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ACADEMIC PAPER

## Recreation student attitudes towards persons with disabilities: considerations for future service delivery

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### Abstract

In order to fully include persons with disability in American society, they must be provided with the same opportunities to pursue recreation and leisure activities as everyone else. Understanding the attitudes of undergraduate students pursuing degrees in recreation is an important step in enhancing future service delivery for this group of users. The purpose of this research was therefore to examine the attitudes of undergraduate students enrolled in recreation and leisure service degree programmes towards persons with disabilities. An initial step was taken to establish a normative attitude mean for this population using the Attitudes Toward Disabled Persons (ATDP) scale, Form B (Yuker & Block, 1986). In addition, data were collected from 298 undergraduate students on the frequency of their interaction with persons with disabilities. Respondents' gender and frequency of interaction with persons

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*Specialising in recreation therapy, Tara Perry's interests revolve around the life experience of disability. Understanding attitudes towards persons with disability is essential in preparing current and future professionals to work and interact most effectively with all individuals, including persons with disabilities.*

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with disabilities (ranging from daily to less than six times a year) significantly accounted for differences in mean ATDP scores, while age, specialisation, and programme accreditation were found to have no significant impact on mean attitude scores.

**Keywords:** Attitude; Disability; Recreation; Undergraduate student

## **Introduction**

Attitude can be one of the most difficult barriers to recreation participation experienced by persons with disabilities (Bedini, 2000; Schleien, Ray & Green, 1997; Smith, Austin, Kennedy, Lee & Hutchinson, 2005). As Bedini (1992) stated, "People with disabilities historically have experienced discrimination and devaluation based solely on being different from the non-disabled public" (p. 45). Goffman (1963) wrote of persons with disabilities as possessing a stigma, an undesired differentness from what is anticipated. Bedini (2000) further touched on the implications of differentness, indicating that persons who are different are often avoided or rejected on the basis of societal stigmatisation. In her examination of the effects of perceived stigma on the recreation participation of persons with disabilities, study participants clearly believed that persons with disabilities were stigmatised by others in the community. Responses to perceived stigma included feelings of being demeaned, helpless, intimidated and disempowered. Bedini suggested that attitudes of persons both with and without disabilities would benefit from further examination in order to enhance understanding, and welcoming environments for those with disabilities, facilitated by those without disabilities, were as essential as accessible environments.

The Americans with Disabilities Act (ADA) of 1990 facilitated progress towards influencing societal behaviours towards persons with disabilities, as well as greatly improving access to a range of services. Specific to the recreation and leisure services profession, Robertson and Long (2008) stated, "Some feel that the Americans with Disabilities Act (ADA) has empowered people with disabilities to seek a variety of recreation options and to request inclusion in community life" (p. 58). The passage of the ADA has afforded an opportunity to scrutinise and change discriminatory practices, such as issues of inaccessibility and inadequate programming for persons with disabilities (Robertson & Long, 2008). While the ADA and other legislation cannot mandate attitude shift, the behavioural changes facilitated through legislation may ultimately assist with effecting attitudinal change.

As part of this process, academe and the service industry must address the training and role expectations of recreation and leisure services students as pre-professionals. In order to meet the needs of the over 60 million individuals with disability in the United States, approximately 21 per cent of the population (Mitka, 1999), a better understanding of attitudes towards persons with disabilities is essential. Specifically, a better understanding of the attitudes of persons without disabilities towards persons with disabilities is required (Kelly, Sedlacek & Scales, 1994). This project was designed to investigate the attitudes of college students, as pre-professionals, towards persons with disabilities. To this end, this paper provides a review of relevant literature, describes the methodology used, and outlines the results obtained. Finally, a discussion of these results and their implications is offered.

## **Attitude and disability**

Attitudes of people with and without disabilities can function to encourage or discourage persons with disabilities in their pursuit of participation in communities. Attitudes refer to beliefs that are directed towards a person, object or event, and may facilitate positive or negative reactions (Eagly & Chaiken, 1993). A common definition of attitude is the tripartite view, which asserts that attitudes are comprised of three components: affective, behavioural and cognitive (Lucas, 1999; Myer, 2008). Lucas (1999) states that, "Attitude is a favorable or unfavourable evaluative reaction toward something or someone, exhibited in one's beliefs, feelings or intended behaviour" (p. 1). Attitudes are very influential in forming an individual's world view.

Research emphasising the importance of attitudes towards persons with disabilities is sparse, with few studies addressing this issue in the last decade (Folsom-Meek, 1998;

Lucas, 1999; Moore, 1998; Palmer, Redinius & Tervo, 2000). The existing literature indicates that most persons with disabilities, like other minorities, desire to achieve acceptance and integration in society.

Continued efforts to change behaviours, and the subsequent quality of life for persons with disabilities, are evident in the Healthy People 2010 initiatives. These initiatives propose several objectives targeting persons with disabilities. Objectives of particular relevance to the recreation and leisure services professions include increasing the proportion of adults with disabilities who participate in social activities; increasing the level of satisfaction with life reported by persons with disabilities; increasing full access to health and wellness programmes; and reducing the number of adults with disabilities reporting environmental barriers to community participation. The Healthy People 2010 report also asserts that the greatest opportunity for reducing disparity between those with and without disabilities is through empowering individuals (US Department of Health and Human Services, 2000). The more accepting persons with disabilities are of their disability, intertwined with positive regard and acceptance by professionals providing services for them, the more positive the overall outcome of support and service provision (Joiner, Lovett & Goodwin, 1989).

### **Attitudes of college students towards persons with disabilities**

To better understand the role of attitude and its impact on the capacity of persons with disabilities to fully participate in community life, it is necessary to assess attitudes. College students are in a formative stage of their lives and research has demonstrated that higher education influences egalitarian attitudes (Chatard & Selimbegovic, 2007). Amsel and Fichten (1988) found that volunteer college students who had previous contact with persons with disabilities were more at ease interacting with this population than other students who had no contact, thus underscoring the importance of contact between students with and without disabilities.

Fichten, Robillard, Judd, and Amsel (1989) researched self-acceptance and peer-acceptance of college students with disabilities using the Coopersmith Self-Esteem Inventory (SEI, 1981). The SEI allowed the participants to rate how they perceived themselves, how they would like to be perceived, and how they thought they were perceived by others (Fichten et al., 1989). The two study groups, students with and without disabilities, were also asked to rate each other on a college student trait checklist including ten socially undesirable traits and ten socially desirable traits. Researchers indicated that there was no significant difference in the groups' SEI ratings. However, on the college student trait list, negative stereotyping of persons with disabilities was found to occur by students without disabilities and by students with a different disability.

Kelly, Sedlacek, and Scales (1994) expanded the Fichten et al. (1989) study and found a significant difference in how students with and without disabilities responded to a 24-item personality instrument when comparing how they rated themselves, rated the other group and how they perceived the other group would rate them. The researchers found that students with and without disabilities tended to rate each other in a 'stereotypical manner'. Respondents with a disability rated students without a disability as being more extrovert and emotionally stable than students without a disability rated students with a disability. Students with a disability also rated students without a disability as less conscientious and less cultured than students without a disability rated those with a disability. These results are especially interesting in light of the fact that there were no differences between how the two groups of students rated themselves on the personality traits. Overall, the research underscores the notion that stereotypes influence the attitudes of college students towards persons with disabilities.

The current study focused on the attitudes of students (pre-professionals) in the recreation and leisure services field towards persons with disabilities. Specific to this research, studies that utilised the Attitudes Toward Disabled Persons (ATDP) scale with college students in diverse professions are reviewed. The ATDP Scale was constructed to measure attitudes of persons with and without disabilities towards persons with disabilities. The scale consists of

three forms, A, B and O. Forms A and B consist of 30 items, and Form O is comprised of 20 items. All forms use a Likert response scale where participants indicate their agreement with each item on a continuum from 'strongly agree' through to 'strongly disagree'. There is no option for a neutral choice. Scores for Forms A and B range from 0 to 180, while Form O scores range from 0 to 120 (Yuker & Block, 1986). Higher scores indicate more accepting attitudes towards persons with disabilities, while lower scores reflect discriminatory or rejecting attitudes (Yuker & Block, 1986). Norms for the ATDP scale are typically above 100 (Paris, 1993; Yuker & Block, 1986).

In a study of 297 first- and fourth-year medical and dental students and health care professionals, Paris (1993) reported ATDP (Form B) mean scores of 111.9 for dental students and 122.1 for medical students. First-year medical students had significantly lower mean scores (119.8) than did the fourth-year medical students (127.2). Health care professionals, however, did not differ significantly from the student groups (mean=125.2). Paris (1993) also found a significant difference between females and males on mean ATDP scores: women in general, and women medical students in particular, have more positive attitudes towards people with physical disabilities than their male peers. Previous research has been inconclusive. Yuker and Block (1986) reported that, in 13 studies, five found higher ATDP scores for women, two found higher ATDP scores for men and six found no gender-related difference. More recent studies have found that women express more favourable attitudes towards individuals with physical disabilities (Yucker & Block).

In a similar study, Tervo, Palmer, and Redinius (2004) surveyed 338 graduate and undergraduate students majoring in various healthcare professions. These researchers used the ATDP Scale Form O and reported a mean score of 73.8. Nursing, medical and other health professional students had more positive ATDP scores than the norm for college students without disabilities, with no differences identified for gender (Tervo et al., 2004).

Lee, Paterson and Chan (1993) assessed ATDP scores for 144 occupational therapy students in Years 2 through 4 of their academic degree programme. Students were administered retrospective pre-tests and post-tests at the end of the first semester of an academic year during which they had experienced dissemination of accurate information about and exposure to persons with disabilities through clinical experiences as a part of the academic curriculum. Retrospective pre-test scores (122.8, 107.6, and 105.7 respectively for students in Years 2 through 4) were significantly lower than their post-test scores; therefore students perceived that they experienced a change to a more positive attitude towards persons with disabilities. While not significantly different among the second-, third- and fourth-year students, the post-test means showed a positive attitude, with scores of 131.8, 137.3 and 136.2 respectively. The study authors concluded that positive attitudes of occupational therapy students towards persons with disabilities are initiated through dissemination of accurate information about disabilities and maintained through continued exposure to information about and contact with persons with disabilities (Lee, Paterson & Chan, 1993). The authors observed that the difference in the higher retrospective pre-test scores by second-year students compared to the third- and fourth-year students may have been due to memory demand; the capacity to recall initial attitudes towards persons with disabilities may have been easier for the second-year students. However, one may also wonder if the views of the advanced students potentially reflected a more accurate knowledge about disabilities and a better ability to self-evaluate.

Bedini (1992) also found that education about disabilities facilitated attitude change of undergraduate students towards persons with disabilities. She examined the effects on ATDP Form O scores of 186 students from 12 different majors enrolled in two sections of a recreation and leisure services course focused on disability when compared to 51 control students in a journalism course. Students in the leisure services course and the control students reported similar pre-test scores of 85.5, 82.9 and 81.9 respectively. However, there were significant differences found in the post-test scores, with the intervention course students having means of 95.5 and 93.7, compared to the control student mean of 85.3. These findings provided mean ATDP scores for a group of undergraduates from diverse

academic majors and reinforced the finding that exposure to information about persons with disabilities can produce positive attitude change.

Chan, Lee, Yuen and Chan (2002) surveyed Chinese students enrolled in rehabilitation (n=73) and business (n=107) during the students' first and third year of study, using the ATDP scale (Form A). At the end of the first and third years, rehabilitation students had significantly more positive attitudes towards persons with disability while business students were more negative. First-year rehabilitation students scored a mean of 103.4 at the beginning of the year and 106.9 at the end of the year. Business students at the beginning of the first year scored a mean of 100.5 and decreased in mean score to 96.4 at the end of the year. The same trend held true for third-year students, with rehabilitation students compiling final mean attitude scores of 107 and 108, while business students scored 97 and 98. The authors recognised that the students may have scored lower than the ATDP norms due to their ethnic background. Chan et al. stated, "Studies on cultural differences and attitudes toward individuals with disabilities have found that Asians, including the Chinese, appear to demonstrate more negative attitudes than Caucasians" (p. 326). However, the authors indicated a specific need to examine further the trend in the decreased mean scores of the business students.

Using a different scale and student population, Loo (2001) examined the attitudes of 231 Canadian undergraduate management students towards persons with disabilities. Loo utilised the Interactions with Disabled Persons (IDP) scale, which is correlated with the ATDP scale. Loo's findings suggested that "these Canadian management undergraduates could, or better still, should develop more positive attitudes towards persons with disabilities" (p. 293). The articles reviewed here highlight some key points in understanding student attitudes towards persons with disabilities. Importantly, researchers in various disciplines have an interest in assessing student attitudes towards persons with disabilities and have utilised attitude scales as a common measurement tool to communicate their findings. Research findings indicate that there are differences in attitudes towards persons with disabilities among students entering diverse professions; students entering helping professions (i.e. medicine, dentistry, occupational therapy and rehabilitation) seem to have more positive attitudes than those seeking careers in business fields. In addition to differences among diverse majors, ethnicity may play a role in attitudes towards persons with disabilities. Finally, there is also documented evidence that interventions, such as the dissemination of information about disabilities and exposure to persons with disabilities, can positively affect student attitudes.

According to Smith et al. (2005), attitude is a top leadership competency needed to work effectively with persons with disabilities. Thus leadership competencies influence how professionals will interact with and serve persons with disabilities. Tervo et al. (2004) stated:

A positive attitude refers to a belief that those with disability can be productive community members, decide what is their own self-interest, and lead a normal life. At the affective level, it suggests sensitivity toward positive attributes and liking the person. At the behavioral level, it implies fashioning conditions to help an individual actualize their creative capacity toward self-sufficiency and contribute to the community. (p. 908)

In contrast, a negative attitude may be "one of the most powerful obstacles faced by individuals with disabilities who are attempting to be included in community recreation programs" (Schleien et al., 1997, p. 61). As discussed earlier, the ADA has helped to advance inclusion for persons with disabilities; however, attitudes cannot necessarily be legislated. Adoption of positive attitudes is necessary for persons with disabilities to be included in community recreation (Schleien et al.; Smith et al., 2005). As Yuker and Block (1986) state, "Differences between occupational groups arise because of differences in education and training and because different personal attributes are valued in role relationships" (p. 6). Given the paucity of research literature on attitudes of students in recreation and leisure services towards persons with disabilities, there is a need to gather and disseminate baseline attitude data. It is important to examine how education and training

can impact pre-professional attitudes towards persons with disabilities and facilitate the attainment of a top leadership competency necessary in working most effectively with persons with disabilities. The current study takes one step in beginning to build an understanding of recreation and leisure student attitudes towards persons with disabilities.

## **Purpose of the study**

This research represents an initial step in identifying a normative score for the attitudes of undergraduate students enrolled in recreation and leisure services degree programmes towards persons with disabilities, using the ATDP scale (Form B). Descriptive data regarding student attitudes towards disability and factors that might influence attitude (i.e. gender, age, disability status, area of specialisation, university programme accreditation status and frequency of interaction with persons with disabilities) were gathered. To this end the research questions examined were the following:

Question 1: What are the mean attitude scores on the ATDP scale of undergraduate students enrolled in recreation and leisure services degree programmes?

Question 2: What is the influence of demographic variables (age, gender and disability status), specific academic programme variables (area of specialisation and university programme accreditation status) and frequency of interaction with persons with disabilities on mean ATDP score of undergraduate students enrolled in recreation and leisure services degree programmes?

## **Methods**

### **Sampling and procedures**

Data to determine mean ATDP scores of undergraduate students pursuing degrees in recreation and leisure services were drawn from a compilation of two research studies, entitled Study A and Study B for clarity. Participants from Study A were 139 undergraduate students pursuing a degree from a National Recreation and Parks Association (NRPA) accredited recreation and leisure services programme in a university in the south-east region of the US. Purposive sampling of NRPA accredited and non-accredited programmes in recreation and leisure services in the same sub-region of the south-eastern US was utilised in Study B. The goal of this sampling technique was to sample approximately even numbers of students from both accredited and non-accredited universities, while controlling for potential geographic differences that may affect attitudes towards persons with disabilities. Study B yielded 266 participants. The combination of these two studies provided a total of 405 undergraduate students enrolled in recreation and leisure services degree programmes from five universities (two accredited and three non-accredited) in the south-east region of the US.

Students enrolled in recreation and leisure service degree programmes (as majors or minors) were administered questionnaires requesting data that included the ATDP scale, Form B; demographic variables; programme variables; and qualitative and categorical items asking about interactions with persons with disabilities. To obtain data from the broadest population of students enrolled in the recreation and leisure services programme (i.e. prior to their entering specialisation areas), questionnaire data were collected from participants in Study A in three different core classes ('Introduction to Recreation', 'Leadership and Group Processes in Recreation and Leisure Services' and 'Recreation for Persons with a Disability') during the first week of classes over two semesters (n=139). Two hundred and sixty-six participants in Study B were administered the questionnaire during one semester of courses; the objective in Study B was to gain participation from all recreation and leisure service majors from five university programmes. A total of 107 questionnaires were omitted from the sample due to missing data. Of the participants surveyed, 105 (of 139 in Study A) and 193 (of 266 in Study B) were usable, giving a total of 298. However, 29 questionnaires were also omitted from the sample because they were completed by participants self-identifying as having a disability. Yuker and Block (1986) recommended separating persons with

disabilities from persons without disabilities in data analyses because previous research has shown that persons with disabilities tend to score differently on the ATDP scale. The omission of the 29 questionnaires resulted in a usable sample of 269 participants.

## **Instrumentation**

The ATDP scale measures general attitudes towards persons with disabilities and is one of the most widely used and extensively researched attitude scales in contemporary studies (Paris, 1993). Reliability for the ATDP was established through four means: test-re-test, parallel, split-half test, and covariance of test items. The average reliability coefficient for the ATDP is stated to be .80 (Yuker & Block, 1986), which held true for this study, with a Cronbach's alpha of .795. Content validity was established through literature review and item analysis, and criterion and construct validity were established through comparisons with other attitude measures (Yuker & Block).

The ATDP scale Form B consists of 30 statements to which respondents choose from strongly agree to strongly disagree, using a six-point Likert scale. Respondents must choose a level of agreement or disagreement with the statement, with no neutral response available. Examples of statements include 'Disabled persons can have a normal social life' and 'Most disabled persons expect special treatment'. In accordance with Yuker and Block's (1986) procedures, Form B of the ATDP scale was modified to incorporate sensitive terminology for this study. For example, the term 'disabled persons' was changed to 'persons with disability'.

Scores for the ATDP may range from 0 to 180 on Form B (Yuker & Block, 1986). Interpretation of the scores is based on the perceived similarity or difference of persons with and without disabilities. Higher scores indicate that the respondent perceives persons with disabilities as similar to persons without disabilities, while lower scores indicate that respondents perceive persons with disabilities as different from persons without disabilities. Using this interpretation, Yuker and Block state, "high scores relative to a certain group reflect positive, accepting attitudes while relatively lower scores reflect negative, rejecting attitudes" (p. 4). There is no mean ATDP score established for interpretation; norms have been established through the research literature. Yuker and Block also recommended that investigators establish norms for the group with which they are working owing to the wide range of scores from varied samples. Norms reported for the ATDP are consistently greater than 100 (Paris, 1993; Yuker & Block).

## **Results**

The intention of this research study was to take a first step in the establishment of a normative score on the ATDP scale for undergraduate students enrolled in recreation and leisure service degree programmes, thus providing baseline data from a specific geographic region. This study focused on factors which were thought to potentially impact on attitudes, including gender, age, disability status, area of specialisation within the recreation and leisure services degree, programme accreditation status (through NRPA) and level of interaction with persons with disabilities. Descriptive data and statistical results from t-tests and analyses of variance are presented below.

### **Description of the participants**

Questionnaires were administered to 405 participants, with 269 of these being usable. Of the total 269 participants, 55 per cent were females (n=148) and 45 per cent were male (n=121). Participants (n=167) ranged from 18 to 47 years of age, with 82 per cent (n=219) between the ages of 18 and 23, while the remaining 18 per cent (n=48) were 24 to 47 years of age. The majority of the respondents (67 per cent) were enrolled in accredited programmes (n=180). The overall mean ATDP score was 115.89 for the sample, with scores ranging from 60 to 166. The median and mode were both 115.

	N	Mean	t	df	p
<i>Gender</i>					
Male	121	111.60	-3.431	268	0.001
Female	148	119.40			
<i>Age</i>					
Traditional	219	115.30	-1.276	265	0.203
Non-traditional	48	119.95			

**Table 1: Influence of demographics on ATDP mean scores**

Note: Traditional = 18 – 23 year olds; Non-traditional = 24 and older

## Demographic and programme variables

Of the demographic and programme variables examined, only gender was significant ( $p=.001$ ). Females had the higher ATDP scores, with a mean of 119.4 as compared to 111.6 for males. Age ( $p=.203$ ), area of specialisation ( $p=.359$ ) and programme accreditation status ( $p=.813$ ) were not statistically significant (see Table 1 for demographics and Table 2 for programme variables).

Specialisation	N	Mean	df	F	p
Administration	41	113.02	254	1.096	0.359
Outdoor	63	115.08			
RT	106	118.71			
None indicated	34	114.53			
Other	11	110.55			
Accreditation status	N	Mean	df	t	p
Yes	180	115.70	267	-0.237	0.813
No	89	116.28			

**Table 2: Influence of programme variables on ATDP mean scores**

## Interactions with persons with disability

For Study A, interaction with persons with disabilities was examined in two ways: a yes/no question about whether respondents had previous experience with persons with disabilities and a qualitative question asking respondents to describe their experiences of interaction with persons with disabilities. An overwhelming majority (85 per cent) of the sample indicated that they had previous experience with persons with disabilities, making statistical comparisons between the two groups (yes/no with regard to previous experience) inappropriate. Unfortunately, the respondents did not provide adequate qualitative descriptions of their interactions with persons with disabilities to allow for meaningful compilation and analysis. Based on this experience, the interaction variable was re-operationalised for Study B. Participants were asked about the frequency of their interactions with persons with disability and the quality of those interactions. Frequency of interaction, as measured through four time categories (daily, weekly, monthly, less than six times a year), was significant using an analysis of variance ( $f=3.785$ ;  $df=176$ ;  $p=.012$ ). Participants who interacted with persons with disabilities on a weekly basis ( $n=58$ ) had the highest mean ATDP scores (121.33) followed by those with daily interaction ( $n=30$ ) with a mean ATDP score of 117.90. Participants who interacted with persons with disabilities monthly ( $n=44$ ) had mean ATDP scores of 112.34, while the lowest mean ATDP scores of 109.93 were from participants who interacted with persons with disabilities less than six times a year ( $n=45$ ). The quality of interaction variable was measured using a six-point Likert scale that ranged from very positive to very negative interactions with persons with disabilities. This variable could not be analysed because 174 participants indicated positive interactions ranging from

somewhat positive to very positive, while only three participants indicated having somewhat to mostly negative interactions with persons with disabilities.

## **Discussion and recommendations**

A key goal of this research project was to take a first step in establishing a normative mean on the ATDP scale (Form B) of undergraduate college students enrolled in recreation and leisure service degree programmes. The sample of undergraduate students in this study scored a mean of 115.2. According to Yuker and Block (1986), positive scores indicate more accepting attitudes of persons with disabilities. To put the mean score identified in this study in context, it can be compared to the mean scores found in a series of eight studies conducted between 1960 and 1980 by Yuker and Block. Those studies, all of which employed the ATDP scale (Form B), yielded undergraduate student mean scores which ranged from 103.0 to 122.9. Of those studies, four reported mean scores between 111.9 and 119.2. More recent studies conducted in the 1990s that also utilised either Form A or B of the ATDP focused on college students in the following fields: dental students (111.9); medical students (122.1) (Paris, 1993); and occupational therapy students (131.8, 137.3, 136.2) respectively for second through to fourth-year students (Lee, Patterson, & Chan, 1994). Thus recreation students in this study had more accepting attitudes than dental students, but less accepting attitudes when compared to medical and occupational therapy students.

Few significant differences between groups were found in this study. In contrast with earlier studies (Yuker & Block, 1986), differences were not found for age. The lower numbers of persons in the 'non-traditional student' age group of 24 and older limited the validity of the statistical analyses in this case. Studies assessing the relationship between gender and attitude towards persons with disabilities have yielded mixed results (e.g. Paris, 1993; Yuker & Block). In this study, significant differences were found between females and males, with females having a higher mean attitude score. The mean ATDP score for undergraduate female students of 119.4 is higher than the means reported from nine studies by Yuker and Block that ranged from 102.0 to 116.0. Male undergraduate students ( $m=111.6$ ), however, fell within the range reported from eight studies of 100.0 and 113.4 (Yuker & Block). From a professional preparation perspective, it is important to gain an understanding of why females and males differ in their attitudes towards persons with disabilities in order to facilitate positive attitude change. Both females and males are likely to provide services for persons with disabilities, and more positive attitudes may yield more effective service delivery for patrons with disabilities. Furthermore, males are much more likely than females to serve in upper-level administrative positions in the parks and recreation professions (Anderson & Shinew, 2001; Shinew & Arnold, 1998). Therefore males are more apt to make administrative decisions regarding facilities and services that impact on persons with disabilities. Accordingly, it is important that decision-makers (both male and female) have positive attitudes towards persons with disabilities.

Assessment of the interactions of students without disabilities (i.e. study participants) with persons with disabilities in their daily lives yielded interesting results. In one study (Study A), researchers naively asked about previous interaction with a 'yes/no' categorical response option. Respondents were also given an opportunity to select their relationship level with the persons with disabilities with whom they interacted and to describe those interactions. On a positive note, the overwhelming majority (85 per cent) of respondents reported having previous experience with persons with disabilities; however, the qualitative data were cumbersome and ultimately not usable. Study B respondents were requested to provide a frequency and quality of interactions with persons with disabilities. The frequency variable results were interesting in that the highest mean scores for attitude occurred for persons who interacted with persons with disabilities weekly, followed by those with interactions daily, monthly and less than six times a year. One might assume that the persons who interacted daily would have the highest attitude mean. Perhaps, though, daily interactions provide an opportunity to experience more stressors, increased responsibilities or other situations that may affect attitude. Again, the quality of interactions variable did not yield any potential for meaningful analysis. All but three of the respondents reported having somewhat positive to very positive interactions with persons with disabilities. While the reporting of these positive

interactions is certainly encouraging, it may also provide evidence that researchers may need to conceptualise and operationalise this variable in different ways. This area of attitude assessment may be more beneficially addressed through qualitative means that may ultimately facilitate quantitative measures. It may also be important to determine how interactions with persons with disabilities affect student attitudes towards persons with disabilities. For example, Lee, Paterson, and Chan (1993) found that exposure to persons with disabilities helped to maintain positive attitudes in occupational therapy students.

The National Recreation and Parks Association is the accrediting body for baccalaureate academic degree programmes in recreation, park resources and leisure services in the US (NRPA, 2004). The standards created by this organisation were developed to ensure that the curriculum in accredited programmes addressed a wide variety of topics, including inclusion and diversity. In this study no difference in student attitudes towards persons with disabilities was found between students enrolled in accredited vs. non-accredited programmes. Since the study gathered data from only five universities (three accredited and two non-accredited), it is difficult to draw generalisable conclusions from the results. Further research involving a larger number of university programmes may provide important information as to how well NRPA accreditation standards lead to adequate preparation of students with regard to service delivery for persons with disabilities.

This study is one step in objectively measuring the attitudes of pre-professionals in the recreation and leisure services field. The mean established through this research can provide a baseline and comparison for future studies. Clearly, to gain a wider and more representative view of the attitudes of recreation and leisure services majors towards persons with disabilities, the scope needs to be expanded to include all geographic regions of the US, other countries and, subsequently, more students. A second consideration in establishing a normative attitude score for undergraduate students is the need to utilise other measures of attitude. For example, it may be beneficial to utilise a multi-dimensional attitude measurement (such as the Scale of Attitudes toward Disabled Persons) that has already been shown to have concurrent validity with the ATDP scale. Taking the study of student attitudes further could also include the meaningful assessment of different attitude factors, such as interactions and levels of acquaintance, between persons with and without disabilities. Accomplishing a comprehensive assessment of attitudes towards persons with disabilities may facilitate better understanding, as well as provide future directions for education with regard to attitude maintenance and/or change. According to Smith et al. (2005), a leadership competency necessary to work effectively with persons with disabilities is attitude. It is critical that persons involved in the training of recreation and leisure service students and professionals have a good understanding of their attitudes towards disability since over 21 per cent of the constituency is likely to have one or more disabilities. While attitudes have historically been the most limiting barrier to recreation participation for persons with disabilities to overcome, current and future attitudes may pave a more inclusive path to full community participation by persons with disabilities. As Bedini (1992) states, "Educators have not only the responsibility but also the opportunity to be advocates for underrepresented populations such as people with disabilities" (p. 46).

\*Note: The ATDP scale is considered public domain material and is available from Hofstra University, Hofstra, NY.

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