (NCAA). The lack of literature on Division II and Division III athletics stems from the notion that programs at these levels lack the same scope as 'big-time' athletic programs, which may limit their influence (Toma, 1998). The supposition that only 'big-time' college athletics would impact the university has further been supported by Clopton (2008) who found that intercollegiate athletic programs associated with the Bowl Championship Series (BCS) had a greater impact on students' sense of community than those in lower affiliated divisions.

Despite evidence that non-Division I intercollegiate athletics may not influence university campuses in the same manner as Division I athletics, recent research has begun to debunk this claim. Research at the Division III level has shown that intercollegiate athletics serve as an initial point of attachment to the university for students (Katz et al., 2017) and contribute to their community identity (Katz & Clopton, 2014). The positive impact of Division III athletics on their college campus has been attributed to the fact that universities at this level are often part of more intimate communities where athletics plays a key role in providing a common ground between students and the local community (Katz & Clopton, 2014).

The recent findings at the Division III level provide evidence that conflicts previous notions that lower division athletics do not impact their campus communities in the same way as their Division I counterparts. While research has begun to look deeper at the influence of Division III athletics on campus communities, Division II has yet to be examined in a similar light. The lack of research at the Division II level is curious, considering one of the hallmark principles of Division II athletics is community engagement (NCAA, n.d.). This principle is based around intercollegiate athletic programs interacting with their campus and surrounding communities. As most Division II programs belong to "smaller, tightly knit communities" (para. 2), they play a significant role in creating a shared civic experience between athletics and the community, thereby assisting students in their acclimation to the campus community (NCAA, n.d.).

Since Division II programs are founded on the principle of adding to the campus community, it is important to understand if programs at this level are having the impact they are meant to. While intercollegiate athletics have been noted to have various intangible benefits to students in the campus community, perhaps the most relevant for universities is intercollegiate athletics' ability to enhance a student's adjustment to college, due to its impact on retention. Intercollegiate athletic teams may be able to assist students in their adjustment to college life through identification with university athletic teams. More specifically, team identification has been linked to enhancing personal well-being (i.e., personal self-esteem) (Branscombe & Wann,

1991; Koo et al., 2015; Wann, 2006a), which is a protective factor in student's social and emotional adjustment to college life (Credé & Niehorster, 2012; Friedlander et al., 2007). Further, team identification also positively influences social well-being of fans (Wann, 2006b; Wann et al., 2011, 2015), which may assist students in their social adjustment to college life. Therefore, the purpose of this study was to examine the effects of team identification on students' personal self-esteem, social and emotional adjustment.

## Literature Review

### *Social Identity Theory*

Social identity theory refers to, "an individual's self-concept which derives from his [or her] knowledge of his [or her] membership of a social group(s) together with the value and emotional significance attached to that membership" (Tajfel, 1981, p. 255). The basis of this theory proposes individuals use social group membership in order to define themselves and their own position within a system of social categories (Turner, 1975). Individuals categorize themselves into groups which will positively reflect their self-concept, thereby linking their self-worth to their group membership (Tajfel & Turner, 1979). A group an individual belongs to becomes their in-group, while those they do not are referred to as an out-group. Individuals will make favorable comparisons between their in-group and an out-group in order to enhance their self-esteem; more specifically, a person will associate positive attitudes toward their in-group while attempting to categorize out-groups as inferior (Tajfel & Turner, 1979). The comparison between in-groups and out-groups is particularly relevant when the two groups are in relative proximity with similarities between groups members (Hinkle & Brown, 1990).

### *Team Identification*

Social identity theory can be applied to a broad range of areas, as individuals belong to various in-groups. In the sporting context, social identity theory is often applied to sports fans, focusing on how fans identify with a sports team they follow (Branscombe & Wann, 1991; Koo et al., 2015). Team identification is defined as "a fan's psychological connection to a team, that is, the extent to which the fan views the team as an extension of his or herself" (Wann et al., 2001, p. 4). Therefore, a sport team serves as a social group, or in-group, for their fans, who may be viewed as community members of the team (Heere & James, 2007).

Fans with stronger attachments to their teams have been reported to receive greater benefits to their well-being than fans with lower team identity (Wann, 2006b; Wann & Pierce, 2005). More specifically, highly identified fans have been found to report having lower feelings of depression, alienation, and loneliness (Branscombe & Wann, 1991), while experiencing higher levels of personal self-esteem (Branscombe & Wann, 1991; Koo et al., 2015; Wann, 2006b; Wann & Pierce, 2005). In addition, research has indicated that highly identified fans have healthier psychological profiles than those who did not identify with a team (Wann et al., 1999). These highly identified fans reported having higher levels of vigor and self-esteem, while also experiencing lower levels of confusion, fatigue, anger, and tension.

Fans often manage their personal self-esteem benefits through basking-in-reflected-glory (BIRGing) and cutting-off-reflected failure (CORFing) (Wann & Branscombe, 1990). BIRGing occurs when an individual shares in the success of another individual they are associated with by

trumpeting their success (Cialdini, Borden, Thorne, Walker, Freeman, & Sloan, 1976), while CORFing occurs when an individual disassociates from others who have failed (Snyder, Lassegard, & Ford, 1986). Highly identified fans are likely to maintain their personal self-esteem and association with the team through BIRGing even when the team may not be performing well (Wann & Branscombe, 1990). When fans have lower levels of team identification, they are likely to CORF by disassociating themselves from an unsuccessful team in order to maintain their positive self-concept (Wann & Branscombe, 1990).

While team identification has been correlated to personal self-esteem, it is important to note that simply being a fan does not mean that an individual will experience positive psychological benefits (Wann, 2006b). Rather, the positive effects of team identification will largely be derived when an individual establishes social connections with others in the group, leading to a sense of belonging and camaraderie (Wann, 2006b; Wann & Pierce, 2005). The social connections that a fan makes may be classified as enduring, where a fan lives in proximity to the team they support, or transient, where a fan may be supporting their team from a distance (Wann, 2006b). Fans who create enduring connections are in a situation where they can easily identify and interact with other fans, allowing them to develop social connections in their community and enhance their sense of belonging (Wann, 2006b). Ultimately, fans with enduring connections are more likely to derive the psychological benefits experienced through team identification (Wann, 2006b; Wann & Pierce, 2005).

In addition to psychological benefits, team identification significantly contributes to a fan's social well-being (Wann & Pierce, 2005; Wann et al., 2011; Wann et al., 2015). Highly identified fans have reported having higher levels of social well-being when compared to those who are unidentified (Wann et al., 2011; Wann & Pierce, 2005). The higher levels of social well-being can be explained by the evidence that highly identified fans are better able to establish and maintain relationships (Wann, 2006b; Wann et al., 2015). Ultimately, a higher level of team identification correlates to fans creating relationships with other fans, who make up a significant portion of their friend group (Wann, 2006b; Wann et al., 2015).

### *College Adjustment*

The social benefits derived from team identification, as well as psychological benefits, may be of importance for universities seeking to enhance their retention rates. Research has noted that one of the keys for universities to increase their retention rates is to assist students in their adjustment to college life (Credé & Niehorster, 2012; Gerdes & Mallinckrodt, 1994; Hiester et al., 2009). More specifically, adjustment to college life has primarily been examined through the lenses of emotional and social adjustment (Gerdes & Mallinckrodt, 1994; Hiester et al., 2009). Emotional adjustment to college life addresses the emotional upheaval that comes with the transition into college life. That is, undergraduate students face various emotional challenges across their college careers including higher levels of stress, depression, and loneliness (Friedlander et al., 2007; Hiester et al., 2009). Meanwhile social adjustment to college life focuses on how students become integrated into their campus community through the building of social support networks and managing newfound freedom (Gerdes & Mallinckrodt, 1994; Gray et al., 2013).

Research has suggested that both social and emotional adjustment are important predictors of students' success and adaption to college life (Friedlander et al., 2007; Gray et al., 2013; Hiester et al., 2009). Therefore, a significant focus of higher education has been placed on

understanding the adjustment process of students and what protective factors help ease a student's adjustment to college life. What this research has shown is that positive feelings of self-worth (Awang et al., 2014; Credé & Niehorster, 2012; Friedlander et al., 2007), a sense of belonging on-campus (Pittman & Richmond, 2007, 2008), and social support (Awang et al., 2014; Friedlander et al., 2007) are pertinent factors in helping students adjust to college socially and emotionally. More specifically, students who have higher levels of self-esteem have been found to have an easier time adjusting socially and emotionally to college life because they have more effective strategies to cope with emotional disturbances and an easier time making friends (Credé & Niehorster, 2012; Friedlander et al., 2007).

From a social aspect, adjustment to college also requires students to become integrated into their campus through the construction of social support networks and developing a sense of community (Friedlander et al., 2007; Gerdes & Mallinckrodt, 1994). For students to receive the necessary social support, it is vital they establish on-campus social groups (Awang et al., 2014; Friedlander et al., 2007). Research has shown that students rely on their university peers as their primary source of emotional support, due to the distance from family (Awang et al., 2014). Therefore, for universities to assist students in their adjustment, they need to create an environment that provides students with the opportunity to become integrated into the social fabric of campus, allowing them to form new social groups and develop a sense of belonging (Gerdes & Mallinckrodt, 1994; Pittman & Richmond, 2007, 2008).

### *Community Building Through Intercollegiate Athletics*

To help create a sense of community on campus, universities can utilize the non-academic environment. Intercollegiate athletics are a major part of the student experience, with athletic events serving as surrogates for more intimate community-building activities (Toma, 1998). By attending on-campus athletic events, students can create social connections with classmates, faculty, and alumni through a shared identification with their university's athletic teams (Katz et al., 2017; Toma, 1998). Highly identified students report having higher levels of social capital (Clopton & Finch, 2008), personal self-esteem (Koo et al., 2015), and become more involved on campus (Katz & Heere, 2016). Ultimately, identifying with on-campus athletic teams leads to a deeper connection to the university and sense of belonging for students (Clopton, 2008; Heere & Katz, 2014; Sung et al., 2015).

The positive impacts that intercollegiate athletics have on students' personal self-esteem and sense of belonging are of important note due to the importance of these factors in predicting students' college adjustment (Credé & Nierhorster, 2012; Pittman & Richmond, 2007, 2008). Previous research on intercollegiate athletics has examined the impact of team identification on students' adjustment to college through a mediated relationship with personal self-esteem (Koo et al., 2015). Koo and colleagues (2015) found that highly identified students had higher levels of personal self-esteem and were more well-adjusted to college than their lower identified classmates. While contributing to the body of knowledge, this finding pertained to a Division I institution only.

### *Division II Intercollegiate Athletics and Community Building*

Most research examining intercollegiate athletics on college campuses has focused on the Division I level, due to its scope and popularity (Toma, 1998), leaving a gap in whether these

findings may exist in other college divisions. Research has indicated that lower levels of intercollegiate athletics may not have the same influence on campus communities as those at the Division I level. Students at BCS institutions have been found to have a greater sense of community than those in lower affiliated divisions (Clopton, 2008). Further evidence has shown that Division III athletics does not serve as social anchors like their larger institutional counterparts (Katz & Clopton, 2014).

While findings suggest that intercollegiate athletics may not be as important to Division III college campuses, recent findings have suggested that athletics at this level may serve as initial points of attachment to the university for students (Katz et al., 2017). Students utilize athletic events to become accustomed to university life during their first year on campus, before eventually branching out to other activities (Katz et al., 2017). The reasoning for this positive impact may be explained by the smaller communities which most Division III universities reside. In this environment, athletics may serve as a bridge to the greater community for incoming students who are unfamiliar with the university (Katz & Clopton, 2014).

The finding that Division III athletics may facilitate student integration into the greater community, may also exist at the Division II level. Division II athletic programs are noted for belonging to "smaller, tightly knit communities" (NCAA, n.d., para. 2), like their Division III counterparts. According to the NCAA (n.d.), Division II athletic programs are meant to develop relationships with the greater community to create a "shared civic experience" (para. 2). Based off this principle, and positive findings at similar communities, it would appear that identifying with university athletic teams should positively impact students.

### *Hypotheses*

Research suggests that team identification is a predictor of one's social psychological well-being (Wann, 2006a, 2006b). More specifically, when a highly identified fan lives near other fans, they are likely to develop enduring social connections (Wann, 2006b), which may enhance their personal self-esteem through a shared identity with the team (Branscombe & Wann, 1991; Koo et al., 2015; Wann, 2006a). Since traditional college students often live in close proximity to other students who might identify with their university team, students who have a high team identification are more likely to build enduring connections with other identified fans and as a result experience higher personal self-esteem. Thus, we hypothesize:

Hypothesis 1: Team identification with a college athletics program will have a positive, direct impact on a student's personal self-esteem.

Scholarship highlights students who have higher personal self-esteem are likely to be better at managing stress and negative emotions (i.e., emotional adjustment) due to their feelings of competence (Credé & Niehorster, 2012; Friedlander et al., 2007). Further, high levels of self-esteem also help students form new relationships (i.e., social adjustment) (Credé & Niehorster, 2012). As such, the literature suggests personal self-esteem developed through team identification may be helpful in students' emotional and social adjustment to college (Credé & Niehorster, 2012; Friedlander et al., 2007; Koo et al., 2015). Thus, we hypothesize:

Hypothesis 2: Personal self-esteem will have a positive impact on a student's emotional and social adjustment.

In consideration of the relationships hypothesized in H1 and H2, we believe that team identification will have indirect effects on emotional adjustment and social adjustment through personal self-esteem. That is, students who highly identify with their university athletic teams are likely to have higher levels of personal self-esteem than those who are less identified (Branscombe & Wann, 1991; Koo et al., 2015; Wann, 2006a), and resultantly experience greater emotional adjustment and social adjustment to college (Credé & Niehorster, 2012; Friedlander et al., 2007). Thus, we hypothesize

Hypothesis 3: Team identification with a college athletics program will have a positive, indirect impact on a student's emotional and social adjustment, through a mediated impact on personal self-esteem.

Individuals with higher levels of team identification have been found to have an easier time adjusting to college socially, but not emotionally (Koo et al., 2015). The relationship between team identification and social adjustment is likely due to team identification having greater positive effects on an individual's social well-being than their personal well-being (Wann, 2006b; Wann et al., 2011, 2015). More specifically, highly identified fans are more likely than low identified fans to have a greater number of social connections (Clopton, 2008; Clopton & Finch, 2010; Wann et al., 2011), a greater sense of belonging (Sung et al., 2015; Wann & Pierce, 2005), and lower levels of loneliness, isolation, and alienation (Branscomber & Wann, 1991; Wann, 2006b; Wann et al., 2001). Thus, we hypothesize:

Hypothesis 4: Team identification with a college athletics program will have a positive, direct impact on a student's social adjustment.

Finally, students who can adjust socially to campus life, may experience an easier time adjusting emotionally to college life as well. More specifically, students who develop a sense of belonging on-campus and can establish on campus supports are likely to feel more positive emotions and be more adaptive in handling emotional disturbance. Thus, we hypothesize:

Hypothesis 5: A student's social adjustment to college will have a positive, direct impact on a student's emotional adjustment.

The following model (Figure 1) is proposed to examine how identifying with a university athletic team at the Division II level, may positively influence students' personal self-esteem and social and emotional adjustment to college life.

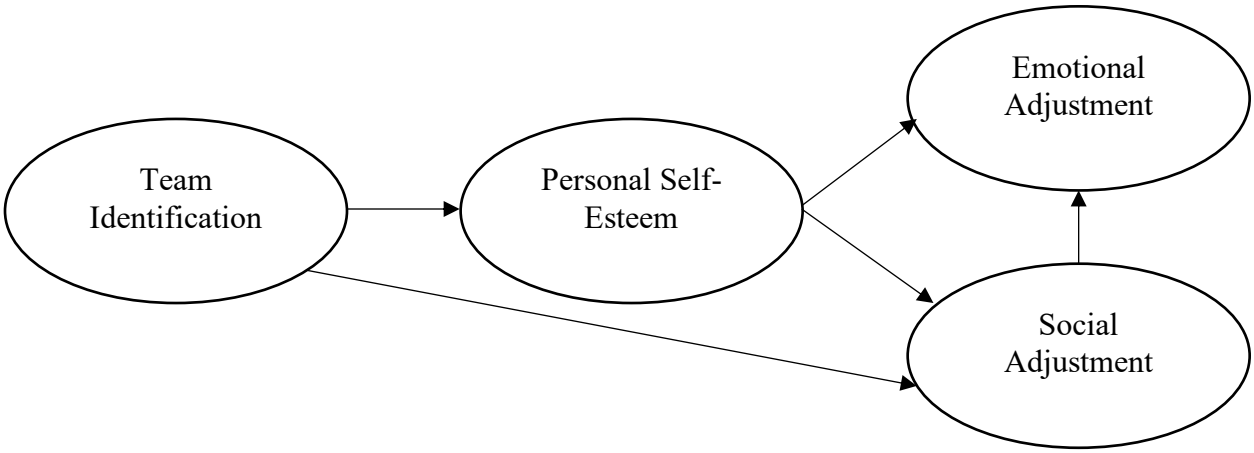


*Figure 1.*
The proposed SEM model

## Method

A cross-sectional quantitative survey research design was employed to measure students' team identification, personal self-esteem, emotional adjustment, and social adjustment. The researchers utilized the methods proposed by Koo et al. (2015) as a guiding framework, as the current study is considered an extension of this line of inquiry. Confirmatory Factor Analysis (CFA) was used to assess the fit of the observed variables to the latent constructs. A Structural Equation Model (SEM) was used to decompose the significant direct and indirect relationships among the latent constructs.

### *Participants and Procedure*

The study was conducted at a mid-sized, public, secondary institution in the northeastern region of the United States. At the time of the study, the university had a total student population (i.e., undergraduate and graduate) of over 12,000, which was predominantly made up of in-state and undergraduate students. Additionally, the university has a history of athletic success at the Division II level, specifically in football and men's basketball, which are consistently ranked nationally.

Prior to data collection, all procedures were approved by the institution's review board. A random sample of 2,000 undergraduate students, currently enrolled at the institution under investigation, was provided by the on-campus Applied Research Lab (ARL). Students under the age of 18 were excluded from the sample. Undergraduate students in the sample were contacted via their university email address, which provided students with a summary of the research being conducted as well as a direct link to the survey on Qualtrics. To increase the response rate, a follow-up email was sent out five days after the initial email to all participants who had yet to complete the survey. Due to a low response rate from the first sample, a second random sample of 2,000 undergraduate students was drawn by the ARL, with measures taken to avoid students being drawn twice. Following, the generation of the second random sample, the same recruitment procedures occurred as with the first.

Any respondent who did not complete all measures in the survey was deemed ineligible and eliminated from the study. After removing ineligible respondents, a total of 255 completed surveys were returned from the two samples (6.4% response rate). This low response rate may be explained by the simple fact that an increase in the number of unsolicited emails sent to individuals may generate ill will among potential respondents (Sheehan, 2001). Of the 255 participants, the majority were female (71.4%), as males accounted for 27.5%, making the sample skewed toward females, in relation to the university population (58% female). In addition, there were 67 freshmen (26.3%), 70 sophomores (27.5%), 54 juniors (21.2%), and 63 seniors (24.7%).

### *Measures*

The survey used in this study consisted of four adapted scales: 1) Spectator Sport Identification Scale (SSIS; Wann & Branscombe, 1993); 2) Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1979); 3) Perceived Stress Scale 10 (PSS-10; Cohen, Kamarck, & Mermelstein, 1983); and 4) the UCLA Loneliness Scale (Russell, Peplau, & Ferguson, 1978). Each of the items were measured on a 5-point Likert scale ranging from strongly disagree (1) to strongly agree (5).

Team identification was measured by a five-item scale adapted from the original seven-item SISS (Wann & Branscombe, 1993). The SISS was chosen due to its consistent use in research examining team identification (James, Delia, & Wann, 2019) and strong reliability. For the adapted scale, the items were slightly modified from a question to statement format, with a few items dropped due to conceptual fit. For example, the original item, “How strongly do you see yourself as a fan of the university’s men’s basketball team?”, was reworded to, “I strongly see myself as a fan of the university’s men’s basketball team”. Two items were considered to not conceptually fit the current study. More specifically, the current study focused on students’ personal self-esteem through in-group interaction rather than disparagement of out-groups, which led the authors to remove the item “how much do you dislike the university’s men’s basketball team’s greatest rivals”. In addition, the item “how important to you is it that the university’s men’s basketball team wins” was dropped due to concerns that team winning may be a preliminary condition that would impact other items in the SSIS. Lastly, the university’s men’s basketball team was indicated in each item in order to capture how well students relate to the institution’s men’s basketball team. The men’s basketball team was chosen to measure a student’s level of team identification due to the team’s continued success, attendance rate, and popularity compared to other athletic teams on campus. The five-item adapted scale has been previously tested and demonstrated acceptable reliability ($\alpha = .93$; Koo et al., 2015).

Personal self-esteem was measured using a three-item scale adapted from the RSES (Rosenberg, 1979). The RSES contains ten items, five positive-wording and five negative-wording (Rosenberg, 1979). The authors chose to utilize the positive-wording items to minimize errors in reverse coding as well as the possibility of participants accidentally agreeing with negative questions (Sauro & Lewis, 2011). Additionally, the items “On the whole, I am satisfied with myself” and “I take a positive attitude toward myself” were dropped from the scale due to previous findings indicating the two items decreased scale reliability due to low-squared multiple correlations (Koo et al., 2015). The final adapted scale consisted of three positive-wording items measuring personal self-esteem, which has demonstrated acceptable reliability in the literature ($\alpha = .86$; Koo et al., 2015).

Emotional adjustment was measured using a five-item scale adapted from the PSS-10 (Cohen et al., 1983). Previous research has indicated the utilization of a reduced subscale for perceived stress is acceptable, as the reduced five-item scale did not alter the structural integrity of the construct (Cole, 1999). Items in the adapted scale were modified to assess students' satisfaction and confidence in their school life, reflecting emotional adjustment. Moreover, the five-item adapted scale consisted of the following modified items: a) I am happy with my school life; b) I feel confident about handling my school life; c) I deal successfully with irritating life hassles at school; d) I am able to control irritations in my school life; and e) I feel that things are going my way at school. The five-item adapted scale has been found reliable in previous research ($\alpha = .85$; Koo et al., 2015).

Social adjustment was measured using a four-item scale adapted from the UCLA Loneliness Scale (Russell et al., 1978). The original scale consisted of nine positive-wording items, however the authors identified the six items that most closely represented the definition of social adjustment – students able to integrate themselves into social groups – which has been supported in the literature (Koo et al., 2015). Previous research has shown that two of the identified items (i.e., "There are people who really understand me" and "I feel in tune with people around me") had low-squared multiple correlations, thereby decreasing the reliability of the scale. Therefore, the following four-item adapted scale was used to measure social adjustment: a) I feel part of a group of friends; b) I have a lot in common with the people around me; c) There are people I can turn to; and d) I am able to do things socially with my friends (e.g., visiting, entertaining, and going out together). Reliability of the four-item adapted scale has been found acceptable in previous scholarship ($\alpha = .85$; Koo et al., 2015).

### *Statistical Analysis*

Data were analyzed through R version 4.0.0, RStudio version 1.3.1056, and Mplus version 8.2. Prior to conducting CFA, preliminary analysis of the data was conducted to assess the validity and reliability of the measures. An Exploratory Factor Analysis (EFA) was conducted to examine the factor structures for each of the modified scales. Factors extracted with an eigenvalue greater than 1.0 were retained, with items demonstrating a factor loading greater than .40 deemed acceptable and maintained if theoretically supported (Stevens, 2009).

CFA was employed to test the factor structure of the modified SSIS, RSES, PSS-10, and the UCLA Loneliness Scale measures. Due to personal self-esteem only having three items, the authors chose to utilize a pooled measurement model CFA, combining all constructs at once, to assist in the model identification process (Awang, 2012). Standardized factors loadings for the indicators were calculated and considered an ideal fit if they were above the .70 level (Hair et al., 2010. Lastly, model fit was assessed based upon the following recommended standards: nonsignificant chi-square ($\chi 2$), root-mean-square error of approximation (RMSEA) less than .08 (with the lower bound of the 95% confidence interval near 0 and the upper bound near .08), goodness-of-fit index (GFI) and comparative fit index (CFI) greater than .95, and standardized root-mean-square residual (SRMR) less than .06 (Hu & Bentler, 1999). The model was considered theoretically and empirically supported if most fit indices demonstrated an acceptable model fit and there were no theoretically justifiable modification suggestions.

Once construct validity of the measures was established, the reliability for each scale was calculated, for which Cronbach alpha of .70 or greater was considered reliable (Hair et al., 2010). Due to minor deviations from normality stemming from the ordinal level or measurement, robust

weighted least square estimation was used (Bowen & Guo, 2011). Structural equation modeling (SEM) was employed for the main analysis to examine the direct and indirect effects between the latent constructs. The procedures conducted for the CFA were replicated to assess the structural model.

## Results

### *Preliminary Analysis*

The screening of the data indicated that only four individuals were missing data. Full information maximum likelihood (FIML) was used to handle missing data (Muthén & Muthén, 2017). Parallel analysis (Hayton et al., 2004) suggested that four factors should be extracted from the data. EFA of the adapted SSIS, RSES, PSS-10, and UCLA Loneliness Scale measures was conducted using an oblimin rotation. The analysis extracted one component for each of the scales, and reliability testing demonstrated strong internal consistency: SSIS ($\alpha = .89$), RSES ($\alpha = .89$), UCLA Loneliness Scale ($\alpha = .91$), and PSS-10 ($\alpha = .93$). The factor loadings for each of the scales can be seen in Table 1.

### *Confirmatory Factor Analysis*

CFA was used to examine whether the observed variables actually measure each related latent construct as well as whether the latent constructs are distinct to the other constructs (Hair et al., 2006). All standardized factor loadings met the acceptable threshold of .70. In addition, each latent construct met convergent validity standards as each AVE was greater than the .50 threshold (SSIS = .896, RSES = .836, PSS-10 = .828, UCLA Loneliness Scale = .886). Therefore, the measures were found to have acceptable levels of discriminant validity. Figure 2 displays the CFA loadings and interfactor correlations found from the data.

After determining the reliability and validity of the psychometric measures, tests were run in order to assess the goodness of fit between the data and the CFA model. While the $\chi^2$ test ($\chi^2$ [84] = 182.1, $p < .001$) and RMSEA (.096 [.077, .115]) did not meet Hu and Bentler's (1999) cutoff criteria, CFI (.981), TLI (.977), and SRMR (.053) were all well within the acceptable thresholds. Per Schumacker and Lomax (2012), no one fit statistic is determinative, and researchers should make a holistic determination based not only on statistical tests, but also on the theoretical validity of the results. Therefore, the fit indices for the comprehensive measurement model met the recommended values specifying a good model fit to the data (Browne & Cudeck, 1993; Hu & Bentler, 1999; Steiger, 2007).

### *Structural Equation Model*

SEM was conducted to examine the relationships between team identification, personal self-esteem, emotional adjustment, and social adjustment. Although the chi-square test was again statistically significant ($\chi^2$ [85] = 180.7, $p < .001$), RMSEA (.066 [.053, .080]), CFI (.991), TLI (.989), and SRMR (.037) all met the recommended criteria, suggesting good model fit.

The SEM analysis revealed that not all relationships between the constructs were significant. First, decomposition of significant relationships derived from the SEM revealed that hypothesis one was not supported, as students' team identification was not significantly

associated with self-esteem (β = .144, $t$ = 1.70, $p$ = .088). Additionally, students' team identification was not significantly associated with social adjustment in higher education (β = .069, $t$ = 0.947, $p$ = .344), therefore, hypothesis four was not supported. Next, support for hypothesis two was provided, given that personal self-esteem had a significant, direct positive impact on social adjustment (β = .627, $t$ = 10.8, $p$ < .001) . Therefore, about 39% of the variance in social adjustment can be explained by the direct effect of personal self-esteem.

Finally, personal self-esteem (β = .438, $t$ = 5.02, $p$ < .001) and social adjustment (β = .378, $t$ = 4.23, $p$ < .001) had a significant, direct positive impact on students' emotional adjustment. These direct effects also triggered the meditating roles of personal self-esteem and social adjustment, as indicated by the significant indirect effect of team identification found in Table 2. Figure 3 also displays the SEM model.

Table 1
*EFA Factor Loadings*

| Item | Text | F1 | F2 | F3 | F4 |
|---|---|---|---|---|---|
| EA2 | I feel that things are going my way at school. | 0.96 | | | |
| EA3 | I deal successfully with irritating life hassles at school. | 0.89 | | | |
| EA5 | I am happy with my school life. | 0.89 | | | |
| EA1 | I feel confident about handling my school life. | 0.82 | | | |
| EA4 | I am able to control irritations in my school life. | 0.81 | | | |
| SA3 | I am able to do things socially with my friends (e.g., visiting, entertaining, and going out together) | | 0.93 | | |
| SA1 | I feel part of a group of friends. | | 0.91 | | |
| SA2 | There are people I can turn to. | | 0.83 | | |
| SA4 | I have a lot in common with the people around me. | | 0.82 | | |
| TI2 | I strongly see myself as a fan of the [school] men's basketball team. | | | 0.98 | |
| TI1 | My friends strongly see me as a fan of the [school] men's basketball team. | | | 0.93 | |
| TI3 | It is important to be a fan of the [school] men's basketball team. | | | 0.71 | |
| PSE1 | I feel that I am a person of worth, at least on equal basis with others. | | | | 0.96 |
| PSE2 | I am able to do things as well as most other people. | | | | 0.86 |
| PSE3 | I feel that I have a number of good qualities. | | | | 0.78 |

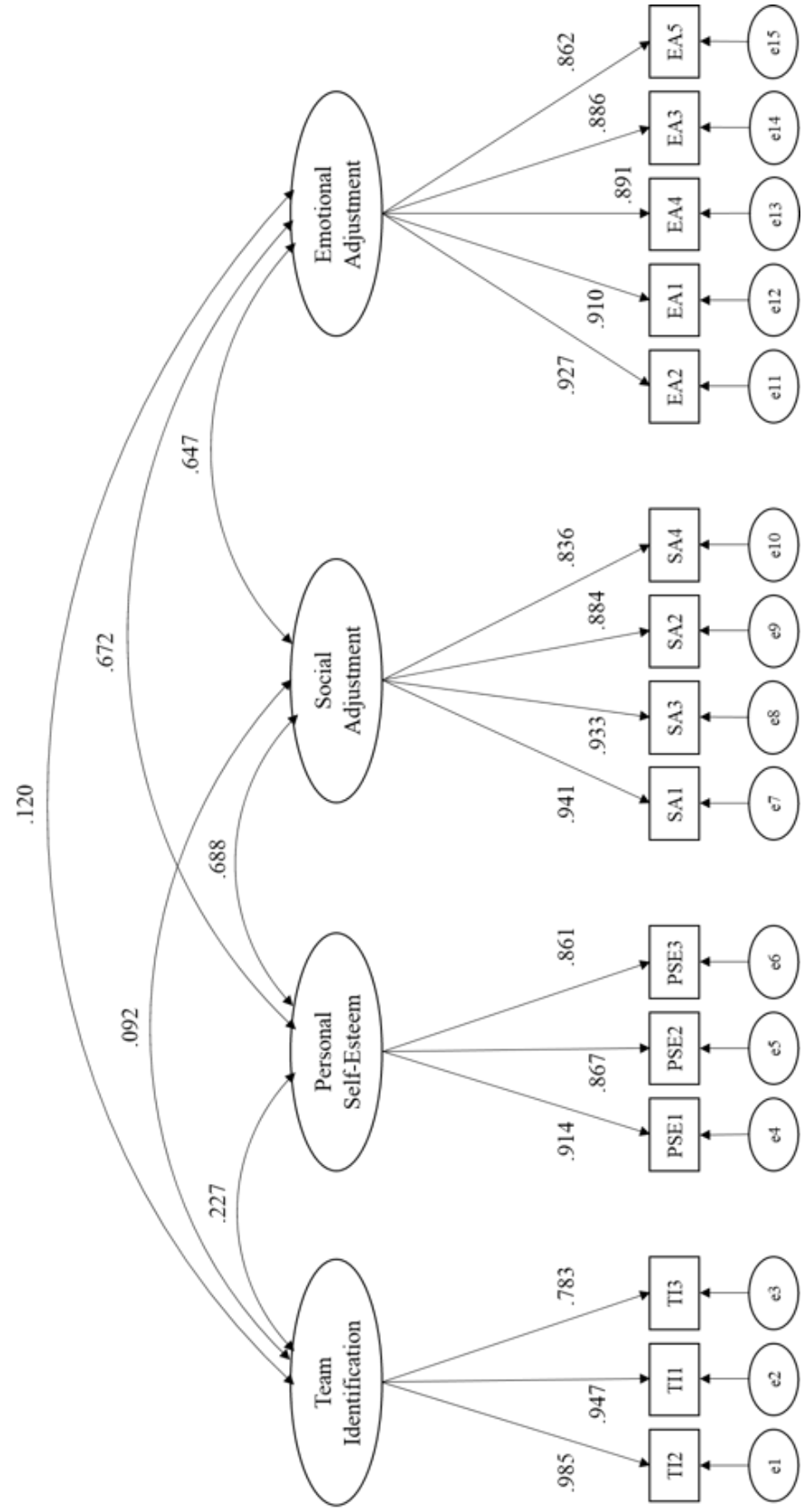


*Figure 2.*
CFA Path Diagram

Table 2
*Decomposition of SEM Standardized Effects*

| Outcome | Predictor | Effects | | | $R^2$ |
|---|---|---|---|---|---|
| | | Direct | Indirect | Total | |
| Personal Self-Esteem | Team Identification | .144 | -- | -- | .021 |
| Emotional Adjustment | Team Identification | -- | .123* | .123* | .411* |
| | Personal Self-Esteem | .438* | .237* | .675* | |
| | Social Adjustment | .378* | -- | .378* | |
| Social Adjustment | Team Identification | .069 | .090 | .160* | .545* |
| | Personal Self-Esteem | .627* | -- | .627* | |

*Bootstrap 95% CI does not include 0

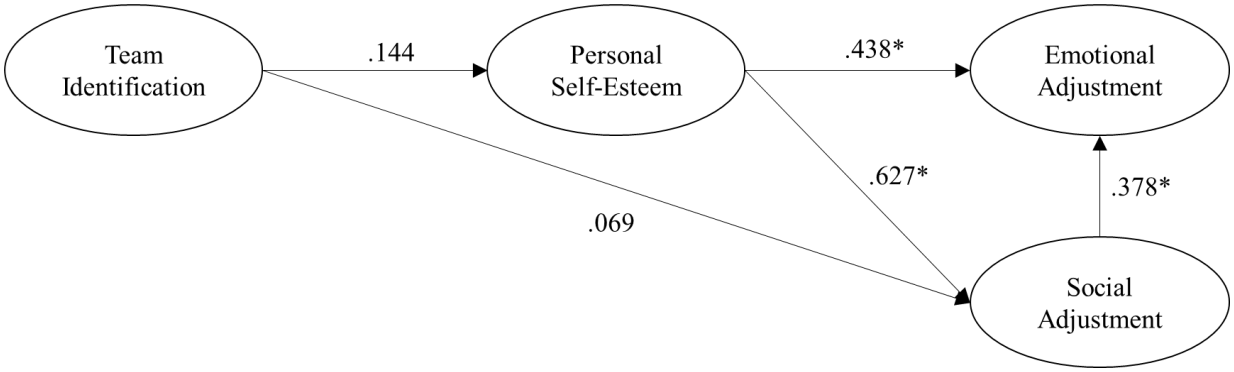


*Figure 3.*
SEM Path Diagram

## Discussion

Previous research has suggested that being highly identified with a college sports team can enhance students' personal self-esteem, psychological well-being (Branscombe & Wann, 1991; Wann, 2006b), and adjustment to college (Koo et al., 2015). The purpose of this study was to add to these previous findings by examining the effects of team identification on students' personal self-esteem, social adjustment, and emotional adjustment to college at a Division II institution.

First, the authors' hypothesized that a student's level of team identification with the institution's men's basketball team would have a positive and direct effect on their personal self-esteem. Previous research surrounding team identification has shown that individuals who report being highly identified fans of a team are likely to experience greater feelings of self-worth (Branscombe & Wann 1991; Koo et al. 2015; Wann, 2006a). However, these findings are more in line with past research that has found team identification to have no effect on personal well-

being (Wann, 2006a; Wann et al., 2003; Wann et al., 2015). The lack of connection between team identification and personal well-being has previously been explained by the fact that the benefits received through social well-being are likely to be stronger than personal well-being, due to most of the benefits of team identification coming through social connections (Wann, 2006a; Wann et al., 2003). Therefore, it may be that no relationship was found between personal self-esteem and team identification because benefits received by students were to their social well-being rather than personal well-being (Wann, 2006a; Wann et al., 2003). Additionally, the lack of relationship between team identification and personal self-esteem may be explained by students' lack of attachment to their university's men's basketball team. Most students reported low levels of identification with the team ($M = 2.04$), it is likely that being a member of the men's basketball fan group was not important to them (James et al., 2019). Therefore, students psychological well-being was not likely to be tied to being a member of the men's basketball fan group, leading to the lack of a relationship between team identification and personal self-esteem.

Second, while there was a lack of a direct relationship between team identification and personal self-esteem, personal self-esteem did have a mediating effect between the relationship of team identification and emotional adjustment. This finding supports previous research, which has shown that team identification can have indirect effects on emotional adjustment through a mediated relationship with emotional adjustment (Koo et al., 2015). However, this finding should be take cautiously, as the lack of direct relationship between personal self-esteem and team identification may be more indicative of team identification having little to no effect on students' emotional adjustment.

This mediated relationship is likely caused by students receiving psychological benefits through a shared attachment to the university's men's basketball team (Koo et al., 2015; Wann, 2006a). While team identification had indirect effects on emotional adjustment, it did not have indirect effects of social adjustment. Most likely, this lack of relationship may be due to the fact that team identification and personal self-esteem had no direct relationship, limiting the influence that team identification may have on social adjustment through personal self-esteem.

Third, it was hypothesized that a student's level of team identification would have a direct impact on their social adjustment to college. While most research has shown positive links between team identification and social connections (Wann, 2006b), social capital (Clopton, 2007, 2008), and integration into the campus community (Katz & Heere, 2016; Katz et al., 2017; Koo et al., 2015), the results of this study suggested that a student's level of team identification was not associated with their social adjustment. Ultimately, this finding most closely resembles the findings of Warner et al. (2011), who found that the introduction of a college football team had no effect on students' sense of community on campus. Warner and colleagues (2011) attributed their findings to students being passive spectators, which has been shown to not lead to any social benefits (Lim et al., 2011). As Wann (2006b) noted, the social benefits that are derived from team identification require fans to believe they can make enduring connections through their group membership. For the students in the study, it may be possible that they did not see any social benefit to being a fan of an athletic team, possibly leading them to seek other social groups (e.g., clubs, job) to form social bonds that helped them in their adjustment to college life. More specifically, students may have become integrated to campus life and develop social connections through membership in learning communities (Hoffman, et al., 2002; Pike, 2000), clubs, or fraternities and sororities (Jacobs & Archie, 2008). Additionally, social media offers another option for students to develop social connections with fellow students on-campus while maintaining already existent relationships, which can assist in their social adjustment to

college (Gray et al., 2013; Yang & Brown, 2013). Therefore, students in this study may have used other social groups to assist in their social adjustment outside of being a fan of their university athletic team (Smith et al., 2012).

Finally, while not related to team identification, it was hypothesized that a student's level of personal self-esteem would have a direct and positive effect on their social and emotional adjustment to college. The results supported this notion, as personal self-esteem was significantly associated with social adjustment as well as emotional adjustment. This finding contributes to previous research which has shown that students with higher levels of personal self-esteem viewed themselves as more socially competent (Credé & Niehorster, 2012). When students feel more socially competent, they can have an easier time interacting and making friends, thereby helping their social adjustment (Credé & Niehorster, 2012; Grant-Vallone et al., 2003; Gray et al., 2013). Further, personal self-esteem was also found to positively impact students' emotional adjustment. Again, this finding supports much of the previous literature which has shown that students with higher levels of personal self-esteem are likely to have higher levels of happiness and life satisfaction and lower levels of stress and depression (Dixon & Kurpius, 2008; Simek, 2013; Wang & Sound, 2008). Lastly, students' emotional adjustment was also found to be positively influenced by social adjustment. This supports previous findings which have shown that having peers on-campus to share experiences with, can help with emotional adjustment (Awang et al., 2014; Friedlander et al., 2007).

## Implications

The findings from this study may be useful for practitioners on a few levels. First, college athletics have been continuously cited for the intangible benefits they bring to their college campuses, including enhancing the sense of community on campus. Findings from this study suggest not all students may be likely to use attachment to university athletic teams to become integrated into the campus community. This aligns with previous research that has shown the context of a university can influence the institution's ability to enhance students' social capital (c.f., Clopton, 2008; Katz & Clopton, 2014). Therefore, findings in this study suggest that understanding where athletics exists in the university context is important for understanding the possible benefits that athletics may have on the greater campus community.

Another implication of this study relates to the Division II principle of community engagement. The findings from this study suggest that college athletics may not resonate as an important social group for all students on campus. Students in the study reported low levels of team identification, but still reported high levels of social adjustment ($M = 4.01$) to college. This may suggest that for the institution in the study, the men's basketball team, while popular in attendance, may not have been important to students' engagement with the greater campus community and helping them develop a sense of belonging on campus. These findings are limited, as they only apply to one institution and one athletic team, but they may serve as a reminder of the importance of assessing how the principle of community engagement is being fulfilled by athletic departments. How athletic administrators assess their fulfillment of the principle of community engagement is likely dependent on their vision for what community engagement means and looks like at their university (Lind, 2016). For some universities, including the one in the study, using athletic teams and events to foster social interactions and community amongst students may not be their goal of community engagement. Regardless of their purpose, it may be helpful for university athletic departments to continuously reassess

whether they are meeting their purpose and finding new and innovative ways to connect with their communities (Lind, 2016).

### *Limitations and Future Recommendations*

This study has several limitations. One of the limitations of this study is that it is not representative of every university. This study focused on one DII institution, which can hardly be expected to account for the differences that are present across institutions. Second, in this study, students' level of team identification was only assessed for one of the university's athletic teams. While the men's basketball team was chosen based on its success and high attendance, it is possible that some students had varying levels of identification depending on the athletic team. Third, the study's measurement of sport fandom may place limitations on the validity of the findings. More specifically, the study used a scaled version of the SSIS, which has recently been critiqued for not allowing non-fans to identify as such (James et al., 2019; Lock & Filo, 2012). Since this study did not provide a non-fan option on the survey, it is possible that many of the low scores for team identification were indicative of non-fans than low-identified fans, thereby, skewing the results. Additionally, previous research on team identification has also provided a measure of sport fandom alongside of team identification to assess for general fandom and high levels of team identification (Wann, 2006a; Wann et al., 1999; Wann et al., 2015). Again, including this type of measure could have clarified the relationships between respondents, the team, and their identification level to help in the interpretation and validity in the findings. A fourth limitation of this study was the sample's unequal representation of male and female respondents. Research has indicated that men may exhibit higher levels of team identification than women (Fink, Trail, & Anderson, 2002). Therefore, since most of the sample was female, this could have impacted the results of the study to a certain degree. Finally, while the sample for this study met the recommended 200 participant cutoff for SEM analysis (Boomsma, 1982), it is important to note that the sample was small, which may influence the accuracy of the results.

Future studies should continue to examine how college athletics enhance the campus community at various institutions. College athletics have become increasingly costly to universities (Fulks, 2015), making it vital to understand what they contribute back. To this point, research has shown that athletics generally have a positive impact on students' connection to their university (Clopton, 2007, 2008; Heere & Katz, 2014; Katz & Heere, 2016; Katz et al., 2017). Yet, this study, as well as others (e.g., Clopton, 2008; Katz & Clopton, 2014), have indicated the context of a university may affect athletics' level of impact on the campus community. Researchers should continue to examine the importance of college athletics at institutions with a lower athletic classification as well as different geographic locations, student body makeup, and religious affiliations.

Future research should examine the success of DII institutions in meeting the community engagement principle. To this point, research has yet to examine how DII athletic departments work to meet their foundational principle of community engagement. Lastly, future research should seek to understand how the importance of college athletics compares across university administrators, athletic administrators, and the general student body. College athletics are often purported to be a key part of the college campus community, yet this study suggested that students may not feel that way. Researchers should seek to understand how the general student body views college athletics on their campuses and their associated intangible benefits.

## Conclusion

Previous research has linked a student's level of identification with a university athletic team with enhanced psychological well-being, greater sense of community, and increased social connections (Branscombe & Wann, 1991; Clopton, 2007, 2008; Katz & Heere 2016; Koo et al., 2015; Wann, 2006b). Yet, this study suggests that athletic team identification does not have an impact on a student's personal self-esteem or school adjustment. The results from this study most align with previous research that has found a lack of connection between team identification and personal well-being (Wann, 2006a; Wann et al., 2003; Wann et al., 2015) as well as those from Warner et al. (2011) who found the introduction of a new football team on campus did not foster greater sense of community for students. Students in this study reported low identification with their university's men's basketball team, which indicates these students may not look to intercollegiate athletics as a way of developing new social connections. Rather, it is possible these students use other social groups (e.g., clubs and intramural) to develop the social connections necessary to assist them in their college adjustment. Ultimately, the findings suggest that more work is needed to explore how Division II athletic departments are fulfilling their principle of community engagement and the role that Division II athletic programs have in enhancing their campus communities.

## References

Awang, M. M., Kutty, F. M., & Ahmad, A. R. (2014). Perceived social support and well being: First-year student experience in university. *International Education Studies, 7*(13), 261-270. 10.5539/ies.v7n13p261

Branscombe, N. R., & Wann, D. L. (1991). The positive social and self-concept consequences of sports team identification. *Journal of Sport and Social Issues, 15*(2), 115-127. 10.1177/019372359101500202

Bollen, K. A., & Stine, R. A. (1992). Bootstrapping goodness-of-fit measures in structural equation models. *Sociological Methods and Research, 21*, 205-229.

Boomsma, A. (1982). The robustness of LISREL against small sample sizes in factor analysis models. In K.G. J¨oreskog & H. Wold (Eds.), Systems under indirect observation: Causality, structure, prediction (Part I, pp. 149–173). North-Holland.

Bowen, N. K., & Guo, S. (2011). *Structural equation modeling*. Oxford University Press.

Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen & J. S. Long (Eds.), *Testing structural equation models* (pp. 136-162). Sage.

Cialdini, R. B., Borden, R. J., Thorne, A., Walker, M. R., Freeman, S., & Sloan, L. R. (1976). Basking in reflected glory: Three (football) field studies. *Journal of Personality and Social Psychology*, *34*(3), 366-373.

Clopton, A. W. (2007). Predicting a sense of community amongst students from the presence of intercollegiate athletics: What roles do gender and BCS-affiliation play in the relationship? *The Sport Management and Related Topics Journal*, *4*, 95-110.

Clopton, A. W. (2008). College sports on campus: Uncovering the link between fan identification and sense of community. *International Journal of Sport Management, 9*(4), 343-362.

Clopton, A. W. & Finch, B. L. (2010). Are college students bowling alone? Examining the contribution of team identification to the social capital of college students. *Journal of Sport Behavior, 33*(4), 377-402.

Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior, 24*, 385-396.

Cole, J. J. (1999). Aquatic microbiology for ecosystem scientists: new and recycled paradigms in ecological microbiology. *Ecosystems*, *2*(3), 215–225.

Credé, M., & Niehorster, S. (2012). Adjustment to college as measured by the student adaptation to college questionnaire: A quantitative review of its structure and relationships with correlates and consequences. *Educational Psychology Review, 24*(1), 133-165. 10.1007/s10648-011-9184-5

Dixon, S. K., & Robinson Kurpius, S. E. (2008). Depression and college stress among university undergraduates: Do mattering and self-esteem make a difference? *Journal of College Student Development*, *49*(5), 412-424.

Friedlander, L. J., Reid, G. J., Shupak, N., & Cribbie, R. (2007). Social support, self-esteem, and stress predictors of adjustment to university among first-year undergraduates. *Journal of College Student Development, 48*(3), 259-274. 10.1353/csd.2007.0024

Gerdes, H., & Mallinckrodt, B. (1994). Emotional, social, and academic adjustment of college students: A longitudinal study of retention. *Journal of Counseling and Development*, *72*(3), 281-288. 10.1002/j.1556-6676.1994.tb00935.x

Gurney, G., Lopiano, D. A., & Zimbalist, A. (2016). *Unwinding madness: What went wrong with college sports and how to fix it.* Brookings Institution Press.

Grant-Vallone, E., Reid, K., Umali, C., & Pohlert, E. (2003). An analysis of the effects of self-esteem, social support, and participation in student support services on students' adjustment and commitment to college. *Journal of College Student Retention: Research, Theory & Practice*, *5*, 255–274.

Gray, R., Vitak, J., Easton, E. W., & Ellison, N. B. (2013). Examining social adjustment to college in the age of social media: Factors influencing successful transitions and persistence. *Computers & Education*, *67*, 193-207.

Hair, J. H., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis* (7th ed.). Prentice Hall.

Hayton, J. C., Allen, D. G., & Scarpello, V. (2004). Factor retention decisions in exploratory factor analysis: A tutorial on parallel analysis. *Organizational Research Methods*, *7*(2), 191-205.

Heere, B., & James, J. D. (2007a). Sports teams and their communities: Examining the influence of external group identities on team identity. *Journal of Sport Management, 21*(3), 319-337.

Heere, B., & James, J. D. (2007b). Stepping outside the lines: Developing a multi-dimensional team identity scale based on social identity theory. *Sport Management Review, 10*, 65-91. 10.1016/S1441-3523(07)70004-9

Heere, B., & Katz, M. (2014). Still undefeated: Exploring the dimensions of team identity among fans of a new college football team. *Journal of Applied Sport Management, 6*(1), 25-42.

Hiester, M., Nordstrom, A., & Swenson, L. M. (2009). Stability and change in parental attachment and adjustment outcomes during the first semester transition to college life. *Journal of College Student Development, 50*, 521-538.

Hinkle, S., & Brown, R. J. (1990). Intergroup comparison and social identity. In D. Abrams, & M. A. Hogg (Eds.), *Social identity theory: Constructive and critical advances* (pp. 48-70). Springer Verlag.

Hoffman, M., Richmond, J., Morrow, J. & Salomone, K. (2002). Investigating sense of belonging in first-year college students. *Journal of College Student Retention*, *4*(3), 227-256.

Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*(1), 1–55. 10.1080/10705519909540118

Jacobs, J. & Archie, T. (2008). Investigating sense of community in first-year college students. *Journal of Experiential Education*, *30*(3), 282-285.

James, J. D., Delia, E. B., & Wann, D. L. (2019). No is not low: Improving the assessment of sport team identification. *Sport Marketing Quarterly*, *28*, 34-45.

Katz, M., & Clopton, A. C. (2014). Town & gown…& jerseys? NCAA Division III athletics as social anchors. *Journal of Issues in Intercollegiate Athletics*, *7*, 285–306.

Katz, M., Dixon, M. A., Heere, B., & Bass, J. R. (2017). Front porch, small house: A longitudinal study of team and university identification among incoming students at a division III university. *Journal of Intercollegiate Sport*, *10*, 103-125.

Katz, M. & Heere, B. (2016). New team, new fans: A longitudinal examination of team identification as a driver of university identification. *Journal of Sport Management, 30*, 135-148. http://dx.doi.Org/10.1123/jsm.2014-0258

Kendall, M. G., & Stuart, A. (1958). *The advanced theory of statistics.* New York, NY: Hafner

Koo, G., Sung, J., & Martinez, J. M. (2015). Effects of team identification on social and emotional adjustment in higher education. *Journal of Intercollegiate Sport*, *8*(2), 247-265. 10.1123/jis.2014-0081

Lim, S. Y., Warner, S., Dixon, M. A., Berg, B., Kim, C., & Newhouse-Bailey, M. (2011). Sport participation across national contexts: A multilevel investigation of individual and systemic influences on adult sport participation. *European Sport Management Quarterly*, *11*, 197-224

Lind, E. (2016). *Your time to shine*. Retrieved from https://www.ncaa.org/sites/default/files/CE%20Guide_FINAL_Dec16.pdf

Lock, D. & Filo, K. (2012). The downside of being irrelevant and aloof: Exploring why individuals do not attend sport. *Sport Management Review*, *15*, 187-199.

Miles, J., & Shevlin, M. (2001). *Applying regression and correlation: A guide for students and researchers*. Sage.

Mithcell, M., Leachman, M., & Masterson, K. (2019). State higher education funding cuts have pushed costs to students, worsened inequality. https://www.cbpp.org/sites/default/files/atoms/files/10-24-19sfp.pdf

Murakami, K. (2020). State cuts grow deep. https://www.insidehighered.com/news/2020/05/15/size-state-budget-cuts-becomes-clearer

Muthén, L. K., & Muthén, B. O. (2017). *Mplus user's guide* (8th ed.). Muthén & Muthén.

National Collegiate Athletic Association (n.d.) *Division II community engagement*. Retrieved from http://www.ncaa.org/about/division-ii-community-engagement

National Collegiate Athletic Association (2019). Finances of intercollegiate athletics. https://www.ncaa.org/about/resources/research/finances-intercollegiate-athletics

Peugh, J., & Enders, C. (2004). Missing data in educational research: A review of reporting practices and suggestions for improvement. *Review of Educational Research*, *74*(4), 525–556.

Pike, G. R. (2000). The influence of fraternity or sorority membership on students' college experiences and cognitive development. *Research in Higher Education*, *41*, 117-139.

Pittman, L. D., & Richmond, A. (2007). Academic and psychological functioning in late adolescence: The importance of school belonging. *Journal of Experimental Education, 75*(4), 270-290. 10.3200/JEXE.75.4.270-292

Pittman, L. D., & Richmond, A. (2008). University belonging, friendship quality, and psychological adjustment during the transition to college. *Journal of Experimental Education, 76(*4), 343-362. 10.3200/JEXE.76.4.343-362

Rosenberg, M. (1979). *Conceiving the self*. Basic.

Russell, D., Peplau, L. A., & Ferguson, M. L. (1978). Developing a measure of loneliness. *Journal of Personality Assessment, 42*, 290-294.

Sauro, J., & Lewis, J.R. (2011). When designing usability questionnaires, does it hurt to be positive? In: *Proceedings ACM CHI 201 Conference on Human Factors in Computing Systems 2011*, 2215-2224.

Schumaker, R. E. & Lomax, R. G. (2010). *A Beginner's Guide to Structural Equation Modeling* (3rd ed.). Routledge.

Sheehan, K. B. (2001). E-mail survey responses rates: A review. *Journal of Computer-Mediated Communication, 6*(2).

Simek, O. F. (2013). Structural relations of personal and collective self-esteem to subjective well-being: Attachment as moderator. *Social Indicators Research, 110*(1), 219-236. 10.1007/s11205-011-9927-1

Smith, S. E., Grieve, F. G., Zapalac, R. K., Derryberry, W. P., & Pope, J. (2012). How does sport team identification compare to identification with other social institutions? *Journal of Contemporary Athletics, 6*(2), 69-82.

Snyder, C. R., Lassegard, M. A., & Ford, C. E. (1986). Distancing after group success and failure: Basking in reflected glory and cutting off reflected failure. *Journal of Personality and Social Psychology*, *51*, 382-388.

Steiger, J. H. (2007). Understanding the limitations of global fit assessment in structural equation modeling. *Personality and Individual Differences, 42*(5), 893-898.

Stevens, J. P. (2009). *Applied multivariate statistics for the social sciences* (5th ed.). Routledge/Taylor & Francis Group.

Sung, J., Koo, G. Y., Kim, S., & Dittmore, S. W. (2015). Enhancement of non-academic environment by intercollegiate athletics and its intangible benefit in higher education. *Journal of Physical Education and Sport, 15*(1), 47-52. 10.7752/jpes.2015.01008

Tajfel, H. (1972). *Social categorization. English manuscript of 'La catégorisation sociale.' In S. Moscovici (Ed.), Introduction à la Psychologie Sociale* (Vol. 1, pp. 272-302). Larousse.

Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict. The social psychology of intergroup relations. In M. J. Hatch & M. Schulz (Eds.), *Organizational identity: A reader* (pp. 33-47). Oxford.

Tajfel, H. (1981). *Human groups and social categories: Studies in social psychology*. CUP Archive.

Toma, J. D. (1998). *Representing the university: The uses of intercollegiate athletics in enhancing institutional identity*. Paper presented at the American Education Research Association Annual Meeting, San Diego, California, 1-29.

Turner, J. C. (1975). Social comparison and social identity: Some prospects for intergroup behavior. *European Journal of Social Psychology, 5*(1), 1-34. 10.1002/ ejsp.2420050102

Wang, C. D., & Castaneda-Sound, C. (2008). The role of generational status, self-esteem, academic self-efficacy and perceived social support in college students' psychological well-being. *Journal of College Counseling*, *11*, 101-118.

Wang, A., Chen, L., Zhao, B., & Xu, Y. (2006). First-year students' psychological and behavior adaptation to college: The role of coping strategies and social support. *US-China Education Review, 3*(5), 51-57.

Wann, D. L. (2000). Further exploration of seasonal changes in sport fan identification: Investigating the importance of fan expectations. *International Sports Journal, 4*(1), 119–123.

Wann, D. L. (2006a). Examining the potential causal relationship between sport team identification and psychological well-being. *Journal of Sport Behavior, 29*, 79–95.

Wann, D. L. (2006b). Understanding the positive social psychological benefits of sport team identification: The team identification-social psychological health model. *Group Dynamics, 10(*4), 272–296. 10.1037/1089-2699.10.4.272

Wann, D. L., & Branscombe, N. R. (1993). Sports fans: Measuring degree of identification with the team. *International Journal of Sport Psychology, 24*(1), 1-17.

Wann, D. L., Dimmock, J. A., & Grove, J. R. (2003). Generalizing the Team Identification Psychological Health Model to a Different Sport and Culture: The Case of Australian Rules Football. *Group Dynamics: Theory, Research, and Practice, 7*, 289-296.

Wann, D. L., Inman, S., Ensor, C. L., Gates, R. D., & Caldwell, D. S. (1999). Assessing the psychological well-being of sport fans using the Profile of Mood States: The importance of team identification. *International Sports Journal, 3*, 81-90.

Wann, D. L., Melnick, M. J., Russell, G. W., & Pease, D. G. (2001). *Sports fans: The psychology and social impact of spectators*. Routledge Press.

Wann, D. L., Waddill, P. J., Brasher, M., & Ladd, S. (2015). Examining sport team identification, social connections, and social well-being among high school students. *Journal of Amateur Sport*, *1*(2), 27-50.

Wann, D. L., Waddill, P. J., Polk, J., & Weaver, S. (2011). The team identification-social psychological health model: Sport fans gaining connections to others via sport team identification. *Group Dynamics: Theory, Research, and Practice*, *15*, 75-89.

Warner, S., Shapiro, S. L., Dixon, M. A., Ridinger, L. L., & Harrison, S. B. (2011). The football factory: Shaping community on campus. *Journal of Issues in Intercollegiate Athletics, 4*, 236-256.

Yang, C. & Brown, B. B. (2013). Motives for using facebook, patterns of facebook activities, and late adolescents' social adjustment to college. *Journal Youth Adolescence*, *42*, 403-416.