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### Promoting Educational Outcomes Through Openness to Diversity: An Exploration of Sport and Physical Activity

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## Promoting Educational Outcomes Through Openness to Diversity: An Exploration of Sport and Physical Activity

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### ABSTRACT

Research in higher education has emphasized the importance of diversity by demonstrating that students' exposure to diversity can support positive academic outcomes. Still, little attention has focused on the role of sport and recreation in promoting students' inclusive thought patterns. This study analyzed the influence of sport spectatorship, physical activity participation, and team identification on college students' (N=140) openness to diversity and academic outcomes. The results indicated that sport and recreational activity had a significant negative effect on students' openness to diversity ( $\beta = -.20, p < .05$ ). Additionally, team identification was shown to have a significant negative effect on students' academic outcomes ( $\beta = -.25, p < .01$ ). This study strived to provide insight into diversity efforts, demonstrating that sport and physical activity may serve as tools to assist in fostering inclusive excellence.

**Keywords:** Academic Outcome, College Students, Openness to Diversity, Physical Activity, Team Identification



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## INTRODUCTION

Exposure to diverse individuals and ideas is an important component of college students' learning and development (e.g., Gurin, 1999; Hurtado, 2007; Hurtado et al., 1999; Seifert et al., 2010; Smith, 1997). Diversity, broadly, refers to the presence of human differences between members of a dyad or group (Cunningham, 2019). Importantly, diversity and organizational behavior literature highlights that these differences can hold social meaning and can be either objective or subjective in nature (see, for a review, Cunningham, 2019). Group members can be diverse with respect to many factors, including gender and gender expression, race, ethnicity, age, level of education, sexual orientation, (dis)ability, and socioeconomic status, among others. In the context of education, interactions with diverse populations can promote concrete outcomes, including student retention and grade point average (GPA; Bowman, 2009, 2010, 2014; Gurin et al., 2002; Kilgo et al., 2015; Pascarella et al., 1996; Whitt et al., 2001). Openness to diversity has been shown to be influenced by students' participation in collaborative and constructivist classroom settings (Alt, 2017; Loes et al., 2018). It is vital that students have "exposure to diversity through the curriculum and interacting with diverse others" (Goodman & Bowman, 2014, p. 42). As such, most institutions of higher education incorporate commitments to diversity and inclusion in their mission statements to prepare students to take part in an increasingly globalized society (Denson & Bowman, 2013; Gurin et al., 2002).

Given that experiencing many forms of diversity can promote positive outcomes for students (Bowman, 2009, 2010, 2014; Gurin et al., 2002; Kilgo et al., 2015; Pascarella et al., 1996; Whitt et al., 2001), studies have sought to explore developmental processes for creating inclusive and welcoming educational environments. For instance, recent works have examined determinants affecting students' openness to diversity (e.g., students' participation in collaborative and constructivist learning) as a starting point for inclusive education (Alt, 2017; Loes et al., 2018). Goodman and Bowman (2014) stress the importance of consistent exposure to diverse populations and ideas throughout the curriculum to promote students' overall openness to diversity in other settings. As such, many higher education institutions include commitments to diversity and inclusion in their mission statements to prepare students for an increasingly globalized society (Denson & Bowman, 2013; Gurin et al., 2002).

On many campuses, physical activity spaces (e.g., fitness centers) and sport (e.g., intramural competitions) serve social purposes, beyond simple health promotion. Indeed, numerous studies have demonstrated that sport and physical activity can assist in building inclusive communities (Cunningham, 2019; Harrolle & Trail, 2007; Kim et al., 2020; Lee & Funk, 2011; Stodolska & Alexandris, 2004). Students' participation in campus recreation sports has also been shown to increase academic outcomes (e.g., Bullon et al., 2017; Mayers et al., 2017; NIRSA, 2004; Vasold et al., 2019). Sung et al. (2015) study explored how students' identification with a college sports team was shown to foster their academic outcomes, with their sense of belonging acting as a mediator. Hence, questions arise about the role of sport and physical activity (both participating and watching) in promoting students' openness to diversity and whether the increased openness to diversity may lead to increased academic outcomes. Therefore, this study aims to fill in the gap in the literature by analyzing whether students' identification with their college sports team and participation in physical activities positively affect their openness to diversity and whether the increased openness to diversity of students positively impacts their academic outcome (GPA).

## LITERATURE REVIEW

### Team Identification

Team identification is a widely used framework when examining sport spectators' behaviors (see Lock & Heere, 2017). According to Wann and James (2019), team identification can be defined as "the extent to which a fan feels psychologically connected to a team" (p. 4). Early studies that examined team identification were conducted by Brill (1929) and Griffith (1938). Yet, most recent studies adopt the team identification theory developed by Wann and Branscombe's (1993) foundational study. Although there appear to be differing opinions regarding which theory the team identification theory is grounded upon, the most commonly utilized theory is the social identity theory by Tajfel and Turner (1979). Social identity theory can be defined as "that part of an individual's self-concept which derives from his knowledge of his membership of a social group (or groups) together with the value and emotional significance attached to that membership" (Tajfel & Turner, 1979, p.63). The ample number of studies that utilized the team identification theory found a causal relationship between sports fans' identification with their teams and their behaviors, such as purchasing tickets and merchandise (Kwon et al., 2007; Lee & Ferreira, 2011; Wann et al., 2004), and spreading positive word of mouth (Swanson et al., 2003).

### Openness to Diversity and Challenges

Pascarella and his colleagues (1997), define openness to diversity and challenges (ODC) as "orientation toward enjoyment from being intellectually challenged by different ideas, values, and perspectives as well as an appreciation of racial, cultural, and value diversity" (p. 179). More generally, ODC was defined by Bowman (2014) as "a psychological proclivity that manifests itself through a variety of emotions, attitudes, behaviors, and reactions to experiences" (p. 278). ODC has been treated as one's characteristic orientation that may lead to students' various college experience outcomes (Astin, 1991). Yet, as modern society is becoming increasingly diverse and global, higher education institutions have started to pursue ODC as one of the desired outcomes for the students to prepare this population to become productive members of society (Alt, 2017; Bowman, 2014). Meanwhile, a limited amount of work has been done to analyze the effect of students' participation in sports (e.g., participation in varsity athletics) on predicting students' ODC development and found both significant and non-significant causal relationships between the two concepts (Pascarella et al., 1996; Whitt et al., 2001; Wolniak et al., 2001).

### *Sports' effect on openness to diversity*

A scarcity of research has specifically analyzed the causal relationship between physical activity participation and openness to diversity. To date, most research has examined the benefits of having a diverse population in sports organizations (Cunningham, 2019; Glass et al., 2014; Spaaij et al., 2018). For instance, Glass et al. (2014) found that students are more likely to cooperate with people from diverse backgrounds and decrease their perceived social barriers when participating in an intramural sports program. However, some work in the sport-for-development subfield has begun to examine the use of sport as a tool for improving social cohesion among diverse groups. In a review of sport for development studies, Raw et al. (2021) found that initiatives designed to leverage the use of sport to improve interpersonal relations have struggled to operationalize social cohesion and often have poor managerial practices and organizational strategy due to a lack of clarity around diversity-related aims and processes. This is of particular import, given the growth of social cohesion programs from international

sports-related organizations and initiatives created due to increasing numbers of immigrants and refugees, as well as general globalization (Jenson, 2010; Richards, 2017; UN, 2015).

However, considering that rare cases of exact analysis on the causal relationship between one's sports participation and their ODC exist and how sports-for-development initiatives have been utilizing social cohesion concepts to foster one's acceptance of diversity, the question remains whether watching sports can also promote sports fans' perceived openness to diversity. For example, in Mastromartino and Zhang's (2020) review of the sports fan community, mixed results were introduced regarding how differences in fans are accepted in the English Premier League (EPL) and National Football League (NFL). While inclusive attitudes were formed in EPL club fan communities due to the organization's effort in eradicating homophobia (Cleland, 2015), homophobic and sexist articles were cited in NFL fan communities (Kian et al., 2011). Hence, although previous research mention being a fan of professional sports may contribute to accepting or none-accepting behaviors (Cleland, 2015; Kian et al., 2011), this study sought to widen the existing literature by analyzing if participating in sports, both by playing and watching, can be the predictors of one's ODC. Thus, following the previous literature, the authors developed the following research hypothesis:

RH1: Sport participation (both physical activity and sport spectatorship) will have a significant positive effect on students' openness to diversity.

### **Academic Outcomes**

The National Intramural-Recreational Sports Association (NIRSA) emphasize that college students share how participating in campus recreation activities helped them succeed in their retention, overall success, etc. (NIRSA, 2004). Moreover, various studies analyzed the causal relationship between students' campus recreation participation and their academic outcomes to find students who participated in campus recreation showed higher GPAs (e.g., Bullon et al., 2017; Mayers et al., 2017; Vasold et al., 2019).

Although many studies have analyzed the relationship between actual sports participation and their academic outcomes, there is a paucity of studies that examined the relationship between students' participation in sports activities by watching sports games and their academic outcomes. For example, past studies have shown the role of being a fan of a college sports team to create a sense of social connectedness to students and how that connectedness affects students' academic outcomes (Beyer & Goossens, 2003; Sung et al., 2015; Walton & Cohen, 2011).

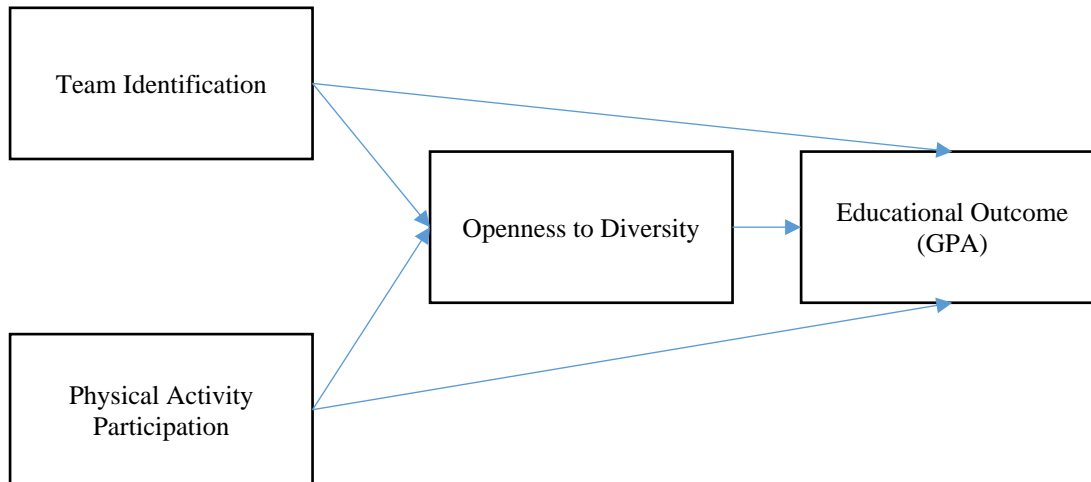
Recent studies analyzed how ODC can predict students' outcomes in college. Especially, Bowman (2014) insisted ODC is a mediating predictor of students' outcomes after their time in college. For example, Bowman (2012) found that positive ODC interaction affects first-year traditional-aged college students' diverse coursework choices in their senior year. In addition, international students seemed to be affected by ODC also as the more positive they are about ODC, the better they are adjusted to college in the U.S. (Yakunina et al., 2012). Finally, students' ODC has been shown to foster their academic and job performance (Connelly & Ones, 2010; Poropat, 2009). However, analyzing the impact of ODC is an ongoing process in academia, as previous studies also found that ODC does not intervene when analyzing one's causal relationship between diversity experience and academic outcomes (Bowman, 2012; Denson & Bowman, 2013; Denson & Chang, 2010). Hence, the additional research hypotheses are proposed based on the previous literature:

RH2: Students' openness to diversity will have a significant positive effect on students' positive educational outcomes (measured as GPA).

RH3: Students' sports participation (playing & watching) will have a significant positive indirect effect on students' educational outcomes (measured as GPA), with students' openness to diversity acting as a mediator.

Based on the research hypotheses, Figure 1 (see below) demonstrates the hypothesized research model.

**Figure 1.** Hypothesized research model



## METHODS AND MATERIALS

The primary researcher sent emails to the faculties and staff in various majors asking for students' voluntary consent and participation in this research, including but not limited to sports management, liberal arts, statistics, etc. The recruitment email consisted of consent to participate and a link to the online survey questionnaire. Participants completed an online survey, which has an advantage over more traditional methods, including low costs, high response rate, and low chance of losing the data compared to the traditional data collection methods (McDonald & Adam, 2003).

### Measurements

The survey utilized one question asking about the frequency of participation in sports activities for students. However, due to the impact of the COVID-19 pandemic at the time of data collection, students were asked to consider their activity during their "normal life" (i.e., during non-pandemic times). Therefore, the question went, "In your normal days (assuming we are not being affected by COVID-19), how often do you participate in sports activities (e.g., fitness, individual or team sports, etc.)?" This question utilized a 7-point Likert-type scale, with higher scores indicating greater frequency. Additionally, the participants were asked to self-report their grade point average (GPA) to measure their educational outcome.

James et al. (2019) Spectator Sport Identification Scale-Revised (SSIS-R) was utilized to analyze the students' sports participation by watching sports. The scale presented seven items that measured one's degree of identifying oneself as a sports fan of a certain team. For example, questions asked how important one thinks their supporting team wins, how strongly they see themselves or their friends see themselves as fans of their supporting team, etc. The SSIS-R is used in sports management academia to analyze the causal relationship between

one's team identification and their perceptions or behaviors toward rival teams (Harvard et al., 2020). The original scale, Spectator Sport Identification Scale (SSIS) (Wann & Branscombe, 1993), was used extensively in sports management academia that analyzes the causal relationship between one's team identification and social outcomes, such as the sense of community, social capital, etc. (Clopton, 2007; Clopton & Finch, 2010; Koo et al., 2015; Warner & Dixon, 2011, 2013; Warner et al., 2012). Both the original scale and revised scale (Wann & Branscombe, 1993; James et al., 2019) reliabilities showed strong internal consistency, with the original scale's Cronbach's  $\alpha$  being .91 and the revised model having Cronbach's  $\alpha$  of .96 (Wann & Branscombe, 1993; James et al., 2019).

Next, Pascarella et al.'s (1996) openness to diversity scale was adopted for this study. The original scale contained seven items that asked how participants feel when they are exposed to situations when participants need to engage with people of different cultures, beliefs, etc. Sample questions asked were: (a) I enjoy taking courses that challenge my beliefs and values, (b) Learning about people from different cultures is a very important part of my college education, (c) I enjoy having discussions with people whose ideas and values are different from my own, etc. Previous studies (Alt, 2017; Ellison et al., 2019; Loes et al., 2018; Han, 2017) utilized openness to diversity as an outcome variable and analyzed how this can be promoted through participants' demographic and classroom characteristics. In our study, openness to diversity is utilized as a mediating variable to analyze how this can be developed through physical activity and ultimately result in positive academic outcomes (Bowman, 2009, 2010, 2014; Gurin et al., 2002; Kilgo et al., 2015; Pascarella et al., 1996; Whitt et al., 2001). The original study (Pascarella et al., 1996) of the ODC scale showed Cronbach's Alpha coefficient as .83 and .84 when utilized in two different time sets.

## Data Analysis

Data analysis was performed by using SAS (ver. 9.4). Composite scores for each variable will be utilized by aggregating the items from the same dimension. The distribution of each variable was evaluated by computing the mean, standard deviation, skewness, and kurtosis. A composite score for each scale is derived by averaging the sum of item responses with the number of items. Pearson's correlations among variables were also performed to understand how strong variables are correlated with each other. The internal consistency reliability of each scale was measured using McDonald's (1999) Omega ( $\omega$ ). As Cronbach's alpha relies on several assumptions (Allen & Yen, 2001), such as (a) uncorrelated item errors, (b) unidimensionality of the scale, (c) unified true score variances for all of the items, and (d) unified factor loadings for all of the items, Cho and Kim (2015) argued that these assumptions are difficult to meet in psychological test data. Omega coefficients do not have an absolute cutoff to be considered adequate or acceptable, but just like alpha coefficients, studies have been widely utilizing minimum .50 and above .75 as preferable values to consider the scale reliable (Reise, 2012; Reise et al., 2013).

Next, a path analysis (Barron & Kenny, 1986) was utilized to analyze the hypothesized research model in Figure 1. Specifically, this study followed the analytic method that Barron and Kenny (1986) suggested: (a) if the independent variables' variances account for mediating variable's variance, (b) if the mediating variable's variance account for the dependent variable's variance, and (c) if the independent variables' variances account for dependent variable's variance when (a) and (b) are controlled. Following Barron and Kenny's (1986) analysis recommendations, this study reported the significance of direct and indirect effects. The fit indices were not applicable for model fit evaluation because the proposed model was saturated with zero degrees of freedom.

**Sampling**

Students enrolled at large public universities in the US were recruited for this study. A total of 148 students responded to the survey, while eight responses were invalid as they were incomplete. In total, 140 responses were utilized in this study. The majority of the participants were White (76%) undergraduate students (61%). In addition, the number of male (N = 70) and female (N = 69) participants was comparable. Table 1 (below) reports the demographics of the participants.

**Table 1.** Participant Demographics (N = 140)

Characteristics		N	%
<b>Gender</b>	Male	70	49.3
	Female	69	48.6
	Non-binary	1	.7
<b>Race</b>	White	107	76.43
	Black	15	10.56
	Asian	12	8.57
	Other	6	4.29
<b>Classification</b>	Undergraduate	86	61.43
	Graduate	54	38.57

**FINDINGS**

First, the reliability of the scales was analyzed by utilizing McDonald’s (1999) Omega ( $\omega$ ). Responses from our study were utilized and revealed Omega coefficients for both team identification and openness to diversity and challenges scale as .91 and .89, which meet the preferable cutoff for a reliable scale (Reise, 2012; Reise et al., 2013). Next, descriptive statistics of the variables were analyzed, wherein all study variables met the normality assumption. Descriptive statistics and bivariate correlations can be found in Table 2.

**Table 2.** Means, Standard Deviations (S.D.), Normality, and Correlations for Variables

Measure	M	1	2	3	4	Skewness	Kurtosis
<b>1</b> Physical Activity Participation (PA)	5.01 (1.64)	-				-.378	-.94
<b>2</b> Team Identification (TI)	5.26 (2.22)	.25**	-			-1.09	.40
<b>3</b> Openness to Diversity and Challenges(ODC)	4.02 (.70)	-.20*	-.07	-		-1.09	1.94
<b>4</b> Grade Point Average (GPA)	3.52 (.43)	-.11	-.27**	.14	-	-.97	.63

*Note.* \* =  $p < .05$ , \*\* =  $p < .01$  for all analyses (N = 140). Standard deviations appear in parenthesis below means.

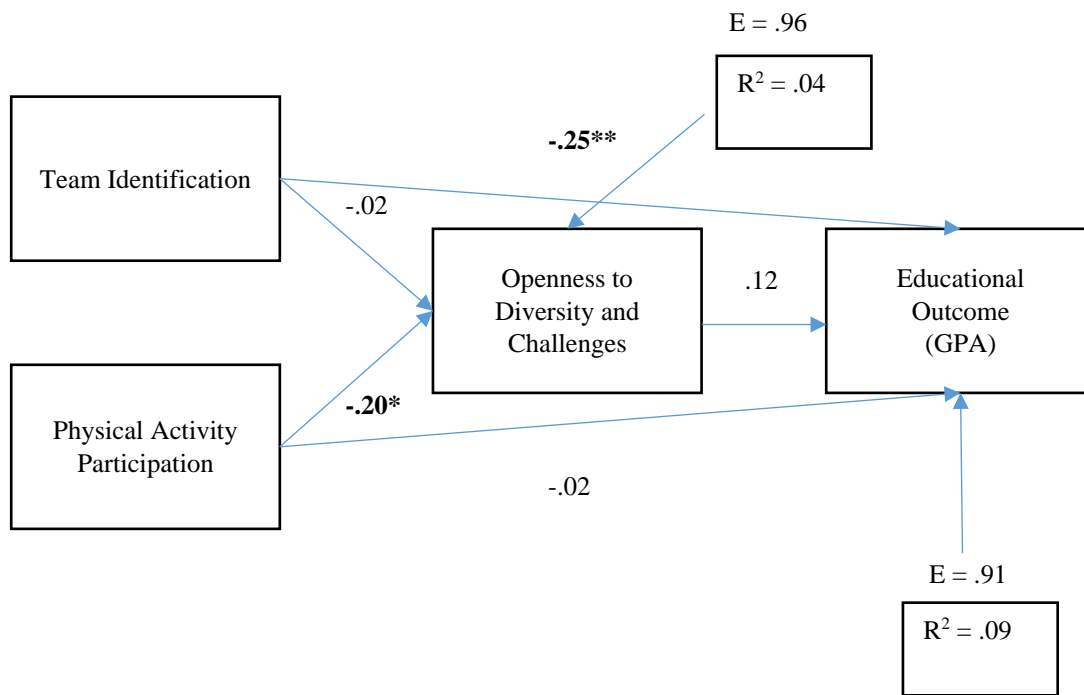
Next, the student’s educational outcome path model was decomposed following Baron and Kenny’s (1986) suggestions (See Figure 2). The results showed that only one of the independent variables (participation) significantly affected the mediator (ODC). Also, the mediator (ODC) did not significantly affect the dependent variable (student’s GPA). Hence, our results indicated that students’ ODC does not act as a mediator between physical activity,



sport spectatorship and academic outcome (GPA). The goodness of fit for this model is not provided as this model utilized a saturated model with no degree of freedom.

Following our results, research hypotheses were tested. RH1 was not supported by results showing only students' PA having a significant negative effect on their ODC when TI did not have a significant causal effect on ODC. RH2 was also not supported by ODC not having a significant causal effect on students' GPA. Finally, RH3 was also not supported as TI had a significant negative indirect effect on the student's GPA when PA did not have any significant causal effects on the student's GPA. More specifically, TI significantly affected GPA (total effect = -.26), but the impact mostly came from the direct effect (direct = -.25), while the indirect effect through ODC was insignificant (indirect = -.002). PA did not impact GPA generally, with insignificant direct and indirect effects (See Table 3).

**Figure 2.** Student's educational outcome path model.



*Note.* Bold indicates statistically significant paths ( $p < .05$ ).

**Table 3.** Standardized Path Coefficients

Path	Direct Effect	Indirect Effect	Total Effect
<b>Team Identification →</b>			
<b>Openness to Diversity and Challenge</b>	-.02	-	-.02
<b>Physical Activity Participation →</b>			
<b>Openness to Diversity and Challenge</b>	-.20*	-	-.20*
<b>Team Identification → GPA</b>	-.25**	-.002	-.26**
<b>Physical Activity Participation → GPA</b>	-.02	-.02	-.04
<b>Openness to Diversity and Challenge → GPA</b>	.12	-	.12

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

## DISCUSSION

Our study examined how students' sports engagement, both through physical activity and sport spectatorship, affected their openness to diversity and challenge (ODC) and students' academic outcomes. Furthermore, we examined the relationship between one's ODC and an academic outcome (i.e., GPA) and tested if students' ODC act as a mediator between sports participation and their academic outcomes. Others have suggested the importance of diversity in organizations (e.g., Avery, 2011) and sports (Melton & Cunningham, 2014) to improve overall outcomes. However, to our knowledge, this was the first study to explore the relationships between students' sports experiences, their ODC, and academic outcomes (i.e., GPA).

### **The Impact of Students' Sports Engagement on their ODC**

Among the first relationships tested in our data, we found a significant inverse relationship between students' physical activity and ODC. That is, among our respondents, those who engaged in higher levels of physical activity exhibited less open attitudes towards dissimilar others. This is at odds with other research, which has suggested the development of inclusive attitudes through participation in physical activity. For example, Glass et al. (2014) found that participating in intramural sports programs promoted one's ability to engage in diverse groups and decreased social barriers. However, others have argued that sports spaces can be exclusive in nature (see, for example, Cho & Price, 2018, Pickett & Cunningham, 2017). For instance, Cho & Price's (2018) study examined different leisure constraints among domestic and international students, finding that international students faced greater barriers in accessing sports activities on campuses due to difficulties finding peers to participate in sports activities. Pickett and Cunningham (2017) similarly argued that individuals in larger bodies faced an exclusive climate when engaging in sports activities. Together, these studies point to a homogenous and generally exclusive dominant sports culture, wherein those with minoritized identities are less likely to have opportunities to engage and benefit from sport. This is consistent with our current findings, as our study's main population was White students who have majority status on campus. In addition, those most likely to engage in sports activities were least open to diversity, again pointing to a more exclusive sports culture.

Interestingly, we found no support for a relationship between team identification and openness to diversity. This may be an effect of countervailing forces. That is, previous studies have suggested that team identification can promote one's sense of social connectedness (Beyer & Goossens, 2003; Sung et al., 2015; Walton & Cohen, 2011). As individuals interact with others (e.g., similar fans), they feel more connected and included. However, others have suggested that college sports and sports fandom can be exclusionary to certain campus community members (Harris, 1998; Palmer & Thompson, 2007; Tonts, 2005). Thus, college sports may serve as a point of connection for interacting with those already in a student's social networks (i.e., other similarly identified fans). However, this shared social connectedness does not necessarily translate to openness to dissimilar others. As diversity is being increasingly important in higher education, athletic departments should examine the role they play in promoting an inclusive campus culture. Given the impact of following college sports on one's sense of social connectedness (Beyer & Goossens, 2003; Sung et al., 2015; Walton & Cohen, 2011), it is a promising space for fostering engagement across social identity fault lines.

### **The Impact of ODC on Academic Outcomes**

It is important to note that ODC was not related to students' academic outcomes, which was inconsistent with other existing literature (Bowman, 2014; Connelly & Ones, 2010;

Poropat, 2009). One explanation for this result may be the nature of self-report data, particularly when an issue is salient to the participant. Bowman (2014) argued that external evaluations of one's ODC seemed to have a higher relationship with academic and job performance than self-evaluation. At the time of writing, several diversity-related social issues were salient in the national news coverage (e.g., Black Lives Matter protests, hate crimes against Asian Americans and Pacific Islanders [AAPIs], disparate treatment of women at national sporting events). Because of the divisive nature of these ongoing conversations, participants may have been primed to feel they were more open to diversity (or responded in a way they perceived to be more socially acceptable). The high mean score on the ODC scale (i.e., 4 / 5) across the sample suggests participants generally viewed themselves as open to diversity. Further, this study was conducted in two predominantly white, predominantly rural states. In these areas, diversity and inclusion may be less emphasized in coursework, and students may not need to interact with diverse others in classes; thus, the relationship between ODC and academic success may be less pronounced.

### **The Impact of Students' Sports Engagement on their Academic Outcomes**

Finally, unlike previous studies (Bullon et al., 2017; Milton et al., 2020; Hoppe et al., 2020), participation in physical activity had no (in)direct effects on one's GPA. Also, our study found contrasting results from previous studies (Beyer & Goossens, 2003; Sung et al., 2015; Walton & Cohen, 2011) by team identification showing a direct negative effect on GPA and its indirect effect not being supported. In sum, these results imply that highly identifying with college sports and engaging in physical activities may distract participants from their studies and hinder them from being open to people in different groups than their peers. These results raise caution on the overall belief that sports may act as a panacea to promote students' ODC and academic outcomes and call for more specific designs when utilizing sports to promote ODC or academic outcomes.

### **Practical Implications**

Although studies found positive academic and social outcomes in students who were exposed to positive ODC interaction experiences (Bowman, 2012; Connelly & Ones, 2010; Poropat, 2009; Yakunina et al., 2012), our results bring up the need for investigation into appropriate and careful promotion of sports-related activities, which may promote wellbeing and openness to different people, but do not impede student success (Bowman, 2009, 2010, 2014; Gurin et al., 2002; Kilgo et al., 2015; Pascarella et al., 1996; Whitt et al., 2001). This suggestion is supported by a previous study that emphasized the importance of structuring sports management classes to prepare students to become more open to diversity (DeLuca et al., 2021).

Based on the previous studies and the results of this study, one of the suggestions is to give students opportunities to experience the benefits of partaking in sports activities with people who are different from themselves. With the sport environment being a homogenous and generally exclusive dominant sports culture, specifically in the context of the student population being predominantly White higher education institutions, this suggests the importance of letting the students experience the benefits of interacting with heterogeneous communities of students through sport and physical activities. Hence, it is recommended for sports management faculties, in cooperation with the recreation office and athletic departments, to guide students to form a group with students from different backgrounds and help students to experience the benefits of positive ODC interaction experiences. Furthermore, as students who have already formed their ingroup may not extend their relationships with students from

different backgrounds, faculties should encourage group extension and promote the benefits of a positive ODC interaction experience.

## CONCLUSION

This exploratory study examined relationships between university students' sports team identification and physical activity participation with their openness to diversity and academic outcomes. Given the increasingly diverse nature of the global society, it is important to understand tools for developing an open and inclusive mindset. While we found no relationship between team identification and ODC, there was an inverse relationship between sports participation and ODC. We further examined the impact of ODC on an academic outcome (i.e., GPA), which was not significant. However, a significant, negative direct effect was observed between team identification and student GPA. Given the exploratory nature of this study, we suggest further investigation is needed to understand the complex relationships between sport, diversity, and academic achievement among students.

## Limitations and Recommendations

The main limitation of this study lies in our sample's generalizability. This study asked for students' voluntary participation without any economic rewards; thus, the overall sample size was limited. Further, our participants were from universities located in states with comparatively less diverse populations. The generalizability of findings would improve with a more nationally representative sample. Finally, since this study is the first to connect individuals' physical activity participation and team identification to their ODC and academic outcomes, the utilization of exact literature was close to impossible with existent literature. Additionally, physical activity and GPA was self-reported; therefore, there is a possibility that the data is not completely reliable.

Future studies can utilize our results to investigate further how sports impact students' perception of diversity and their effect on academic outcomes. Therefore, utilizing experimental studies that include testing groups and control groups regarding the degree of participation in physical is recommended. Through this setting, one will be able to distinguish between those who participate in physical activities or follow college sports in terms of how much ODC they develop by getting involved in those activities. In addition, this setting will allow researchers to uncover if there are significant differences in results (e.g., one's perception towards ODC, improvement in one's GPA at the end of the semester from experiment participation, etc.).

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