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Addison Pond
Saint Mary’s College of California

T. Christopher Greenwell
University of Louisville

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Re-Visiting the Flutie Effect: An Exploration of Athletic Success and its Impact on Student Enrollment Decisions

Addison Pond  
Saint Mary’s College of California  

T. Christopher Greenwell  
University of Louisville

Increased athletic department spending makes it important for institutions to examine the benefits they receive from athletic success. The impact of football and men’s basketball success on enrollment decisions (i.e., the “Flutie Effect”), campus sense of community (SOC), and enrollment satisfaction was examined amongst 225 students across nine Football Bowl Subdivision institutions. Results indicated that football and men’s basketball success perceptions did not significantly predict the importance of athletics in students’ enrollment decisions. Rather, team identification was found to be the strongest predictor. However, football and men’s basketball success perceptions were found to significantly predict SOC, regardless of team identification levels, with SOC also significantly predicting enrollment satisfaction. These findings suggest that when citing potential student interest to justify their spending and subsidization, colleges and universities should avoid over-emphasizing team performance. Rather, they should concentrate their efforts on using football and men’s basketball success to convert potential students into highly identified fans. Once students enroll at their respective universities, institutions may be able to place more emphasis on football and basketball success and its ability to strengthen campus climate and student satisfaction levels.

Keywords: sense of community, athletic success, Flutie Effect
Between 2005 and 2019, the median total expenditures for Division I Football Bowl Subdivision (FBS) athletic programs increased from $34 million to approximately $80 million, roughly a 135% increase (Jewell, 2010). Because of these enlarged budgets, the majority of Division I FBS athletic departments operate at a deficit (Lipford & Slice, 2018) and must support their programs via student fees, or “mandatory fees assessed primarily (but not exclusively) to full-time undergraduate students that universities use to support intercollegiate athletics” (Jones & Rudolph, 2020, p. 57). Student fees are becoming a progressively larger component of athletic department funding (Osborne et al., 2020). Between 2008-2018, the amount of student fees collected by Division I institutions increased by 51% (Enright et al., 2020).

Institutional subsidization of athletics is controversial, as most students are unaware of the percentage of athletic department revenues these fees represent, or even that their mandatory fees are being used to support university athletic programs at all (Bennett, 2019). However, a common justification for this institutional funding is the belief that successful athletic programs can provide enhanced visibility and publicity to the institution, serving as a “front porch” to the rest of the university (Bass et al., 2015).

One of the main benefits institutions hope to receive from athletic success is increased student applications, a phenomenon dubbed the “Flutie Effect,” named after Boston College quarterback Doug Flutie. In 1984, Flutie’s role in an upset victory over the Miami Hurricanes resulted in a 30% increase in student applications to Boston College in the next two years (McCann, 2018; McEvoy, 2005). Subsequently, institutions receiving increased exposure and applications following successful athletic performances was dubbed the “Flutie Effect.” While the concept of athletics being a viable marketing tool for the university dates back to the 1800s (Flowers, 2007), Flutie’s gridiron heroics popularized this concept within sport management research. Since then, football and basketball success have shown to correlate to increased student applications (Baumer & Zimbalist, 2019; McEvoy, 2005; Murphy & Trandel, 1994; Pope & Pope, 2009; Toma & Cross, 1998). Despite its prevalence in higher education literature, the Flutie Effect has only been studied using secondary data, where some measurement of athletic success (e.g., overall winning percentage, conference winning percentage etc.) is correlated to the number of student applications. This reliance on secondary data leaves institutions unable to pinpoint how much of a role athletic success played in students’ enrollment decisions.

In addition to attracting potential students, athletics is commonly cited as a means to create a more sociable campus atmosphere (Clopton, 2007). Specifically, athletics can foster a stronger sense of community (SOC) on campus (Stensland et al., 2019), which can go on to increase students’ satisfaction with their enrollment decision (Noel-Elkins et al., 2019). However, there is a lack of research on how athletic success influences SOC, and how this goes on to impact student satisfaction. Since many institutions are increasing their athletic spending in the hopes of winning more games, it is important to research how current students’ perceived campus SOC changes with team performance. Thus, the purpose of this study was to incorporate current students’ perspectives to measure athletic success’ impact on college enrollment decisions, campus SOC, and enrollment satisfaction.
Literature Review

The Flutie Effect & The College Choice Process

The literature’s consensus appears to be that athletic success has a positive, albeit marginal impact on student applications. For example, McEvoy (2005) found that FBS institutions with an increase in football conference winning percentage, or the percentage of in-conference games won, of at least 25% from the previous year saw undergraduate applications rise by an average of 6.1%. Similarly, Baumer and Zimbalist (2019) analyzed applications figures for all 65 Power Five institutions between 2005-2016 and found that each additional football victory yielded institutions around a 1.1% average increase in applications. Studies on the impact of basketball success on applications have produced similar findings. Pope and Pope (2009) found that appearing in the NCAA Basketball Tournament increased applications the following year by approximately 1%, making the “Final Four” increased applications by 4-5%, and winning the NCAA tournament increased applications by 7-8%. Beyond applications, athletic success has also been shown to increase actual student enrollment (Anderson, 2017).

While secondary data provides some information about the quantifiable relationship between these variables, it fails to give a holistic view into why athletic success influences student interest and enrollment. This is a notable limitation given the literature on how students select which college to attend. While numerous factors may drive high school students’ college decision, including cost/financial aid (Hu & Hossler, 2000; Maringe, 2006), institutional reputation and fit (Solikhah et al., 2016), and campus facilities (Lee & Chatfield, 2011; Price et al., 2003; Rickes, 2009) we must look at the differences between the application and enrollment decision to connect these outcomes to perceptions of athletic success research.

Previous research has indicated that students rely on different factors to make their actual enrollment decision compared to choosing which colleges to merely apply to (Chapman, 1986; Galotti & Mark, 1994). When applying these findings to the Flutie Effect, several questions arise. Was athletic success enough to actually make students enroll at one institution over another one? Conversely, was this just one factor in the decision? What other factors influenced this decision? Further, secondary data fails to capture what students consider successful. Toma and Cross (1998) found that certain institutions who won the national championship received smaller applications increases than institutions with less objective success. In other words, “success” might not be a strictly linear relationship. Students may possibly have different benchmarks for what they consider successful. Hence, future research may choose to conceptualize “athletic success” subjectively, as opposed to objectively. This leads us to the formulation of our first research question:

RQ 1: Do subjective perceptions of football success and subjective perceptions of men’s basketball success influence how students perceive the importance of athletics in their college choice decision?

Sense of Community and Satisfaction

When making their enrollment decision, students demonstrate similar behaviors to that of traditional consumers. Consumer behavior research has consistently found that businesses are more likely to retain satisfied customers (Darzi & Bhat, 2018; Diaz, 2017; Han et al., 2018; Koay & Derek, 2016), and within academia, satisfaction makes students more likely to persist in their education (Hickman & Meyer, 2017; Tucker, 2004), as well as choose the same university again.
if they were to revisit their enrollment choice (Schreiner & Nelson, 2013). One possible way to use increase satisfaction is by creating a stronger SOC on campus (Roy et al., 2008).

While SOC has been studied in various settings, including neighborhoods (French et al., 2013), recreational activities (Fairley & Tyler, 2012), and prisons (Phillips, 2007), the importance of a strong SOC within an educational setting has become a prominent area of research. SOC can lead to decreased student loneliness (Pretty et al., 1994), higher levels of academic performance (Warner & Dixon, 2013), and higher student retention levels (Bailey et al., 1998). A strong SOC can make individuals feel that they are part of a larger, more reliable, and more stable structure, making it vitally important for college and university officials to generate SOC on campus (Boyer, 1990). If institutions are able to positively channel SOC, they will be more effective in retaining students (Warner & Dixon, 2011).

Numerous authors have posited that sport can serve as a viable channel to foster campus SOC (Chalip, 2006; Lyons & Dionigi, 2007; Toma, 2003). This is primarily due to sport functioning as a social agent, as identifying with a team can give individuals a sense of belonging by watching and attending games together (Clopton, 2007; Heere & James, 2007; Swyers, 2005). While previous studies have found the presence of athletics to increase SOC (Stensland et al., 2019), no research to date has examined if athletic success leads to higher campus SOC. Since enlivening campus spirit has been shown to be a primary motivation for institutional subsidization of football programs (Feezell, 2009), not researching how SOC fluctuates with team performance presents a notable gap in the literature and warrants future consideration.

Moreover, it is also possible that SOC is an instrumental variable in the relationship between athletic success and satisfaction. Previous research has linked both athletic support (Hanson et al., 2019) and SOC (Conn, 2017; Warner et al., 2011) to higher student satisfaction levels. Because of how athletic success may influence SOC, the former may not be directly impacting enrollment satisfaction. Rather, athletic success might create a SOC on campus, which will then lead to higher student satisfaction. If institutions wish to continue using successful athletics as a means to attract more students, it is imperative to know whether students whose enrollment decision is influenced by athletic success are more satisfied with this choice. Thus, operationalizing SOC as a mediating variable may provide valuable insight into the relationship between these two variables. This leads us to our second research question:

**RQ 2:** Does Sense of Community (SOC) mediate the relationship between subjective athletic success and enrollment satisfaction?

**Methods**

**Participants**

Questionnaires were distributed to students at nine FBS institutions, four on the Power Five level, and five on the Group of Five level. Since the FBS is the highest level of college football competition, these institutions subsequently spend the most money on their athletic programs (Jewell, 2020), making this the most appropriate competition level for the current study. In order to maximize the study’s sample size, students of all classes were eligible to participate (i.e., not just freshmen or sophomores). Students were informed that their participation is voluntary and that their responses will remain anonymous.
Instrumentation

Football & Basketball Success Perceptions. To measure success perceptions, a section of Ross et al.’s (2006) Team Brand Association Scale (TBAS) was used. The full instrument, which is designed to measure professional sport team brand associations, consists of 41 items and 11 team brand associations, one of which is a five-item section on team quality, performance, and/or success (e.g., “the (team) is high class,” “the (team) is a great team”. The TBAS has been used in multiple sport management studies and proven to be reliable and valid (Arai et al., 2013; Biscaia et al., 2013; Ross et al., 2007; Walsh & Ross, 2010). This section of the TBAS was employed twice for RQ1: once to measure perceptions of football success, and again to measure perceptions of basketball success. The items for each section were the same, but with “football” switched with “basketball” where appropriate. Additionally, the verbiage prefacing the two respective sections clarified that one section was measuring perceptions of football success at the time of enrollment, while the other was measuring perceptions of basketball success at the time of enrollment.

The TBAS was also used to measure success perceptions for RQ2. However, since students may have different perceptions of team success now compared to when they enrolled, the decision was made to delineate between current and time-of-enrollment success perceptions. The items in the current success sections were the same, with the only difference being the prefacing wording, which clarified that students were now being asked to rate their current levels of success perceptions. All items were measured on a seven-point Likert scale. In total, the five-item section of the TBAS appeared four times on the survey instrument.

Enrollment Decisions. The researcher created an instrument to gauge the importance of athletics on students’ enrollment decisions. This allowed us to uncover if students who perceive higher levels of football and basketball success place greater emphasis on athletics in their decision. The items were created with the thought that although students may perceive an institution’s football or basketball teams as successful, this does not mean they will place high importance on athletics in their enrollment decision. The Athletics and Enrollment Scale consisted of four (4) items designed to measure the importance students place on FBS athletics in their enrollment choice, so that we may see how this importance fluctuates with success perceptions. All four items were measured on a 7-point Likert Scale (1=Strongly Disagree and 7= Strongly Agree):

- (Institution’s name) athletics played an important role in my enrollment decision
- If it weren’t for (Institution’s name) athletics, I would have attended another institution
- It was important for me to attend a school with FBS athletics
- (Institution’s name) athletics attracted me to this school

Sense of Community. SOC was measured using Warner et al.’s (2011) College Sense of Community Scale (CSCS), a modified version of the Campus Atmosphere Scale (Lounsbury & DeNeui, 1995, 1996). Both the Campus Atmosphere Scale and the College Sense of Community Scale have shown adequate reliability and validity in previous research (Clopton 2007; Lounsbury & DeNeui, 1995; Warner et al., 2011). The CSCS consisted of six (6) items, all measured on a 7-point Likert Scale (1=Strongly Disagree to 7=Strongly Agree).

Enrollment Satisfaction. To measure satisfaction, the researcher used a three-item measure developed by Oliver (1980). This instrument has been commonly used and shown reliable to measure satisfaction with a variety of services (Cronin et al., 2000; Madrigal, 1995;
Oliver & Swan, 1989). Within sport management research, the scale has also been used and proven reliable to measure satisfaction with bowling leagues (Ruihley et al., 2019), fitness centers (Šíma & Ruda, 2019), long-distance running events (Hyun & Jordan, 2019), and road racing events (Funk et al., 2011). The scale consisted of three modified items adapted from Oliver (1980), each measured on a 7-point Likert scale (1=strongly disagree and 7=strongly agree).

**Team Identification.** To account for how different levels of fandom may impact both students’ enrollment decisions, as well as campus SOC, team identification was also incorporated as a variable. Team identification was measured using Trail and James’ (2001) Team Identification Index (TII). This instrument has been used and proven reliable in several other sport management studies (Kwon et al., 2008, Robinson & Trail, 2005, Trail et al., 2003, 2005). The TII appeared twice in the survey instrument: once to assess identification with the football team and once to assess identification with the basketball team. This three-item scale was measured on a 7-point Likert scale (1=Strongly Disagree and 7= Strongly Agree).

**Instrument Pre-Testing**

Before proceeding for data analysis, the survey instrument was tested for reliability and validity. Based on Dillman’s (2014) recommendation, this consisted of a panel of experts, a pilot study, and both exploratory (EFA) and confirmatory factor analyses (CFA).

**Panel of Experts & Pilot Study.** To check for content validity, the researcher consulted a panel of experts to review the full questionnaire. The researcher identified faculty members familiar with collegiate athletic research, based on their history of scholarly publications on the topic. The panel did not express any issues with instrument clarity but suggested several minor changes to item wording. Notably, in order to improve item clarity, the panel suggested changing the wording of all items in the football and basketball success perceptions at the time of enrollment sections to past tense. For instance, instead of reading “the (university name) football team is not very successful,” the item now read “When I decided to attend (university name), the (university name) football team was not very successful.” Similar changes were made to all other items in these two sections.

The pilot study was conducted with 22 Sport Management undergraduate and doctoral students at a Power Five research institution. Students were asked to complete the questionnaire and comment on instrument clarity and readability. The pilot study allowed for internal consistency to be assessed, which produced acceptable Cronbach’s Alpha values.

**Exploratory & Confirmatory Factor Analysis.** Following the panel of experts and pilot study, an EFA using maximum likelihood estimation with varimax rotation was conducted on the four-item Athletics and Enrollment Scale. The EFA identified a one-factor structure, which accounted for 79.80% of the total variance (eigenvalue =3.192) of the scale’s items. Thus, the Athletics and Enrollment Scale contained all four original items loaded onto one factor. The Cronbach’s alpha coefficient was .92 for the revised scale.

Following the EFA, a confirmatory factor analysis (CFA) was conducted on several instruments to test for convergent and discriminatory validity: the Athletics and Enrollment Scale, the College Sense of Community Scale, the Team Brand Association Scale, the Team Identification Index, and Oliver’s (1980) satisfaction scale. Per Hu and Bentler (1999), model fit
was primarily assessed using the Comparative Fit Index (CFI) and the Root Mean Square Error of Approximation (RMSEA).

Two (2) separate confirmatory factor analyses were conducted using SPSS AMOS Statistical Package. The first CFA consisted of items included in the RQ1 analysis (Team Success Section of the TBAS and the Importance of Athletics and Enrollment Scale), while the second CFA consisted of items included in the RQ2 analysis (Team Success Section of the TBAS, Team Identification Index, Campus Sense of Community Scale, and Oliver’s (1980) Satisfaction Scale).

The CFA for RQ1 showed acceptable model fit for the CFI, but not the RMSEA. However, it is common for the RMSEA to report poor model fit for models with small degrees of freedom and sample size (Kenny et al., 2015). Therefore, the three instruments in RQ1 were determined to be appropriate for use in the current study. The CFA for RQ2 produced similar findings, with both the CFI (.92) and RMSEA (.09) showing acceptable levels (Hu & Bentler, 1999).

Procedures

IRB approval was granted and data collection began in February 2021. Students received a Qualtrics link to the survey instrument either via professors/administrators of general education classes, an institutional official in the Dean’s office, or through a club/center on campus. Further, an intentional effort was made to target non-sport management/administration majors. This decision was made in order to preserve the study’s generalizability, as it is reasonable to expect that sport management majors may have a skewed interest in the topic. Thus, contacting students in general education and activity classes was determined to be the best way to ensure that students from a variety of majors completed the survey. Students were only contacted once, and the survey instrument reiterated that their participation was strictly voluntary. Students did not receive any reward for participating (e.g., drawings for gift cards).

Results

Demographics

A total of 280 participants completed the questionnaire. After eliminating incomplete or partial responses, a total of 225 questionnaires were deemed suitable for analysis. Of these 225 responses, 179 came from Power Five institutions, and 46 came from Group of Five institutions. With respect to class, 72 (32.0%), of the participants were seniors, 54 (24.0%), were juniors, 60 (26.7%) were sophomores, and 39 (17.3%) were freshmen.

In order to further preserve generalizability, the sample’s demographic information was compared to the overall college student population via a Chi-Square test. Per Table 1 below, the tests revealed significant differences between the sample and target population in regard to race \((p < .05).\), indicating that sample participants were not representative of the general college student population. Therefore, for research question 1, race was dummy-coded into white vs. non-white students and entered into analysis model as a control variable, along with team identification, to mitigate the effect of an unrepresentative sample on inferential results. However, the Chi-square test for sex was not significant \((\chi^2 = 1.11 \ p = .292.)\) This suggested that the sample participants were representative of the college student population, meaning that sex would not need to be entered as a control variable into the first block of the regression analysis.
Table 1
Demographics of College Students in Sample and Entire College Student Population

<table>
<thead>
<tr>
<th></th>
<th>Sample</th>
<th>College Student Population*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percentage</td>
<td>Percentage</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>46.8%</td>
<td>43.3%</td>
</tr>
<tr>
<td>Female</td>
<td>53.2%</td>
<td>56.7%</td>
</tr>
<tr>
<td>Other/Prefer not to Respond</td>
<td>2.2%</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Race</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>70.7%</td>
<td>52.4%</td>
</tr>
<tr>
<td>Black or African-American</td>
<td>15.6%</td>
<td>12.7%</td>
</tr>
<tr>
<td>Hispanic or Latino</td>
<td>4.9%</td>
<td>20.5%</td>
</tr>
<tr>
<td>Asian</td>
<td>4.9%</td>
<td>6.6%</td>
</tr>
<tr>
<td>American Indian/Alaska Native</td>
<td>0.9%</td>
<td>0.7%</td>
</tr>
<tr>
<td>Native Hawaiian/Pacific Islander</td>
<td>0.0%</td>
<td>0.27%</td>
</tr>
<tr>
<td>Other/Prefer not to respond</td>
<td>3.1%</td>
<td>6.83%</td>
</tr>
</tbody>
</table>

*Source: Hussar et al. (2020)

Research Question 1

Research question 1 was concerned with football and basketball success’ impact on enrollment decisions. To address this question, a hierarchical multiple linear regression analysis was conducted, with football success perceptions (at the time of enrollment) and basketball success perceptions (at the time of enrollment), serving as the independent variables and the importance of athletics on enrollment serving as the dependent variable. Both success perceptions variables were analyzed using participant’s mean scores on the TBAS instrument. Before analyzing the data, Field’s (2009) regression assumptions were addressed: independence of responses, a normally distributed dependent variable, homoscedasticity among independent variables, linearity of the dependent variable, and an absence of multicollinearity among independent variables. No issues arose from these assumptions, and the data was deemed suitable for analysis.

Before entering the independent variables and dependent variable into the equation, football team identification and basketball team identification were entered into the first block as control variables. Since the Chi-square test of independence showed that the sample significantly differed from the college student population with regard to race, this was also dummy-coded and entered into the first block of the regression analysis.

The control variables explained a significant amount of variance in the dependent variable (importance of athletics on enrollment) \( R^2 = .203, F(3, 221) = 18.73, p < .001 \). This suggests that football team identification and basketball team identification explain 20.3% of the variance in the importance of athletics on enrollment.

The second block of the linear equation, however, did not result in a statistically significant amount of variance explained \( \Delta R^2 = .012, F(2, 219) = 11.986, p > .05 \), suggesting that the unique combination of the two independent variables explain 1.2% of the variance in the importance of athletics on enrollment. Among the two independent variables, neither football success perceptions \( B = .179, t = 1.803, p > .05 \) nor basketball success perceptions \( B = .020, t = .189, p > .05 \) were significantly predictive of the dependent variable.
These results indicate that, controlling for football and basketball team identification, as well as demographic variables, football success perceptions and basketball success perceptions are positive, but non-significant predictors of the importance of athletics on students’ enrollment decisions. Table 2 shows the results of the hierarchical multiple linear regression analysis used for RQ1.

Table 2
Results of Hierarchical Multiple Linear Regression Analysis for RQ1

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Unstandardized coefficient</th>
<th>Standardized coefficient</th>
<th>p</th>
<th>F</th>
<th>R²</th>
<th>ΔR²</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>S.E.</td>
<td>β</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>18.73</td>
<td>.203</td>
</tr>
<tr>
<td>Race</td>
<td>-.053</td>
<td>.261</td>
<td>-.012</td>
<td>.840</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Football Team Identification**</td>
<td>.408</td>
<td>.118</td>
<td>.380</td>
<td>.001</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Basketball Team Identification</td>
<td>.069</td>
<td>.111</td>
<td>.069</td>
<td>.465</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>2 (Constant)</td>
<td>1.037</td>
<td>.709</td>
<td>--</td>
<td>.145</td>
<td>11.99</td>
<td>.215</td>
</tr>
<tr>
<td>Race</td>
<td>-.067</td>
<td>.262</td>
<td>-.016</td>
<td>.797</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Football Team Identification**</td>
<td>.391</td>
<td>.118</td>
<td>.365</td>
<td>.001</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Basketball Team Identification</td>
<td>.081</td>
<td>.116</td>
<td>.080</td>
<td>.485</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Football Success Perceptions</td>
<td>.179</td>
<td>.099</td>
<td>.109</td>
<td>.073</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Basketball Success Perceptions</td>
<td>.020</td>
<td>.107</td>
<td>.013</td>
<td>.850</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

** Indicates significance at the p < .01 level
Research Question 2

Research question 2 was concerned with SOC’s mediation of football and basketball success’ influence on enrollment satisfaction, with the moderating effect of team identification. To address this research question, two moderated mediation analyses were conducted: one with football success as the IV, and another with basketball success as the IV. Both of these IVs were measured using the current success perceptions sections of the TBAS. For both analyses, enrollment satisfaction served as the dependent variable, SOC served as the mediating variable, and team identification served as the moderator between team success and SOC. Both mediation analyses were run using Model 7 of PROCESS Macro, a free add-on available through SPSS. The moderated mediation models can be found below:

To assess the indirect effect of both football and basketball success on satisfaction through SOC, with the moderating effect of team identification, the bootstrap test was used. The bootstrap test uses 5000 random bootstrap samples in order to determine a 95% confidence interval of where path coefficients may fall. If the range of lower-bound and upper-bound confidence intervals does not include zero, we conclude that there is a significant indirect effect (Hayes, 2012; Hayes & Rockwood, 2017). If the indirect effect is significant, while the direct effect is not, fully moderated mediation has taken place. If both the indirect and direct effects are significant, we concluded there is partially moderated mediation (Zhao et al., 2010).

Moderated Mediation Model 1. The first moderated mediation model (see figure 1) was tested in a single model using a bootstrapping approach. Before examining the moderated mediation effect, several other effect sizes needed to be assessed. The first effect was the direct effect between football success and enrollment satisfaction. This effect was not significant ($\beta = .004, p > .05$), signifying that football success perceptions does not directly influence enrollment satisfaction. However, when examining the path between sense of community and enrollment satisfaction, a significant relationship was observed ($\beta = .667, p < .01$), as was the path between football success perceptions and sense of community ($\beta = .246, p < .01$). Lastly, the moderated mediation effect was not significant, as evidenced by the bootstrap test ($\beta = -.017, 95\% CI = -.069, .031$). Since this confidence interval included 0, this was evidence of non-significant moderated mediation.

These results suggest that, given the significant path between football success perceptions and SOC, combined with the non-significant moderated mediation effect, that subjective team performance does strengthen SOC on campus, regardless of students’ team identification levels. Further, while SOC significantly relates to enrollment satisfaction, football success perceptions do not have a direct impact.

Moderated Mediation Model 2. For model 2, the direct effect of basketball success perceptions on enrollment satisfaction was calculated first. Similar to model 1, this effect was found to be non-significant ($\beta = .054, p > .05$). However, just like model 1, the path between sense of community and enrollment satisfaction was significant ($\beta = .653, p < .01$), as was the path between basketball success perceptions and SOC ($\beta = .246, p < .05$). Lastly, and again similar to model one’s findings, the moderated mediation effect was not significant, as evidenced by the bootstrap test ($\beta = .010, 95\% CI = -.040, .053$).

The results of these two moderated mediation analyses suggest that perceptions of athletic success do, in fact, increase SOC on campus, regardless of how identified students are with the football and basketball teams. While perceptions of athletic success do not directly influence enrollment satisfaction, the former increases campus SOC, which goes on to increase
enrollment satisfaction. The implications and discussion for these findings can be found in the next section.

Figure 1.
Results of Moderated Mediation Analysis #1

Figure 2.
Results of Moderated Mediation Analysis #2
Discussion

The purpose of this study was to incorporate current students’ perspectives to measure football and basketball success’ impact on college enrollment decisions, campus SOC, and enrollment satisfaction. RQ1 found football team identification (B = .408) to be the strongest predictor of the importance of athletics on enrollment. This finding suggests that team performance alone does not significantly influence the importance students place on athletics when making their enrollment decision. Rather, college and university officials should treat team identification as an intermediary of sorts and develop campaigns focused on increasing high school students’ identification levels with the football or basketball team, which may then go on to influence their decision to attend that particular institution.

For example, in the opening round of the 2021 NCAA Men’s Basketball Tournament, the Abilene Christian Wildcats pulled off a shocking upset over the University of Texas Longhorns. Following the upset victory, Abilene Christian president Phil Schubert told local media that the university could expect increased applications and enrollment this upcoming fall (Goldberg, 2021). The applications component of Schubert’s statement is likely true, as previous literature has regularly correlated unforeseen, successful athletic performances to increased student applications (McEvoy, 2005; Pope & Pope, 2009). However, if this study’s results are any indication, the increased enrollment portion of President Schubert’s statement should be taken with a caveat. If Abilene Christian (or any other institution in a similar position) wants to leverage athletic accomplishments as a tool to increase enrollment, they may wish to focus their efforts on getting potential students identified with the Cougars’ basketball team.

RQ2 examined the impact of football and basketball success on students’ enrollment satisfaction, with the mediating role of sense of community and the moderating role of team identification on the pathway between success and sense of community. The direct path between team success and SOC suggests that, while athletics itself can increase campus SOC, this relationship positively fluctuates with subjective team performance. In other words, students perceive greater institutional SOC in times of success. Colleges and universities may use these results to justify their spending and subsidization behaviors by citing the enhanced campus SOC that arises from successful performances. Further, the lack of significant moderation from team identification signifies that supporting the football and basketball team may be a universal rallying point for all students, not just highly identified fans. Comparing these findings to those from RQ1, athletic success alone is more effective at enhancing current students’ experiences than it is for attracting potential students, with the benefits to current students not being predicated upon a certain level of team identification. Thus, colleges and universities may struggle to continue justifying their athletic subsidization by citing football and basketball success’ impact on potential student interest. However, they may find the results from RQ2 more encouraging, and choose to highlight athletic success’ effect on current students. This is especially important, as athletic success can be used as a tool to increase current students’ likelihood of donating money as alumni (Pond et al., 2022).

Further, the relationship between SOC and enrollment satisfaction is also valuable information for colleges and universities. Institutional officials should market how enhanced SOC can make students more satisfied with their decision to attend that college or university, which may result in additional benefits. For example, if institutions are able to use SOC to increase students’ enrollment satisfaction, they may be more likely to donate money as alumni. Such a financial outcome would make it easier for institutions to justify their athletic expenditures. However, institutions will not be able to receive these benefits (SOC and enrollment satisfaction) if they are unable to convert potential students into enrolled ones. Thus,
marketing departments still need to concentrate their efforts on how to use athletics to aid their enrollment efforts before they can receive beneficial outcomes from their current students. Any benefits received from current students will be moot if potential students choose to enroll at another institution.

Taken collectively, these findings provide greater insight into potential justifications for increased athletic spending and subsidization patterns. Athletic success’ significant impact on sense of community suggests football and basketball success alone may have a more substantial effect on current students’ college experiences than they do on attracting potential students. Subsequently, colleges and universities should justify their expenditures by citing the social benefits that current students receive from football and basketball success, as opposed to highlighting potential student interest. Further, these officials can point to the institution-wide benefits of football and basketball success not being predicated upon team identification levels like they are for potential students.

**Limitations**

First, a single Power Five institution accounted for approximately 80% of the responses. While significant measures were taken to include students from as many majors and backgrounds as possible, the lack of institutions represented is nonetheless a noteworthy limitation. Since athletic subsidization tends to be higher at Group of Five institutions (Jablonski et al., 2022), this is an especially noteworthy limitation. Further, of the 280 original responses, 55 were eliminated due to incomplete questionnaires. This leaves an attrition rate of roughly 20%, which can cause concerns about study validity (Sackett et al., 1997).

This sample size also presents limitations to the instrument’s psychometric properties. Given the pilot study’s sample size of 22 students, the EFA on the Athletics and Enrollment Scale provides limited evidence of the instrument’s validity. Hence, the scale should be considered highly exploratory and would benefit from future research. Similarly, while previous studies have suggested that 200 is a satisfactory threshold for conducting a CFA (Hoe, 2008; Kyriazos, 2018; Singh et al., 2016), this is far from ideal. A larger sample size would have provided stronger evidence of the instrument’s psychometry.

Another limitation is the potential for students’ opinions on SOC and enrollment satisfaction to change as they matriculate in their academic careers. Approximately 44% of the sample was made up of freshmen and sophomores, so these students may have different views on these two constructs as juniors and seniors. Conversely, another limitation is recall bias of success perceptions. While asking students to indicate their perceptions of football and basketball success at the time of enrollment was deemed the most appropriate method to analyze RQ1, it is undoubtedly a limitation. It is possible that even highly identified football and basketball fans do not recall exactly how well they believed the teams performed at the time of their enrollment decision, and thus their responses in this study may not reflect how they felt at the time. This limitation is amplified considering that seniors were the most represented undergraduate class in the sample (32.0%). Future studies may wish to take additional measures to ensure that students’ clearly recall their success perceptions at the time of enrollment.

**Future Research**

This study chose to focus on football and men’s basketball success, since these are the most profitable and commercialized sports at colleges and universities (Whiteside et al., 2011). However, future research may wish to expand and explore how success in other sports impacts
institution-wide outcomes. For example, did the prolonged success of the University of Connecticut Women’s Basketball Team in the 2010’s play a significant role in students’ enrollment decisions?

While the Chi-Square test between sample demographics and the college student population produced no significant differences in regard to sex, researchers should not discount potential differences amongst male and female students. Since RQ2’s findings provide evidence for athletic success providing a universal “rallying point” for students, future research should attempt to better understand how athletic success impacts male vs. female students differently.

Another avenue for future research is to utilize program history and tradition as the independent variable. As Mixon and Trevino (2005) point out, it is common for football and basketball programs to play at an elite level for a small number of years, but be unable to maintain this performance over a longer period of time. For example, the University of Miami Hurricanes won four national championships during an eight-year stretch between 1983 and 1991. However, the Hurricanes have only appeared in one major bowl game in the past 16 seasons. For Miami students, while the football team’s success may not draw them to enroll at Miami, they may still be attracted to the institution’s rich heritage and tradition. Future research should attempt to demarcate between success and tradition.

The current study did not incorporate perceptions of institutional academic quality into the analysis. Previous research has found that university identification influences how students perceive athletics (McGehee et al., 2019), and that football success positively impacts perceptions of academic exclusivity (Goidel & Hamilton, 2006). This demonstrates evidence of a relationship between perceptions of athletics and perceptions of academics. Future research may considering measuring how institutional identification impacts perceptions of athletic success, and vice versa. This study also did not account for the concept of sport’s social desirability. In other words, it is possible that RQ2's findings are attributable to students believing that they should be fans of the institution’s football and men’s basketball teams due to their prominence. Such a possibility warrants consideration for future Flutie Effect studies.

Lastly, future studies may wish to introduce sport identification as a predictor of the importance of athletics on enrollment, as opposed to team identification. It is possible that even if students are not identified with their institutions’ football and basketball programs, they are highly identified fans of the sport itself. In this case, when making their enrollment choice, students may consider their general identification as a college football or college basketball fan more important than team identification.

**Conclusion**

The current study both provides support and dispels claims about the Flutie Effect. The findings indicate that athletic success has a stronger influence on current students’ perceptions of campus sense of community than potential students’ enrollment decisions. In the wake of increased athletic spending and subsidization, institutional officials should leverage team identification when recruiting potential students, and focus on success’ ability to increase campus SOC for current students.
References


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