

# Analyzing the Mediating Effects of Social Capital and Sense of Community Between International Student's College Sports Team Identification and Acculturation

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Previous studies focused on the role of leisure activities, such as physical activity participation, to analyze how international students can receive social support from their communities to better acculturate in the U.S. This study focused on the role of college sports in providing social support and its effect on international student's acculturation. Four hundred eighty-seven international students enrolled in 25 Power-5 affiliated colleges participated in this study to analyze the acculturation path model suggested by the primary researcher. The initial path model did not show a statistically significant model fit, which led to modifying the model once following the available theory in academia. As a result, the proposed model resulted in a good model fit (RMSEA = .03, SRMR = .01, CFI = 1.00, TLI = .98). Discussions on utilizing spectator sports to promote international students' acculturation, suggestions for future study options, and limitations of the study were provided.

The United States (U.S.) is well-known as the most preferred destination for international students (Bai, 2016), with close to a million international students supporting the fame (Institute of International Education, 2021). In addition, studies often highlight how these international students bring cultural and economic contributions to U.S. higher education institutions and local communities (Alvarez, 2016; Hegarty, 2014; Luo & Jamieson-Drake, 2013; Perry, 2016; Ridpath et al., 2019). For instance, not only do international students help cultivate global perspectives in the local and/or campus communities (Hegarty, 2014), but in 2021 alone, the report indicated that international students also contributed \$28.4 billion to local U.S. communities (National Association of Foreign Student Advisers, 2021). However, despite the positive contributions international students make to U.S. communities, there are a myriad of studies on the hardships faced by international students during their transition to a new environment and have sought to identify ways to assist their successful adjustment in the U.S. (Alfattal, 2017; Gallagher, 2013; Gomez et al., 2014; Jolly et al., 2022; Kağnici, 2012). The psychological and cultural adjustment

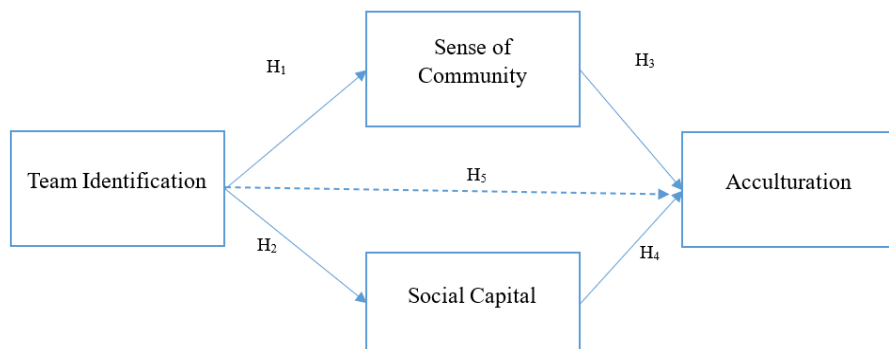


process international students experience because of exposure to a different culture often is referred to as acculturation (Berry, 2005).

While various types of support (e.g., financial and academic, campus activities, etc.) were found to be helpful to international students' successful adjustment to the U.S. (Redden, 2014), social support is one of the essential contributing factors to acculturation that often is recognized in international student research (Aldawasari et al., 2018; Bai, 2016; Bhoohhibhoya et al., 2017; Kim, Stokowski, et al., 2023; Kim, Pickett, et al., 2022; Luo et al., 2019; Martirosyan et al., 2019; McFaul, 2016). Studies found that international students who received good social support from their host country experienced less stress during the acculturation process (Sullivan & Kashubeck-West, 2015) and went through fewer unfavorable psychological adjustment outcomes (Bai, 2016). But this begs the question: where and how should international students receive social support in the host nations?

Recent studies by Martirosyan et al. (2019) and McFaul (2016) revealed international students often form relationships with domestic peers by participating in various extra-curricular activities (such as language exchange programs and conversation clubs), taking classes, and residing with a domestic student roommate. In addition, various studies highlighted the extent to which participating in physical activities could promote international students' social support and acculturation (Bertram et al., 2012; Gomez et al., 2014; Kutintara & Min, 2016; Ra & Trusty, 2017; Rienties et al., 2012). Furthermore, studies have shown that international students who actively participated in physical activities on campus were socially well-adjusted and experienced less acculturative stress (Allen et al., 2010; Gomez et al., 2014). Although a few studies have examined the influence of sport fandom on international students' acculturation (e.g., Agregaard, 2018; Stodolska & Tainsky, 2015), there is a need to explore whether college sport can provide effective social support for international students in a new environment. For instance, Kim et al. (2023) examined whether international students' identification with their college athletics team and participation in social and physical leisure activities can contribute to the successful acculturation of international students. Although their study found that international students' identification with a college athletics team contributes to a high acculturation score, their study called for including more variables in the model, as the acculturation process is a complex procedure that is affected by various factors such as social support, language competency, self-efficacy, among others (Alharbi & Smith, 2018; Brunsting et al., 2018).

In sports management research, domestic students who identified with their college athletics teams showed they received more social support, which then led to successful social adjustment to their campus communities (Clopton & Bourke, 2011; Koo et al., 2015; Warner & Dixon, 2011, 2013; Warner et al., 2012). More specifically, students who followed their college sports teams felt more sense of belonging to their campus (Warner & Dixon, 2011, 2013; Warner et al., 2012) and created social capital (Clopton & Bourke, 2011). Yet, college sports may be new to international students since this is a unique culture in the U.S. (Beyer & Hannah, 2000). Therefore, an in-depth analysis is needed regarding whether the same merits of developing social support that domestic students enjoy, such as developing a sense of communi-

**Figure 1***Initial Acculturation Path Model*

ty and social capital by being a fan of college sports, can equally happen to international students. Hence, the purpose of this study is to analyze the mediating effect of sense of community and social capital between international students' college sports team identification and their acculturation. Figure 1 shows the proposed path model based on the purpose of this study.

## Literature Review

### Theoretical Background

#### *Team Identification*

Team identification is a concept first developed by Wann and Branscombe (1993). This concept has been widely utilized in various sports research since the 1990s, namely sports management, marketing, and psychology (James et al., 2019). The concept of team identification seeks to assess individuals' and fan groups' degree of identification with the sports team(s) they support (Lock & Heere, 2017). The purpose of team identification can be explained by Tajfel and Turner's (2004) social identity theory, from which the team identification concept originated. Tajfel (1972) defined social identity as "the individual's knowledge that he [or she] belongs to certain social groups together with some emotional and value significance to him [or her] of this group membership" (p. 31). That is, this theory aims to explain one's behavior by assuming that belonging defines one's part of perceived self-concept to a certain social group (Abrams & Hogg, 1988). Based on the social identity theory, team identification theory is widely utilized in various consumer behavior studies by exploring the causal relationship between one's degree of identification with the sports team they follow and their consumer behavior (James et al., 2019). Specific topics include, but are not limited to, ticket or product sales (Lee & Ferreira, 2011; Wann et al., 2004), word-of-mouth sharing (Swanson et al., 2003), star athletes (Li et al., 2019), and sponsor recognition (Chien et al., 2016).

### ***Sense of Community***

According to McMillan (1976), a sense of community is “a feeling that members have of belonging, a feeling that members matter to one another and to the group, and shared faith that members’ needs will be met through their commitment to be together” (p. 9). Based on McMillan and Chavis’ (1986) work, a sense of community is a concept that consists of four aspects, namely fulfillment of needs, influence, integration, and shared emotional connections. Fulfillment of needs often is explained together with integration and portrays how members of a certain community feel their needs can be fulfilled by shared interaction within a community. Influence is a concept that explains how one’s needs, opinions, and values are acknowledged and understood mutually by the group members. Finally, shared emotional connection is the community members’ emotional attachment toward the community, which is formed by sharing important lifetime events, showing respect to community members, resolving community problems with other members, and forming a spiritual bonding with other members through positive interaction (McMillan & Chavis, 1986).

### ***Social Capital***

Social capital refers to resources that can be utilized through social relationships, such as being a member of a certain community, that foster positive outcomes, such as receiving a new job opportunity for members (Bourdieu, 1986; Burt, 1992; Lin, 2001). Putnam (2001, December 19) defined social capital as “features of social organizations, such as networks, norms, and trust that facilitate coordination and cooperation for mutual benefit.” More specifically, the social capital concept consists of individual and community aspects (Putnam, 2000). Putnam explains the difference between the two aspects by sharing how the relationship shared by members of the communities creates social capital and emphasizes each member’s choice is important in creating social capital. Further, Putnam stressed that the community aspect of society is important as the interaction among social organizations and structures creates social capital. In addition, Putnam’s (2000) definition provides two types of social capital: bonding and bridging. Bonding social capital is grounded on the thick trust among group members (Williams, 2006), which connects the members within a certain group, allowing social exclusion of people who do not belong to the same group but strengthening the network within the group. In other words, according to Staveren and Korringa (2007), “...bonding social capital generates a particular type of trust that is ascribed to the members of the group” (p. 114). In contrast, bridging social capital connects people between the groups, which benefits the community by creating various forms of tangible social capital such as human or financial capital (Putnam, 2000). Putnam further explains the importance of bridging capital in community settings as it brings in new ideas and resources from outside the original community. In addition, “Bridging social capital generates what is labelled generalized trust, which is based on the belief that everyone shares a minimum set of common values and therefore has a minimum level of trustworthiness to act upon these values” (Staveren & Korringa, 2007, p. 115).

### ***Acculturation***

Acculturation is “the dual process of cultural and psychological change that occurs as a result of contact between two or more cultural groups and their individual members” (Berry, 2005, p. 698). Two differing ideas available in research explain the cause of acculturation. First, based on Bhatia and Ram’s (2001) critical and postcolonial perspectives, the immigrants and the hosting community are the two groups that cause one’s psychological changes during the acculturation process. Next, based on various acculturation models (e.g., Berry, 2005, 2006; Bourhis et al., 1997; Navas et al., 2005), the cause of one’s psychological changes during the acculturation process depends on the two options that immigrants possess when they transition to a new environment: whether to maintain their ethnic identity or to adapt themselves to the culture of the hosting community. In addition, some studies insist acculturation is a multi-dimensional process (Bacallao & Smokowski, 2009; Cabassa, 2003; Yoon et al., 2011). Among these explanations of acculturation, Berry’s (1997) bi-dimensional acculturation is widely used, which explains immigrants’ acculturation process depending on the two aforementioned choices. Four acculturation outcomes suggested by Berry (1997) are separation (one chooses to separate oneself from the host culture), assimilation (one chooses to accept the hosting culture only by denying their original culture), integration (one chooses to accept both hosting and original culture), and marginalization (one chooses to deny both hosting and original culture).

### **The Effect of Team Identification on Sense of Community and Social Capital**

College sports have been utilized to facilitate students’ involvement on campus, leading to active social engagement with peers (Davis et al., 2020; Katz & Heere, 2016; Katz et al., 2017). More specifically, studies have shown how students in higher education utilize varsity athletics to feel more attachment and belonging within their campus community (Heere & Katz, 2014; Katz & Heere, 2016; Sung et al., 2015). In addition, students’ identification with their college sports team led to more connections with the campus community members, such as peer students, faculties, and alums (Katz et al., 2017). However, previous studies have found different results by sharing that when students are passive fans of college sports, the relationship mentioned above between identifying as a college sports fan and feelings of connectedness does not exist (Lim et al., 2011; Warner et al., 2011). For international students, however, college sports may be a new culture, leading to the higher possibility of being passive fans of college sports compared to domestic students. Hence, it is necessary to study whether international students can benefit from being college sports fans, just as their domestic counterparts enjoy.

The relationship between team identification and perceived social capital has been a topic of interest in sports management research (Clopton, 2010, 2011; Gibson et al., 2014; Havard, 2014; Mastromartino et al., 2020; Wann & Craven, 2014). For instance, Havard (2014) pointed out that membership in a sport fan community may strengthen one’s bonding capital in a community as fans bond together to support their favorite team. Furthermore, Mastromartino et al. (2020) mentioned the importance of bridging capital in sports organizations because of its contribution

to flourishing the organization with various fan communities. Clopton (2010, 2011) found mixed results on how college students' identification with their varsity athletic teams affects students' social capital. While earlier research found a significant causal relationship between students' team identification and social capital (Clopton, 2010), a later study utilized a more complex model and specified the social capital into two types: general and bridging. The model utilized students' university identification as a mediator and found a negative relationship between college sports team identification and overall social capital and no significant relationship between team identification and bridging social capital (Clopton, 2011). Furthermore, Wann and Craven's (2014) study found that college students' identification with their intercollegiate athletic team was more likely to lead students to interact with peer students and less likely to avoid social interaction. Yet, most of the participants in the previous studies were domestic students, while few or no international students were included. Hence, based on the previous studies and to expand the previous studies, the authors came up with the following research hypothesis:

*H<sub>1</sub>: International students' identification with college athletics teams will have a significant positive effect on their sense of community on campus.*

*H<sub>2</sub>: International students' identification with college athletics teams will have a significant positive effect on their social capital on campus.*

### **The Effect of Sense of Community and Social Capital on Acculturation**

A sense of community has been utilized to explain immigrants' acculturation behaviors (Barbieri & Zani, 2015; Lee, 2012; Sonn, 2002; Tadmor & Tetlock, 2006). For instance, when immigrants only feel a sense of community within the same ethnic community, they are more likely to separate themselves and only engage with the same ethnic community or resist perceived oppression to become enculturated into a new community (Sonn, 2002; Tadmor & Tetlock, 2006). In contrast, for immigrants to be open to learning and accepting the host culture in a new community, they need to feel more belonging to their new community (Lee, 2012). Lee's study found that when Korean immigrants felt more perceived belonging to their new community, they were more open to learning and accepting the host culture. Developing a sense of community has been shown to affect immigrants' well-being (Barbieri & Zani, 2015). While immigrants who had a strong ethnic identity and sense of community with the same ethnic community were shown to have positive well-being, no relationship was found when they developed their sense of community with a hosting community.

Social capital commonly has been found to significantly affect immigrants' acculturation (Joyce & Liamputtong, 2017; Tatarko et al., 2020; Terry & Le, 2014). Most studies that analyzed the relationship between immigrants' social capital and acculturation utilized Putnam's (2000) bonding and bridging social capital concepts (Ager & Strang, 2004; Putnam, 2000). Conceptually, bonding social capital promotes immigrants' connection with their ethnic community and protects them from assimilating their original culture (Ager & Strang, 2004; Putnam, 2000). Bridging social capital explains how immigrants utilize a certain type of social capital to establish in-

tercultural networks and promote cross-cultural adaptation (Terry & Le, 2014). Both bonding and bridging social capital were effective in the sociocultural adaptation of immigrants from Central Asia when mediated by the integration acculturation strategy (Tatarco et al., 2020). Yet, bridging social capital is considered more important for immigrants' successful acculturation as immigrants can collaborate with host society members to receive social resources (Hendrickson et al., 2011). However, as far as the authors' knowledge, no studies have examined whether international students' engagement in college sports may develop their sense of community and social capital on campus and ultimately lead to their successful acculturation in the U.S. Therefore, based on the previous findings, the authors developed the following research hypotheses:

*H<sub>3</sub>: International students' perceived sense of community will have a significant positive effect on their acculturation.*

*H<sub>4</sub>: International students' perceived social capital will have a significant positive effect on their acculturation.*

*H<sub>5</sub>: International students' sense of community and social capital will have a positive mediating effect(s) between their identification with college sports teams and acculturation.*

## Method

### Participants

The original samples included 612 international students from universities affiliated with the commonly called 'Power 5' Conference, namely Atlantic Coast Conference (ACC), Big Ten Conference (Big Ten), Big 12 Conference (Big 12), Pacific-12 Conference (Pac-12), and Southeastern Conference (SEC). However, 125 participants (20.42%) were excluded from the study because they did not complete the survey or were not international students enrolled at the targeted universities. Therefore, the final samples included 487 international students, mostly from SEC-affiliated universities (336 participants, 69%), female (262 participants, 54%), and graduate students (397 participants, 82%). Table 1 shows the demographic characteristics of the participants.

### Data Collection

After receiving IRB approval, an invitation email was sent out to international student offices at each of the targeted universities (Power 5 institutions;  $n = 65$ ), asking if they could send out a group email to their international students. Only 10 institutions opted to send out the survey, largely due to international student survey fatigue during the COVID-19 pandemic. In addition, this study utilized snowball sampling by reaching out to peer international students enrolled at the targeted institutions and asking for help distributing an invitation email to the target population. The email contained basic information regarding the study, participant consent, and an online link to the survey.

**Table 1***Demographic Characteristics of the Participants (N = 487)*

Characteristics	<i>n</i>	%
Conference		
SEC	336	68.99
Big 12	91	18.69
Big 10	40	8.21
ACC	15	3.08
Pac-12	5	1.03
Gender		
Male	223	45.79
Female	262	53.80
Other	2	.41
Academic level		
Undergraduate	90	18.48
Graduate	397	81.52
Years in the U.S.		
Less than 1 year	87	17.86
1 - 2 years	63	12.93
More than 2 years	337	69.19
Years in the current university		
Less than 1 year	60	12.32
1-3 years	104	21.35
More than 3 years	323	66.32

Note: SEC = Southeastern Conference; ACC = Atlantic Coast Conference; Pac-12 = Pacific-12

## Measures

### *Demographic Variables*

Participants' demographic characteristics (e.g., gender and nationality) and their academic backgrounds (e.g., current class level, name of the affiliated college, length of time spent in the U.S.) were asked through the survey. In sum, seven questions were asked about participants' demographic information.

### *Team Identification*

Sport Spectator Identification Scale-Revised (SSIS-R; James et al., 2019) was utilized to measure international students' perceived identification with their institution's varsity athletics team. SSIS-R is a revised scale from the original 7-item SSIS (Wann & Branscombe, 1993), which measures one's identification toward a team of interest. The SSIS-R scale uses an 8-point Likert-type scale, from 1 being low identification to 8 being high identification. James et al. (2019) revised the original scale by adding a self-report screening question at the beginning of the survey utilizing a Yes/No response option (e.g., do you identify yourself as a fan of your college sports team even if a little bit?). Hence, if participants selected "No" to the screening question, then the participants' score on this scale is recorded as zero. A high overall score reflects the participant's high identification with the team of interest. The original study showed that the scale has reasonable reliability (coefficient alpha = .96) and validity (TLI = .99, CFI = .99; RMSEA = .06, and SRMR = .01) [James et al., 2019]. This study modified the team of interest from the Boston Red Sox to the participant's



institution's varsity athletics team. A sample question included: "How important to you is it that your college sports team wins?"

### ***Social Capital***

International students' perception of their social capital within their campus community was measured with the five items from Krishna and Shrader's (1999) Social Capital Assessment Tool, as Clopton and Finch (2010) formerly utilized. Clopton and Finch utilized SCAT to construct a latent two-factor model, which consisted of social trust (two-item) and the norm of reciprocity (three-item). The items utilized a 7-point Likert-type scale from 1, being does not apply to me at all, to 7, being completely applies to me. The higher overall score reflected participants felt more trust in their community and strength in the norms of reciprocity within the community. Sample questions asked were: "Most students/faculty at this university are basically honest and can be trusted," and "Most students/faculty at this university are willing to help if you need it." The scale with selected questions showed reasonable reliability, with coefficient alphas being .72 and .71 for social trust and the norm of reciprocity, respectively (Nunnally & Bernstein, 1994).

### ***Sense of Community***

International students' perceived sense of community in their campus community was measured using the Sense of Community Scale (Davidson & Cotter, 1986). The original scale was developed to measure how much the participant feels they belong to their local city community by utilizing a 17-item, 4-point Likert-type scale from 1 being not at all important to 4 being very important. The sample questions included: "I like the neighborhood in which I live," "I feel safe here," and "The people in this city are polite and well-mannered." The high overall score reflects participants feel more sense of community with the community of interest. The original study showed acceptable coefficient alphas for two cities: .85 and .81 (Davidson & Cotter, 1986).

### ***Acculturation***

The Acculturation and Resiliency Scale (AARS; Khawaja et al., 2014) measured international students' perceived degree of acculturation into the U.S. culture. While the original scale had three factors (resilience, acculturation, and spirituality), this study utilized the acculturation subscale and modified the questions' country of interest from Australia to the U.S. The modified scale consisted of an 11-item, 5-point Likert-type scale from 1 being strongly disagree to 5 being strongly agree. Sample questions included: "I am okay with accepting both U.S. and my own cultural values," "I am open-minded and curious about my new culture," and "I feel comfortable talking about my culture of origin." The original subscale showed an acceptable coefficient alpha (.83).

### **Data Analysis**

Descriptive and correlation analyses were conducted to assess the normality and relationships among the variables utilized in this study. Next, path analysis was

utilized to analyze the hypothesized model (see Figure 1), which examined the mediating effect of international students' sense of community and social capital between their college sports team identification and acculturation. Path analysis was chosen as a methodology to analyze the hypothesized model due to its wide usage in analyzing causal chain that utilizes mediating variables (Baron & Kenny, 1986). Descriptive and correlation analyses were performed utilizing the IBM SPSS Statistics 26. Finally, path analysis was performed through the Mplus 8.5 utilizing maximum likelihood estimation.

### *Initial Hypothesized Model*

The hypothesized model was decomposed by utilizing path analysis and treating the variables of interest as observable variables. Each scale's observable score was measured by aggregating the participants' responses and averaging them by the number of participants. Although the  $\chi^2$  goodness-of-fit statistic was significant ( $\chi^2(2, N = 487) = 29.03, p < .001$ ), other goodness-of-fit indices showed poor model fit by not meeting the acceptable values. For instance, Kenny (2003) suggested that for the hypothesized model to show a good model fit, its comparative fit index (CFI) and Tucker-Lewis index (TLI) should be more than .90, and the root mean square error of approximation (RMSEA) and standardized root mean square residual (SRMR) should be lower than .08 and .05, respectively. However, the initial model's goodness-of-fit indices did not meet the standard (CFI = .83, TLI = .49, SRMR = .08, and RMSEA = .05).

### *Model Modification*

The initial hypothesized model was modified based on two rationales. First, the authors found previous literature indicating a sense of community may be treated as part of the social capital (Carpiano & Hystad, 2011; Lochner et al., 1999; Moore et al., 2006). Next, the authors utilized modification indices from Mplus and found an option to add a direct path from the sense of community to social capital (MI = 26.744). Since this option matched the previous literature the authors found, the authors adopted this option and modified the model. The modified model showed a good model fit by meeting the standard of goodness-of-fit indices (CFI = 1.00, TLI = .98, RMSEA = .03, and SRMR = .01) [Kenny, 2003; Kline, 2015; Stage et al., 2004]. Table 2 shows the comparison of goodness-of-fit indices from the original and modified model.

**Table 2**

*The Goodness of Fit Indices of the Models*

Index	Initial model	Revised model
$\chi^2$ -statistic ( <i>df</i> )	29.031 (2)	1.43 (1)
RMSEA	.17	.03
SRMR	.07	.01
CFI	.83	1.00
TLI	.49	.98

## Results

### Descriptive Statistics and Correlations

Descriptive statistics of the variables utilized in this study are summarized in Table 2. According to the result, the variables met the normality assumption by showing absolute values of less than 10 (Kline, 2015) [See Table 3].

**Table 3**

*Descriptive Statistics (N = 487)*

Measure	<i>M</i> ( <i>S.D.</i> )	Skewness	Kurtosis	1	2	3	4
1 Team Identification	2.50 (2.56)	.398	-1.335	-			
2 Sense of Community	2.81 (.35)	-.208	-.086	.22**	-	-	
3 Social Capital	4.77 (.70)	.037	.371	.17**	.27**	-	-
4 Acculturation	2.92 (.48)	.088	-.151	.16**	.42**	.25**	-

\*  $p < .05$ , \*\*  $p < .01$ .

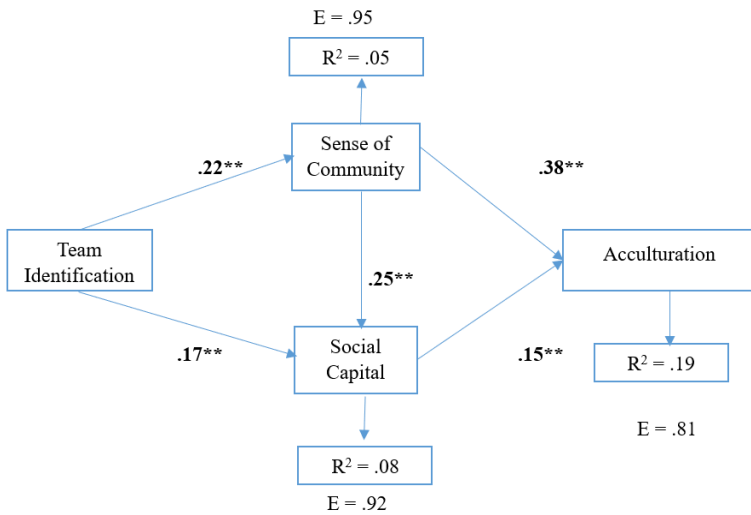
Next, the revised model's path coefficients were decomposed (See Table 4). Specifically, international students' college sports team identification significantly affected their sense of community ( $\beta = .22, p < .01$ ) and explained 10% of the variance of sense of community. Team identification also had a significant effect on their social capital ( $\beta = .11, p < .01$ ) and explained 3% of the variance of social capital ( $H_1$  and  $H_2$  supported). International students' sense of community ( $\beta = .38, p < .01$ ) and social capital ( $\beta = .15, p < .01$ ) had a significant effect on their acculturation, which together explained 19% of the variance of acculturation ( $H_3$  and  $H_4$  supported). Finally, international students' college sports team identification showed a significant indirect effect on their acculturation through their sense of community and social capital ( $\beta = .11, p < .01$ ) [ $H_5$  supported] (See Figure 2).

**Table 4**  
*Standardized Path Coefficients*

Path	Direct Effect	Indirect Effect	Total Effect
Team Identification → Sense of Community	.22**		.22**
Team Identification → Social Capital	.11*	.05**	.17**
Sense of Community → Social Capital	.25**		.25**
Team Identification → Acculturation		.11**	.11**
Sense of Community → Acculturation	.38**	.04**	.41**
Social Capital → Acculturation	.15**		.15**

\* $p < .05$ , \*\*  $p < .01$

**Figure 2**  
*Modified Acculturation Path Model*



*Note.* Bold Indicates Statistically Significant

## Discussion

### Discussion of Results

#### *The effect of international students' college sports team identification on their sense of community and social capital*

Various studies have indicated that college sports have been widely utilized as one of the many ways students foster a sense of belonging and social engagement with other members of the campus community (Davis et al., 2020; Katz & Heere, 2016; Katz et al., 2017). This study expanded findings from previous studies (Davis et al., 2020; Katz & Heere, 2016; Katz et al., 2017) by differentiating the research participants into solely international students. According to this study's results, international students enrolled at the Power 5 conference's affiliated colleges were shown to feel more belonging to their campus community when they identified themselves as fans of their college's varsity athletics team. Interestingly, previous studies warned the causal relationship between college sports team identification and feelings of belonging to a community might not exist for passive fans (Lim et al., 2011; Warner et al., 2011). However, regarding international students, most included in this study seemed to be passive fans (having a composite team identification score of 2.5 out of 8), and a significant relationship between college sports team identification and a sense of community was found. Hence, our study found that international students may not only enjoy the benefits of being fans of college sports just as their domestic peers, but also do not need to be active fans to enjoy that benefit.

The findings of this study support previous studies that found the causal relationship between students' college sports team identification and their perceived social capital (Clopton, 2010; Wann, 2006; Wann & Craven, 2014). Along with these previous studies' results, international students in this study showed that identification with their college sports team has a positive causal relationship with their perceived social capital. More specifically, the result of our study can be explained by Wann and Craven's (2014) study, which showed higher college sports team identification leads to more active interaction with peer students. Furthermore, in line with the previous study, our study showed that international students' college sports team identification is likely to increase bonding and bridging capital since they can interact with peers, such as fellow domestic or international students, faculties, and alums. These opportunities are seemingly likely to promote international students' social capital development.

#### *The effect of international students' sense of community and social capital on their acculturation in the U.S.*

The findings of this study were in line with the previous studies (Barbieri & Zani, 2015; Joyce & Liamputtong, 2017; Lee, 2012; Tatarko et al., 2020; Terry & Le, 2014) and showed that international students' sense of community and social capital both had significant causal relationships with their acculturation in the U.S. More specifically, previous studies' results differed based on which community im-

migrants felt they belonged to – immigrants who felt they belonged to the new community were open to accepting new cultures (Lee, 2012), whereas those who only felt belonging to a community that shares the same ethnicity did not open themselves to accept new cultures (Sonn, 2002; Tadmor & Tetlock, 2006). Hence, the findings of this study share Lee's (2012), as international students felt they belonged to their new campus environment in the U.S., they were able to become more open to accepting new culture as their higher sense of community score led to a higher acculturation score.

International students' social capital also significantly affected their acculturation into the U.S. As various studies shared the importance of social capital on immigrants' acculturation into the new environment (Joyce & Liamputtong, 2017; Tatarko et al., 2020; Terry & Le, 2014), our study was able to add that international students' social capital also is important for their acculturation. In our study, international students had higher acculturation scores when they showed higher SCAT scores, which measured the perception of participants' perceived social trust and norms of reciprocity toward their campus community. In other words, international students felt they became more acculturated into the U.S. when they felt their campus community could be trusted (bonding social capital) and when they were able to receive help from others (bridging social capital). More specifically, bonding social capital reflects a strengthened connection within a group, and bridging social capital reflects an improved connection between two or more different groups (Putnam, 2000). Hence, our study's findings show that when international students felt connected within a campus community and with different subgroups in the campus community (e.g., faculties, peers, neighbors, etc.), they felt more acculturated into the U.S. However, social capital's path coefficient toward acculturation shared a lower score ( $\beta = .15, p < .01$ ) than the effect of a sense of community on acculturation ( $\beta = .38, p < .01$ ). Hence, although a sense of community may be encompassed in social capital (Carpiano & Hystad, 2011; Lochner et al., 1999; Moore et al., 2006), our study found that international students' perceived belonging to a campus community is more important than their social capital, which brings up the necessity to distinguish the two factors that may contribute to international students' acculturation.

***Mediating effects of international students' sense of community and social capital between their college sports team identification and acculturation in the U.S.***

Finally, international students' college sports team identification showed a significant indirect effect on acculturation, which revealed partial mediating effects on a sense of community and social capital. This shows that when international students become fans of their college sports teams, they can develop a sense of community and social capital in their campus community and become more acculturated into the U.S. This result adds to the previous study by Kim et al. (2021), which showed how international students' college sports team identification directly affects their acculturation. Based on our study's findings, international students' college sports team identification contributes to their sense of community and social capital on campus, which then assists this population's acculturation. Hence, our study showed

a more detailed process of how international students' college sports team identification leads to their acculturation by utilizing the mediating effects of a sense of community and social capital.

### **Practical Implications**

This study provides opportunities for college athletics and international student departments to utilize college sports to provide additional strategies for attracting new potential fan groups and successfully adjusting this population to a new environment. This study showed that not many international students are involved in college athletics. Therefore, college athletics offices may consider drawing this subgroup of students in cooperation with the international students' office to attract more fans to the sporting events. For instance, college athletics may utilize their international student-athletes and promote them when competing in a certain event, and the international students' office could then organize an event that shares the cultural aspects of that athlete's country of origin. Not only would this event attract international students to become new fans of their college athletics teams, but they also may develop their sense of community and social capital by becoming friends with those who watch the event together. Ultimately, with international students' sense of community and social capital developed through identification with their college sports teams, this population is more likely to better adjust to their new environment.

### **Limitations and Future Study Options**

Limitations exist in this study, as the targeted population came from Power 5 conference-affiliated colleges, where a significant amount of the budget is dedicated to varsity athletics compared to other colleges affiliated with non-Power 5 conferences. Hence, because the result may differ when different colleges are utilized, recruiting students from various colleges not affiliated with the Power 5 conference is suggested to increase the generalizability of the study.

Next, the model did not utilize the demographic backgrounds of the population, such as nationality, length of stay in the U.S., etc. As international students may experience a different level of stress depending on where they are from and their language capability, future study is recommended to utilize the demographic backgrounds of international students and analyze whether the model's effect changes. This will provide a better understanding of which demographic characteristics of international students need to be considered in applying the current study's results.

Finally, this study took place when the COVID-19 pandemic was a significant issue. Due to the pandemic, college athletics events were held with limited capacity openings in their home fields. Hence, the authors suggest that future studies may utilize this study's model when college athletics are open to full capacity and analyze whether international students' college sports team identification strengthens their sense of community, social capital, and acculturation.

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