

Undergraduate Student Attitudes toward Disabled Persons and Influence on Disability Sport Volunteerism

Dwedor W. Ford¹, Ph.D.¹, Gloria H. Elliott, Ph.D¹, Minyong Lee, Ph.D.¹

Abstract

The purpose of this study was to assess undergraduate student attitudes toward persons with disabilities and whether their attitudes impacted their disability sport volunteerism. The information presented should contribute to a growing field of study that seemingly in its current state lacks a representative amount of research to help people understand the significance of the disabled community and sport. This article is also an attempt entice more persons, especially, undergraduate students to volunteer with disabled persons while in school in an effort to interest them in future career opportunities present within disability sport. This article should be of interest to sport practitioners, academicians and volunteer groups seeking the involvement of undergraduate students in the area of disability sport. Data from the Attitude toward Disabled Persons (ATDP) Scale along with additional questions were collected on 203 undergraduate students. Findings revealed no significant difference between gender and ATDP scores, although, females exhibited more favorable attitudes towards disabled persons. Also, higher ATDP scores translated in volunteer involvement in disability sport events.

Keywords: Attitude toward disability persons, disability sport, sport volunteerism.

Introduction

The world is inclusive of, in a very general context, non-disabled and disabled persons. Of the 7.4 billion persons (U.S. Census Bureau, 2016) living on the earth, there is an estimated one billion (15%) of those persons living with some form of disability (World Health Organization (WHO), 2016). In the U.S. alone, 19% of the population lives with some form of disability (U.S. Census Bureau, 2012). The distinction between non-disabled and disabled persons, in essence, is driven by a person's ability, or lack thereof, to be self-sufficient in navigating major daily life activities (Americans with Disabilities Act, 1990). Due to this distinction, persons who have either been labeled and/or self-identified as having some form or variation of disability have struggled to overcome a number of challenges such as social exclusion, discrimination, and accessibility. The three aforementioned challenges, along with others, have been demonstrated in the context of sport, thus limiting disabled persons' ability to be fully engaged in sporting activities with non-disabled persons.

In response to these challenges, disability sports were formed to address the growing desire and need for disabled persons to become physically active and have the opportunity to compete athletically (DePauw & Gavron, 2005). The term disability sport(s) is the inclusion of various sports designed for, or specifically practiced by, people (athletes) with disabilities (i.e. physical, sensory, intellectual) (DePauw & Gavron; sportanddev.org, 2013). Historically, the disability sport movement in the United States began as a form of rehabilitation for many of the men and women injured during and following World War II ("A Brief History," 2014; French & Hainsworth, 2001, Le Clair, 2012). Following World War II, disability sport has progressively moved to include recreation and competition in addition to its original rehabilitation focus.

¹ Assistant Professors of Department of Human Performance and Leisure Studies, North Carolina A&T State University, Greensboro, NC, USA. E-mail: mlee1@ncat.edu

The recreation and competition aspect of disability sport has modified/adapted the rules, regulations and equipment of most of the existing sport activities to meet the needs of disabled persons/athletes. For example, specially designed wheelchairs in sports such as basketball, rugby, tennis, and dancing allow participants to engage in the sport without sacrificing the overall essence of the activity. As a result of modifications to various sporting activities, disabled athletes are able to draw on the many benefits sport provides, such as: improved rehabilitation, experience of less stress, increased independence, higher academic or employment achievement, reduced dependency on pain and depression medication, fewer secondary medical conditions (Disabled World, 2016), the acquisition of life skills (Rohwer, 2013) and the occasion for socialization.

According to Coakley, Hallinan and McDonald (2011), socialization is an active process of learning and social development occurring as individuals interact with others in the involvement of the formation of ideas about who we are and what is important in our lives. Sport, in the process of socialization, can produce positive or negative results in all stages of human growth. On the negative side, because of the spirit of competition, sport can facilitate unsportsmanlike conduct and violence while on the positive side, sport can create and support a person's social identity (Rosewater, 2009) as it reflects and reinforces societal norms. Disturbingly, societal norms from various parts of the world reflect the continued marginalization, segregation, stigma and social exclusion of disabled persons (International Federation of Social Workers, 2016). Unfortunately, the sport industry has been no exception to the social injustices that facilitate to marginalize certain groups as it grants insight to sensitive issues such as racism, sexism, classism (Macri, 2012) and ableism, a discriminatory term used in favor of able-bodied people (Ableism, 1981).

Disabled individuals continue to face challenges socially as the perpetuation of negative stereotypes, attitudes, and perceptions, and thus these aforementioned factors impede the progressive of improved integrated socialization between those with and those without disabilities. The continued exclusion deprives disabled persons' opportunities to engage and develop relationships with others, which is essential to their social development and overall well-being (Right to Play, 2008; Right to Play International, 2008). Since disabled persons remain members of society, it is essential they be treated as individuals and not their disability, as well as has increased opportunity for improved quality of life and participation in sporting activities. Sport contributes to normalization and affords disabled persons to have a forum to share personal experiences and enjoy camaraderie with others (Right to Play). Nondisabled persons having opportunity to work alongside disabled persons would thereby facilitate experiences promoting improved understanding and increased sensitivity whereby the development of more favorable attitudes and perceptions toward disabled persons by the nondisabled.

This investigation examined the attitudes of undergraduate sport science students toward disabled persons and whether their attitudes led to actual volunteer involvement in disability sport events.

Undergraduate Students' Attitudes Toward and Participation with Disabled Persons

Despite the many milestones, such as the Americans with Disabilities Act of 1990 advancing civil rights and advocacy for disabled persons, disability still seemingly evokes discomfoting attitudes and awkwardness. Much of the discomfort may stem from a lack of understanding that can be combated by both more public education and daily interactions (Aiden & McCarthy, 2014). According to Aiden and McCarthy, attitudes are a complex set of beliefs, feelings, values and dispositions that characterize the way a person thinks or feels about certain people or situations. They are often the result of experiences, social factors and learning primarily developed during a person's formative years that clearly influence show the person behaves.

Concerning disability, there is a large body of research documenting attitudes towards disabled persons, from childhood to adulthood. For most nondisabled children and adults, they are fairly segregated from their disabled peers. Thus, the challenge of encouraging positive attitudes, behaviors, and engagement of nondisabled persons toward disabled persons. An earlier study by Rosenbaum, Armstrong, and King (1988) examined children's expressed attitudes toward their handicapped peers. The authors developed a 36-item questionnaire called The Chedoke-McMaster Attitudes toward Children with Handicaps [CATCH] to measure the affective, behavioral intent and cognitive domains of children aged 9 to 14 years of age. Findings suggested that girls had more positive interactions with their handicapped peers than the boys and that the age (9 to 14 years) of the child did not matter in their attitude of their disabled peers.

Donaldson, Helmstetter, Donaldson and West (1994) examined 142 nondisabled students enrolled in seventh-grade social studies classes. The students were engaged in a developed unit of a series of social studies activities designed to promote increased awareness, understanding, sensitivity, acceptance and interaction with disabled persons. Attitudes and contact with peers were measured using The Acceptance Scale: Secondary Level (Version B) (Voeltz, 1981).

Findings for the study indicated that students' attitudes towards disabled persons improved pretest to posttest. In addition, students, six months later, showed significant improvement in acceptance and increased contact with disabled students. As young adults, undergraduate students encounter a varying array of persons different from them; thereby, broadening their world context. Among these encounters are disabled persons (i.e. physical, learning/intellectual, visual, speech, health-related, etc.). On the collegiate campus alone in the 2011-2012 academic year, according to the U.S. Department of Education (2015), 11% of undergraduate students reported having a disability. Unfortunately, every disabled student in high school is not college qualified, may delay entry to college and if the disabled student does attend college, he/she may not report their status or seek services while enrolled (Wolanin & Steele, 2004). Therefore, more disabled students could exist on U.S. college campuses without anyone knowing. This would also make it more likely that nondisabled students will have some but limited interactions with disabled students at some point during matriculation. Lack of interactions of nondisabled students toward disabled students and related issues are sure to reveal their attitudes and perceptions.

After reviewing research in the field, Bruder and Mogro-Wilson (2014) concluded that in the current state of disability studies, the attitudes, beliefs and knowledge of university students (and faculty) on university disability-related issues was pertinent. The authors surveyed 881 undergraduate students (freshmen through seniors), who mainly lived on campus and where more than half majored in Liberal Arts and the Sciences. Participants completed a survey focused on three main areas: 1) interactions with disabled persons, 2) opinions regarding disability-related issues, and 3) community/classroom treatment and provision for disabled persons. Results indicated that the majority of undergraduates occasionally felt admiration, pity, awkwardness, and/or embarrassment when occasionally encountering a disabled person. Also reported was 54% of the students had been taught how to approach and interact with individuals having disabilities, five in ten indicated lack of enthusiasm about encounters with disabled persons, twenty-six percent indicated uncertainty of how to respond to a service animal (i.e. appropriateness in petting) and fifty-five percent said they had limited relationships with disabled persons. Because of the very limited interactions between the students and disabled persons, it would stand to reason why their attitudes toward disabled persons are not highly favorable.

Miller and Cordova (2002) examined the effectiveness of two specially designed college courses on changing student attitudes towards disabled persons. In addition, an additional course was used as the control course. The two specially designed courses provided students with advanced information concerning relationships between disabilities and recreational activities whereas the control course provided information pertaining to sport and recreational activities not related to disabled persons. Fifty-eight participants completed the Interactions with Disabled Persons Scale (IDP) (Gething, 1991) designed to measure dimensions underlying negative attitudes toward disabled persons. Results indicated no significant differences between groups pretest; however, significant differences existed between the two specially designed courses and the control course. From these results, the inference is that students who received information regarding disabled persons had increased positive attitudes towards disabled persons after taking the classes.

Rice (2009) examined undergraduate student attitudes toward disabled persons. The 295-participant sample for the study comprised students from sections of introduction to special education and political science courses. Instructors were asked at the beginning of each semester (fall and spring) to administer the Mental Retardation Attitude Inventory-Revised (MRAI-R) (Antonak & Harth, 1994) in class. Study findings demonstrated a significant interaction between students mean score on the MRAI-R, course and gender. The findings suggested that students enrolled in the special education course had increased favorable attitudes towards disabled persons with intellectual disabilities and females, regardless of major, had more positive attitudes than the males.

Stovall and Sedlacek (2015) surveyed 244 undergraduate students assessing their attitudes toward physically disabled students. Three forms (A - neutral, B - blind, and C - wheelchair) of the Situational Attitude Scale - Handicapped (SASH) were randomly administered to participants over a three-day period. The situations included as questions on the SASH developed from the literature and pilot studies.

Differences in attitudes among the three forms were significant. The authors reported that students generally had negative attitudes toward people who were blind or in wheelchairs when close contact was involved, but were more neutral or positive towards disabled students in less intimate settings. Attitudes toward blind students were more negative than attitudes towards students in wheelchairs in the following three situations: student seating next to you, student accepted to a university, student-offering help with assignment.

Situations where students preferred blind students to those in wheelchairs were noted in the following: if the participant's sister were asked to marry, the student insisted on receiving help, asked out on a date, mysterious experiences and meeting a blind person at a party. The women responded differently than the men with the women being more positive about their involvement situations regardless if the student was blind or in a wheelchair.

Hergenrather and Rhodes (2007) developed a study to determine the influence of social context of university students on attitudes towards disabled persons. The authors used the Disability Social Relations Generalized (DSRGD) Scale to understand the multidimensionality of attitudes towards disabled persons. The instrument measured three subscales representing dating, marriage and work. Thirty-seven juniors and seniors were involved in a 30-minute training on instruction of modeling behavior and role playing addressing the purpose of the DSRGD, how to approach students to determine interest and eligibility for completing the DSRGD, and provision of both the informed consent and the DSRGD. The representing sample for the study included 1,013 students of varying ethnic backgrounds. There was a statistically significant difference between males and females as females had more positive attitudes towards disabled persons than the males. No statistically significant differences were found with race/ethnicity or age.

Ford, Elliott, and Lee (2015) investigated undergraduate sport science students' attitudes toward disabled persons, their disability sport awareness and spectator interest. The Attitudes toward Disabled Persons (ATDP) survey and additional questions related to awareness and spectator interest were used to obtain data. The findings suggested that sport science students, regardless of gender or classification, have similar, positive views regarding disabled persons, and they are aware of some disability sports; yet, have low interest in spectating disability sport events.

Overall, most research supports undergraduate students beginning with seemingly unfavorable attitudes towards disabled persons, that is, until they are educated on disability related issues in addition to having meaningful interactions. Early accounts of unfavorable attitudes towards disabled persons were demonstrated in Ancient Greece. Greeks upheld ideal physical beauty and prowess for the human body in every facet of Greek culture, especially, sport; thus, insensitivities toward disabled persons presented itself in the forms of mistreatment and mockery in sport, as such with the Hephaestus's Olympian feast (Rimmerman, 2012). Following this time, there seems to be limited historical and statistical evidence regarding attitudes and perceptions toward disabled persons and their sport engagement. Even more limited is research on persons who volunteer with disabled persons to facilitate sport promotion and engagement among disabled persons. Noted is for those who engage or interact with disabled persons where they possibly gain respect for the challenges and barriers disabled persons face. They also may come to realize that disabled persons are not that much different than nondisabled persons thus the potential desire to want to assist them as volunteers in sport.

Volunteerism among College Students and in Disability Sport

The continued efforts (i.e. education, awareness, etc.) of mainstreaming disabled persons into society and sport is slowly progressive due to limited experiences and athletic opportunities, lack of reasonable accommodations, ostracization for having the disability or complete exclusion from sport participation (Lakowski, 2009). Despite the challenges and barriers to sport participation disabled persons face, a growing number of organizations such as the Adaptive Sports Foundation, Disabled Sports USA, International Paralympic Committee, and the Special Olympics, focus on providing opportunities for disabled persons to engage in sport. Along with the growth of disability sport organizations, mostly non-profit, is the need for more volunteers to be in contact with disabled persons. However, it is the attitudes and beliefs persons have toward disabled persons that affect whether or not they choose to become involved in disability sport. Influence of undergraduate student attitudes and beliefs toward disabled persons come from their academic training, interactions with both peers and faculty/administrators, as well as the amount of time spent in contact time engaged in community service opportunities focused on disabled persons.

Overall, higher educational institutions, in an effort to foster civic responsibility and expand narrow life perceptions, encourage and most times mandate that students volunteer in community projects/organizations. Berger and Ackerman (1994) reported that students who participated in community/service learning activities cited gaining considerably from their service experience and that the experience “put things in perspective” regarding their own lives.

According to the 2006 Corporation for National & Community Service report, Dote, Cramer, Dietz, and Grimm stated that 2.7 million college students volunteered in 2002. This number grew to 3.3 million (30.2%) in 2005. The authors went on to say that the growth was generated primarily by youth who attended high school or were first-year college students during the 9/11 terrorist attacks. Unfortunately, by 2010, the percentage of college students volunteering declined to 26.1 (Brumble, 2012). Part of the reason for the decline in student volunteering is students working more hours each week (Dote, Cramer, Dietz, & Grimm) as well as the lack of personnel and dedicated resources to engage students in community-based efforts (Soria, Troisi, & Stebleton, 2012). The authors of the 2006 Cooperation for National & Community Service report reported that college student volunteering was either episodic (service of fewer than two weeks per year with their main service organization) or occasional (service of three to eleven weeks per year with their main service organization).

Amongst the large number of college students who volunteer, most of their volunteer contact time is spent educational or youth services (31.6%), followed by religious organizations (23.4%), and then social or community service (16.3%) activities. Other types of organizations (i.e. hospital/health care; civic, professional, political, or international; sports, hobby, cultural arts; public safety, etc.) where students volunteer, each accounted for less than 11% of the total percentage of where students volunteered (Dote, Cramer, Dietz, & Grimm, 2006). Volunteerism with disabled persons falls into the category of social and community service; however, there is no disaggregated data to represent the actual number of students volunteering with disabled persons, much less disability sport. The challenge then becomes to make concerted efforts to engage more college students in volunteer/contact time with disabled persons, overall, and in sport so accessible data is reflected in related literature and research.

To date, there exists a very limited amount of literature discussing college students and their volunteering and/or contact with disabled persons. However, one article, in particular, provides an example of a collaborative effort between the Department of Recreation, Tourism, and Hospitality Management of the University of North Carolina at Greensboro (UNCG) and the Greensboro Parks and Recreation department who sought to establish not only contact but also significant engagement between nondisabled college students with disabled high school students. The collaboration espoused what is termed “inclusive volunteering.” Inclusive volunteering supports both nondisabled and disabled persons actively engaged in the improvement of their communities by placing them in positions to be recognized as community assets. Both the nondisabled and disabled students met weekly for two hours volunteering in various parks around Greensboro completing projects such as trail building, weeding, mulching and building bridges, gates and signs (Stroud, Miller, Schleien, & Adams, 2006). The authors reported that many of the university students had little, if any, contact with disabled persons prior to the program. Following the experiences, students reported increased confidence in their interactions with the disabled students, increased awareness of disability related issues and developed meaningful relationships with their disabled peers.

Although literature exists for volunteerism in sport, the amount of research dedicated to volunteerism in disability sport pales in comparison. One relevant and comprehensive study by Fitzgerald and Lang (2009) focused on sports volunteering and disability for the English Federation of Disability Sport by the Carnegie Research Institute at Leeds Metropolitan University. The review aimed to draw out key issues and identify gaps in the knowledge and understanding of this topic in the United Kingdom (UK). Based on two policy streams of civil renewal and social inclusion, the UK designed efforts to encourage voluntary activity within sport. Numerous nationally driven initiatives promoting sport volunteerism in the UK included some of the following:

- *Trailblazers* – a pre-Games office-based volunteer opportunity where volunteers perform administrative duties prior to the game,
- *Games Time Olympic Volunteer Programme* – volunteers served as assistance for the London 2012 Olympic and Paralympic games,
- *Step Into Sport* – volunteers 14 to 19 years of age begin and sustain leadership and sport volunteerism, and

- *Respect Athlete Mentor Programme* – elite athletes from various sports offer mentoring and support to disadvantaged young people in schools and community.

Development and application of similar initiatives presented by Fitzgerald and Lang (2009) can assist disability sport organizations in the United States develop effective volunteer programs and strengthen current volunteer policies. Two research studies investigated volunteer engagement within a disability sport context.

The first by Brooke-Holmes (2005) examined two Riding for Disabled Association (RDA) groups where the central volunteering motivation was the opportunity to help disabled people enjoy horse riding or carriage driving. The author found that volunteers expressed three main motivations: altruism and giving benefit to others; friendship and social affiliation; and long-term involvement with and loyalty to the group. The second by Kay and Bradbury (2009) studied young people ages 16 and older who were apart of the Step into Sport program which resulted in positive impacts on the volunteers who worked with disabled youth. Although there is limited research on volunteerism and disability sport, there is a great dearth of research on college student volunteerism in disability sport.

Being that disability sport is not a new concept; it is however, becoming more of a visible sector of the sport industry because of major sport events such as the Special Olympics, the Paralympics and the National Wheelchair Games. Although these events exist on a large scale, the interest and volunteerism in this area by college students is very low. College students who are interested in sport and sport careers usually do not consider disability sport as a viable volunteer or employment option. Students are rather excited in pursuit of entry into the well-known professional sports of football, basketball, and baseball. If they are not considering a career in professional sports, then the mindset is on intercollegiate athletics. These two sport sectors tend to generate a great deal of revenue for the sport industry as a whole and the excitement, money, fame and notoriety that comes with it only encourages more and more students to desire gainful employment in these areas. It is rather unfortunate that more students do not volunteer with disability sport activities.

According to Ford, Elliott, and Lee (2015), students within sport science programs or related disciplines seemingly have yet to appreciate the growing volunteer opportunities to meet the needs of disabled persons. Students enrolled in sport-type degree programs tend to lean toward volunteering for sports exclusive of disabled persons; therefore, the academy and the sport industry must address the training and expectations of sport science students in an effort to increase involvement and career choice within disability sport. One of the important pieces of increasing the number of students who volunteer in disability sport is to first discover and address their perceptions and attitudes toward disabled persons. From this information, discussion can then focus on how those attitudes and perceptions may or may not lead to their volunteerism in disability sport.

Method of Study

A convenience sample of 203 undergraduate students enrolled in a sport science program at a local Historically Black College and University (HBCU) participated in this investigation. Students were provided informed consent forms and instructions on how to complete the survey questionnaire. Upon completion of the questionnaire, participants were instructed to leave their survey questionnaire in a designated envelope at the front/back of the respective classroom.

The survey questionnaire used for this investigation was a modified version of the Attitudes Towards Disabled Persons (ATDP) Scale developed by Yuker, Block and Young (1986) which consisted of 20 items pertaining to a respondent's attitude toward disabled persons. In Yuker, Block and Young's original development of the scale, the authors used a Likert scale of +3 indicating strongly agree to -3 indicating strongly disagree; however, in the current study, the Likert scale was modified to reflect a score of 6 indicating a respondent's strong agreement with the statement to a score of 1 indicating a respondent's strong disagreement with the statement. The modified scale improved clarity of results from data analysis. Interpretation of higher scores indicated that the respondent perceived that disabled persons are not different from nondisabled persons while lower scores indicated the respondent perceived disabled persons different from nondisabled persons. In addition to the Attitudes Towards Disabled Persons (ATDP) Scale, participants were asked demographic questions pertaining to their gender and classification. They were also asked questions regarding their awareness of, interest in, and volunteer for disability sport events.

The information from the collected questionnaires were entered and analyzed by the Statistical Package for Social Sciences (SPSS) version 22.0. All descriptive data expressed the means \pm standard deviations for chosen variables. In addition, an independent t-test was calculated to examine the comparison between student volunteerism and gender with responses from the Attitudes Toward Disabled Persons (ATDP). Lastly, a logistic regression analysis was conducted to examine variables predicting disability sport volunteerism. The statistical significance level was set at $p < 0.05$.

Findings

In summary, of the total 203 sport science majors who participated in the study, 74.4% of students were classified as either a junior or senior, had a mean age of 20.3 years ($SD=0.55$) and were majority female (51.7%). Regarding respondent's experience and participation in disability sport events, only 18.7 percent of respondents volunteered in any disability sport events.

Independent t-test revealed that female students reported having a more favorable attitude ($M = 69.10$, $SD = 13.10$) toward disabled persons (higher ATDP scores) than male students ($M = 66.34$, $SD = 10.66$); however, there was no statistical significant difference between the groups. Another independent t-test revealed students with volunteer experiences with disability sport events had favorable attitudes toward persons with disabilities (higher ATDP scores) ($M = 68.56$, $SD = 11.90$) compared to non-volunteer experienced students ($M = 63.82$, $SD = 11.50$), $t(201) = 2.230$, $p < .05$.

A logistic regression analysis was conducted to predict how attitude toward disabled person influenced a student respondent's actual disability sport event participation in one of two forms: 1) as a spectator or 2) as a volunteer using independent variables, ATDP scores and gender as predictors. A test of the full model against a constant model was statistically significant, indicating that the predictors as a set reliably distinguished between volunteer experienced students and non-volunteer experienced students ($\chi^2 = 6.006$, $p < .05$ with $df=2$). Prediction success overall was 81.3 % which has been identified as being acceptable. The Wald criterion demonstrated only ATDP scores made a significant contribution to prediction ($p=0.36$). Gender was not a significant predictor.

Discussion

This investigation examined undergraduate sport science students' attitudes toward disabled persons to determine whether those attitudes predicted volunteer involvement in disability sport. The students completed the Attitudes Towards Disabled Persons (ATDP) scale used to determine student attitude toward disabled persons and influence on volunteer behavior in disability sport. Although, a statistically significant difference did not exist for gender, the results supported the expectation that females would have significantly more positive attitudes than males. The rationale for this hypothesis is that results from studies (Tait & Purdie, 2010; Hergenrather & Rhodes, 2007; Jones & Stone, 1995; Fielder & Simpson, 1987; Royal & Roberts, 1987; Stovall & Sedlacek, 1983; Livneh, 1982; Chesler, 1965) have found that among college undergraduates, females tend to have had more favorable attitudes and greater empathy toward disabled persons. In research by Fitzgerald and Lang (2009), they reported from the 2005 Citizenship Survey that women were more likely to volunteer than men, which in this case would support the reasoning why females may have the more favorable attitude toward disabled persons partly due to their involvement.

In addition, the current study confirmed the expectation that students who volunteered with a disability sport event would have a more favorable attitude toward persons with disabilities than those who have not volunteered. The confirmation of this rationale is present in research studies (Parasuram, 2006; Yazbeck, McVilly, & Parmenter, 2004; Eichinger, Rizzo, & Sirotnik, 1991) that speak to the effect of favorable attitudes when nondisabled persons are engaged in contact with disabled persons. Amsel and Fitchen (1988) explored the effects of contact of non-disabled students with disabled persons and found that students who had contact with disabled persons were more comfortable and more at ease during their interaction. Thus, the current study merely confirms research similar to Amsel and Fitchen about the effect of contact between disabled persons and nondisabled persons. The regression model suggested that gender was not a predictor of disability sport volunteerism.

When examining gender and volunteerism on a macro -level, according to the 2015 Bureau of Labor Statistics data on volunteering in the United States, 21.8 percent of men and 27.8 percent of women (which dropped from 28.3%) volunteered from September 2014 to September 2015. Even though the inference is that women continue to volunteer at a higher rate than men volunteer; the data does not indicate a substantial difference between the groups.

In the assessment of why women may volunteer more than men volunteer, the answer could be found in the traditional roles of men and women where women volunteers were not employed and men who volunteered had full-time jobs (Taniguchi, 2006). The current state of the workforce includes both men and women with full-time jobs, whether single or married, with or without children or elderly family members to take care of. This dynamic change in the workforce makes volunteering more difficult for women than men.

Thus, as the workforce continues to see a rise in women becoming more self-sufficient by working full-time jobs and taking care of the family, the gap percentage between men and women volunteering will grow closer. Concerning disability sport, student volunteerism and gender, it can be inferred that the macro-trend will be similar on this micro-level.

In the current study, the predictor of volunteerism in disability sport was a person's attitude toward disabled persons. Overall, students attitudes were favorable towards disabled persons; however, only 18.7 percent of them actually volunteered. This disconnect may be explained by a few factors: 1) time to volunteer (Hartnett & Matan, 2014), 2) internal and external marketing of disability sport events on college campuses, 3) lack of actual disability sport events on college campuses, 4) lack of transportation to get to and from a disability sport event (Brooke-Holmes, 2005), 5) lack of interest in disability sport, and 6) limited campus and community opportunities. A disturbing commentary is that the students in the study were sport science majors where coursework includes topics on disability and sport in various settings. Disability sport would offer them a practical experience in theory application.

There are limitations to this study. First, the lack of prior research on undergraduate student volunteerism with disability sport left the researchers without an established framework. Without this framework, the researchers had to define the needs for this study topic. Therefore, this study was an effort to begin further study and measurement of the subject area. Second, participants were all upperclassmen undergraduates majoring in sport science. There may be a difference in attitudes towards disabled persons and disability sport volunteerism between graduate students, undergraduate upper and underclassmen and students from other majors. Third, only two variables, gender and ATDP scores, were selected for potential predictors for students volunteering with disability sport events, whereas, further investigation of other variables may assist in the development of a model that may explain a more holistic approach to getting students to be disability sport volunteers.

Prior research has examined attitudes and perceptions of undergraduate students towards disabled persons. If the attitudes are negative, then the person's cognitive and emotional components need addressing (Pickens, 2005). To challenge a student's attitude and resulting behavior, techniques such as providing new and ongoing information and ways of involvement regarding disabled persons and disability sport must be readily accessible. Academic institutions and related training programs should therefore, strive to engage in more direct opportunities to partner with organizations that promote persons with disabilities as well as increase support for disability sport events (Ford, Elliott, & Lee, 2015). Additionally, the Right to Play (2008) organization recommended the following to improve relationships with disabled persons in the education and sport settings:

- Education of physical education teachers about disability
- Provision of educational toolkits to teachers discussing adaptations and inclusion
- Ensured visibility of teachers and coaches on staff with disabilities (at the university level this would include staff, faculty, and administrators)
- Establishment of programs and cooperatives educating individuals on adaptive sport, especially in the university system
- Inclusion of disabled persons in educational materials as sport participants
- Make disabled persons campaign target groups in sport
- Provide information on accessible sport facilities
- Plan national sports days or events highlighting inclusion
- Encourage service providers and sport clubs to target disabled persons for inclusion in activities
- Support inclusion of disabled persons in sport leadership positions (i.e. coach, teacher, etc.)

Knowing that there is a large number of disabled persons in the world that may directly or indirectly participate in disability sports, it stands to reason that college students, especially majors of sport and sport-related disciplines be prepared to proficiently engage with disabled persons and this can occur through disability sport volunteerism locally, nationally, and internationally. These opportunities will facilitate increased awareness, advocacy, and involvement. It is evident that volunteers are needed in disability sport as the Special Olympics alone relies on more than 750,000 volunteers and coaches (Special Olympics, 2016) to assist in the implementation efficiency of the event.

The small percentage of students who actually volunteered in disability sport events in this study demonstrated the very need for more research, education and training of disability and the opportunities that exist in disability sport. Increased and on-going efforts such as community education are needed to ensure that sport participation are inclusive, thus eliminating the perpetuation of discriminatory attitudes. By appropriately socializing nondisabled persons with disabled persons, using sport as a means, a reduction in its stigma will result. Thereby, more persons would potentially be more willingly to volunteer in events that focus on the disabled persons. Overall, the volunteer plays an important role in empowering the disabled person to become a more independent, involved member in the community. Both sides, nondisabled and disabled, can continue to journey toward understanding of the other; hence, becoming more apt to addressing the inequities that exist between the groups, especially in sport.

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