

Inclusivity & Modification Attitudes in Collegiate Intramural Sport: A Pilot Study

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Abstract

The purpose of this study was to evaluate college students' inclusivity and openness for modifications made for those with physical disabilities in intramural sport. Participants were 268 students from two midwestern universities. Attitudes toward inclusivity and modification were assessed using the Collegian Attitudes toward Inclusive Recreation (CAICR) Scale. Data were analyzed using multiple linear regression. Results show that positive attitudes toward inclusivity increased as students got older, and male students were less likely to be inclusive compared to female students. Students majoring in education and human services fields had more positive attitudes toward inclusion than those in arts and sciences fields did. Being a non-traditional student was the only and strongest predictor of less positive attitudes toward modification. Findings demonstrate that students in the two midwestern colleges may have welcoming attitudes toward individuals with physical disabilities in intramural sports; however, they may be less willing to make modifications, particularly among non-traditional students.

Keywords

college students, disability, sport

Discussions about inclusion for all individuals across all aspects of the college experience have been going on for years. With the Architectural Barriers Act (ABA) of 1968 and the Americans with Disabilities Act (ADA) passing in 1990, the spotlight became more focused on including individuals with disabilities at all private and public institutions in the United States. The

ADA mandates that no institution can discriminate based upon disability. This means giving individuals with disabilities access to all spaces. Just after the ADA was passed, it was thought by numerous institutions of higher education that if the buildings were accessible and architectural barriers were removed to ensure "physical access" that an institution was inclusive.

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However, over time it became more apparent if individuals with disabilities are going to have access, and be included, there needs to be a welcomeness that comes from the environment beyond the physical structure. The community in and around the institution needs to perceive, value, and demonstrate a level of acceptance for the inclusion of all people through their actions, policies, and attitudes.

Institutions of higher education have been using phrases about diversity, acceptance, difference, etc. in their mission statements or vision statements for years. Colleges and universities have been working to demonstrate to their students, prospective students, students' parents/caregivers, and communities that they celebrate diversity and difference. However, there is also evidence that students with disabilities may shy away from participating in campus recreation programs because of their perceived lack of acceptance from their peers (Hodges, 2000).

As campus recreation programs/centers are an integral part of every campus, it is important to note that the National Intramural and Recreation Sports Association (NIRSA) published the *Equity, Diversity, and Inclusion Resource Guide for Leaders in Collegiate Recreation* (Motch-Ellis, 2019). Within that guide, definitions are provided for diversity, inclusion, equity, and multiple other terms on the topic. Additionally, the resource guide includes sections discussing identity, creating an inclusive community, and including all students. As is evident, NIRSA has spent time identifying methods for increasing awareness, creating an inclusive environment, and developing advocates within their professional structures.

Review of Related Literature

It goes beyond facilities for another barrier that has been discussed is that the integration of students with physical disabilities often results in the stereotypical belief that an individual is also mentally impaired, and the following discriminatory actions of campus recreation staff and other students (Gmelch et al., 1998). Bassett-Gunter et al. (2019) and Martin Ginis et al. (2016) both found that the level of training and awareness

was lacking among the campus recreation professionals in regards to making accommodations and including students with disabilities. Everyone seems to be supportive of the idea but often takes on more of a perception that individuals with disabilities are inspirational, heroic, or extraordinary. It is these types of perceptions that may be uncomfortable for individuals with disabilities to engage in participation (Cottingham et al., 2015; Devine, 2016).

Over the last 30 plus years, there has been research from the perspective of students with disabilities, the university professional (i.e., campus recreation directors), and one early study in regards to the university students and their perceptions of inclusion. One of the earliest pieces of literature published about the inclusion of students with disabilities on campus indicated that new facilities were being designed to be accessible, but there is no guarantee for inclusion (Green & De Coux, 1996). In the 1990s, various experts emphasized and expected that more students with disabilities would be attending college because of the ADA. Recommendations were made to campus recreation directors that they needed to start adapting their programming to include students with disabilities, begin to purchase adaptive equipment, use inclusive language on their brochures and fliers to reflect an inclusive environment, and also focus on training their staff in meeting the needs of their students with disabilities, and even encourage students with disabilities to be present on advisory boards. All of this was recommended as an investment in the institution's future. A powerful reason for this belief is that research supports that campus recreation programs are crucial to the recruitment and retention of students on almost every campus (Forrester et al., 2018).

Since the early 1990s, researchers have examined the satisfaction of students with disabilities with campus recreation programs. Yoh et al. (2008) found that students with disabilities had a significantly lower perception of facilities for campus recreation than their able-bodied peers on campus. Even earlier, one study found that the lack of lack of opportunity and access to programs and/or facilities was a barrier to participation in campus recreation programs (Hodges, 2000).

Most recently, Spencer (2019) interviewed directors of campus recreation programs to

evaluate the inclusiveness of their programs. One overarching finding was that campus recreation programs and specifically intramural sports are being designed to be more inclusive of all abilities, and even adding adapted team sports to the competition calendar including goalball, sitting volleyball, beep ball, and wheelchair basketball (Spencer, 2019). Spencer (2019) also noted that these adapted sports could be played by those with and without disabilities, allowing for and promoting social integration for all.

Hurd and Forrester (2006) identified that both faculty and staff at a university using the campus recreation facilities need to feel (a) comfortable in the atmosphere when participating, (b) their skill level is acceptable – whatever that is, and (c) their level of fitness is not judged. The thought is that constraints felt by typically able individuals would align as similar constraints perceived by college students with disabilities. Generally, persons with disabilities experience similar perceived constraints and barriers as their able-bodied peers. Barriers/constraints identified by persons with disabilities have included: (a) structural, (b) social and attitudinal, (c) psychological, (d) communication, and (e) programmatic accommodations (Hironaka-Juteau & Crawford, 2010). This relates to what, why, and how an environment is considered inclusive for students with disabilities. The staff perceptions and/or training seems to also play into the level of inclusivity of campus recreation programs which is evident in various studies (i.e., Bassett-Gunter et al., 2019; Gmelch et al., 1998; Martin Ginis et al., 2016; and Shapiro et al., 2020).

Shapiro et al. (2020) conducted a study to focus on the factors inhibiting and facilitating the adapted and inclusive intramural sports programming for college students with disabilities by campus recreation departments. The researchers looked at what programs the university was offering, what modifications and adaptations were being made, what strategies were being used, what were the needs of the staff regarding programming, and what were staff perceptions of providing inclusive or adapted programs. The findings showed that campus recreation departments offered inclusive and accommodating programs but significant barriers persisted, including

limited time to train staff, lack of facility space, and students with disability's limited interest (Shapiro et al., 2020). Attitudes and stereotypical perceptions of students with physical disabilities were found to impact participation in inclusive sports. Shapiro et al. (2020) noted that a limitation of the study was that they did not ask the participants (staff of campus recreation departments) of their perceptions of college students' attitudes toward their peers; they did indicate the need for future research.

Attitudes matter, the perceptions that people have towards individuals who are different affect whether sports activities and fitness programs are inclusive. Since the 1980s different researchers have focused on inclusion at the university level and used different methods to examine college students' perceptions of individuals with disabilities. These different instruments have included: (a) the Interaction of Disabled Person Scale (Lundberg et al., 2008), (b) the Attitude Toward Disabled Persons Scale (Kisabeth & Richardson, 1985), and the Attitudes Toward Integrated Sports Inventory (Gillespie, 2002). It was time to examine the attitudes of university students toward the participation of individuals with disabilities in a campus recreation program. Gillespie (2002) did just that with a research project where 46 students who participated in a campus recreation in Canada were surveyed using hypothetical scenarios where an individual with a disability was participating on one of their teams and then asked to comment on different statements regarding their attitudes toward the person with a disability in their intramural league. Based upon the college students' responses, Gillespie (2002) reported that the university students have relatively positive attitudes toward integrated campus recreation programs. It was noted that when looking at the actual impact upon the sport and/or game where modifications were being made to rules and participation opportunities during the game students' attitudes were more negative compared to the generally positive attitudes toward inclusion as a whole (Gillespie, 2002). While Gillespie's study was conducted 20 years ago, much has changed as those in Generation Z, those born between 1995–2010 are thought to be more welcoming and open minded

(Seemiller & Grace, 2016). Characteristics of Gen Z include: loyal, thoughtful, compassionate, open-minded, and responsible (Seemiller & Grace, 2016). When combining these characteristics Seemiller and Grace believe that this generation is not very competitive, or they rein in their competitiveness because of their loyalty, compassion, and thoughtfulness.

Other than Gillespie (2002) there appears to have been a lack of an instrument specific to college students' attitudes toward inclusive campus recreation. As a result, McKay et al. (2019) developed a collegiate adaptation of the Children's Attitudes toward Integrated Physical Education-Revised Scale (CAIPE-R; Block, 1995) known as the Collegian Attitudes toward Inclusive Campus Recreation (CAICR) scale. The CAICR was determined to be an acceptable instrument for measuring attitudes toward inclusive lifetime fitness, sport, and recreation at the collegiate level through their research. Since McKay et al. (2019) were focused on the validity and reliability of the CAICR they recommended that further research use the instrument with larger sample sizes and explore different college and university settings.

In the context of the ADA, the term "disability" is not a medical term. However, the ADA does define a person with a disability as "a person who has a physical or mental impairment that substantially limits one or more major life activity" (ADA National Network, n.d.). While disabilities can differ by type, impact and visibility, for the purpose of this paper only, the authors discuss disability as a visible physical disability. The purpose of this study was to examine the perceptions of university students toward inclusive lifetime, fitness, sport, and recreation at the collegiate level at two different mid-western universities. This study will add the current literature by also exploring how college majors also shape attitudes toward inclusion and modification.

Methods

Participants

Data were collected from a convenience sample of participants from two universities in the

Midwestern United States between November 2020 and February 2021. Participants had to be 18 years or older and currently enrolled in the universities were eligible to participate to be included in the study.

Design & Procedures

This study is a web-based, cross-sectional survey. Participants were recruited using email and various social media platforms (Facebook & Instagram). Under the requirements from the Institutional Review Board (IRB), an electronic informed consent document was signed before the completion of the survey. No personal identifying information was collected to ensure anonymity. Participants could withdraw from the survey at any time, without justification, and no data was saved. The survey took approximately 10 minutes to complete.

Measures

Outcome Variables. The main outcomes were attitudes toward inclusion and sports modification. They were assessed using the Collegian Attitudes toward Inclusive Campus Recreation (CAICR) scale (McKay et al., 2019). The CAICR scale measures attitudes toward inclusivity and willingness to modify sport in recreationally active college students. The 11-item CAICR demonstrated high internal consistency according to McDonald's ω of .90 (McKay et al., 2019).

To complete the scale, participants first read a vignette of how "Taylor", a student living with cerebral palsy, desired to participate in her campus recreation center activities. Then, they completed the CAICR scale evaluating their attitudes toward Taylor participating alongside them at a recreation center. Each of the items was scored on a 4-point Likert scale (4 = yes, 3 = probably yes, 2 = probably no, 1 = no). Item number three on the scale is reverse scored. The CAICR has two subscales: attitudes toward inclusion (6 items) and sports modification (5 items). Each subscale item was first summed and then divided by the total number of items to compute a mean score. The total score ranges from 6 to 24 on the inclusion subscale, and 5 to 20 on the sports modification subscale. For this study, the

inclusion and sport modification subscales were each treated as a separate outcome measure.

Covariates. Participants also completed a socio-demographic questionnaire assessing characteristics including age (years), gender (female, male, non-binary, prefer not to answer), school status (University A vs. University B); year (freshman, sophomore, junior, senior, Ph.D./MD, other/non-traditional), major (arts and sciences, business administration, education, and human services, engineering and communication sciences, health sciences, medical and nursing students, and no major/non-traditional), and campus intramural participation (yes or no) and other recreation center use (yes or no).

Statistical Analysis. The statistical analysis proceeded as follows. First, the authors computed descriptive statistics for socio-demographic covariates and the two dependent variables, including separately estimating mean and standard deviation for scores on attitudes toward inclusion and sports modification per each covariate. Subsequently, in bivariate simple linear regression analyses, crude beta coefficients and 95% confidence intervals were independently calculated to assess the independent relationship between the socio-demographic variables and the two outcomes. Covariates in the bivariate analysis that reached a statistical significance of $p < 0.1$ were included in a final multivariate model. Further, an interaction term was created between gender and age and Wald test ($p < 0.05$) was performed to assess whether gender modified the relationship between age and attitudes toward inclusion and modification.

Assumption about multicollinearity in the model was evaluated using variance inflation factor. Assumptions about the normality of residuals and normal distribution of the outcome variables were checked using quantile-quantile plots and Shapiro Wilks test. Statistical significance was set at $p < 0.05$. Data were analyzed using Stata Statistical software version 15.

Results

Demographic Characteristics

Students' socio-demographic characteristics and mean scores on attitudes toward inclusion and

modification are presented in Table 1. The mean age of college students in the study was 23 years. The majority of them were female students (68.30%), had arts and sciences (31.32%) as their major, attended University A (71.70%), and were seniors (32.83%). More students participated in intramural sports at a recreational center outside of campus (43.67%) than on campus (14.67%) (See Table 1).

The mean score on the inclusion and modification sub-scales was 3.39 and 3.49, respectively. These scores indicate that most students endorsed "yes" or "probably yes" on the inclusion and modification subscale items (See Table 1). Students who had no chosen major or were non-traditional students had the highest mean score on both the inclusion (3.35) and modification sub-scales (3.85).

Bivariate and Multivariate Results

Crude analyses presented in Table 2 showed that age, gender, and major were statistically significantly associated with attitudes toward inclusion. Specifically, the older students were, the more positive attitudes they had toward inclusion ($\beta = .007$, 95% CI: .0023, .01; $p < 0.01$). Male student's attitudes toward inclusion were less positive than female student's ($\beta = -.11$, 95% CI: $-.18, -.32$; $p < 0.01$). In addition, attitudes toward inclusion of students with non-binary and those who preferred not to indicate their gender identity did not differ significantly from female student's. Whilst all the student majors, except business administration and non-traditional students, predicted more positive attitudes toward inclusion than those in the arts and sciences, only education and human services ($\beta = .14$; 95% CI: .04, .24; $p = 0.01$) and health sciences were statistically significant ($\beta = .09$; 95% CI: $-.18, -.01$; $p = 0.03$) (See Table 2).

The crude analysis further showed that only student major statistically significantly predicted attitudes toward sport modification. Compared to students in the arts and sciences, those in business administration ($\beta = -.27$, 95% CI: $-.51, .03$, $p = < .001$) and those who had no major/non-traditional ($\beta = -.53$, 95% CI: $-.82, .24$, $p = < .001$) had fewer positive attitudes toward

Table 1. Collegian Attitudes Inclusive Campus Recreation: Descriptive Statistics (N = 268).

Variable	Value	Inclusion Mean ($\pm$ SD)	Modification Mean ($\pm$ SD)
Inclusion (Mean ($\pm$SD))	3.39 (.27)	--	--
Modification (Mean ($\pm$SD))	3.49 (.60)	--	--
Age, years (Mean ($\pm$SD))	23.55 (6.69)	--	--
Gender (N, %)			
Female	181 (68.30)	3.43 (.24)	3.52 (.58)
Male	73 (27.55)	3.33 (.30)	3.37 (.64)
Non-binary	8 (3.02)	3.35 (.34)	3.85 (.21)
Prefer not to answer	3 (1.13)	3.28 (.42)	3.33 (1.15)
Major (N, %)			
Arts and Sciences	83 (31.32)	3.36 (.27)	3.60 (.59)
Business Administration	32 (12.08)	3.34 (.27)	3.33 (.67)
Education and Human Services	40 (15.09)	3.49 (.27)	3.53 (.67)
Eng. and Comm. Sci.	9 (3.40)	3.40 (.34)	3.53 (.41)
Health Sciences	72 (27.17)	3.44 (.23)	3.51 (.51)
Medicine/Nursing	7 (2.64)	3.40 (.23)	3.51 (.72)
No major/other traditional	22 (8.30)	3.30 (.28)	3.07 (.61)
Cohort (N, %)			
University A	190 (71.70)	3.40 (.26)	3.51 (.58)
University B	75 (28.30)	3.39 (.29)	3.42 (.65)
Year (N, %)			
Freshman	38 (14.34)	3.41 (.26)	3.56 (.49)
Sophomore	38 (14.34)	3.36 (.26)	3.37 (.68)
Junior	45 (16.98)	3.32 (.29)	3.38 (.66)
Senior	87 (32.83)	3.43 (.26)	3.48 (.63)
Masters	45 (16.98)	3.44 (.26)	3.66 (.42)
PhD/MD	5 (1.89)	3.40 (.35)	3.40 (.89)
Other	7 (2.64)	3.35 (.37)	3.37 (.73)
Campus recreation center intramural participation[#] (N, %)			
Yes	11 (4.67)	3.32 (.32)	3.51 (.39)
No	64 (85.33)	3.39 (.28)	3.40 (.68)
Other campus recreational center participation[#] (N, %)			
Yes	32 (43.67)	3.39 (.32)	3.35 (.70)
No	43 (57.33)	3.39 (.27)	3.46 (.61)

[#]only University B students.

modification. Notably, having no major/being a non-traditional student was the strongest predictor of less positive attitudes toward modification, based on the effect size estimate (See Table 2).

In the adjusted model (Table 3), all the statistically significant associations (age, gender, education and human services major) with inclusion persisted, except for health sciences major (Age: $\beta = .007$, 95% CI: .002, .01; $p = 0.01$; Male students compared to female students: *adjusted* $\beta = -.09$, 95% CI: $-.17$, $-.02$; $p = 0.02$; education and human services vs. arts and sciences: *adjusted* ($\beta = .11$; 95% CI: .01, .21; $p = 0.04$). In contrast, having no major/being a non-traditional

student was the only variable statistically related to less positive attitudes toward modification in the adjusted model ($\beta = -.50$; 95% CI: $-.80$, $.21$; $p = 0.01$) (See Table 3).

Student's cohort, year, or participation in intramural sports neither predicted attitudes toward inclusion nor modification in both the crude and adjusted model (see Tables 2 and 3).

Discussion

This study is the first study to evaluate attitudes toward inclusion and sports modification for individuals living with a disability using the

Table 2. Crude Analysis of Collegian Attitudes Inclusive Campus Recreation (N = 264).

Variables	Attitudes toward inclusion Crude β (95% CI)		Attitudes toward modification Crude β (95% CI)	p-value
Age, years	.007(.0023, .012)	<0.01	-.01 (-.02, .002)	.12
Gender				
Female	Reference		Reference	
Male	-.11 (-.18, -.03)	<0.01	-.15 (-.32, .01)	.07
Non-binary	.07 (-.27, .11)	.42	-.33 (-.10, .77)	.13
Prefer not to answer	.15(-.46, .15)	.32	-.18 (-.88,.50)	.59
Intercept	3.43 (3.39, 3.47)		3.52 (3.43, 3.61)	
Major				
Arts and Sciences	Reference		Reference	
Business Administration	-.01 (-.12, .10)	.83	-.27 (-.51, .03)	.03
Education and Human Services	.14 (.04, .24)	.01	-.07 (-.30, .16)	.55
Engineering and Communication Sciences	.05 (-.13, .23)	.57	-.08 (-.51, .36)	.73
Health Sciences	.09 (.18, .01)	.03	-.10 (-.29, .09)	.32
Medicine/Nursing	.05 (-.15, .25)	.63	-.09 (-.55, .37)	.71
No major/other traditional	-.05 (-.18, 0.07)	.41	-.53 (-.82, .24)	<0.001
Intercept	3.35 (3.29, 3.41)		3.60 (3.47, 3.73)	
Cohort				
University A	Reference		Reference	
University B	-.015(-.087,.06)	.68	-.10 (-.06, .261)	0.23
Intercept	3.40 (3.36, 3.44)		3.51 (3.43, 3.60)	
Year				
Freshman	1.00			
Sophomore	-.05 (-.17, -.07)	.44	-.19 (-.47, .09)	.19
Junior	-.09 (-.20, .03)	.14	-.18 (-.45, .08)	.18
Senior	.02 (-.09, .12)	.77	-.08 (-.32, .15)	.50
Masters	.03 (-.09, .14)	.68	.10 (-.16, .37)	.45
PhD/MD	-.01(-.26, .24)	.92	-.16 (-.73, .41)	.58
Other	-.06 (-.27, .16)	.61	-.19 (-.68, .30)	.45
Intercept	3.41 (3.33, 3.50)		3.56 (3.36, 3.75)	
Campus recreational center intermural participation[#]				
Yes	Reference		Reference	
No	.08 (-.11, .27)	.39	-.11 (-.53, .31)	.61
Intercept	3.32 (3.14 -3.49)		3.50 (3.11, 3.90)	
Other campus recreational center participation[#]				
Yes	Reference		Reference	
No	.0005 (-.14, .14)	.99	-.12 (-.19, .42)	.45
Intercept	3.39 (3.28, 3.49)		3.35 (3.12, 3.58)	

N = 75; Sample size for multiple linear regression = 258.

recently validated CAICR scale among various universities. It was found that older, female college students who were decided in their major (education and human services) were more inclusive of individuals with a physical disability compared to their younger, male

peers who were undecided/uncertain of their area of study.

It is well known and accepted that sport, exercise, and leisure-time physical activity (LPTA) have several health benefits for individuals across all abilities (Brown et al., 2014). With

Table 3. Adjusted Analyses of Collegian Attitudes Inclusive Campus Recreation (N = 244).

Variable	Inclusion Adjusted β (95% CI)	p-value	Modification Adjusted β (95% CI)	p-value
Age, years	.007(.002, .01)	0.01	--	
Gender				
Female	Reference		Reference	
Male	-.09 (-.17, -.02)	.02	-.13 (-.31, .03)	.10
Non-binary	-.03 (-.22, .16)	.76	.24 (-.19, .67)	.28
Prefer not to answer	-.14(-.43, .15)	.35	-.26 (-.94, .42)	.45
Major				
Arts and Sciences	Reference		Reference	
Business Administration	-.004 (-.11, .11)	.95	-.23 (-.49, .01)	.06
Education and Human Services	.11 (.01, .21)	.04	-.06 (-.29, .17)	.63
Engineering and Communication Sciences	.09 (-.09, .27)	.33	.01 (-.43, .45)	.98
Health Sciences	.08 (-.01, .17)	.07	-.09 (-.28, .11)	.38
Medicine/Nursing	.13 (-.10, .36)	.23	-.07 (-.53, .39)	.77
No major/other traditional	-.05 (-.18, -.08)	.44	-.50 (-.80, -.21)	<0.01
Intercept of Multivariate Model	3.23 (3.10, 3.67)		3.62 (3.47, 3.76)	
Adjusted R ²	0.07		0.04	

the passage of the ABA in 1968, and the ADA in 1990, many on-campus buildings and recreation/fitness centers are physically accessible and the missions behind them are that of inclusivity. However, if the goal is to increase physical activity and inclusivity, merely meeting architectural guidelines is not enough; there must be a social environment that is just as welcoming as a building aims to be. The *Field of Dreams* (Robinson, 1989) adage, “If you build it, he will come” may not apply at these universities as the facilities meet ADA requirements, yet our data suggest that students are not as inclusive as we had hoped. We know that “a welcoming environment encompasses an underlying attitude toward individuals with disabilities characterized by accessibility statements, use of people-first language, access to physical spaces, providing support staff, and encompassing a wide scope of program offerings” (Young et al., 2016, p. 23).

Massey and Rodgers (1986) theorized that there are three distinct periods in which values are developed: the imprint, modeling, and socialization periods. The socialization period, between the age of 13–21 years, is the time when individuals gravitate towards those who are most like them (Massey & Rodgers, 1986). This theory supports the current study’s findings that female college students’ attitudes were more inclusive than their male peers.

In the survey scenario for this study, “Taylor” was a college female with cerebral palsy. Not only are female students seen as more empathetic, but they may also have gravitated towards Taylor because of her gender.

Our findings are consistent with previous research which showed that college female have more positive perceptions of individuals with intellectual disabilities (ID), are more willing to interact with individuals with ID, and are more likely to see the value of including students with ID than male students (Griffin et al., 2012; Hazzard, 1983).

This study suggests that among college students in the Midwest, attitude toward inclusivity in intramural sports increased with increasing age. One explanation for this observation is the rise of Generation Z, as they have been shown to take strong social justice stands (Seemiller & Grace, 2016). As a society, we anticipate inclusivity to improve through generations, but the speed of this has yet to be determined. Despite this acceptance, the authors did not find age to be associated with sports modification. This finding suggests that as students get older, they develop more positive attitudes toward inclusivity, yet they do not want to make the necessary changes within the game to accommodate individuals, like Taylor (who has cerebral palsy). This may be due to a result of exposure to

individual differences as individuals age, and persons with various disabilities, as well as the possibility that college students remain fairly competitive. Future research is needed in this area as much of the research on age and inclusion focuses on children and older individuals, but limitedly on how inclusivity on an interpersonal level (Martin Ginis et al., 2021).

While we found that younger students are more likely to be less inclusive than older individuals, Seemiller and Grace (2016) in contrast found that older students (Gen Y/Millennials) tend to be more competitive than younger students (Gen Z), and thus more exclusive. This difference in finding may be due to variations in levels of competitiveness or exposure to individuals with a disability since the researchers of the current study did not ask about exposure to individuals with disabilities and the competitiveness of participants. However, increased exposure to diverse experiences throughout the university experience may positively impact inclusivity and acceptance of modifications.

To our knowledge, this is the first study of this kind, examining a program/study of interest and its implication on inclusion and modification in sport. We found that education and human services majors were more inclusive than arts and sciences majors. Those who were undecided or non-traditional students were not as inclusive toward sport modification. Degree trajectories such as elementary Education, Special Education, and Counseling can be sought through education and human services at both universities. These career and degree programs may naturally attract more open and inclusive individuals, and/or they have been educationally socialized to have positive perceptions of individuals with disabilities. The current study also indicated that those who were undecided majors and non-traditional students were the only major seemingly less interested in modifying sports to include "Taylor". Otherwise, there is no difference in attitude toward modification across majors.

Strengths and Limitations

To our knowledge, this is the first study to compare different types of universities and student

perception of disability through participation in intramural sport. While this was an exploratory study, the researchers found a need for increasing exposure to, and inclusion of individuals with disabilities in the campus recreation setting.

Unlike the Children's Attitudes toward Integrated Physical Education- Revised (CAIPE-R; Block, 1995), the current study did not evaluate participants' competitiveness or experiences with individuals living with a disability. Contact theory suggests that students may be more inclusive if they are exposed to those individuals with disabilities more often (Allport, 1935; Silvers & Francis, 2005; Tripp et al., 1995). Future studies should include disability contact-related and competitiveness questions. Another limitation was that COVID-19 pandemic restricted access to the recreation center and other venues for recruiting students.

Moreover, the current study only examined one disability, and did not indicate the severity of the condition. Thus, it is unclear whether the type and severity of disability affects inclusiveness.

Introducing various disabilities (i.e., various mobility and visual impairments, intellectual disabilities, etc.) to determine if perceptions of inclusiveness are impacted by the type of disability. Finally, the size of the university may be a factor in the participants' perception of inclusiveness, thus future study should vary the size of the university.

Conclusion

Habits and behaviors formed in young adulthood set the tone for future habits of older adults, making the health habits formed throughout college of great importance (Schmidt, 2012). If individuals with disabilities are going to reduce their risk of developing comorbidities associated with physical inactivity, it may be crucial to develop and establish a routine to include positive health habits in college to assist in long-term positive health behaviors. A welcoming environment for recreation opportunities is of utmost importance. In order to achieve this goal, efforts must be focused on improving attitudes of younger students and those who identify as male or non-traditional. Yet, those who are undecided in college major are the most critical group to reach to promote higher levels of inclusivity.

Limited research has been conducted in the area of inclusive intramural sport at the collegiate level and the inclusive perceptions of college students at various universities. While this new generation of students is said to be more inclusive, the willingness to make modification to sport is still lacking. There is still a desire for and much to be learned about changing attitudes toward inclusion and modifications in intramural sports on university campuses. However, the results showed that while college students showed more inclusivity, modification to sport was still lacking in that those who were undecided and non-traditional students, demonstrated they were slightly less willing to make modifications to sport. Future studies should examine personal experiences as well as individual competitiveness.

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