THERAPEUTIC RECREATION JOURNAL Vol. 39, No. 3, 176–191, 2005

Quality of Life and Identity: The Benefits of a Community-Based Therapeutic Recreation and Adaptive Sports Program

Ramon B. Zabriskie, Neil R. Lundberg, and Diane G. Groff

The purpose of the study was to examine perceived outcomes of participation in a community-based therapeutic recreation and adapted sports program on the quality of life and athletic identity of individuals with disabilities. Participants (n = 129) were involved in either an alpine skiing program or a horseback riding program provided by the National Ability Center, a non-profit community-based therapeutic recreation and adaptive sports agency. Findings indicated that participation positively influenced quality of life, overall health, quality of family life, and quality of social life. Athletic identity was also reported and compared with other samples of people with and without disabilities. Findings and implications for therapeutic recreation professionals were discussed.

KEY WORDS: *Therapeutic Recreation, Quality of Life, Community-Based Programming, Adaptive Sports, Athletic Identity*

Dr. Ramon Zabriskie is an Associate Professor in the Department of Recreation Management and Youth Leadership at Brigham Young University. Neil Lundberg is a Lecturer at Indiana University in the Department of Recreation and Parks Administration and the former Program Director at the National Ability Center in Park City, UT. Dr. Diane Groff is an Assistant Professor in the Department of Exercise and Sport Science at the University of North Carolina at Chapel Hill.

The authors wish to express their gratitude to the National Ability Center for its cooperation and assistance in conducting this study.

* Address correspondence to Ramon B. Zabriskie, Department of Recreation Management and Youth Leadership, Brigham Young University, 273 RB, Provo, UT 84602-2033. Phone: (801) 422-1667, email: zabriskie@byu.edu

The provision of therapeutic recreation is typically described as a continuum of services ranging from treatment interventions to independent recreation and leisure experiences. The intended outcomes of the continuum style approach include assisting clients in obtaining a healthy life and lifestyle (Austin, 2002; Stumbo & Peterson, 2004). These are lofty goals which are not easily achieved. Their achievement is made more difficult, however, by a medical environment that is often constrained by high costs, demands for efficiency, and decreased lengths of stay. While the medical model may be a cost effective rehabilitation approach, it represents only the beginning phase of the service continuum and the starting point of the healing process for the client. If therapeutic recreation professionals are to assist clients in achieving healthy lives, including an independent leisure lifestyle, a commitment to the entire continuum approach is necessary. Community-based therapeutic recreation and adaptive sports programs represent a commitment to the continuum approach and may provide a critical link that can assist in bridging the gap between the treatment services provided in healthcare facilities and the leisure skills, resources, and relationships that help facilitate a high quality of life with family and friends in the community.

Unhealthy Lives and Health Disparities

For many individuals with disabilities, inequities in a number of key areas have resulted in poor health, limited community participation and reduced quality of life (National Organization on Disability, 2002). According to the National Organization on Disability (NOD), when individuals with disabilities are compared to their peers without disabilities they lag "somewhat" or "very far" behind in eight key areas of life: education, employment, income, health care, transportation, entertainment and socializing, political participation, and life satisfaction. Given that all eight indicators are thought to be interconnected, it is no surprise that limited opportunity for employment and education restricts income and ultimately access to health care, transportation, entertainment and socializing, and the political process. The net effect is that half as many individuals with disabilities (33%) say that they are "very satisfied with their life in general" as compared to 67% of individuals without disabilities (NOD, 2002).

The Centers for Disease Control (CDC) and other collaborating agencies have provided further evidence that health disparities exist between individuals with and without disabilities (Centers for Disease Control and Prevention, 1998; National Center on Birth Defects and Developmental Disabilities, 2001; U.S. Department of Health and Human Services, 2001). According to the CDC, 31% of children with disabilities ages 4 to 11 reported being sad, unhappy or depressed, while 28% of adults with disabilities reported feelings of sadness, unhappiness and depression preventing them from being active. Adults with disabilities reported lower scores than their peers without disabilities in areas of participation in social activities and overall life satisfaction. Additionally, from 1990 to 1994 activity limitations due to disability increased up to 40% in some age and gender groups. The CDC concluded that "individuals with activity limitations experience more days of pain, depression, anxiety, and sleeplessness as well as fewer days of vitality when compared to individuals without activity limitations" (U.S. Department of Health and Human Services, 2001, p. 8).

The NOD (2002) suggested that one strategy to help offset health disparities is community participation. Current participation patterns suggest, however, that individuals with disabilities are more isolated from their communities, although they appear to be as equally informed about activities as their peers without disabilities. There are several barriers that limit community participation. Lack of time is most often cited by individuals without disabilities as a barrier to community participation while lack of encouragement from community organizations is most often noted by

individuals with disabilities. Other barriers to community participation noted by individuals with disabilities are lack of time, limited income, and lack of awareness. Given that community participation may be one way to help offset existing health disparities, the NOD (2002) urges community organizations to be more active in removing existing barriers to participation.

Researchers from the CDC emphasize that difficulties adjusting to life largely stem from encounters with environmental barriers that reduce the individual's ability to participate in life activities and that undermine physical and emotional health (Centers for Disease Control and Prevention, 2000). Researchers have also demonstrated that individuals with disabilities who remain physically active: (a) are better adjusted and more satisfied with life, (b) report having fewer days of pain, depression, anxiety, sleeplessness, improved vitality, and (c) substantially increase their life expectancy (Krause & Kjorsvig, 1992; U.S. Department of Health and Human Services, 2001). Given this relationship and the fact that medical advances have steadily increased the average life expectancy of individuals with physical disabilities (National SCI Statistical Center, 1995), community based programs and services designed to reduce secondary complications, remove environmental barriers, and promote the independence and health of individuals with physical disabilities have become increasingly important (Frieden, 1990; U.S. Department of Health and Human Services, 2001). One approach that may be well suited to accomplish these goals is that of community-based inclusive therapeutic recreation and adapted sport programs.

Adaptive Sport and Quality of Life

The contribution of sport and physical activity to quality of life is well documented for individuals without disabilities (U.S. Department of Health and Human Services, 2001). Limited research, however, prohibits our ability to clearly describe the relationship for individuals with disabilities. Researchers have demonstrated that sports have a positive influence on the physical health of male athletes such as increased muscular strength and endurance (Wells & Hooker, 1990), cardiovascular health and fitness (Corbin & Pangrazi, 1999), and reduced secondary health conditions (U.S. Department of Health & Human Services, 2001). Male athletes with disabilities are also more likely than males with disabilities who do not participate in sports to exhibit mental characteristics representative of emotionally healthy adults (Apple, 1996; Hutzler & Sherrill, 1999).

In spite of these potentials, however, the high degree of feedback from others and socializing agents of sport may also have a negative influence on individual development. Detrimental effects of participation in sport may arise if an individual fails in his or her attempts to be successful in sport, or is taught to fear failure during competition (Danish, Petitpas, & Hale, 1990). The socializing agents within sport may also initiate a form of social control whereby the individual feels compelled to comply with the obvious and hidden "rules" of sport (Williams, 1994). This interaction may restrict an individual's desire to explore other avenues for self expression and definition. Finally, if an individual develops a strong exclusive athletic identity, it may narrow or limit further identity development (Kleiber & Kirshnit, 1991) or result in limited options for the individual when sport involvement ends (Brewer, VanRaalte, & Linder, 1993; Kleiber & Kirshnit). The ambiguity surrounding the outcomes of participation in sport for individuals with disabilities warrants further research. One of the fundamental questions to be addressed is how participation in sport affects individuals with disabilities, specifically when considering the level of competition they pursue (e.g., recreational, amateur, or elite athlete).

Blinde and McClung (1997) reported that recreational sport positively influenced the self-perceptions of individuals with disabilities including improved physical self perceptions, increased confidence to pursue new activities, opportunity to experience their bodies in new ways, and a redefinition of their physical ca-

pabilities. Additionally, involvement in recreational sport positively impacted social self perceptions by expanding participants' social interactions and helping them initiate social interactions in a variety of contexts. While these positive outcomes have been noted for adults, few studies have examined the outcomes of participation in sport through inclusive community-based programs on youth and their families.

Sports may influence adolescent development because of the opportunities it affords adolescents to develop social and physical competence (Danish et al., 1990; Kleiber & Kirshnit, 1991). In a qualitative study of family participation in a challenger baseball program, Castaneda and Sherrill (1999) found that participants believed that the program fostered feelings of "normalcy," offered a social network and emotional support for families, increased sport knowledge and skills, offered social support of peers, and was fun and enjoyable. Martin and Smith (2002) shed additional light on the important role that sport may play in the social development of adolescents with disabilities. Participants ($N = 160$) reported that sports served as an important vehicle to interact with "best friends," thereby promoting positive peer relations. This was particularly beneficial for the female adolescents who often use social interactions with others to develop a sense of identity (Archer, 1989; Josselson, 1994).

Adaptive Sports and Quality of Family Life

Although Castaneda and Sherrill's (1999) findings had specific implications for individuals with disabilities and their families, few studies of adaptive sport programs have included broader family variables. There has, however, been an increased focus on families and related variables in the therapeutic recreation literature in recent years (Bocarro & Sable, 2003; Freeman & Zabriskie, 2003; Huff, Widmer, McCoy, & Hill, 2003; Scholl, McAvoy, Rynders, & Smith, 2003). "Practitioners and researchers alike have not only focused on strengthening the effects and carry over of interventions for individuals by addressing family needs in treatment approaches, they have examined relationships and provided interventions focused on making improved quality of family life a primary goal for therapeutic recreation" (Zabriskie & Heyne, 2003, p. 16). Therefore, it appears that the impact of programming for people with disabilities not only goes well beyond the individual, but that as therapeutic recreation professionals increase their focus on family outcomes they are likely to effectively influence the overall family unit.

Mactavish and Schleien (1998) found that families who have a child with a disability viewed joint recreation and leisure involvement not only as an avenue that benefited the child with the disability but as a means for promoting overall quality of family life (e.g., family unity, satisfaction, physical and mental health) and for helping family members develop other life skills, including social skills such as problem solving, compromising, and negotiation. They argued that "including a family focus in the planning and delivery of recreation services" (p. 228), particularly in community-based programs, would not only increase involvement but would have a lasting impact on both individuals and their families. Scholl et al. (2003) reported that after participation in an inclusive community-based outdoor recreation experience families who have children with disabilities reported greater family satisfaction and family cohesion and decreased perceived constraints that typically inhibited or prohibited their families from participating in recreation opportunities together. They also discussed the benefits of and essential need for a greater focus from therapeutic recreation providers, particularly those in community-based agencies, on "providing safe, satisfying, and socially appropriate family activities" (p. 54). Few previous studies of community-based adaptive sport programs, however, have focused on or included family related variables.

Adaptive Sports and Athletic Identity

A limited amount of research has demonstrated the impact of adapted sport on the development of athletic identity. One popular theoretical basis for identity construction was offered by Stryker (1987) who focused on identity commitment and salience. Stryker espoused that individuals who are highly committed to a particular self construct are likely to consider this construct to be highly salient. As such, the individual is more likely to seek out and engage in activity that is consistent with this self conceptualization so that he or she can demonstrate this important construct to self and others. Cooley (1902) and Mead (1934) provided additional insight into the role that other individuals play in developing a sense of self. It is during periods of social interaction that individuals are provided critical feedback regarding who others perceive them to be. Depending upon the extent to which others perceptions match personal self-concept, people utilize feedback from others to further refine a sense of self. Thus, social interactions with others play a vital role in either validating or negating identity.

Sport is an important context for social interaction and feedback from others. Groff and Kleiber (2001) reported that sport can have a positive impact on the identity formation of youth with disabilities by increasing their skills and competence; offering outlets for emotional expression, social interaction, and connections with others with a disability; and decreasing awareness of disability. Additionally, the action orientation of sports provides a means to develop heightened self-awareness, enhance self-expression, and strengthen levels of perceived mastery and coping skills (Covey & Feltz, 1991; Danish et al., 1990). Each of these effects provides information that is relevant to individuals as they develop a sense of athletic identity (Breakwell, 1983) and perhaps identity in other domains as well.

National Ability Center

Community-based adaptive sport and recreation programs offer avenues for the healthy development of both identity and quality of life. The National Ability Center (NAC) located in Park City, Utah is one such community-based program. As a non-profit organization serving individuals with disabilities and their families and friends, the NAC seeks to assist individuals in developing life skills and abilities through participation in adaptive sport and recreational experiences. Programs at the NAC take place in a variety of indoor and outdoor recreational settings and include such activities as: alpine and cross country skiing, bobsledding, horseback riding, water skiing, canoeing, cycling, swimming, camping, on-site camps, challenge course/leadership development, and a variety of community and special events.

Participants include people with orthopedic, spinal cord, neuromuscular, visual, and hearing impairments, as well as those with cognitive and developmental disabilities. A primary focus of the center is to increase integration in the community and family by providing adaptive sport opportunities in an inclusive community environment. The NAC staff encourages family and friends to be involved in all programs. This study focused on participants involved in the two largest programs offered through the center, Alpine Skiing and Horseback Riding. Combined, these programs account for approximately 10,000 lessons annually.

Lessons at the NAC are primarily geared towards teaching individuals with disabilities new recreational skills. They may, however, have a treatment orientation based on the needs and goals of participants. To determine the appropriate program focus, each participant receives an assessment and participates in a planning session which includes the development of personal and program goals. NAC staff document progress on each participant following lessons to determine the effectiveness of programs in meeting individual goals that typically focus on: learning a new recreation skill, meeting people, having fun, partic-

ipating with family, and other specific goals that compliment therapy goals established in another environment. Program instructors come from a wide variety of backgrounds and hold various certifications and credentials in the fields of therapeutic recreation, physical therapy, occupational therapy, special education, and physical education.

Although services at the NAC are interdisciplinary, therapeutic recreation is clearly the philosophical basis of all programs. At the time of this study the Executive Director, Program Director, and a majority of the program coordinators were Certified Therapeutic Recreation Specialists™[1] (CTRS®) for a total of nine CTRS's. The Center also employs as many as ten therapeutic recreation interns annually. These employees and interns use the therapeutic recreation process as described by Austin (2004) and are committed to enhancing health and well-being of individuals with disabilities through the provision of adaptive sports and recreation activities.

A primary focus of all programs provided by the NAC is the creation of inclusive environments and communities. The NAC suggests that inclusive environments begin with the family and friends of the individual with a disability. Programs at the Center teach recreation skills to both the individual with a disability and his or her family members and friends so that mutual participation can be achieved beyond the program setting. In this way the programs offered through the NAC become the springboard for future participation as a family or social unit. Inclusion is additionally achieved by conducting all programs and activities at publicly operated facilities where individuals participate alongside the general public. This provides the individual with a disability the opportunity not only to participate in the same activity, but also in the same location as family and friends, which further enhances opportunities for shared participation and the development of an inclusive atmosphere.

Participants become involved with the NAC through referrals, word of mouth, and media advertising. The NAC's referral program is operated through a network of volunteers who coordinate visits and speaking arrangements through therapeutic recreation specialists and other related professionals working in a variety of settings such as hospitals, school programs, assisted living facilities, youth treatment centers, and other community organizations serving individuals with disabilities.

Purpose and Research Questions

Limited research makes it difficult to fully understand the impact of community-based adaptive sport on the athletic identity or quality of life of individuals with disabilities and their families. Therefore, the purpose of this study was to examine perceived outcomes of a community-based therapeutic recreation and adaptive sport program on the athletic identity and quality of life of individuals with disabilities and their families. The research questions for the current study were: (1) Is there a relationship between participation in a community-based therapeutic recreation and adaptive sport program and quality of life for individuals with disabilities and their families? and (2) Is there a relationship between participation in a community-based therapeutic recreation and adaptive sport program and athletic identity for individuals with disabilities?

Methods

Participants

The study sample consisted of participants in alpine skiing (n = 92) and horseback riding sessions (n = 37). These two adaptive sports programs were selected due to the season in which data were collected and because they were the largest programs provided at the NAC. There were no significant differences among study variables (e.g., athletic identity, quality of life) between the two samples; con-

[1] The trademarks 'CTRS®' and 'Certified Therapeutic Recreation Specialist™' are the property of the National Council for Therapeutic Recreation Certification®, all rights reserved.

sequently they were combined into one study sample (N = 129). There were more males (59.8%) than females (40.2%) with ages ranging from 3 to 73 years old (M = 19.38, SD = 16.59). Although there was a broad range in age, 70% of participants were 18 years of age or younger. Younger participants and those with disabilities that impaired their ability to respond to the written survey were assisted by parents and/or the CTRS in the completion of the survey. The majority of participants were White (91.2%), followed by Hispanic (6.1%), Asian/Pacific Islander (1.8%), and African American (.9%). All subjects had at least one disability, and 18.9% had multiple disabilities. The majority of participants (70.6%) reported having disabilities since birth with 29.4% having acquired disabilities. Disabilities included developmental disabilities (25.2%), autism (22.5%), visual impairments (15.3%), hearing impairments (10.8%), learning disabilities (10.8%), brain injury (8.1%), cerebral palsy (6.3%), multiple sclerosis (5.4%), spina bifida (3.6%), orthopedic impairments (3.6%), amputation (2.7%), epilepsy (2.7%), spinal cord injury (1.8%), and muscular dystrophy (1.8%).

Programs

Individuals participating in this study were involved in either an alpine skiing program or a horseback riding program provided by the NAC. The alpine skiing program operated from November to April. Individuals participated in either a three week session, five week session, or both. Sessions included one lesson per week that lasted from one to six hours in duration. The horseback riding program operated throughout the year in both an indoor and outdoor riding facility. Lesson format was similar to the ski program in that all participants were involved in program sessions ranging from three to five weeks.

Both the skiing and horseback riding programs were similar in terms of client goals. In addition to having fun, learning new recreational skills, and participating with family and friends, other commonly identified goals included improved physical fitness, mobility, communication skills, independence, and strengthening specific muscle groups.

Instrumentation

A 28-item questionnaire was distributed to participants on the last day of each program in conjunction with the NAC's final evaluation. The survey consisted of: (a) descriptive questions about program involvement (i.e., sport participation history, who they participated with, etc.); (b) five items regarding perceptions of the program's influence on quality of life; (c) the ten item Athletic Identity Measurement Scale (AIMS) (Brewer, Van Raalte, & Linder, 1993); and (d) relevant socio-demographic questions.

The eight questions about program involvement first asked respondents about the length and type of sessions that they participated in and then about their background in adaptive skiing or riding and how long they had participated in the sport. Finally, respondents described who participated with them during their session at NAC, how they learned about the program, why they participated, how they rated their performance in skiing or riding prior to acquiring their disability, and how they rated their current performance.

The influence on quality of life items were developed for this study and asked respondents to describe how much they agreed or disagreed with five statements about the influence of their skiing or riding experience at the NAC. Items addressed influence on overall health, influence on quality of life, influence on quality of family life, influence on quality of social life, and influence of family participation on the meaning of the experience for the respondent. Items were scored according to a seven point Likert scale with responses ranging from "Strongly Disagree" to "Strongly Agree."

The AIMS is a ten-item instrument that measures athletic identity (Brewer, Van Raalte, & Linder, 1993) or the identification with the role of an athlete. Questions are

scored according to a seven point Likert scale with responses ranging from "Strongly Disagree" to "Strongly Agree." Total AIMS scores can range between 10–70, with high scores representing strength and exclusivity of identification with the athletic role (Brewer, Boin, & Petitpas, 1993). The reported internal consistency of items over a 14 day period of time was .93 and test-re-test reliability was .89 (Brewer, Van Raalte, & Linder, 1993).

Socio-demographic questions asked respondents to report their age, gender, and ethnicity. They also identified type of disabilities, whether the disabilities were acquired or congenital, and how long the respondents had the disabilities.

Analysis

Descriptive statistics were first computed for socio-demographic information to examine the characteristics of the sample. Cronbach alpha scores were calculated for the influence on quality of life items and the AIMS scale to examine internal consistency of scores. Descriptive statistics were then calculated for all research variables, and bivariate correlations were computed to identify significant relationships. Analysis of covariance was then used to examine further relationships between descriptive variables and the dependent variables of influence on quality of life and athletic identity.

Findings

Descriptive Variables

Demographic data revealed that 16% of the subjects participated in the three week program, 76% in the five week program, 4% in both programs. Individuals had participated in sport for up to 20 years, with a mean of 3 years and 7 months. They attended sessions with a variety of others including: parent (55.2%), child (17.9%), friend (15.5%), spouse (5.3%), or other (13.8%). They learned about the program from a range of sources including: friends (22%), family members (13.9%), disabled athletes (5.7%), media (9%), therapeutic recreation specialists (9%), occupational therapists (8.7%), physical therapists (8.2%), NAC employees (6.2%), and schools (4.7%). Reasons for participation in the NAC program included: have fun (74%), learn a new skill (66.7%), socialize (32.5%), recreate with family members (31.8%), and for therapy (28.7%). Very few respondents were there to prepare for competition (7%). Finally, individuals were asked to rate their performance in sport prior to having a disability and after taking lessons. Of the 46 (44.7%) respondents who reported not having a disability present at birth, 39% did not participate in the sport of skiing or riding prior to acquiring a disability, 6.5% rated their performance as poor, 15.1% as fair, 26% as good, and 13% as excellent. When asked to rate their level of performance at the conclusion of the program, individuals reported poor (0.8%), fair (20.3%), good (57.7%), and excellent (21.9%).

Influence on Quality of Life

The influence on quality of life items indicated that the majority of participants thought that these programs had a positive impact on their quality of life (see Table 1). The majority of the sample either agreed or strongly agreed that the program positively influenced their overall health (79.6%), quality of life (84.2%), quality of family life (70%), and quality of social life (69.4%). Furthermore, of those who attended with a family member (70%) the majority (79.3%) agreed or strongly agreed that having a family member with them had a positive impact on the meaning of their overall experience.

All five items held together well as a scale with scores indicating acceptable internal consistency ($\alpha = .87$). Total scores for this sample ranged from 16–35 and had a mean of 30.91 ($SD = 4.10$). There were no differences between total scores based on gender, age, type of program, or length of involvement. Furthermore, perceived influence on quality of life was not related to one's perceived performance in the skiing or riding program.

Table 1.

Influence on Quality of Life Responses

My Skiing/Riding Experience Had a Positive Influence on My . . .	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree	% Agreed or Strongly Agreed
Overall health	0%	0.8%	0%	4.7%	15.0%	33.9%	45.7%	79.6%
Quality of life	0%	0%	0.8%	3.1%	11.3%	29.1%	55.1%	84.2%
Quality of family life	1.6%	0%	0.8%	15%	12.7%	28.6%	41.3%	69.9%
Quality of social life	0%	1.6%	1.6%	8.9%	18.5%	31.5%	37.9%	69.4%
Participation with family members had a positive impact on meaning of my experience*	1.1%	0%	4.3%	7.5%	7.5%	21.7%	57.6%	79.3%

* Note. 35 (or 27.1%) did not have family members participate with them and responded NA on this item.

Athletic Identity

The total AIMS scores ranged from 10 to 63 with a mean score of 37.43 (SD = 10.18) and acceptable internal consistency (α = .84). Although there were no statistically significant differences between total AIMS scores based on gender, females had slightly lower mean scores (M = 35.05, SD = 9.97) as compared to males (M = 39.16, SD = 10.24). This is consistent with studies reporting that males generally have higher total AIMS scores than females (Brewer, Van Raalte, & Linder, 1993; Martin, Adams-Mushett, & Smith, 1995; Wiechman & Williams, 1997). When compared with these studies the scores for both females (F) and males (M) in this sample were higher than scores for collegiate non-athletes (F = 15.7, M = 19.7) and collegiate recreational/fitness athletes (F = 30.4, M = 34.8), but less than a sample of elite skiers with disabilities (F = 48.1, M = 49.4), and intercollegiate athletes without disabilities (F = 53.4, M = 54.6) (see Table 2). These results indicate that athletes with disabilities are generally comparable to athletes without disabilities based on gender and level of engagement in sport.

Bivariate correlations revealed only one significant relationships between descriptive variables and the dependent variables of influence on quality of life and athletic identity, which limited further analyses. Findings indicated a negative correlation (r = −.205; p = .05) between length of involvement in adapted sport and athletic identity. There was however, a significant (r = .296; p < .01) positive correlation between quality of life and athletic identity. Although analyses of covariance were conducted to examine possible multivariate relationships, no multivariate significant relationships were found beyond the correlation between quality of life and athletic identity.

Discussion

Although the purpose of this study was to examine perceived outcomes of a community-based therapeutic recreation and adapted sport program on the athletic identity and quality of life of individuals with disabilities and their

Table 2.

Comparison of Athletic Identity Scores for Samples with and Without Disabilities

Population	Gender (Number)	Mean	SD
Current sample Recreational Skiers & Riders w/Disabilities	Male (67)	39.16	10.2
	Female (45)	35.05	9.9
Elite Skiers w/Disabilities*	Male (22)	48.1	9.4
	Female (11)	49.4	8.0
Elite Swimmers w/disabilities**	Male (30)	44.3	11.5
	Female (27)	45.7	12.2
Collegiate Non-athletes***	Male (6)	19.7	7.6
	Female (23)	15.7	5.3
Collegiate Recreation/Fitness***	Male (67)	34.8	9.9
	Female (77)	30.4	11
Intercollegiate Athletes***	Male (27)	54.6	9.1
	Female (17)	53.4	9.1

Note. * Groff & Zabriskie, 2002; ** Martin, J., Adams-Mushett, C., & Smith, K., 1995; *** Brewer, B., Van Raalte, J., & Linder, D., 1993.

families, some discussion of the descriptive program involvement variables is warranted. It was interesting to note that most subjects (96%) participated in the three or five week programs instead of a single lesson or experience. Such a finding suggests that participants in this community-based therapeutic recreation and adaptive sport program were willing to commit to, and preferred, longer and more consistent program participation to briefer experiences. Community-based programs should consider committing more resources to programs that promote consistent participation for longer periods of time. Shorter programs may not be effective or desired except to recruit participants for longer programs.

Findings also indicated that almost 40% of participants who had an acquired disability had not participated in skiing or riding prior to their injury, and 39% said they were good or excellent in skiing or riding prior to their injury. After participation in the community-based therapeutic recreation and adaptive sport program, 80% of all participants indicated that they were good or excellent in skiing or riding. These findings suggest that participants perceived that they gained new skills and proficiency in those skills, which provide further options for independent leisure functioning in the community.

A final descriptive finding that may have considerable implications was that therapeutic recreation professionals were not the primary advocates for engagement in this particular community-based therapeutic recreation and adaptive sport program. Only 11 of the 129 individuals (9%) reported that they were informed about the program from a therapeutic recreation professional, in spite of the fact that 28.7% of participants attended the as part of their therapy. Others were informed of the NAC's programs by friends and family members (36%), the media (9%), or by occupational and physical therapists (17%). Considering that the NAC is a community-based therapeutic recreation and adaptive sport program that provides services addressing leisure functioning and inclusive sport involvement, it would appear that therapeutic recreation professionals should clearly provide the most referrals to the program particularly when considering shorter lengths of hospital stays and the increased need for effective transition planning. Greater efforts must be made by therapeutic recreation professionals to promote involvement in community-based therapeutic recreation and adaptive sport programs for appropriate clients, particularly in light of the finding that the vast majority of these participants believed that participation had a positive impact on their health and quality of life.

Influence on Quality of Life

Understanding the influence of adaptive sports on quality of life for individuals with disabilities has been identified as a national research priority (Seaman, 1999). Such information will allow health care professionals to better understand the factors that influence activity behaviors and the benefits of participation in sport for individuals with disabilities. This knowledge should be of particular interest and relevance for therapeutic recreation professionals as the field strives to make continued contributions to inclusion, health, and quality of life for individuals with disabilities.

Findings from this study provide evidence that involvement in community-based therapeutic recreation and adaptive sport programs can play a significant role in the continuum of care by influencing outcomes such as quality of life and athletic identity among people with disabilities. In light of the various health disparities reported by the N.O.D. (2002), it should be noted that for this sample, participation in the adaptive skiing and riding programs had a positive influence on overall health, quality of life, quality of family life, and quality of social life. Such outcomes are likely to play a significant role in minimizing disparities between groups of individuals with disabilities and those without disabilities, particularly in areas such as health, entertainment and socialization, and life satisfaction. Fur-

thermore, the fact that 80% of participants rated themselves as good or excellent at skiing or horseback riding following their program participation suggests that the introduction to adaptive sport in a community-based setting may also play a critical role in helping participants develop the necessary skills, support systems, and resources necessary to decrease the activity limitations that have been related to increased experiences with pain, depression, anxiety, sleeplessness, and decreased vitality (US Department of Health and Human Services, 2001). Such indicators clearly suggest that community-based therapeutic recreation and adaptive sport programs can influence quality of life and should play a significant role in the continuum of care for people with disabilities and their families.

These findings also indicated that the inclusion of family members in this community-based program had a significant impact both on the effectiveness of the interventions themselves and on the outcome of increased quality of family life. Respondents indicated that having family members present and participating in the adaptive sport programs with them had a significant impact on the overall meaning of the experience for them. This finding suggests that not only can the inclusion of family members add to the efficacy of the intervention, but it adds further support to the concept of providing a continuum of care. The inclusion of family members in such programming contributed to the ability of the participants to learn new skills, gain knowledge of equipment and activity adaptation, and strengthen relationships in perhaps the most essential of all support systems. Such outcomes are critical to the continuum of care approach as individuals with disabilities begin to rely more on family and community support systems and resources in route to greater independence and increased quality of life.

Respondents also indicated that their participation in the adaptive skiing or riding programs with family members had a positive impact on the quality of their family lives. Such findings are consistent with previous research (Zabriskie & McCormick, 2003) which found family leisure involvement was integral to family satisfaction. Freeman and Zabriskie (2003) reported a direct relationship between family leisure involvement and family functioning from parent, child, and family perspectives. They also suggested that therapeutic recreation professionals should provide more family interventions with their clients and that research continues to provide empirical support which calls for and helps "justify needed family focused therapeutic recreation services" (p. 90). Findings from the current study add further support by indicating that family focused community-based interventions influenced quality of family life and had a positive impact on the meaning of the experience for the client during the intervention itself. Community-based therapeutic recreation and adaptive sport programs may be the ideal place to increase family focused interventions within the continuum of care concept.

Several practical considerations regarding a family focused intervention may be in order. The NAC seeks to include the family and friends of individuals with a disability in several specific ways. If family and friends are not familiar with the activity and would like to learn, they are encouraged to participate in programs along side the individual with a disability. This mutual participation naturally facilitates an atmosphere of inclusion by providing a safe environment for all parties to learn together. Learning the activity together is the first step in developing the needed skills for future independent participation. If, on the other hand, family members and friends are familiar with the activity, they are encouraged to participate as assistants. This role allows family members and friends to be involved while giving them a first hand view of what it might take to recreate together independently, beyond the intervention setting. These ideas can be easily incorporated by the CTRS seeking to enhance family participation.

Athletic Identity

In addition to family involvement in the intervention, development of one's identity is also a relevant concept for therapeutic recreation professionals. Findings revealed that this sample had a fairly high level of athletic identity based on the level of competition that they were engaged in. This may be reflective of the fact that there are fewer opportunities for individuals with disabilities to engage in community-based sport and recreation programs (Blinde & McClung, 1997; Groff, 1998). Having limited programs that provide the specialized instruction and equipment required of adaptive sport and recreation may have a greater impact on athletic identity when they are available. This increased impact may stem from an individual's belief that involvement in the program is more of a luxury than an assumed right. Therefore, individuals with disabilities may identify with the role of an athlete quite quickly, but not exclusively, given that it is not an activity commonly available in everyday life.

Fostering opportunities to develop athletic identity has implications for health and fitness. Individuals with strong athletic identities generally demonstrate increased social relationships (Petitpas, 1978) and overall commitment to athletic performance (Horton & Mack, 2000). Additionally, individuals with a high degree of athletic identity have increased participation in physical activity and exercise (Fox & Corbin, 1989). Recent studies (e.g., Anderson, 2002) have also concluded that adolescents who participate in sport and develop a sense of athletic identity in childhood are more likely than others to continue their engagement in physical activity into adulthood and thus improve their fitness levels over the course of their lives.

Participation in sport contributes to the social and physical health of individuals with disabilities (Apple, 1996; Blinde & McClung, 1997; Corbin & Pangrazi, 1999; Groff & Kleiber, 2001; Martin & Smith, 2002) and it is important to consider the impact of sport on the whole person. The findings of this study offer preliminary evidence that there is a strong correlation between athletic identity and quality of life. Given that quality of life is often identified as the ultimate outcome of health care (U.S. Department of Health and Human Services, 2001; Whiteneck, Fougeyrollas, & Gerhart, 1997) as well as therapeutic recreation (Austin, 2002), the correlation between these two constructs is an important finding for professionals. Particularly if similar findings can be replicated in other studies and the directionality of this relationship can be clarified, the use of adaptive sport as a cost effective way to increase one's quality of life may help justify future program expansion, development, and reimbursement.

Therapeutic recreation professionals can use measurements of athletic identity to accomplish several outcomes. Athletic identity, particularly when viewed in conjunction with other aspects of self-concept, plays a significant role in shaping how individuals define themselves and how they view themselves in comparison with others and thus, becomes relevant to both athletes and non-athletes alike (Horton & Mack, 2000). The possession of a strong athletic identity has been associated with better athletic performance, commitment to sport, expanded social networks, and more positive experiences in training (Horton & Mack). Equally important however, is consideration of how to work with individuals who do not identify with the role of an athlete. It is critical that all individuals engage in at least minimum levels of physical activity to sustain optimal levels of physical health and psychological well-being. It is suggested that therapeutic recreation professionals pay particular attention to individuals with low levels of athletic identity to ensure that they maintain an active lifestyle.

Although the findings from this study make a significant contribution to the therapeutic recreation body of knowledge and provide useful implications for community-based therapeutic recreation providers, study limitations must be acknowledged. The exploratory na-

ture of the study and the limitations related to data collection required the use of descriptive and correlational methodologies. Therefore, while findings can provide valuable descriptive characteristics and identify relationships among variables, interpretations related to causality of outcomes cannot be made without further study. In an effort to promote further applicability of such community-based therapeutic recreation and adaptive sport services in the area of athletic identity, quality of life, and quality of family life, additional research is required.

Prior to establishing causal relationships it will be necessary to conduct controlled studies using experimental or quasi-experimental techniques. An emphasis in all studies should be on securing an adequately large, unbiased sample to control for external threats to validity. Due to the difficult nature of implementing true experimental studies in a naturalistic setting, it may be prudent to utilize quasi-experimental or mixed quantitative and qualitative research methods. Quasi-experimental research designs are a rigorous way to provide a reasonable control over sources of error without having to implement true randomization of clients into treatment and control groups (Coyle, Kinney, & Shank, 1993). Alternatively, mixed qualitative and quantitative designs allow for a broader examination of different facets of a construct which may add to the scope and breadth of study (Creswell, 1994). Finally, conducting two or three month follow up studies or more in-depth longitudinal studies would also help generate additional insight into the long term effects of participation in community-based therapeutic recreation and adaptive sport programs on athletic identity and quality of life for individuals with disabilities and their families.

Conclusions

Appropriate means to improve the health and well-being of individuals with disabilities is a critical issue facing today's health care professionals (U.S. Department of Health and Human Services, 2001). Since health and well-being are currently being defined as not merely the absence of disability but rather one's perceived quality of life (Whiteneck et al., 1997), it is important to find effective strategies to improve multiple dimensions of health. The results of this study suggest that therapeutic recreation professionals can play a central role in improving the lives of individuals with disabilities and their families by providing community-based therapeutic recreation and adapted sport programs. Programs such as the one provided by the NAC fit well within the continuum of care philosophy and can make significant contributions to quality of life by providing individuals with disabilities opportunities to identify with the role of the athlete and experience activities that improve overall health and quality of family life.

The impact of these programs on various dimensions of quality of life supports the need to expand community-based sport programs for individuals with disabilities. Particularly, program managers should consider advocating for family involvement when appropriate to improve the overall experience for participants and to foster the development of quality family life. Therapeutic recreation professionals in other healthcare settings should also increase their networking with community-based adaptive sport programs by providing appropriate referrals, particularly when working toward the community reintegration of clients. By doing so, therapeutic recreation profession can help reduce health disparities and offer individuals with disabilities and their families opportunities to develop a sense of identity and achieve the highest level of quality of life while expanding our contribution to the full continuum of health care services.

References

Anderson, C. B. (2002). *Athletic identity and its relation to exercise behavior: Scale development and validation.* Manuscript submitted for publication.

Apple, D. F. (1996). *Physical fitness: A guide for individuals with spinal cord injuries.* Department of Veterans Affairs Scientific and Technical Publications Section, Baltimore: MD.

Archer, S. L. (1989). Gender differences in identity development: Issues of process, domain, and timing. *Journal of Adolescence, 12,* 117–138.

Austin, D. R. (2004). *Therapeutic recreation: Process and techniques* (5th ed.). Champaign, IL: Sagamore.

Austin, D. R. (2002). Conceptual models in therapeutic recreation. In D. R. Austin, J. Dattilo, & B. P. McCormick (Eds.). *Conceptual Foundations for Therapeutic Recreation* (pp. 49–71). State College, PA: Venture.

Blinde, E. M., & McClung, L. (1997). Enhancing the physical and social self through recreational activity: Accounts of individuals with physical disabilities. *Adapted Physical Activity Quarterly, 14,* 327–344.

Bocarro, J., & Sable, J. (2003). Finding the right path: Exploring familial relationships and the role of a community TR program in the initial years after a spinal cord injury. *Therapeutic Recreation Journal, 37*(1), 58–72.

Breakwell, G. (1983). Formulations and searches. In G. Breakwell (Ed.), *Threatened identities* (pp. 3–26). New York: John Wiley & Sons.

Brewer, B., Boin, P. D., & Petitpas, A. J. (1993). *Dimensions of athletic identity.* Paper presented at the American Psychological Association Annual Conference, Toronto, Ontario, Canada.

Brewer, B., Van Raalte, J., & Linder, D. (1993). Athletic Identity: Hercules' muscle or Achilles heel? *International Journal of Sport Psychology, 24,* 237–254.

Castaneda, L., & Sherrill, C. (1999). Family participation in challenger baseball: Critical theory perspectives. *Adapted physical Activity Quarterly, 16*(4), 372–388.

Centers for Disease Control and Prevention (1998, November). Health-related quality of life and activity limitation—Eight states, 1995. *Morbidity and Mortality Weekly Report, 47*(7), 134–140. Atlanta, GA: Author.

Centers for Disease Control and Prevention (2000, November). *Measuring healthy days.* Atlanta, GA: Author.

Cooley, D. H. (1902). *Human nature and the social order.* New York: Schriners.

Corbin, C., & Pangrazi, B. (1999). Physical activity and fitness for persons with disabilities. *President's Council on Physical Fitness and Sports Research Digest, 3*(5), Washington, DC: Author.

Covey, L., & Feltz, D. (1991). Physical activity and adolescent female psychological development. *Journal of Youth and Adolescence, 20*(4), 463–474.

Coyle, C. P., Kinney, W. B., & Shank, J. W. (1993). Trials and tribulations in field-based research in therapeutic recreation. In M. Malkin, & C. Howe (Eds.), *Research in therapeutic recreation: Concepts and methods* (pp. 207–232). State College, PA: Venture Publishing.

Creswell, J. W. (1994). *Research design: Qualitative & quantitative approaches.* Thousand Oaks, CA: SAGE Publications.

Danish, S., Petitpas, A., & Hale, B. (1990). Sport as a context for developing competence. In T. Gullotta, G. Adams, & R. Montemayor (Eds.), *Developing social competency in adolescence* (pp. 169–194). London: Sage Publications.

Fox, K., & Corbin, C. (1989). The physical self-perception profile: Development and preliminary validation. *Journal of Sport and Exercise Psychology, 11*(4), 408–430.

Freeman, P., & Zabriskie, R. (2003). Leisure and family functioning in adoptive families: Implications for therapeutic recreation. *Therapeutic Recreation Journal, 37*(1), 73–93.

Frieden, L. (1990). Community integration and follow-up. In D. F. Apple & L. M. Hudson (Eds.), *Spinal Cord Injury: The Model.* Proceedings of the National Consensus Conference on Catastrophic Illness and Injury (pps. 38–41).

Groff, D. G. (1998). Exploring identity formation of youth involved in an afterschool disabled sports program. (Doctoral dissertation, University of Georgia, 1998). *Dissertation Abstracts International, 59,* 3334.

Groff, D., & Kleiber, D. (2001). Exploring the identity formation of youth involved in an adapted sports program. *Therapeutic Recreation Journal, 35*(4), 318–332.

Horton, R. S., & Mack, D. E. (2000). Athletic identity in marathon runners: Functional focus or dysfunctional commitment? *Journal of Sport Behavior, 23*(2), 101–110.

Huff, C., Widmer, M., McCoy, K., & Hill, B. (2003). The influence of challenging outdoor recreation on parent-adolescent communication. *Therapeutic Recreation Journal, 37*(1), 18–37.

Hutzler, Y., & Sherrill, C. (1999). Disability, physical activity, psychological well-being, and empowerment: A life-span perspective. In R. Lidor & M. Bar-Eli (Eds.), *Sport psychology: Linking theory and practice* (pps. 281–300). Morgantown, WV: Fitness Information Technology, Inc.

Josselson, R. (1994). Identity and relatedness in the life cycle. In H. Bosma, T. Graafsma, H. Grotevant, & D. de Levita (Eds.), *Identity and development: An interdisciplinary approach* (pp. 81–102). Thousand Oaks, CA: Sage Publications.

Kleiber, D., & Kirshnit, C. (1991). Sport involvement and identity formation. In L. Diamant (Ed.), *Mind-body maturity: Psychological approaches to sports, exercise, and fitness* (pp. 193–211). New York: Hemisphere Publishing.

Krause, J. S., & Kjorsvig, J. M. (1992). Mortality after spinal cord injury: A four-year prospective study. *Archives of Physical Medicine and Rehabilitation, 73,* 558–563.

Mactavish, J., & Schleien, S. (1998). Playing together growing together: Parents' perspectives on the benefits of family recreation in families that include children with a developmental disability. *Therapeutic Recreation Journal, 32*(3), 207–230.

Martin, J., Adams-Mushett, C., & Smith, K. (1995). Athletic identity and sport orientation of adolescent swimmers with disabilities. *Adapted Physical Activity Quarterly, 12*(2), 113–123.

Martin, J., & Smith, K. (2002). Friendship quality in youth disability sport: Perceptions of a best friend. *Adapted Physical Activity Quarterly, 19*(4), 472–482.

Mead, G. H. (1934). *Mind, self, and society.* Chicago: University of Chicago Press.

National Center on Birth Defects and Developmental Disabilities (2001, September 6). *Healthy people with disabilities: HP 2010 data on disparities.* Retrieved June 23, 2004 from www.cdc.gov/ncbdd

National Organization on Disability (2002, July 10). *2000 National Organization on Disability/Harris survey of Americans with disabilities.* Retrieved June 22, 2004 from http://www.nod.org/section.cfm?id=55

National SCI Statistical Center (1995). *Spinal cord injury: Facts and figures at a glance.* Birmingham, AL.

Petitpas, A. J. (1978). Identity foreclosure: A unique challenge. *Personnel and Guidance Journal, 56,* 558–561.

Scholl, K. G., McAvoy, L. H., Rynders, J. E., & Smith, J. G. (2003). The influence of an inclusive outdoor recreation experience on families that have a child with a disability. *Therapeutic Recreation Journal, 37*(1), 38–57.

Seaman, J. A. (1999). Physical activity and fitness for persons with disabilities. *The Presidents Council on Physical Fitness and Sports Research Digest, 3,* 1–6.

Stryker, S. (1987). Identity theory: Developments and extensions. In K. Yardley & T. Honess (Eds.), *Self and identity: Psychological perspectives* (pp. 89–103). Salisbury: John Wiley & Sons Ltd.

Stumbo, N., & Peterson, C. (2004). *Therapeutic recreation program design: Principles and procedures.* San Francisco, CA: Pearson Education Inc.

U.S. Department of Health and Human Services (2001, December). *Healthy People 2010: Understanding and Improving Health.* 2nd ed. Washington, DC: U.S. Government Printing Office. Retrieved June 22, 2004 from *http://www.healthypeople.gov/*

U.S. Department of Health and Human Services (2005). *The Surgeon General's call to action to improve the health and wellness of persons with disabilities.* Rockville, MD: Author.

Wells, C. L., & Hooker, S. P. (1990). The spinal injured athlete. *Adapted Physical Activity Quarterly, 7*(3), 249–260.

Whiteneck, G., Fougeyrollas, P., & Gerhart, K. (1997). Elaborating the model of disablement. In M. J. Fuhrer (Ed.), *Assessing medical rehabilitation practices: The promise of outcomes research* (pp. 91–102). Paul H. Brookes Publishing: Baltimore, MD.

Wiechman, S., & Williams, J. (1997). Factors affecting athletic identity and expectations in high school student athletes. *Journal of Sport Behavior, 20*(2), 199–211.

Williams, T. (1994). Disability sport socialization and identity construction. *Adapted Physical Activity Quarterly, 11*(1), 14–31.

Zabriskie, R., & Heyne, L. (2003). A refocus on family. *Therapeutic Recreation Journal, 37*(1), 15–17.

Zabriskie, R., & McCormick, B. (2003). Parent and child perspectives of family leisure involvement and satisfaction with family life. *Journal of Leisure Research, 35*(2), 163–189.