Research Briefs from the 2013 ATRA Research Institute

ATRA Annual Conference
September 29-October 2, 2013
Pittsburgh

Held in Conjunction with the 2013 Annual Conference of the American Therapeutic Recreation Association
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Co-editors

Jo Ann Coco-Ripp, PhD, LRT/CTRS
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Editors’ Comments

We would like to thank all the educators, practitioners and students who were a part of the Research Institute, including those who gave presentations, those who depicted their work with posters, and the professionals who helped with the review process. Recreational therapy (RT) as a field has embraced Evidence-Based Practice (EBP). There is no doubt that the excellent research presented at the 2013 ATRA Annual Conference will add to our literature base. Again this year, ATRA Practice Posters were included in the Research Institute. Research posters and practice posters were displayed side-by-side. This was done to highlight a concept called Practice-Based Evidence (PBE). “In the concept of Practice-Based Evidence, the real, messy, complicated world is not controlled. Instead, real world practice is documented and measured, just as it occurs, ‘warts’ and all. It is the process of measurement and tracking that matters, not controlling how practice is delivered” (Swisher, 2010, p. 4). In PBE the reflective practitioner carefully describes the client, intervention, and outcomes. PBE does not replace EBP but adds to it. Thus we have research informing practice, and practice informing research. We strongly believe this year’s poster session did just that.

New this year was the addition of students’ posters depicting Theory-Based Practice (TBP). TBP is the application of theory to intervention (Stumbo, 2011). A discussion on the ATRA listserv provided information on a project that was undertaken by Temple University master RT students. Participants on the listserv noted they would like to learn more about the project, thus the students were invited to be a part of the Practice Poster Session. The students researched various theoretical frameworks or RT models and used them to explain current RT issues. The focus on using theory to guide interventions has been encouraged for many years (Caldwell, 2001). We were pleased to be able to showcase excellent examples of TBP this year.

References


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# TABLE OF CONTENTS

## 2012-13 OFFICERS, BOARD OF DIRECTORS, AND RESEARCH TEAM

<table>
<thead>
<tr>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
</tr>
</tbody>
</table>

## 2013 ATRA RESEARCH INSTITUTE PRESENTATIONS

*Listed alphabetically by first author*

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strengths-Based Therapeutic Recreation: A Research Think Tank</td>
<td>Lynn Anderson, Linda Heyne, Cynthia Carruthers, Colleen Hood</td>
<td>7</td>
</tr>
<tr>
<td>A Conceptual Marketing Model for the Field of Recreation Therapy</td>
<td>Leandra Bedini, Laura Kelly</td>
<td>11</td>
</tr>
<tr>
<td>The Role of the Internship in the Moral Development of TR Students</td>
<td>Patti Craig, Janet Sable</td>
<td>16</td>
</tr>
<tr>
<td>Motivation and Adults with Physical Disabilities: Factors that Increase Participation in Competitive Sports</td>
<td>Sara Curry, Brent Wolfe</td>
<td>24</td>
</tr>
<tr>
<td>The Influence of Contextual Factors on Community Reintegration among Injured Service Members from the Global War on Terrorism</td>
<td>Brent Hawkins</td>
<td>37</td>
</tr>
<tr>
<td>Barriers for Active Living in Aging Adults with Developmental Disabilities</td>
<td>Pei-Chun Hsieh, Rosemary Price</td>
<td>40</td>
</tr>
<tr>
<td>Health Promotion for Youth with Autism through Technology Intervention</td>
<td>Elizabeth Kemeny, Cassandra McMinn, Lauren Marriner</td>
<td>44</td>
</tr>
<tr>
<td>Interdisciplinary Team Perceptions of the Certified Therapeutic Recreation Specialist: Impact on Relational Coordination and Quality of Care on an Acute Inpatient Child and Adolescent Psychiatry Unit</td>
<td>Abby Pestak</td>
<td>49</td>
</tr>
<tr>
<td>Student Attitudes towards Individuals with Severe Mental Illnesses</td>
<td>Gretchen Snethen, Gena Bell Vargas</td>
<td>56</td>
</tr>
</tbody>
</table>

ATRA Research Institute, Pittsburgh, PA, October 1-2, 2013
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Introduction

A paradigm shift is occurring in health and human services from a deficits and problem-based orientation (often referred to as the medical model) toward an approach grounded in participant strengths, capabilities, and aspirations (Anderson & Heyne, 2012a; Saleebey, 2006; Utesch, n.d.; World Health Organization, 2004). Professions that support individuals and communities are reorienting themselves to a strengths perspective. The positive psychology movement (Fredrickson, 2001, 2009; Lyubomirsky, 2008; Seligman, 2003, 2009); the focus on resiliency in youth development (Search Institute, 2013); the recovery model in mental health (Conley, 2004; Deegan, 1988; Jacobson & Curtis, 2000); and the asset-building approach in community visioning and coaching (Cohen, 2005) are four such examples. New research in brain functioning also provides scientific evidence that a strengths orientation is far more effective in creating positive growth than an approach geared toward correcting deficits (Koyama, McHaffie, Laurienti, & Coghill, 2005; Rock, 2006; Rock & Schwartz, 2006; Schwartz, Stapp, & Beauregard, 2005). This shift has significant implications for therapeutic recreation/recreational therapy research and practice.

New research findings in “positive science” (Lopez & Snyder, 2003; Saleebey, 2006) are challenging the medical model as the dominant approach to the helping relationship. Empirical findings are now pointing to the “power of the positive” (Carruthers & Hood, 2004; Fredrickson, 2009), and there is a call to shift our lens to the strengths, dreams, goals, and aspirations that participants bring to the therapeutic process (Anderson & Heyne, 2012a). Instilling hope and building strengths are key to the effectiveness of the helping relationship, more so than techniques focused primarily on deficit reduction. Dr. Martin Seligman, in his presidential keynote to the American Psychological Association, stated,

> It is possible that building strengths produces a larger improvement for most disorders than the specific damage-healing moves. By working in the medical model and looking solely for the salves to heal wounds, we have misplaced much of our science and much of our training. (1998, p. 1)

This statement is perhaps more true in therapeutic recreation/recreational therapy than most professions, given the nature of our work in the realm of leisure functioning, participation, and enjoyment. However, given that therapeutic recreation/recreational therapy services have been couched in the medical model so solidly, the profession is in need of guidance in using a strengths approach in the critical area of research and evaluation.

The purpose of the research think tank is to provide the beginning step in an inclusive process to develop a research agenda for strengths-based ecological therapeutic recreation. The process will lead to the development of guidance documents that can assist researchers and practitioners alike in efficacy.
research focused on the strengths approach in therapeutic recreation practice.

**Methods**

The research think tank utilizes a structured round table discussion format, 1 hour in length. Facilitators work with small groups, then one large group, to develop research focus areas and research questions that can guide a national agenda/plan for strengths focused leisure-centric research in therapeutic recreation.

Sequential steps are used in the think tank dialogue. In the first step, the think tank facilitators introduce the research topic areas, state the purpose of the session, and provide brief overviews of the strengths approach and the ecological approach. Strengths/resources needed for well-being and quality of life based on current literature as well as a brief compare/contrast of the deficits versus strengths approaches are also provided.

In the second step, the facilitators present instructions for groups, using a modified World Café approach. The World Café process “depends on two fundamental beliefs about human life. First, we humans want to talk together about things that matter to us. In fact, this is what gives satisfaction and meaning to life. Second, as we talk together, we are able to access a greater wisdom that is found only in the collective” (Brown & Isaacs, 2005, p. ix). Due to time constraints, not all aspects of the World Café process are used, but these basic principles of the approach are implemented: setting the context, creating a hospitable space (music and treats provided), exploring questions that matter, encouraging everyone’s contribution, connecting diverse perspectives, listening together for patterns and deeper questions, and collecting and sharing discoveries.

In the third step, participants choose a round table discussion to join. Tables for discussion are organized by human well-being domains as identified in the Leisure and Well-Being Model (Carruthers & Hood, 2007; Hood & Carruthers, 2007) and the Flourishing through Leisure Model (Anderson & Heyne, 2012b). Participants can remain at one table or rotate through two to three domain tables (depending on time) to generate strengths-based ecological research ideas and questions. At each table, participants take roles of moderators, recorders, or spokespersons.

In the fourth step, groups report back to larger group, using the modified World Café approach. Facilitators collect the responses of all tables, to be used for follow-up dissemination and continued brainstorming via an online discussion board. The think tank and discussion board ideas will constitute the first phase of a Delphi study to identify a national agenda for strengths-based therapeutic recreation/recreational therapy research.

**Outcomes**

As a result of this working session, the research think tank will begin to develop focus areas and guiding research questions for strengths-based therapeutic recreation practice. The research ideas and questions generated will then be used by the facilitators in a follow up Delphi study to determine priority areas for research in strengths-based therapeutic recreation practice, which is how many of the prior therapeutic recreation studies of research priorities have been conducted in the past (Carruthers, 1998; Wilhite, Keller, & Jacobson, 2003). Final results of the Delphi study will be disseminated to researchers and practitioners alike via the research journals, newsletters, listservs, and other venues, as well as shared with therapeutic recreation groups (e.g., ATRA, CTRA, Midwest Symposium, Inclusion...
& Accessibility Network/NRPA, state associations or chapters). The results of the session and Delphi study will be used to begin to develop a profession-wide strategy or plan for pursuing research in the efficacy of strengths-based therapeutic recreation practice.

References


ATRA Research Institute, Pittsburgh, PA, October 1-2, 2013


The purpose of this paper is to present a theoretically grounded, evidence-based strategic model for marketing the field of recreation therapy (RT). The Social Marketing Theory (Morris & Clarkson, 2009) provided the theoretical framework to develop this targeted and sustainable model. The theory offers six guiding principles: (a) goals for the target market behavior, (b) insight into customer decision processes, (c) segmentation and targeting, (d) competition, (e) exchange, and (f) marketing and intervention mix. Application of these principles to the potential target markets for our field (i.e., healthcare administrators, physicians, other therapies, community, and clients and their families) provided a strong conceptual foundation for the RT marketing model’s initiatives presented below. In addition, evidence-based strategies from marketing research were used to develop this specific, and sustainable marketing model designed for the field of RT.

Background/Rationale

Occupational prestige is founded on “high pay, high social value with the greatest training” (Rosoff & Leone, 1991, p. 322). Unfortunately, RT lags far behind related therapies (OT, PT, SLP) in public awareness, occupational prestige, and positive and accurate perceptions by healthcare administrators. Data from the U.S. Department of Labor’s *Occupational Outlook Handbook* (2011-2012), show fewer jobs and lower salaries for RT than for OT, PT, SLP. In addition, RT is absent from many general social surveys evaluating prestige (Hinton, 2010). Also, research suggests that many healthcare administrators do not fully comprehend RT services, rather perceive RT as “fun activities,” not really beneficial, not medically prescribed, and not needed as well as identified Activity Programs (AP) as services that could easily do RT (Harkins, 2010). Harkins (2010) also found that RT referral rates by physicians were woefully low compared to other therapies. Unfortunately, historically, RT professionals have not done a good job in marketing nor taking ownership in promoting ourselves as a viable service. Smith, Perry, Neumayer, Potter, and Smeal (1992) showed that RTs themselves often reported the same or poorer perceptions of the field of RT than they did for other service areas (PT, OT). Despite these limitations, there is currently little emphasis by academia or the field itself on education and training about how to market RT programs. For example, only 6.7% of the CTRS exam content addresses “Advancement of the Profession.” Of the 12 items that make up the 6.7% in this category, only one item, “public relations, promotion, and marketing of the TR/RT profession” addresses marketing. Even though the field has grown over the last five decades, RT is still one of health care’s “best kept secrets.” This unfamiliarity of RT services can be attributed to a lack of a unified, targeted, and universal marketing strategy. Even though our national professional organizations (i.e., ATRA, NTRS, NCTRC) have created marketing guides, brochures, and campaigns, marketing efforts to date are not comprehensive and make up only a small segment of a universal and sustainable marketing strategy. Thorn (1984) proposed that the field seek to understand the “discrepancies between the desired image and the actual image” (p. 44) of the field. Almost 30 years later, little has been done toward achieving this goal. Therefore, a marketing model is proposed here to begin to address these needs.

Methods to Design Marketing Model

Several methods were used in the design of the marketing model. First, an examination of evidence-based research in social marketing, provided data to build the model’s infrastructure. In addition, an examination of literature that addressed goals and needs of target markets provided the data used to identify each markets’ questions regarding “what really matters to them” (as suggested in marketing
Finally, specific strategies were developed and outlined using evidence from research studies in disciplines of physical therapy, occupational therapy, nursing, health, social studies, and business.

**Description of the RT Marketing Model**

This proposed model offers a conceptual template for building a unified and sustainable marketing strategy in the field of RT. The RT Marketing Model (see Figure 1) is presented in the form of three concentric circles: (a) *Intra-Professional*, (b) *Inter-Professional*, and (c) *Extra-Professional*. Each circle represents a target market category that has potential to carry the message of RT. The model is based on the concepts of education, empowerment, and becoming ubiquitous through branding. All three categories are interwoven throughout the circles presenting potential benefits as well as liabilities.

The innermost circle, *Intra-Professional Marketing*, focuses on internal markets directly in the field of RT. Cooper and Cronin (2000) described internal marketing as the first line of effective marketing for an agency. It is done within and by program staff and should precede any external marketing efforts. RT professionals must promote “marketing” as more than a department responsibility alone; rather the responsibility of each member of a department (Merenda, n.d.). The Intra-Professional circle of the model is divided into two subsets: *pre-professional training* and *professional training*. In pre-professional training, RT students are the target market. RT educators must teach them to perform not only the “whats” of our field, but also be able to explain the “hows” and “whys” of what we do. The proposed marketing model outlines specific strategies for educators and students to reach beyond the “elevator speech,” and be able to describe the evidence-based benefits of RT for various populations ranging from a prospective client to the prospective employer or the CEO/Administrator of the company. Subsequently, *professional training* is directed toward RT practitioners in the field to assist in the ability to identify to whom they are marketing, design a relevant message communicating the benefits of RT, and determine the most effective media through which to send these messages.

The second circle of the RT Marketing Model, *Inter-Professional Marketing*, addresses marketing the value of RT services to others who have the ability to prescribe or request our services such as administrators/CEOs, physicians and other entities who can prescribe our services, related therapies (OT, PT, SLP, Nursing), and clients and their families. Based on specific research data from fields such as business, healthcare administration, physical therapy, and higher education (e.g., Beattie, Pinto, Nelson and Nelson, 2002; Cooper & Cronin, 2000; Harkins, 2010; Hudgins, 2013), the model describes the distinct target needs for each of these populations and proposes specific techniques for creating and communicating the matching RT messages to meet those needs.

*Extra-professional Marketing* is the last and largest circle in the RT Marketing Model and addresses critical elements in the “environment” determined to have direct as well as indirect effects on the acknowledgement of RT services. These elements include: (a) points of contact, (b) signage, (c) media, and (d) branding. *Points of contact* refer to the first person or source of information potential clients, family members, or affiliated staff have with an agency. Research demonstrates that the presence of a treatment service through a point of contact is critical to the recognition and potential pursuit of that service. Research from the medical arena (e.g., American Hospital Association, 2004; Boyington, Jones, & Wilson, 2006; Kasoff, 2006; Sullivan, Kasoff, & Carty, 2000; Taylor, 2010) stresses the importance of hospital websites as a “tool” to promote the agency’s healthcare products and services. Specific to RT, results of a study by Bedini and Petraca (2013) showed that online searches for RT in specific healthcare websites yielded results in only 60% of agency websites, whereas OT was found in 92% of the agencies searched. Research suggests that omission of the “presence” of a service on the agency’s website diminishes the perception of the importance and relevance of said service within the healthcare team. *Signage* is a subtle form of marketing often overlooked but has significant impact on the impression perceived by visitors and staff alike. Braun (2011) posits that good signage
creates marketing benefits in several ways: (a) contributing to effective and efficient location of a service, (b) preventing visitor frustration and annoyance, and (c) decreasing time that agency employees spend on giving out directions. Social media such as Facebook is being engaged by many agencies to market their services, programs, or agencies. Healthcare marketing research shows that using Facebook not only offers the “voice” of the client/customer, but also boosts a program’s visibility in search engines (e.g., Hirsch & Gandolf, 2012). Finally, branding has been identified as a critical element in marketing, especially in the healthcare arena. Marketing research emphasizes that branding is “promise to your customer” and must deliver a clear message that gives you credibility (Sorenson 2012; Williams, n.d.). The marketing model outlines specific strategies within this technique that are appropriate and potentially successful for RT agencies.

Conclusion and Recommendations for Practice and Research

As noted above, the field of RT has no comprehensive strategic plan for marketing itself. This study proposes a theoretically based conceptual model in an effort to promote a dialogue regarding the development of a unified and comprehensive marketing strategy for the field. In addition, presenting marketing strategies on three levels, the model offers RT professionals the foundation on which to build a system to communicate RT’s worth, impact, and value to the healthcare arena both in clinical and community settings. By exploring individualized concepts of relevant goals, insights, segments, competition, and exchange as suggested in the tenets of the Social Marketing Theory, RT professionals can use this model as a “template” to design their own marketing strategies. Finally, consistent with conceptual model development process, future research is warranted to systematically test this model’s effectiveness in these various settings.

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Kasoff, J. (2006). How do hospitals represent the image of nursing on their web sites? The Journal of
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ATRA Research Institute, Pittsburgh, PA, October 1-2, 2013
Figure 1. Proposed Marketing Model for Recreation Therapy
The Role of the Internship in the Moral Development of TR Students
Patti Craig, PhD, CTRS/L
Janet Sable, EdD, CTRS/L

Therapeutic recreation (TR) educators have long recognized the significance of the internship experience in the professional growth of TR students, specifically as it leads to the development of entry-level competencies for practice (Holmes-Layman & Pommier, 2009). Although the internship is a time of intense skill acquisition where students are challenged to make the critical transition to more autonomous professional functioning (Hambrick, Pimental, & Albano, 2009), it is also a time when they begin negotiating their ethical identity as they bump up against issues of “right and wrong” in daily practice. During the internship, students must manage complex ethical demands of the profession such as problems associated with the therapist-patient relationship, confidentiality and privacy, fairness in the distribution of services, patient autonomy, and/or conflict of interest (Jacobson & James, 2001). They may be further challenged by ethical situations presented by our current health care system. For example, managed care tends to position health care within a business framework emphasizing efficiency, productivity, and cost containment; occasionally at the expense of holistic, patient-centered care (Jacobson & James). This emphasis can challenge our understanding of professional ethics, and may result in a moral climate shift from a human service orientation to a self-interested value system (Swisher, 2005).

Student interns are especially vulnerable to this challenging professional environment and must receive appropriate ethical training opportunities within the TR curriculum if they are to succeed. In the context of TR practice, “doing right” is conveyed through ATRA’s (2009) code of ethics, which is traditionally presented to students through various didactic means in the classroom (Henderson & Bedini, 1990; Nisbett, Brown-Welty, & O’Keefe, 2002; Nisbett & Hinton, 2008). Although this training is important for moral development, to become ethical practitioners and successfully integrate into the profession, students must also be socialized to develop an internalized understanding of these ethical codes (Trietzenberg & Davis, 2000). This integration process, we contend, is most readily achieved through the internship experience; however, there is a lack of research offering insight into the role of the internship in the moral development of TR students.

Our conception of moral development is grounded in Rest, Narvaez, Bebeau, and Thoma’s (1999) NeoKohlbergian theory of moral behavior, and as operationalized in their Four Component Model. Rest et al. suggest that moral behavior is comprised of four major internal components: moral sensitivity, moral judgment, moral motivation, and moral character. These four components depict an “ensemble of processes” and deficiency in any of them can result in a failure of moral action (Narvaez & Rest, 1995). According to Rest et al., a person who demonstrates moral sensitivity is aware that there is a problem when it exists, is empathic and able to interpret the situation, can imagine consequences, and can understand how his/her actions may impact others. Moral judgment is being able to define what the ethical issues are, and is the rationale one uses when deciding on a course of action. This conception of moral judgment includes three moral judgment schemas (Personal Interest, Maintaining Norms, Post-Conventional) and seven developmentally ordered judgment types, and can be measured by the Defining Issues Test 2. Individuals who have dominant scores in the Personal Interest (PI) schema are said to have less complex levels of moral reasoning, and tend to demonstrate judgments and actions from an egocentric perspective. Those with dominant scores in the Maintaining Norms (MN) schema tend to reason at a moderate level of complexity, and have an increased ability to recognize norms, social order, and society-wide cooperation. Individuals with dominant scores in Post-conventional (PC) schema are able to conceptualize and reason at higher levels about complex ethical
issues. Moral motivation emphasizes the importance of prioritizing moral values over competing non-moral values, and the formation of role concept or professional identity. Moral character is described as the ability to persist in a challenging ethical task despite the consequences or perceived threat.

Rest et al.’s primary theoretical proposition suggests that for moral action to occur, an individual must interpret the situation and the action possibilities (moral sensitivity), form a moral judgment about what should be done (moral judgment), choose a moral or non-moral value to seek through action (moral motivation), and carry out the intended act (moral character). They further suggest that morally mature professionals exhibit an internalized understanding of and commitment to ethical codes and are able to place a high priority on professional values, whereas less mature professionals, such as interns, have yet to internalize the values of the profession resulting in moral actions that may be motivated by self-interests of the Personal Interest schema such as self-preservation, reward, or avoidance of punishment rather than moral considerations. Individuals’ whose moral judgments are motivated by self-interests have yet to develop the conceptual frameworks for a professional ethical identity (Rest et al.).

This mixed methods study examined the moral development of one TR student intern. The purpose of the quantitative phase was: 1) to investigate changes in intern moral judgment as determined by the Defining Issues Test 2 (DIT-2) over the course of a 14-week internship experience. The purpose of the qualitative phase was two-fold: 2) to explore congruence and incongruence between the theoretical patterns of NeoKohlbergian theory of moral development and the observed patterns of intern moral judgment and actions; and 3) to explore aspects of the internship experience that appeared responsible for changes in intern moral development over the course of the internship experience.

Method

The setting was a nationally accredited recreation management curriculum with TR and program administration options at a public university in the northeast region of the country. We present case study findings from one TR intern who served as a participant in a larger mixed methods study that explored moral growth of undergraduates in a recreation internship experience (Craig & Oja, 2013). The larger study used a sequential explanatory design whereby data were collected sequentially in two phases: a quantitative phase followed by a qualitative phase (Creswell, 2003). In the quantitative phase, the Defining Issues Test 2 (DIT-2) was administered in a pre and post-test format to 33 recreation students who were conducting 14-week internship experiences throughout the country. Using a criterion sampling strategy based on low and high pre-test scores of the Post-conventional (PC) schema subscale of the DIT-2, 10 interns were purposefully selected to serve as participants in a collective case study during the qualitative phase of the study. We present the case of Amelia, a 22 year-old female senior, who was the only TR intern to serve in the collective case study. Amelia scored high in the PC schema on the DIT-2 pre-test (46) during the quantitative phase of the larger study. She completed her internship with a non-profit, community-based TR organization located in the northeast region of the country, where she provided TR services to diverse groups of individuals with physical, cognitive, and developmental disabilities. A pseudonym is used to maintain her anonymity.

Instrumentation

Quantitative data. The DIT-2 is an objective paper and pencil test of moral judgment (Rest, 1987). It presents five hypothetical moral dilemmas, each followed by 12 issues which the respondent rates and ranks in order of importance in resolving the dilemma. For each respondent the patterns of ratings and rankings determines “estimates of the relative strength of three moral schemas: Personal Interest, Maintaining Norms, and Post-Conventional moral reasoning” (Rest et al., 1999, p. 6). An individual’s scores will demonstrate thinking in all three schemas, while one is predominant. Results are reported as percentage scores in each of the three schemas. The use of Type Indicator scores provides a
fuller account of an individual’s moral judgements. On the basis of evidence for validity and reliability as reported in Bebeau and Thoma (2003), the DIT-2 is adequate for research purposes.

**Qualitative data.** Multiple forms of qualitative data were gathered including: a) a 90-minute interview conducted at the end of the internship experience, which was audio-taped and transcribed verbatim; b) academic assignments including formative and summative papers, weekly reflective journals, bi-weekly online discussions with intern peers and academic supervisor, a special project report, and a summative internship portfolio document; and c) researcher field notes. These data sources were used as a "convergence of evidence" (Yin, 2003, p. 100) to identify aspects of the internship that appeared to influence intern moral development. The interview tool was developed through a series of observations, focus groups, telephone interviews with site supervisors, and a pilot test study.

**Data Analysis**

**Quantitative analysis.** Because Amelia’s case was a part of the larger mixed methods study where descriptive and inferential statistics were utilized to examine changes in mean moral judgment schema scores from pre- to post-test for the larger sample, for the purpose of this brief, we report descriptive findings for Amelia’s individual case. Pulling her case out of the larger sample dictates a review of the schema scores in terms of directional trends (e.g., increases or decreases), rather than statistical mean score changes.

**Qualitative analysis.** Because the qualitative phase comprised two distinct aims, this section describes the two different data analysis techniques utilized. To explore congruence and incongruence between the theoretical patterns of NeoKohlbergian theory of moral development and the observed patterns of intern moral judgment and actions, the researcher used an outcome pattern matching technique (Trochim, 1989), which compares an empirically based pattern with a predicted theoretical pattern. The inferential task of outcome pattern matching involves relating, linking, or matching the two patterns; to the extent that the patterns match, one can conclude that the theory receives support, and if patterns do not match, the theory may be incorrect or poorly formulated, the observations may be inappropriate or inaccurate, or some combination of both states may exist (Trochim). The empirically based patterns in this study were generated from Amelia’s DIT-2 pre and post-test, interview, academic artifacts, and the researcher’s field notes. The theoretical patterns were based on Rest et al.’s (1999) moral development theory, which suggests that as individuals utilize more complex moral judgment schemas, they will demonstrate different actions with regard to moral sensitivity, moral motivation, and moral character. When a pattern is deemed congruent it suggests that “schema from artifact analysis parallel schema from the DIT-2” and when a pattern is determined to be incongruent it suggests there is “disparity in resulting schema” (Johnson, 2008, p. 436). In accordance with the theory, one would expect an intern to exhibit certain cognitive-affective interactions for each component of moral behavior and might anticipate certain situational factors that influence each component. Rather than arbitrarily make decisions about which of the four components were evident in Amelia’s judgments and actions, a decision rules guide was created based on each of the four components as defined by Rest et al., which allowed for consistent categorization of Amelia’s judgment and action patterns.

To explore aspects of the internship experience that appeared responsible for changes in intern moral development over the course of the internship experience, the researcher coded the qualitative data by breaking it down into manageable segments and identifying, labeling, or naming those segments (Schwandt, 2001). Utilizing the constant comparative method (Glaser & Strauss, 1967), the researcher compared and contrasted each new segment of data to the existing categories, and if the new coded data was an appropriate fit with an existing category, it was placed in that category. Conversely, if the new coded data was an inappropriate fit with an existing category, then the researcher either redefined a category or created a brand new one until all of the data were labeled. A member check procedure was
used to verify the accuracy of the preliminary narrative themes. The salient categories that resulted led to the development of three prominent themes describing how the internship influences the moral development of TR students.

Findings

Quantitative Results
Table 1 depicts Amelia’s pre- and post-test moral judgment schema and type indicator scores derived from the DIT-2. Although statistical significance is not sought for the case study method, a review of Amelia’s scores reveals some very positive trends. Amelia demonstrated a decrease in her Personal Interest schema score from pre (26) to post-test (6), an increase in her Maintaining Norms schema score from pre (28) to post-test (38), an increase in her Post-conventional schema score from pre (46) to post-test (56), and an increase in her overall N-2 Index score from pre (50) to post-test (58). Her Type Indicator score remained the same from pre to post-test, which is the highest score indicating consolidation in the Post-conventional schema. These scores suggest that a TR internship experience has the potential to move interns towards more complex levels of moral reasoning. These are important findings for the TR field because students who demonstrate more complex levels of moral judgment are said to have access to better conceptual tools to help them make sense of their world and derive guides for decision-making (Rest & Narvaez, 1994). Although these findings cannot be generalized to the greater population, they are consistent with the literature, which suggests that fieldwork experiences have the potential to promote student cognitive growth in the moral domain (Brendel, Kolbert, & Foster, 2002; Cannon, 2008; Sisola, 2000; Trietzenberg & Davis, 2000).

Case Study Findings
Noteworthy congruence existed between the theoretical patterns of NeoKohlbergian theory of moral development (Rest et al., 1999) and the observed patterns of judgments and actions in Amelia’s case. According to the theory, individuals who have high PC schema scores are expected to demonstrate judgments and actions that are open to conflicted viewpoints, consider the rights of others, take into account both logical and emotional domains, and adhere to universal ethical principles. These patterns were evident in Amelia’s judgments and actions as she encountered ethical and/or ambiguous situations in practice. Despite some challenging situations, she consistently considered others’ perspectives, including those of her clients, their families, her co-workers, and program volunteers. She showed patience and tolerance during times of ambiguity and conflict, and put the needs of others before her own. She took a caring, empathic, and sensitive approach with others, even when challenged by occasionally inappropriate behaviors. Overall, Amelia demonstrated judgments and actions that were consistent with the Post-Conventional schema, showing congruence with the theoretical patterns of Rest et al’s NeoKohlbergian theory of moral development.

The case study further attempted to offer possible explanations for Amelia’s moral reasoning shifts from pre to post-internship. How the internship impacted Amelia’s moral development appears to be influenced by three critical aspects: 1) exposure to ethical norms and core values at the internship site, 2) significant supervision and mentoring, and 3) opportunities for guided reflection.

Theme I: Exposure to ethical norms and core values at the internship site. In contrast to the value incompatibility experienced by a number of interns from the collective case study who interned in for-profit recreation settings, where a personal stake emphasis appeared to negatively impact their moral development, Amelia encountered core values in her non-profit TR setting that seemed to enhance her ability to prioritize professional ethical values. The focus of her work was on service provision to vulnerable populations and the message she received on the job from coworkers was one of genuine care and concern for others. Compared to the other interns, Amelia seemed more at ease as she worked through ethical situations, and if she was challenged by a particular situation, she looked to and
consulted with her site supervisor and/or co-workers to model professional behaviors or offer guidance in the resolution of the dilemma. The type of ethical situations that arose in Amelia’s setting enabled her to internalize the organization’s public service philosophy, thus contributing to her moral development.

**Theme II. Fostering moral development through significant supervision and mentoring.**

Supervision and mentoring emerged as an influential aspect of the internship experience in Amelia’s moral development. She characterized her site supervisor and co-workers as strong ethical role models because they were available to her during daily interactions as well as at times when she needed guidance on the ethical front. Her supervisor was attuned to her needs, providing her with practical and emotional support as she struggled to accommodate new and ambiguous experiences in practice. Her supervisor also challenged her with responsibilities outside of her comfort zone and modeled responsible professional behaviors throughout the experience, which appeared to positively influence her understanding of professional ethical values.

**Theme III: Cultivating moral development through guided reflection opportunities.**

Another aspect of the internship that appeared to positively influence Amelia’s moral development was the opportunity for regular reflection through the university’s academic assignments, which were staggered throughout the internship to achieve a balance between her work in the internship and her reflection of the learning experience. Amelia utilized her formative papers, weekly reflective journals, and the online discussion assignments to express her concerns and frustrations, acknowledge what she was learning, reflect on and talk through her encounters with ethical situations, and help her to make sense of the experience. This finding suggests that academic internship supervisors can play a significant role in motivating interns toward ethical practice through the use of guided reflection strategies, which include providing timely and on-going feedback to academic work, probing for more detail, and offering advice or suggestions as interns grapple with certain elements of practice.

**Discussion**

The results of this case study suggest that there is value in exploring the TR internship experience as a primary pedagogical resource for intern moral development. The quantitative results indicate that the internship shows promise in elevating interns to more complex levels of moral judgment. The qualitative findings suggest that an intern’s level of moral judgment may, in fact, be a good predictor of his/her moral behavior in practice. The qualitative findings further suggest that when interns engage in the internship experience, where they are exposed to ethical agency norms and values, supported and challenged by effective site supervisors, and encouraged by academic supervisors to reflect on their learning and development, they can begin to internalize professional ethical values, and thus may take steps towards developing a professional ethical identity.

These findings are significant because TR interns assume a considerable helping role where success or failure can result in real consequences for their clients. We want interns to act in the best interest of others, and to treat everyone fairly and with respect. In the stressful practice environment, it is not easy to identify a specific ethical issue and decide on the best course of action, but interns who demonstrate higher levels of moral judgment should be at a distinct advantage in this process. The process of identifying ethical issues, reasoning and deciding on the best course of action, and having the ability to act requires knowledge and skills that need to be learned and developed. As demonstrated by these results, the internship appears to be a fertile training ground for the moral development of TR students.

**Limitations**

The case study presented is of one TR intern and is intended to provide an in-depth exploration of moral development during a 14-week internship experience and cannot be extrapolated to a larger context. The study is further limited by the fact that only one researcher analyzed the qualitative data.
Implications and Directions for Future Research

Students who are immersed in practice through the internship are likely to be exposed to context-specific values for the first time, bringing them face-to-face with ethical issues that challenge them to reflect upon their own values and understand how their values align with or differ from the values of others. While we hope that students can learn to give priority to professional ethical values over self-interested values, in reality, they are often challenged by many conflicting value systems operating at the same time within the context of their internship experience (Triezenberg & Davis, 2000). These conflicting values may be associated with organizational, contextual, and/or policy factors that compete for students’ attention, acting as potential barriers to moral behavior in practice (Swisher, 2005). Interns’ ability to respond to moments of value incompatibility is contingent upon their moral development (Rest et al., 1999), and the type of pedagogical strategies used by on-site and academic internship supervisors to bridge incongruence and dissonance. We must continue to help students develop awareness and understanding of the potential ethical pitfalls associated with diverse settings in the field. We can achieve this outcome not only through didactic ethical training in the classroom and requiring fieldwork experiences before the internship, but also by being attuned to the values and behaviors presented to our students during the internship experience. If we can succeed in these intentional pedagogical efforts, we might be able to lessen the “reality shock” experienced by interns who encounter setting-specific ethical dilemmas in practice for the first time. Through ethics education in the classroom and carefully designed fieldwork experiences, we can help prepare interns to choose professional ethical values and begin developing their professional identity amidst the reality of practicing in the field.

Future research should consider employing an experimental design where interns from similar TR academic programs participate in a comparative study of intern moral development. Using a larger sample with a control group would allow generalization of the results to the larger field and may enable researchers to quantitatively examine whether different service sectors of the TR field have an impact on the moral development of interns, an issue that this study did not address. A longitudinal study of interns spanning the full period of time they are in the university program would potentially provide more information about the effects of the internship experience on student moral development. For example, gathering DIT-2 data on newly admitted students could serve as a baseline of their moral-reasoning levels, which could then be systematically assessed at numerous points in time throughout the curriculum.
Table 1. Defining Issues Test, Pre- and Post-test Schema and Type Indicator Scores for Amelia

<table>
<thead>
<tr>
<th>Schema Subscale</th>
<th>Pre-test</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Interest</td>
<td>26</td>
<td>6</td>
</tr>
<tr>
<td>Maintaining Norms</td>
<td>28</td>
<td>38</td>
</tr>
<tr>
<td>Post-conventional</td>
<td>46</td>
<td>56</td>
</tr>
<tr>
<td>N-2 Index</td>
<td>50</td>
<td>58</td>
</tr>
</tbody>
</table>

| Type Indicator Score | 7 | 7 |

References
Motivation and Adults with Physical Disabilities: Factors that Increase Participation in Competitive Sports
Sara Curry
Brent Wolfe, PhD, CTRS

The purpose of this study was to determine what specifically motivates adults with physical disabilities to participate in competitive sports. Participation in competitive sporting activities may contribute to one of the main target areas of recreation therapy: improving the quality of life of individuals with disabilities or disabling conditions. Therefore, understanding what motivates people with disabilities to participate in competitive sports can contribute to the selection of recreation interventions, which will contribute to improved quality of life for a broader spectrum of people with disabilities. In the current research, questions of motivation were explored through qualitative methods in order to provide information to aid recreation therapists in understanding the motivational factors necessary for individuals with physical disabilities to engage in competitive sport.

Recreation therapists seek to improve client functioning through the use of purposeful activities. If the motivation of clients with physical disabilities to participate in competitive sports is understood, optimal results can be achieved through the use of competitive sports as interventions. As a recreation therapist, knowing the factors that motivate adults with physical disabilities to participate in competitive sports will allow for effective interventions that specifically employ the motivational factors in order to have the sports interventions be the best fit for the client. Having an intervention that fits with what motivates the client will ensure that the client’s participation in the intervention (and therefore improvement) is optimal.

Overall, factors that have been shown to motivate individuals with and without disabilities are varied but include: a sense of achievement, skill development and to spend ‘luxury time’ on themselves away from daily responsibilities (Crone-Grant & Smith, 1999); fitness and health (Marwat, Khan, & Shah, 2011); attainment of fun and entertainment (Marwat, et al., 2011); enjoyment and socializing with friends (Marwat, et al., 2011); competition, affiliation, enjoyment, increasing social capital, and challenge (Kilpatrick, Hebert, & Bartholomew, 2005); skill development and having fun (Chen, Jin, Mei, & Kwon On, 2007); improved physical conditioning, sense of bodily mastery, heightened sense of self-esteem, and personal empowerment (Berger, 2008). This research served as an attempt to determine motivational factors for people with physical disabilities and identify how these findings fit into the larger body of research related to motivations of individuals with physical disabilities in competitive sports.

Method

Participants are described in Table 1: Participant Descriptions. The study included 12 male and two female participants with a median age of 36.8 years with congenital and non-congenital disabilities. Thirteen of 14 participants were currently involved in various competitive athletic events. One of the participants was working on mobility to be able to maneuver a manual wheelchair with the ultimate goal of participating in competitive sports.

Face-to-face interviews that contained ten standardized questions (located in Appendix) were conducted to elicit information about sport participation and motivation. The interviews were typed and read at least 2 times a week to keep the data fresh in the PI’s mind. “In sections where repetitive words or concepts were identified, a line-by-line coding was completed to allow for an in-depth development of concepts (Charmaz, 2000) and similar concepts were grouped together as themes” (Wolfe & Dattillo, 2006, p. 132). Through constant re-reading of the typed transcripts and examination of the data, clear trends and similarities began to emerge. These trends and similarities become the primary themes.
preliminary themes were competition, camaraderie, physical benefits, “the feeling,” inspiring others, family, coaches, and fun.

After the preliminary themes were reviewed and examined in additional comparison with the participants interview information, the member check process began. Member checking involved presenting the findings to the participants, and “was done to allow participants voice and promote trustworthiness within the data” (Wolfe & Dattilo, 2006, p. 133). The member check process was done to make sure the preliminary themes were accurate and truly represented the participant’s perceptions relation to their motivation in competitive sports. In a word document, the eight themes were randomly ordered and given a brief definition. The document was sent in an email to each participant, and each participant was asked to answer questions about their personal reactions, how accurately each of the themes represented their personal motivations, and their level of agreement with each of the themes. The participants ranked the themes from one to eight with one being the theme that was least motivating and eight the theme that was most motivating. Participants were also provided with the opportunity to comment on the themes and give feedback. There were a final total of seven replies out of 14 participants.

Along with the information from the interviews, the member check responses were considered when developing the subthemes to define the motivational themes. After slight changes, the final motivational themes included: competition, fun, camaraderie, physical benefits, influencing others, coaches, and “the feeling.” The themes and final subthemes provided the answers to the research question, “What motivates adults with physical disabilities to participate in competitive sports?” The motivational themes are visually represented in Figure 1: Results.

**Results**

“Physical benefits” was the most prominent motivational theme that arose from the participants. Physical benefits were described in the subthemes of strength, general fitness, mobility and staying in shape. In the interviews, all 14 participants referenced some type of physical benefit gained from sport participation. Daniel stated that “it helps me physically,” has a “physical benefit” and “it frees up your muscles” in reference to swimming. He called swimming “the best exercise in the world” and gets a “great deal of physical benefits” from participation.

Camaraderie, which was defined in the member checks as “the social support and friendship of being on a team,” was a reoccurring theme. Based on the evidence, the responses about camaraderie were separated into the subthemes of support (both during the sport and outside of the sport), being on a team, meeting other athletes, social life and friendship. Robbie talked about how his sport “brings people together” and “you are no longer on your own.”

The face-to-face interviews conducted with the athletes with physical disabilities presented strong evidence that competition was also a motivating theme. Based on participant statements, the theme of competition was divided into 4 separate subthemes: winning, specific competitions, joining higher levels teams, and the act of competing. Charlie is motivated by the aspiration of being competitive on a higher level stating that he “might be the next person playing in the U.S.A. Team.”

A common idea referenced by participants when discussing motivation was influencing others. This theme is multi-faceted and divided into the subthemes of role modeling, helping others, and inspiring others. Role modeling included being an example for others. Jane stated that she likes use her running to “show other people and myself that you don’t have to stop when you have a major interruption in life.”

Possibly the most difficult theme to define as a motivating factor was “The Feeling.” While difficult to define, as documented in the member checks, participants fully supported the inclusion of this particular theme. Because “The Feeling” can be defined as so many things, three subthemes help
explain what “The Feeling:” positivity, the love of sports, and accomplishment. Jaiden talked about how participating in sports provides “a great feeling, feels good to sweat to work out” and “a good feeling” for him.

Having a coach is a staple in most sports. “Coaching is a collaborative process designed to help people alter perceptions and behavioral patterns in a way that increases their effectiveness and ability to adapt and accept change as a challenge, rather than an obstacle” (Hicks & McCracken, 2011, p. 71). The coach of Daniel’s swim team is highly motivational to him as referenced by the fact that he mentioned the name “Leon Jones” many times throughout the interview and also stated that “I don’t think we could have been more fortunate in getting the coach that we got.”

One motivational factor that was highly supported by the participants in the current study was physical benefits. Martin mentioned that, “participation in sports and exercise can enhance self-esteem and strengthen athletic identity thereby reducing perceived negative external evaluations of body physique” (as cited in Kosma, Cardinal, & Rintala, 2002, p. 117), and that “women with disabilities such as spinal cord injury, limp deficiency, brain-injury, post-polio, and spina bifida can utilize exercise and physical activity in order to increase self-control, psychological empowerment, and personal freedom” (Guthrie as cited in Kosma, Cardinal, & Rintala, 2002, p. 117). Exercise and its role in living a physical healthy lifestyle are constantly referenced in society today as the US Department of Health and Human Services states “evidence clearly shows that regular physical activity improves physiological and psychological health” (as cited in Kilpartick, Hebert, & Bartha, 2005, p. 87). Zardani and Mohades found that “physical activities are important from two aspects of providing health and prevention of secondary diseases and increasing of disabilities level” (2011, p. 96). Therefore, physical benefits are a well-known benefit to sport participation. Zarandi and Mohandes research “indicated that there was significant differences between general health of athletic and non athletic physical disabled people and athletes had higher general health” (2011, p. 99).

Camaraderie and competition were also well-supported themes. Prior research showed that “the important factors of motivation were Skill Development, Fun, Friendship, Achievement, Situation factors, and Energy release, from the most important to the least respectively” (Chen, Jin, Mei, & Kwok On, 2007, p. 1). The current research also identified friendship (in the theme camaraderie) as a motivating factor as well as the motivation theme of fun. “During researches that were done about 1980 Paralympic Netherlands, the results indicated that social contact of disabled athletes with healthy athletes had increased” prior to sport participation (Zarandi & Mohandes, 2011, p. 99). Zarandi and Mohandes also stated that “it seemed that the participation of disabled people and athletes in regular sports activities, in addition to increasing their abilities and physical fitness, was a good social experience that probably had social and psychological consequences, such as social respect and self-esteem” (2011, p. 99).

**Discussion**

Determining the motivational factors for adults with physical disabilities is important for the development of sports programs and recreation therapy interventions. If the programs are developed to directly meet the needs of adults with physical disabilities, more people will likely be involved and will benefit from the programs. Also, as programs are more successful, awareness of sports leagues for individuals will be raised. Competitions could also be modified to motivate the participants as much as possible. These results can also be used in rehabilitation with sport participation. With better information about what motivates participation in sport, recreation therapists could tailor sports interventions to meet the motivational needs of the client so they gain the most benefit from the activity.

Throughout entire research project, the themes emerged and were solidified through the evidence found in the interviews in the participants’ own words that clearly defines the reasons that they
are motivated to continue being involved in competitive sports. For these athletes, the mixture of motivations they experience when participating in their sports comes from many sources. The commonality among the seven motivational themes and numerous motivational subthemes lies in the fact that they always lead to continued success and participation in competitive sports. These themes can be used in practice today to motivate clients with physical disabilities to achieve the many benefits of sport participation in recreation therapy.

References


Table 1: Participant Descriptions

<table>
<thead>
<tr>
<th>Pseudonym</th>
<th>Gender</th>
<th>Age</th>
<th>Disability</th>
<th>Congenital or Non-Congenital</th>
<th>How long disability has been present or transplant occurred?</th>
<th>How long played sports?</th>
<th>Sport</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brody</td>
<td>M</td>
<td>25</td>
<td>CP</td>
<td>Congenital</td>
<td>-</td>
<td>1 year</td>
<td>MOBILITY</td>
</tr>
<tr>
<td>Daniel</td>
<td>M</td>
<td>42</td>
<td>L1 Paraplegic</td>
<td>Non-Congenital</td>
<td>2 and a half years</td>
<td>2 and a half years</td>
<td>Swimming</td>
</tr>
<tr>
<td>Jaiden</td>
<td>M</td>
<td>57</td>
<td>Double Amputee Below the knee</td>
<td>Non-Congenital</td>
<td>10 years</td>
<td>2 years</td>
<td>Basketball, softball</td>
</tr>
<tr>
<td>Ryan</td>
<td>M</td>
<td>42</td>
<td>Heart transplant</td>
<td>Non-cogenous</td>
<td>5 years</td>
<td>4 years</td>
<td>Tennis, running</td>
</tr>
<tr>
<td>Russell</td>
<td>M</td>
<td>23</td>
<td>CP</td>
<td>Congenital</td>
<td>-</td>
<td>15 years</td>
<td>Wheelchair basketball</td>
</tr>
<tr>
<td>Jane</td>
<td>F</td>
<td>53</td>
<td>Liver Transplant</td>
<td>Non-congenital</td>
<td>1 year</td>
<td>10 months</td>
<td>Track</td>
</tr>
<tr>
<td>Robbie</td>
<td>M</td>
<td>49</td>
<td>Above the knee amputee</td>
<td>Non-cogenous</td>
<td>5 years</td>
<td>1 and a half year</td>
<td>Basketball</td>
</tr>
<tr>
<td>Randall</td>
<td>M</td>
<td>62</td>
<td>Heart transplant</td>
<td>Non-Congenital</td>
<td>5 years</td>
<td>3-4 years</td>
<td>Track and Field</td>
</tr>
<tr>
<td>Jackson</td>
<td>M</td>
<td>20</td>
<td>Quad Amputee</td>
<td>Non-Congenital</td>
<td>19 years</td>
<td>8 years</td>
<td>Basketball, track</td>
</tr>
<tr>
<td>Jessica</td>
<td>F</td>
<td>38</td>
<td>T9 Complete Paraplegic</td>
<td>Non-congenital</td>
<td>18 years</td>
<td>A month and a half</td>
<td>Basketball</td>
</tr>
<tr>
<td>Henry</td>
<td>M</td>
<td>45</td>
<td>T10/T12 incomplete</td>
<td>Non-Congenital</td>
<td>30 years</td>
<td>22 years</td>
<td>Tennis, basketball</td>
</tr>
<tr>
<td>Drake</td>
<td>M</td>
<td>63</td>
<td>L1/T10</td>
<td>Non-Congenital</td>
<td>8 years</td>
<td>6 years</td>
<td>Tennis, basketball</td>
</tr>
<tr>
<td>Sheldon</td>
<td>M</td>
<td>26</td>
<td>T11/T12 Complete</td>
<td>Non-Congenital</td>
<td>6 years</td>
<td>2 years</td>
<td>Basketball, swimming, wheelchaier dancing</td>
</tr>
<tr>
<td>Charlie</td>
<td>M</td>
<td>23</td>
<td>T7 Incomplete</td>
<td>Non-Congenital</td>
<td>5 years</td>
<td>5 years</td>
<td>Basketball</td>
</tr>
</tbody>
</table>
Figure 1: Results

What Motivates Adults with Physical Disabilities to Participate in Competitive Sports?

- **Competition**
  - Winning
  - Specific Competitions
  - Joining Higher Level Teams
  - The Act of Competing

- **Fun**
  - Having a good time

- **Camaraderie**
  - Support
  - Being part of a team
  - Meeting other athletes
  - Social life
  - Friendship with teammates

- **Physical Benefits**
  - Mobility
  - Strength
  - General fitness
  - Staying in shape

- **Influencing Others**
  - Role modeling
  - Helping others
  - Inspiring others

- **Coaches**
  - Having a coach

- **"The Feeling"**
  - Love and enjoyment of sports
  - Positivity
  - Accomplishment
Appendix: Interview Questions

My name is. I am conducting personal interviews for the purpose of researching what motivates individuals with disabilities to participate in competitive sports. Is it okay if I record this interview?

Name:

Age:

Current Location:

Pseudonym:

1.) What sports(s) do you play?
2.) How long have you played?
3.) What is your disability? How long have you had your disability?
4.) How/why did you initially become involved in the sport?
5.) Describe your sport (such as is it individual or team, do you have a coach?)
6.) What benefits do you receive from your participation?
7.) Who influences your participation?
8.) How do you measure success in your sport?
9.) What need does participation in the sport meet for you?
10.) How important are goals and achievement of those goals?
Traumatic Brain Injury (TBI): Preliminary Findings on Physical, Cognitive and Psycho-Social Functioning 90 days Post Injury as Measured by the Functional Independence Measure and the Functional Assessment Measure (FIM/FAM)

Donna Gregory, CTRS
Janelle Krantz

Recreation Therapy is part of an interdisciplinary team engaged in an ongoing five year natural history study, Long Term Clinical Correlates of TBI: Imaging, Biomarkers, and Clinical Phenotyping Parameters at the National Institutes of Health (NIH). Recreation Therapy administers the Functional Independence Measure and Functional Assessment Measure (FIM/FAM), as a Common Data Element (CDE) in the TBI research protocol. The CDEs are performed at every time point in the study for each patient. The Research study is part of a large multisite, IRB-approved biomedical research protocol. Preliminary findings identify which FIM/FAM performance measures are most affected by severity for residual functional deficits following TBI. The implementation of the FIM/FAM is a small segment of the overall study. Information regarding the large multi-site research study is included to provide a broader perspective on the study.

Overview of TBI

Each year, at least 1.4 million people sustain TBI, with over 1.1 million treated and released from the Emergency Department (ED) (Langlois, Rutland-Brown, & Thomas, 2006). Approximately 125,000 patients with TBI, typically those more severely injured, experience permanent disability as a result of damage to the brain (Selassie et al.; Zaloshnja, Miller, Langlois, & Selassie, 2008). On the other hand, mild TBI, accounting for at least 75% of all TBI, results in more subtle functional and cognitive deficits that often go undetected in the acute setting. These patients can experience drastic changes in their quality of life, have difficulties returning to daily activities and may be unable to return to work for weeks or months (Pierce & Hanks, 2006; Wagner, Hammond, Sasser, & Wiercisiewski, 2002). It is estimated that mild TBI alone costs the United States in excess of $17 billion per year in long-term care and lost productivity (National Center for Injury Prevention and Control, 2003).

Lack of objective criteria for diagnosing and classifying TBI presents a significant impediment to developing therapies and to providing uniform quality of care. Patients with a history of head injury often receive a screening brain scan using computed tomography (CT) in the Emergency Department (ED) despite a low sensitivity for detecting mild injury (Haydel et al., 2000). The majority of patients discharged directly from the ED are assigned the vague diagnosis of “concussion” and left to their own accord to seek further medical support, despite a persistent and complex “post concussive syndrome” that includes complaints of headaches, dizziness, impaired attention, trouble concentrating, poor memory, and emotional problems (Stalnacke, Elgh, & Sojka, 2007). The identification of imaging and other hematological markers obtained upon acute presentation could help in the diagnosis and classification of TBI, the selection of populations for clinical trials, and the prognosis of clinical, functional, and cognitive outcome. Therefore, it is important to improve our understanding of the nature of acute TBI in order to better design future studies to address specific research and clinical gaps.

Classification of TBI

The vast majority of TBI research and clinical care uses a three level severity classification system (mild, moderate, severe) that has not changed in decades. It is based on subjective reports of symptoms, duration of loss of consciousness, post-traumatic amnesia and the Glasgow Coma Scale (GCS). The current taxonomy has the advantage of being an acute assessment and being a good predictor of mortality, however, for those who survive, it tells us little about long term prognosis for many outcomes important to them (e.g. return to functional independence, work, and participation in the community).
In addition, this taxonomy does not take advantage of newer methodologies that might assist in classification including imaging, serum biomarkers and neuropsychological testing. Adding these variables might add significant predictive power to any outcome model.

**Multi-site Large Study Objectives**

Specific objectives of the prospective cohort study are:

1. To characterize the natural history of TBI by examining the changes in imaging, biomarkers, and clinical phenotype over 5 years.
2. Create and test new criteria for measuring TBI severity using clinical phenotyping, MRI, Positron Emission Tomography using F-Fluorodeoxyglucose (FDG PET/MRI), that will better predict a variety of long-term outcomes (Grossetete, Phelps, Arko, Yonas, & Rosenberg, 2009).
3. Provide blood (or buccal cells) and saliva from well characterised TBI patients to the CNRM Biorepository
4. To evaluate the relationship between demographic, clinical, imaging variables and outcome measures with an eye toward the generation of hypotheses for future studies.

**Core Phenotyping Assessments: TBI Common Data Elements**

All participants will receive a global assessment battery which was recently approved by an interagency government panel as TBI “Common Data Elements” that all TBI cohort studies should use. The California Verbal Learning Test (CVLT-II) will be administered instead of the Rey Auditory Verbal Learning Test (RAVLT).

The core phenotyping assessments include:

- **Glasgow Outcome Scale-Extended (GOS-E):** an assessment of the general functioning. This scale evaluates 8 categories: Dead, Vegetative State, Lower Severe Disability, Upper Severe Disability, Lower Moderate Disability, Upper Moderate Disability, Lower Good Recovery, and Upper Good Recovery. It takes approximately 10 minutes to administer.

- **California Verbal Learning Test (CVLT-II):** measures long and short delay free and cued recall, the effects of interference, recognition, and efficiency of learning. The CVLT-II takes approximately 30 minutes to administer.

- **The Trail Making Test (TMT):** is an assessment of visual conceptual and visual motor tracking (involves motor speed and attention functions). The test requires visual scanning, numeric sequencing and visual motor speed. The TMT takes approximately five minutes to administer.

- **Wechsler Adult Intelligence Scale – 4th Edition (WAIS-IV):** is an intelligence test made up of several subtests. We will focus on Perceptual Reasoning, Working Memory, and Processing Speed; hence we consider the following 7 subtests to be common data elements: Block Design, Matrix Reasoning, Visual Puzzles, Digit Span, Arithmetic, Symbol Search, and Coding. However, at certain other time points we may administer all 10 core subtests. The ten standard subtests take approximately 60-90 minutes to administer.

- **Neurobehavioral Symptom Inventory (NBSI):** is a questionnaire that can be administered to someone who sustains a concussion or other form of traumatic brain injury to measure the presence and severity of symptoms. The NBSI takes approximately 10 minutes.

- **Brief Symptom Inventory - 18 (BSI-18):** is used to identify self-reported clinically relevant psychological symptoms in adolescents and adults. The shortened form of the BSI instrument provides a highly sensitive assessment of psychological factors. The BSI-18 takes approximately 10 minutes to administer.

- **Functional Independence Measure/Functional Assessment Measure (FIM-FAM):** is an 20-item, seven level ordinal scales used to measure one's ability to function with independence. The FIM
was intended to be sensitive to change in an individual over the course of a comprehensive inpatient medical rehabilitation program. The FIM can be completed in approximately 30-35 minutes in conference, by observation, or by telephone interview.

- Craig Handicap Assessment Reporting Technique-Long Form (CHART-LF): is used to provide a simple, objective measure of the degree to which impairments

The two primary objectives of the study for TBI are

1. to identify which FIM/FAM performance measures are most affected by severity for residual functional deficits following TBI; and to
2. compare the findings between mild, moderate, and severe TBI in order to find any correlation to FIM/FAM cognitive, physical and psychosocial function from initial injury.

**Methods**

This study reports the findings obtained from 27 participants with the diagnosis of mild, moderate, and severe TBI. Non penetrating causation of TBI included bike accidents, falls, MVA/motorcycle accident related injury, sports related or other cause. The time since injury is 90 day time point (window is 60 – 120 days)

**Assessments**

1. Severity of injury of injury was determined based upon Department of Defense (DoD) guidelines. Parameters include duration of loss of consciousness, post traumatic amnesia, coma, and imaging findings.
2. Functional Independence Measure/ Functional Assessment Measure (FIM/FAM) – 30 item measure of physical, cognitive, and psychosocial function. Seven domains are assessed. The clinician rates the degree of symptom severity on a seven –level ordinal scale.

**Statistical Analysis**

A Kruskal-Wallis one-way ANOVA was used to examine differences in FIM/FAM scores by injury severity. Two tailed Spearman Correlations examined the association between injury severity and FIM/FAM scores. A significance level was established at 0.05 (Fisher’s)

**Results**

Study participants with severe TBI were significantly different in terms of their FIM-FAM subtotal scores from mild and moderate injuries in the areas of self care (p=0.018), sphincter control (p=0.018), mobility (p=0.018), and psychosocial adjustment (p=0.022), respectively. Severity of injury was moderately and negatively correlated with psychosocial adjustment subtotal score (r= -0.515, p=0.006). A Tukey post hoc test showed a significant difference between mild and severe TBI in the psycho-social domain. The FIM-FAM total score was highly and positively associated with psychosocial adjustment (r=0.726, p<0.001), cognitive function (r=0.850, p<0.001), and communication (r=0.714, p<0.001), respectively. There was no significant association between self care item scores and TBI severity. TBI severity was moderately correlated with two psychosocial adjustment item scores: i.e., emotional status score (r= -0.443, p=0.021) and employability score (r= -0.472, p=0.013).

**Conclusions**

At the 90 day time point post injury patient with mild, moderate and severe TBI were significantly different in terms of their FIM-FAM subtotal scores of self care, sphincter control, mobility, and psychosocial adjustment respectively. These findings suggest the more severe the injury the poorer the scores in the areas of auditory comprehension, adjustment to limitations, employability, memory and attention. Severity is correlated with several domains such as psychosocial adjustment, cognitive function, and communication continues to show most significant impairment. Results show a lack of variability in patients with mild TBI. Ceiling effects in mild injury may contribute to inaccurate ratings.

ATRA Research Institute, Pittsburgh, PA, October 1-2, 2013
Limitations

- Small sample size
- Convenience sample
- Limited number of participants diagnosed at onset with severe injury
- Ratings are not as accurate for mild injuries due to ceiling effects

Future Directions

- To continue enrollment to provide stronger sample size. Target 300
- Increase enrollment with focus on severe injury
- To correlate FIM/FAM scores with imaging, employment status, activity level, and quality of life

Implications for Recreation Therapy practice

- Focus treatment interventions on compensatory strategies – memory and auditory comprehension
- Structure environment to compensate for attention deficits.
- Community Re-entry – in areas where patient’s need to function (community access)
- Identification and facilitation of meaningful activities and functional skill development (employability)
- Future best practice research

References


The Influence of Contextual Factors on Community Reintegration among Injured Service Members from the Global War on Terrorism

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Community reintegration of injured military service members has been an emerging issue since the beginning of the Global War on Terror (GWOT) in 2001 (Garcia, 2010; “Improving Care,” 2009; Resnik & Allen, 2007). Due to the increased survival rate associated with the GWOT (Department of Defense, 2012; Gawande, 2004; Holcomb, Stansbury, Champion, Wade, & Bellamy, 2006), many injured service members are receiving rehabilitation and mental health services to assist them in transitioning back into their homes and communities (i.e., community reintegration). Recreational therapy and other recreation-based services are often used to assist injured service members with reintegrating into their home and community (Ewert, Van Puymbroeck, & Luo, 2010; Hawkins, Cory, & Crowe, 2011; Lundberg, Bennett, & Smith, 2011; Mowatt & Bennett, 2011). Recent studies have conceptualized and measured community reintegration among injured service members (Resnik, Gray, & Borgia, 2011; Resnik, Plow, & Jette, 2009; Resnik & Allen, 2007; Resnik & Plow, 2009); however, these studies have not addressed the contextual factors (e.g., personal and environmental) that influence injured service members’ ability to actively participate in their homes and community. This study sought to better understand how contextual factors influence community reintegration among injured service members in the GWOT.

Methods

A mixed methods, explanatory sequential model with a participant selection variant guided the research (Creswell & Plano Clark, 2011). The quantitative phase included an online survey to determine level of community integration measured by the Extent of Participation (EOP) and Satisfaction with Participation (SWP) scales (Resnik et al., 2009), identify environmental barriers using the Craig Hospital Inventory of Environmental Factors-Short Form (CHIEF-SF) (Whiteneck et al., 2004), measure self-efficacy using the New General Self-Efficacy scale (NGSE) (Chen, Gully, & Eden, 2001), and identify demographic variables (e.g., age, type of injury, time since injury, perceived level of disability/handicap). Using maximum variation and snowball sampling, participants were recruited from organizations and individuals who serve and support injured service members (e.g., adaptive sports/recreation programs, veteran advocacy organizations, friends/family of service members). The sample included 52 service members who served in the GWOT and sustained single or multiple physical, psychological, and/or emotional injuries. Cluster analysis, multivariate analyses of covariance, discriminant analysis, and other statistical tests identified groups of service members based on reintegration scores and identified the relationships between community reintegration (e.g., EOP and SWP) and contextual factors (e.g., CHIEF-SF, NGSE, demographic variables).

The qualitative phase employed a phenomenological framework to obtain injured service members’ personal experiences with community reintegration (Creswell, 1998). From the initial sample, nine participants were selected for the qualitative phase using stratified purposive sampling. Strata were based on participants who scored low, moderate, and high on the community reintegration scales. In-depth, semi-structured interviews were conducted with participants from each stratum. Interview questions prompted participants to share their personal experiences with reintegration and how various environmental and personal influences assisted or hindered their ability to reintegrate. The qualitative data were methodologically reduced through thematic analysis and peer review and examination to identify emergent themes (Creswell, 1998; Merriam, 2009). Finally, the quantitative and qualitative data were converged in a series of graphical matrices to aide in comparison of the findings and to draw meta-inferences for more meaningful interpretation of the mixed data (Creswell &
Results

Using perceived level of disability/handicap as a covariate, a MANCOVA model indicated (a) general self-efficacy had the largest significant main effect (partial eta squared = .620, F = 35.907, p < .000), followed by (b) services and assistance barriers (partial eta squared = .326, F = 10.633, p < .000), (c) physical and structural barriers (partial eta squared = .239, F = 6.891, p = .002), (d) attitudes and support barriers (partial eta squared = .223, F = 6.310, p = .004), (e) work and school barriers (partial eta squared = .147, F = 3.790, p = .030), and (f) policy barriers (partial eta squared = .141, F = 3.598, p = .036). To determine which contextual variables best discriminate between reintegration strata, standardized canonical discriminant function coefficients were reported. The effect sizes (coefficient squared) for each contextual variable were: (a) general self-efficacy = .685, (b) services and assistance barriers = .076, (c) attitudes and support barriers = .058, (d) perception of disability/handicap = .057, (e) policy barriers = .007, (f) physical and structural barriers = .005, and (g) work and school barriers = .0007.

Thematic analysis in the qualitative phase of the study indicated that the roles of (a) social support and (b) personal factors (e.g., self-efficacy, personal motivation) were the primary means for being reintegrated into their homes and communities. Other themes included the important roles of (c) adapted sports, recreation, and other social programs; (d) rehabilitation programs and therapists; (e) school, work, and volunteering; and (f) organizations and policies in developing social supports and self-efficacy; therefore, having an important but indirect influence on community reintegration. When the themes between reintegration strata were compared, participants in the low reintegration stratum reported many more contextual barriers and far fewer contextual facilitators to reintegration than those in the high reintegration stratum. The moderate reintegration stratum participants were unique as they reported many facilitators to reintegration, but also reported many barriers as well.

Discussion/Implications

This study found that contextual factors are highly influential in the process of home and community reintegration for injured service members, especially the role of social support and personal factors. Social support from family, friends, and other service members played an integral role in reintegration of injured service members similar to previous studies (Hawkins et al., 2011; Khaylis, Polusny, Erbes, Gewirtz, & Rath, 2011; Mowatt & Bennett, 2011; Yazicioglu et al., 2006). This study also contributes to the literature regarding the impact of personal factors on recovery from traumatic experiences. Similar to Benight and Bandura (2004), higher self-efficacy was related to the perception of being able to overcome challenges and lower emotional distress. This was especially evident among participants in the high reintegration stratum who had high general self-efficacy scores, scored lower on all environmental barrier factors, was more successful at negotiating barriers, and reported less impact from their psychological injuries.

This study has implications for recreational therapists working with injured service members. Results from this study support implementing programs that address the personal and environmental influences of reintegration with particular focus on providing opportunities to increase self-efficacy and increase social supports. Recreational therapy programs may help with the community reintegration process by including goal-setting, adapted sports, including families in programming, creating social connections between service members, and creating connections between service members and veteran support organizations.

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Barriers for Active Living in Aging Adults with Developmental Disabilities
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After reviewing the literature related to aging and developmental disabilities, it is clear that there is a lack of consensus concerning at what age persons with developmental disabilities (DD) would be considered “old.” With greater medical care and the beneficial results of deinstitutionalization, people with DDs, particularly those without severe impairments, have a life expectancy close to that of the general population (Turk, Overeynder, & Janicki, 1995). However, it has been noted that people with certain types of developmental disabilities (e.g., Down syndrome, Cerebral Palsy) experience an accelerated aging process and experience some age-related changes earlier than their peers without disabilities (Strax, Luciano, Dunn, & Quevedo, 2010). In addition, while many individuals with DDs receive some types of formal services, a central registry for this population does not yet exist. Hence, it is difficult to determine how many individuals currently living in the United States are aging with a developmental disability. Taking into account differential mortality, several researchers have suggested using the four percent rule of thumb in estimating the number of aging persons with DDs, thereby proposing the number may be between 1.2 and 1.6 million (Doka & Lavin, 2003).

The aging process brings changes in physical, social-emotional, and cognitive functions that often create new demands and require adaptations for all individuals. For persons with developmental disabilities (DDs), however, changes associated with aging may present greater challenges as their internal abilities and external resources might be more limiting, compared to their peers without disabilities. Doka and Lavin (2003) argued that this population is more likely to remain unmarried and face economic instability through their adulthood; and thus, their sources of support are likely to be fewer later in life. In addition, individuals with DDs often experience lifelong impairments which, to some degree, affect their ability to independently perform major life activities. Small declines in their physical health may further limit their functional skills and influence their ability to care for themselves in their current environment.

Recently, more researchers have devoted time to understanding the health disparities faced by persons with DDs, and reported that this population experiences higher rates of comorbid conditions and secondary conditions (Krahn, Hammond, & Turner, 2006). While some of these conditions could be improved through proper nutrition and exercise (Heller, McCubbin, Drum, & Peterson, 2011), researchers have found that individuals with DDs are more likely to live a sedentary lifestyle than adults without disabilities (Havercamp, Scandlin, & Roth, 2004). Knowing that physical activity could potentially benefit this population, it is important to understand the challenges and barriers that prevent this population from living a more active lifestyle. It is especially important to learn how to assist aging individuals with DDS to engage in physical activities while negotiating age-related changes. Therefore, the intent of this study was to explore barriers for aging individuals with developmental disabilities (age of 45 and over) in physical activity participation.

Methods

This study adopted a qualitative approach and used focus group interviews to invite individuals with developmental disabilities to share their views about active living and express any barriers they faced in pursuing an active lifestyle. The intent of the focus group was to more quickly gather information related to the research question, as well as to create a dynamic setting in which group interaction could stimulate deeper discussions about the issue.

To obtain the general view of individuals who experience aging with a disability, we purposefully recruited individuals with a variety of functional abilities, including people with physical
disabilities, intellectual disabilities, and/or sensory limitations. The inclusion criteria were individuals who lived in Pennsylvania, were older than 45 years of age, and had been diagnosed with a developmental disability. We set the age of 45 as a cut-off point, as the literature has suggested that people with DDs may experience age-related changes in their physical functioning (e.g., motor, perceptual, and sensory abilities) as early as age 30 to 45 depending on their diagnosis and co-existing conditions (Hammel et al., 2008). Four focus groups were conducted; one in each of the following geographic areas: Philadelphia, Scranton, Erie, and Pittsburg. As suggested by Krueger (1994), each focus group was limited in size to four to twelve participants.

For each focus group, we had a moderator to facilitate the discussion, as well as a note taker to observe the group interaction and record all of the non-verbal communication. And necessary accommodations (e.g., interpreter) were provided upon participants’ requests. All of the focus group interviews were tape recorded, with an average interview length of 1.5 hours.

Data Analysis

The verbatim transcriptions from recordings were analyzed using content analysis, in which researchers took an inductive approach and identified thematic patterns from the data by grouping similar comments into categories. Subsequently, an expert about disability study was invited to discuss the common themes that emerged from the qualitative data to increase the verifiability of the findings.

Participant Description

There were 28 participants in this study (group size: Philadelphia = 6, Scranton = 6, Erie = 4, and Pittsburg = 12), ranging in age from 45-75. All of the participants lived in the community, received some type of formal services and self-identified as an individual with a developmental disability. In addition, the majority of participants reported that they had mobility impairment and used wheelchairs (83%).

Findings

Many participants reported that they were actively involved in community activities and emphasized that “being visible” in the community is crucial in improving understanding about people with disabilities in the general population. The participants also reported that they enjoyed a variety of leisure activities; however, the majority of the participants indicated that they did not participate in physical activity regularly or that they have not been physically active. It is clear that individuals with developmental disabilities experience both internal and external constraints that affect their levels of physical activity and exercise.

External Constraints

Although the Americans with Disabilities Act has mandated facilities to be architecturally accessible and to provide equal services for people with disabilities, the participants in this study reported inaccessibility, including the environment and equipment, as their major barrier for physical activity and exercise. Many individuals with physical disabilities complained that fitness and recreation facilities were not accessible and did not have adaptive exercise equipment for people with lower extremity disabilities. Participants in the Erie and Pittsburg area focus groups also remarked that even though some state agencies have accessible equipment for people with disabilities, the hours of operation did not fit the schedule of any individuals who are employed. One participant in the Pittsburg focus group commented, “Center for Independent Living got in all this wonderful stuff…. [However] it took me a while to figure out [their operation hours]…. Because I work 8-5, five days a week, I can’t get there.”

In addition, many participants commented that they did not have adequate support (e.g., trained staff and attendant care) to participate in physical activities. A negative experience shared across focus groups is that when many of the participants attempted to exercise in a fitness facility, the staff did not
have proper training in helping people with disabilities participate in physical activity. Morgan, who uses a power wheelchair, described her gym experience and said that the young staff told her to “hop up on a bike” when she has difficulty transferring in and out of her wheelchair. Many participants had similar experiences and commented that the staff often was not sensitive to their needs.

Individuals with physical disabilities also commented that it requires more planning and organization on their part to participate in physical activity. For example, Taylor, a female with physical disabilities, responded to factors that influence their frequency of participation in physical activity, and said that “I do want to do more physical activity, but you need more attendant care to do that and you can’t get it for exercise and so finding that informal support to help you for that is difficult.” Her comment was well supported by her peers across the four focus groups.

**Internal Constraints**

Some internal constraints reported by the participants in this study were lack of skills, financial shortages, low physical stamina, and negative attitudes toward physical activities. Due to their physical limitations, many individuals with physical disabilities commented that it requires enormous time and energy for them to perform life activities and so they often have low desire to participate in more physical activity. For example, Karen, a female participant in the Philadelphia focus group, said that “Us getting up, getting dressed, and getting in our wheelchairs is a day’s work.” In addition, many individuals reported that, through the aging process, they have experienced diminished physical ability and have seen very little benefit from physical activity and exercise. Josh, a male participant in the Pittsburg focus group, commented that “when I look at the investment of time and energy, I’m much better at putting that time and energy into other things that benefit my wellbeing than exercise.” The negative attitude toward physical activity further limits these individuals’ desire to pursue an active lifestyle.

**Discussion**

Previous literature has shown that several secondary conditions in individuals with developmental disabilities could be improved by targeting behavioral or lifestyle issues (Havercamp et al., 2004). However, consistent with previous studies, the findings of this study revealed that individuals with developmental disabilities face many barriers in physical activity participation and live a sedentary lifestyle (Rimmer, Riley, Wang, Rauworth, & Jurkowski, 2004). The findings of this study have several implications for recreation therapists when working with individuals with developmental disabilities. First, it might be important to promote a commitment to a healthy lifestyle in this population by educating them about how physical activity can bring substantial benefits by reducing the incidence of chronic diseases and secondary conditions (e.g., pain, fatigue, reduced mobility, joint stiffness). In addition, as these individuals may experience a gradual loss of physical functioning, recreation therapists should discuss with clients plans for anticipated changes and set goals that will help to maintain their level of independence in performing various activities. Finally, recreation therapists could provide education and training to the staff in recreation facilities regarding how to assist individuals with disabilities in physical activity participation so that, in the future, the clients can use these community facilities. It is important to note some limitations in this study. As most of our participants were people with physical disabilities, their experience may not be generalized to individuals with other type of disability. Future research studies concerning aging and disability issues may be necessary to better understand the age-related needs and best practices for meeting the needs of this population.

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Health Promotion for Youth with Autism through Technology Intervention
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With a prevalence rate of autism spectrum disorders (ASD) at 1 in 88 children and 1 in 54 boys (Autism Speaks, 2013), a larger number of youth with ASD are growing towards adulthood in the community. In 2013, 50,000 youth with ASD will turn 18 years old, aging out of the education system. IDEA mandates that schools include transition planning for youth ages 14 to 21. Three predictors of post-school success include: 1) social skills; 2) daily living skills; and 3) physical and self-care skills (Newman et al., 2011). However, current planning may neglect health promotion and recreation. Eight years after high school, 89.8% of youth with ASD were involved in employment or post-secondary education, but only 52% were engaged in any type extracurricular activity (Neman et al., 2011; Shattuck et al., 2012). When compared to youth without disabilities, Pan and Frey (2006) report both lower physical activity levels for youth with ASD and a steeper decline in physical activity levels with age. According to the DSM IV, ASD is characterized by early onset impairment in communication, social interaction, and repetitive or restricted interests (American Psychiatric Association, 2010). While motor delays are not a diagnostic criteria, some researchers suggest a pattern of motor skill development deficits in youth with ASD especially with respect to an unexpected change in movement requirements (Nazarali, Glazebrook, & Elliott, 2009; Todd, Mills, Wilson, Plumb, Mon-Williams, 2009; Yanardag, Ilmaz, & Aras, 2010). Due to the characteristics of ASD, youth may have limited physical activity participation due to the lack of ability/opportunity to: 1) express preference for a type of physical activity; 2) complete the activities with adequate duration and intensity; or 3) transition from one activity to the other (Housten-Wilson & Lieberman, 2003). Due to the decline in physical activity levels with age combined with the pressing need to prepare for lifelong physical activity after high school, “transition” age youth (age 14-21) appear particularly vulnerable.

Due to infrequent eye contact and poor imitation skills, some evidence supports visual strategies, such as picture exchange communication systems (PECS) and video modeling or prompts, help youth with autism communicate more effectively than traditional sign language (Graft-Jones & Block, 2006; Colozzi, Ward, & Crotty, 2008; Hart & Banda, 2010; Van Laarhoven, Kraus, Karpman, Nizzi, & Valentino, 2010). Typically, visual strategies promote progression to more independence in “functional” communication of preferences or needs (Hart & Banda, 2010). Recently, more anecdotal reports from education suggest the use of visual strategies on smart tablets (such as iPads) to promote communication. Evaluation research suggests that individualized health promotion interventions for youth with disabilities improve the level of physical activity and independence (Kemeny & Arnhold, 2012). However, no known research investigates the use of PECS or iPads to promote communication of preferences and transition between physical activity segments.

In research conducted on visual strategies and autism spectrum disorder to date, no known studies research the effect of visual strategies on health promotion. Based upon the findings from educational classroom settings, single-subject research suggests evidence to support visual strategies as an effective means to teach activities of daily living and decrease off-task behaviors (Hart & Banda, 2010; Van Laarhoven et al., 2010). In addition, anecdotal evidence exists to suggest smart tablet (i.e. iPad) applications promote communication for youth with autism. However, no clarity exists on the
comparative effectiveness of different visual strategies for youth with ASD.

**Method**

This research project’s purpose concerns the following research question: What type of visual strategy is the most effective in promoting active involvement in a health promotion program? The null hypotheses stated that no significant difference exists between visual strategies on: a) the duration of physical activity; b) the intensity of physical activity; c) the ability to communicate a preference for an activity; and d) the ability to transfer from one activity to another. Each participant’s Body Mass Index (BMI) was also measured before and after the study as a secondary control measure. The study employed a within-subject alternating-treatments design with a return to baseline (ABBBACCCAA) (Gast, 2010; Riley-Tilman & Burns, 2009) for single subjects. In the alternating treatments design, each intervention (PECS or iPad application) was applied to the same physical activity behaviors over time. Single-subject design, allowing for each participant to serve as his/her own control, was chosen due to the known variation between subjects with ASD (Hart & Banda, 2010; Wolery, Dunlap, & Ledford, 2011).

**Sample**

Ten youth with ASD meeting the inclusion criteria were recruited through referrals from community-based programs for youth with autism. Inclusion criteria are male gender, age range 14-21, ambulatory, with a diagnosis of autism spectrum disorder (DSM IV). Exclusion criteria include persons with multiple disabilities, dual diagnoses, and/or those who are non-ambulatory. Participation in the project by the participants was voluntary and the participants were permitted to quit the program at any point. Three subjects did not fully complete the study in all parts, leaving seven male subjects who completed the research.

**Instrumentation**

The dependent variables consist of five distinct physical activity outcomes measured during each of the 10 sessions: 1) physical activity level (duration); 2) physical activity (intensity); 3) ability to communicate an activity preference; 4) ability to transition to different aspects of physical activity during session. Physical activity level (duration) was measured by stop watch. Physical Activity level (intensity) was measured by monitoring heart rate. Activity preference communication was measured by using post-facto video observation using a hierarchical prompting grid and number of prompts needed (Colozzi, Ward, & Crotty, 2008). Ability to transition between activities was measured by post-facto video observation using hierarchical prompting grid and number of prompts needed to change activities. The independent variables consist of two visual strategies: 1) Condition A: Picture Exchange Communication System (PECS) set up in two columns with the ability to move pictures from one side to the other based upon preference; 2) Condition B: smart tablet (iPad) with appropriate applications (proloquo2Go) which allows for Voice Output Communication Aide (VOCA).

**Procedures**

Researchers had extensive cross-training in administration of the PECS and iPad communication systems. Each physical activity session planned for 30 minutes of aerobic activity of moderate to vigorous intensity, 10 minutes of muscle strengthening activity and 10 minutes of bone strengthening activity (U.S. DHHS, 2008). For each category of activity, every participant every week received the same two choices (such as treadmill or stationary bike for aerobic activity). The condition varied (baseline, PECS, iPad). In order to eliminate environmental distractions, the use of the same small fitness room reduced potential noise and extraneous visuals. Each session was video recorded. In order to assist with transportation costs, incentives to the parent/guardians included a $25.00 gift card upon completion of the pre-tests and an additional $25.00 gift card upon completion of the program. Outcome measures were gathered at each session. Each video tape was coded by the same two
researchers.

Analysis
Post-session video-analysis allowed for two researchers to score from one to seven on an independence scale for each condition (verbal, PECs or iPAD) on the ability to communicate a preference and to transition between activities. After independent scoring, if the two researchers disagreed on the score, the video was viewed again and a consensus score was determined. Experimental control was determined through charting, visual inspection, and interpretation of the data. Experimental control is demonstrated by a consistent level and/or trend difference between the interventions (Riley-Tillman & Burns, 2009; Wolery, Dunlap, & Ledford, 2011). The video-analysis was cross-checked with session notes created by researchers.

Findings
While there were some variations in intensity and duration from session to session, no clear pattern emerged for any of the single subjects. On the other hand, a pattern of individual differences were noted in scores for ability to communicate a preference and ability to transfer between activities. For communication of preference, two showed no difference, two subjects favored the PECS, and three showed more success with the iPad. For transition between activities, four showed more ease with transition using the iPad and one showed more ease with PECS. Four of the subjects were consistent in their preference for PECS or iPad across all situations, while one was not consistent. Subjects’ BMI did not change significantly over time.

Discussion
There were no reportable differences seen in intensity or duration during the sessions, supporting the first two null hypotheses. There was variability between the subjects on whether the PECS or iPad was more useful in communicating a preference for the activity. The same was true for which method eased transition. Most of the individuals were consistent with their preferences in all situations. Several explanations may account for the difference seen in individuals regarding the preference for PECS or iPad for communication or transition. First, some of the subjects found the iPad distracting. For some youth, technology time is a reward. Second, the two subjects with no preference had better verbal skills. Third, some subjects may have had more familiarity with PECS as communication device from school or home.

Limitations, Future Research, and Application to Practice
The limitations of the study included the lack of quantifiable information on frequency of use of PECS/iPads at school or home and intervening behavioral issues during sessions. Future research should include more frequent data points in closer succession (days in a row) over longer periods. The outcomes of this study suggest the need for CTRS to conduct a formal screening assessment with the client with ASD before applying the use of iPads or PECS in a communication intervention. In addition to assessing the client’s response during preference and transition scenarios, the CTRS may include a short questionnaire for parents/guardians regarding the history of technology use for communication and leisure. The use of iPads in a therapeutic recreation setting may improve response to treatment by enhancing communication. However, the latest technology may not always be best, especially if it promotes more dependence and ignores the use of a prompting hierarchy (Crollick, Mancil, & Stopka, 2006). With an individualized assessment approach, the most appropriate communication vehicle for the individual may promote increased communication for participation in health promotion programs.

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ATRA Research Institute, Pittsburgh, PA, October 1-2, 2013
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ATRA Research Institute, Pittsburgh, PA, October 1-2, 2013


Interdisciplinary Team Perceptions of the Certified Therapeutic Recreation Specialist: Impact on Relational Coordination and Quality of Care on an Acute Inpatient Child and Adolescent Psychiatry Unit
Abby Pestak, MS, CTRS

With out-of-home services, especially inpatient stays, for children and adolescents with emotional and behavioral problems continuing as a viable and popular option for treatment, gaining information about the importance of coordinated care is vital (SAMSHA, 2008). Services are provided on an acute inpatient child and adolescent psychiatry unit by a variety of healthcare professionals including but not limited to psychiatrists, psychologists, nurses, social workers and therapists. Therapists associated with mental health and often contributing to required daily therapy include but are not limited to occupational therapists (OTs), CTRS’, music therapists (MTs) and ATs.

Within the CTRS discipline as well as complementary therapeutic disciplines, such as child life specialists (CLS’), OTs, MTs, and ATs, although some of the interdisciplinary perceptions of their specific roles have been studied, the amount of research available varies by each therapeutic discipline. An increased understanding of scope of practice for each therapeutic discipline can potentially result in increased recognition of the therapeutic discipline as a vital & unique resource to the health care institution (Bellmer, Hoshino, Schrader, Strong & Hutzler, 2003, Darsie, 2009, Smith, Perry, Neumayer, Potter & Smeal, 1992).

CTRS’ research primarily focuses on gathering data regarding demographic profiles, professional ethics, professional unity, advocacy for the profession and establishment of CTRS as a clinical discipline (Riley & Connolly, 2007, Kestenbaum, 1985, Sylvester, 2002). For example, within the most recent National Council for Therapeutic Recreation Certification (NCTRC) CTRS profile, approximately 36% of CTRS’ reported working in the population of mental health (NCTRC, 2009). As a whole, 40% of CTRS’ reported working in the hospital setting, 2% in pediatrics and 5% in adolescents (NCTRC, 2009). Smith, Perry, Neumayer, Potter & Smeal (1992) focused on the interprofessional perceptions between OTs and CTRS’ via surveys distributed to the Eastern Pennsylvania-New Jersey Chapter of American Therapeutic Recreation Association (ATRA) or Pennsylvania Occupational Therapy Association. The Interprofessional Perception Scale (IPS) was used within this survey. The three main questions related to differences in view of other professions, differences in view of therapeutic recreation (TR) and differences in view of OT regarding professional judgment, status, training, capabilities and encroachment into the other therapeutic discipline. Results indicated varying levels of trust, respect and understanding between TR & OT and a need for further advocacy and education amongst each discipline about scope of practice. While only 59% of TR reported feeling OT trusted their professional judgment, 89% of OT felt TR trusted their professional judgment (Smith, Perry, Neumayer, Potter & Smeal, 1992). Regarding status, 85% of TR felt OT is viewed with a higher status than TR while 2% of OT felt TR has a higher status than OT (Smith, Perry, Neumayer, Potter & Smeal, 1992). When 40% of OT felt that TR understood the capabilities of OT, 83% of TR felt they understood the capabilities of OT (Smith, Perry, Neumayer, Potter & Smeal, 1992).

Child life research indicates perceptions of the role of CLS by the interdisciplinary team relates most to the patient’s experience not the CLS role within the team; research recommendations reflected a
need for the CLS to increase communication and advocacy among the team in order to address the issue of limited understanding, jobs dissatisfaction as it relates to the future outlook for CLS (Cole, Deiner, Wright & Gaynard, 2001, Gaynard, Hausslem & DeMarch, 1989, Gaynard, 1985, Snow & Triebenbacher, 1996.)

Darsie (2009) indicated opinions regarding the MT role in an outpatient setting differed by the study participants’ roles (which included physicians, nurses, psychologists, CLS, and creative arts therapists) within the interdisciplinary team as reported by pre test and post test as part of a video inservice; The use of video inservice showed a significant effect on opinions regarding written assessments, provision of support during patient procedures and routines and assessing and setting goals to meet emotional/social needs for each child.

Bouchard (1998) discussed the definition of AT’s professional identity as a process which begins with training and continues throughout a career from a Jungian perspective. This refers to Jung’s concepts of personal and collective shadows as they relate to the repressed positive or negative characteristics of a person for survival or projections of positive or negative characteristics of a group (Bouchard, 1998.) Awareness of personal and collective shadows as well as professional group identity is necessary and can strongly influence the development of an AT professional’s values and AT’s acceptance as a clinical discipline.

Lachman-Chapin (2000) provided not only definitions of AT as a profession but also general definitions and requirements of being a profession. She cites requirements as clear definitions of function and practice, populations and settings to be served, training, licensure, certification, respect and publications. Lachman-Chapin’s requirement of respect for a discipline is central to this study’s goal to identify interdisciplinary perceptions for without the understanding of a role there cannot be respect for a role.

Relational coordination, as identified by Gittell (2000), is characterized by a team’s communication paired with shared goals, shared knowledge & mutual respect. Gittell, Weinberg, Pfefferle & Bishop (2008) relates relational coordination to job satisfaction for nursing aides as well as coordination of care for residents of nursing homes. The idea of relating relational coordination to job satisfaction is an area of research that still has limited data. Within an interdisciplinary team setting, each provider has his or her own niche or scope of practice; however together, with communication emphasizing shared goals, shared knowledge & mutual respect, the providers can function interdependently (Gittell, Weinberg, Bennett & Miller, 2008). Achieving effective relational coordination within an interdisciplinary team has the potential to increase efficiency and reduce risk of errors therefore increasing quality of care (Gittell, Weinberg, Bennett & Miller, 2008).

This study’s main focus is the CTRS role on an acute inpatient child and adolescent psychiatry unit within a large Midwestern teaching hospital and the interdisciplinary team’s perceptions (comprised of doctors, residents, fellows, mental health workers, nurses, social workers, a full-time CTRS and a part-time AT) of the CTRS role. This acute inpatient child and adolescent psychiatry unit has a maximum capacity of 14 beds and operates on an interdisciplinary programming model in providing daily programming. The perceptions of the role of the CTRS by the interdisciplinary team will be assessed in the context of its effects on relational coordination and quality of patient care. This
will help to provide necessary information for CTRS’ to better understand interdisciplinary team perceptions, which in turn has the potential for increasing interdisciplinary communication and mutual respect as well as improving continuity and quality of care. In addition, the results of this study also have the potential to highlight and inform important areas for future CTRS’ education and research.

**Method**

This study used pretest/posttest design based on the studies of Gaynard (1985), Cole, Deiner, Wright & Gaynard (2001) and Darsie (2009). Gaynard (1985) developed the original questionnaire and design which informed our study; portions of this questionnaire and design then formed the basis for Cole, Deiner, Wright & Gaynard (2001) and were later adapted to MT by Darsie (2009). Validity of the survey was established by Gaynard (1985) and Cole, Deiner, Wright & Gaynard (2001) via panel review of relevance to the field. Similar to Darsie (2009), our research team adapted the survey to suit the job tasks of a CTRS & it was reviewed via panel review, also. The study was conducted in three phases: pretest, posttest #1 and posttest #2; pretest occurred prior to watching video inservice, posttest #1 occurred immediately following video inservice and posttest #3 occurred four weeks after completion of initial survey. The informational video used for this study includes an overview of the assessment, planning, implementation and evaluation job tasks of the CTRS. Accompanying each clip are subtitles listing the mental health oriented goals and objectives for the session. Our decision to include three phases was based on Darsie’s recommendations (2009) for the evaluation of long-term effects of video inservices.

The survey used in this study collected two types of information demographics regarding role and experience on unit, experience with a CTRS and perceptions regarding the CTRS role. Participants used a 5-point Likert type scale (with 1 being the lowest and 5 being the highest) to rate 25 tasks pertinent to the CTRS role. Accuracy of data entry and review for consistency was maintained via double entry of data by both the researcher and research assistant as well as the data analysis software SPSS for consistency. All research procedures were reviewed and approved by the Institutional Review Boards (IRBs) at University Hospitals and Cleveland State University prior to implementation.

Categorical variables were reported as frequencies and proportions and continuous variables were reported as means with standard deviations and percentiles. All results are considered statistically significant at the p <0.05 level. Pretest, posttest #1 and posttest #2 survey data related to the 25 tasks were analyzed using a repeated measures one-way analysis of variance (rANOVA) with a Bonferroni correction for multiple comparisons. Next, statistically significant data from the pretest, posttest #1 and posttest #2 survey scores were compared by categories of role on unit, experience with CTRS and experience with CTRS prior to current setting. Finally, data related to 25 tasks from both posttest #1 and posttest #2 were analyzed using an rANOVA to determine the long-term effects of the video inservice. Statistically significant data from posttest #1 and posttest #2 were compared by categories of role on unit, current experience with CTRS and experience with CTRS prior to current setting.

**Results**

Among all phases, participants represented the five roles on unit as well as anonymous submissions (see table 1). Experience with a CTRS (n=8, 53.3%) was attributed to textbooks (n=5, 33.3%), student placement (n=4, 26.7%) and prior healthcare setting (n=6, 40.0%) (data not shown).
Regarding experience with CTRS prior to current setting, participants reported prior experience within nursing homes, behavioral healthcare and hospital settings (data not shown).

Findings related to the top 5 most relevant and bottom 5 least relevant tasks are summarized in table 2. The data related to 25 tasks for posttest #1 and posttest #2 indicated two statistically significant responses (p < 0.05). Responses include scores of 4.73 reducing to 3.27 for provide leisure opportunities which foster continued growth and development and prevent adverse reactions to hospitalization (p=0.03) and 3.93 reducing to 2.47 for assess and set goals to facilitate each child or adolescent’s physical development (p=0.03). The reductions in score correlating to participants perceiving lower relevance of the task to the CTRS role. The data related to 25 tasks for pretest to posttest #2 indicated one statistically significant response (p < 0.05). Response includes a score of 3.87 reducing to 2.47 for provide leisure opportunities which foster continued growth and development and prevent adverse reactions to hospitalization (p =0.04) (Table 2). Again, the reduction in score correlating to reduced perception of relevance to the CTRS role.

Discussion

This study’s main focus is the perceptions of the role of the CTRS by the interdisciplinary team assessed in the context of its effects on relational coordination and quality of patient care. Findings indicate participation amongst nearly all roles represented on the interdisciplinary team for pretest and posttests. Representation from each role of the interdisciplinary team as well as a near balance of prior experience and lack of prior experience, allows for the study to influence the interdisciplinary team perceptions which can in turn gain respect, communication and understanding for the CTRS role (Gittell, Weinberg, Bennett & Miller, 2008). Further consideration should be made for replicating the study amongst each role within the unit to increase respect, communication and understanding therefore increasing the relational coordination as well as continuity and quality of care provided (Gittell, 2000; Gittell, Weinberg, Pfefferle & Bishop, 2008; Gittell, Weinberg, Bennett & Miller, 2008).

When further reviewing statistically significant responses it is important to note differences based upon categories of role on unit, experience with CTRS and experience with CTRS prior to current setting. Future studies should consider increasing number of research staff and/or manipulating available research staff’s schedules to allow for increased flexibility regarding opportunities for participation in efforts to increase the ability to recruit a larger sample size of participants.

While data related to role perceptions indicates limited number of tasks with statistical significance it is important to note the standard deviation and where scores fall in respect to the Likert type scale. It is evident that repetition and reinforcement of the knowledge gained via inservice is key. Further consideration for continued replication of this study should include additional components of repetition and reinforcement to the study design (i.e. additional inservice). Additional repetition and reinforcement is suggested based upon decreases shown in overall scores between posttests. Consideration for increased education or reinforcement of the education provided has potential for sustaining improved scores over a period of time.

The results of this study provide empirical evidence of the potential to utilize a video inservice as a means of education for an interdisciplinary team. The results warrant further research within the area of relational coordination and quality of care as it relates to the CTRS role not only within this

ATRA Research Institute, Pittsburgh, PA, October 1-2, 2013
particular population and setting but additional populations and settings for both pediatrics and adults. By attempting to clarify misperceptions of the CTRS role and possibly increase relational coordination amongst the interdisciplinary team, this study has provided necessary information for CTRS’ to better understand interdisciplinary team perceptions and maximize their potential impact as a member of the interdisciplinary treatment team. CTRS’ can provide education to reduce misperceptions in daily interactions or patient rounds with interdisciplinary team, or more formalized, in presentations, trainings or staff meetings.

References


Table 1 Study Participants

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Pretest &amp; Posttest #1</th>
<th>Posttest #2</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>n (%)</td>
<td>n (%)</td>
</tr>
<tr>
<td>Psychiatrist</td>
<td>1 (6.7)</td>
<td>1 (6.7)</td>
</tr>
<tr>
<td>Resident/ Fellow</td>
<td>2 (13.3)</td>
<td>0 (0.0)</td>
</tr>
<tr>
<td>Social Worker</td>
<td>4 (26.7)</td>
<td>2 (13.3)</td>
</tr>
<tr>
<td>Nurse</td>
<td>4 (26.7)</td>
<td>4 (26.7)</td>
</tr>
<tr>
<td>Mental Health Worker</td>
<td>2 (13.3)</td>
<td>2 (13.3)</td>
</tr>
<tr>
<td>Prefer not to answer</td>
<td>2 (13.3)</td>
<td>1 (6.7)</td>
</tr>
<tr>
<td>Total</td>
<td>15 (100.0)</td>
<td>10 (100.0)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Prior Experience working with CTRS</th>
<th>Pretest &amp; Posttest #1</th>
<th>Posttest #2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n (%)</td>
<td>n (%)</td>
</tr>
<tr>
<td>Yes</td>
<td>8 (53.3)</td>
<td>5 (50.0)</td>
</tr>
<tr>
<td>No</td>
<td>7 (46.7)</td>
<td>5 (50.0)</td>
</tr>
<tr>
<td>Prefer not to answer</td>
<td>0 (0.0)</td>
<td>0 (0.0)</td>
</tr>
<tr>
<td>Total</td>
<td>15 (100.0)</td>
<td>10 (100.0)</td>
</tr>
</tbody>
</table>
Table 2  Survey Response Scores

<table>
<thead>
<tr>
<th>Role</th>
<th>Pretest Mean ± SD (P value between pretest &amp; posttest #1)*</th>
<th>Posttest #1 Mean ± SD (P value between posttest #1 &amp; posttest #2)*</th>
<th>Posttest #2 Mean ± SD (P value between pretest &amp; posttest #2)*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Highest Ranked</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heighten feelings of competency</td>
<td>4.80 ± 0.41 (p=0.81)</td>
<td>4.60 ± 0.74 (p=0.07)</td>
<td>3.13 ± 2.33 (p=0.06)</td>
</tr>
<tr>
<td>Provide opportunities which encourage expression of feelings and promote a sense of mastery and understanding</td>
<td>4.73 ± 0.59 (p=1.00)</td>
<td>4.73 ± 0.59 (p=0.10)</td>
<td>3.27 ± 2.40 (p=0.09)</td>
</tr>
<tr>
<td>Promote participation in meaningful leisure activities.</td>
<td>4.73 ± 0.70 (p=1.00)</td>
<td>4.73 ± 0.59 (p=0.05)</td>
<td>3.13 ± 2.33 (p=0.05)</td>
</tr>
<tr>
<td>Provide leisure opportunities which foster continued growth and development and prevent adverse reactions to hospitalization</td>
<td>4.67 ± 0.62 (p=1.00)</td>
<td>4.73 ± 0.46 (p=0.03)</td>
<td>2.93 ± 2.22 (p=0.04)</td>
</tr>
<tr>
<td>Meet regularly with the health care members</td>
<td>4.40 ± 0.91 (p=1.00)</td>
<td>4.47 ± 0.64 (p=0.12)</td>
<td>2.93 ± 2.40 (p=0.10)</td>
</tr>
<tr>
<td><strong>Lowest Ranked</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contribute to decisions concerning when a patient should be discharged.</td>
<td>3.53 ± 1.41 (p=1.00)</td>
<td>3.80 ± 1.27 (p=0.08)</td>
<td>2.40 ± 2.03 (p=0.08)</td>
</tr>
<tr>
<td>Provide education to patients and families</td>
<td>3.60 ± 0.91 (p=0.80)</td>
<td>3.93 ± 1.16 (p=0.12)</td>
<td>2.47 ± 2.07 (p=0.22)</td>
</tr>
<tr>
<td>Provide explanations comprehensible to the child or adolescent of the nature and reason for programming, procedures and routines.</td>
<td>3.60 ± 1.18 (p=1.00)</td>
<td>4.00 ± 1.13 (p=0.15)</td>
<td>2.60 ± 1.99 (p=0.58)</td>
</tr>
<tr>
<td>Assess and set goals to facilitate each child or adolescent’s physical development.</td>
<td>3.87 ± 1.55 (p=1.00)</td>
<td>3.93 ± 1.49 (p=0.03)</td>
<td>2.27 ± 1.94 (p=0.08)</td>
</tr>
<tr>
<td>Provide parent education concerning leisure education, leisure awareness, and coping skills.</td>
<td>3.87 ± 1.06 (p=1.00)</td>
<td>3.67 ± 1.18 (p=0.14)</td>
<td>2.47 ± 2.03 (p=0.05)</td>
</tr>
</tbody>
</table>

*Bonferroni Adjustment was performed for multiple comparisons

ATRA Research Institute, Pittsburgh, PA, October 1-2, 2013
Student Attitudes towards Individuals with Severe Mental Illnesses
Gretchen Snethen, PhD, CTRS
Gena Bell Vargas, PhD, CTRS

Introduction
The Rehabilitation Act of 1973 was a prominent legislative act that has promoted independent, community participation of individuals with disabilities. However, stigmatizing attitudes towards individuals with severe mental illnesses (SMI) are a major barrier to community participation (Gonzalez-Torres, Orrea, Arastegui, Fernandez-Rivas, & Guimon, 2007). Even though mental health professionals have purported to value community integration, staff in community-based, outpatient facilities that adhered to a medical model have been found to hold low expectations about clients’ actual ability to integrate successfully into their communities (Moldovan, 2007). In a qualitative study examining the perception of stigma in adults with SSD, Gonzalez-Torres and colleagues (2007) found mental health professionals attributed symptom related characteristics (e.g., amotivation, asociality, apathy) to laziness or lack of willpower, rather than illness related factors. Wright, Gronfein, and Owens (2000) found that the experience of social rejection negatively impacted one’s sense of mastery and perceived self-worth in adults with SSD. When providers have stigmatizing attitudes about individuals with SMI, it impacts how services are delivered and ultimately the independence of individuals with SMI. Furthermore, if individuals with SMI experience stigma within community-based settings (e.g., recreation facilities) they are less likely to continue independent participation (Snethen, Lewis, & McCormick, 2008; Struening et al., 2001).

Recreation and leisure activities can facilitate independent community participation for individuals with SMI (Iwasaki, Coyle, & Shank, 2010; Rudnick, 2005; Snethen, McCormick, & Van Puymbroeck, 2012). The 2007 Job Analysis Report (NCTRC, 2007) indicated that nearly 40% of Certified Therapeutic Recreation Specialists work with behavioral/mental health. Therefore, it is important to understand the attitudes that providers have towards individuals with SMI, both from the perspective of the health care provider and the community recreation provider.

One strategy is to examine the attitudes of recreational therapy (RT/TR) and parks and recreation (PR) students towards individuals with SMI, as these individuals will potentially serve this population. Therefore, the purpose of this study was to understand the attitudes of PR and RT/TR undergraduate students towards adults with SMI, specifically attitudes towards the inclusion of this population within the community.

Methods
This study was approved by East Carolina University’s and Temple University’s Institutional Review Boards.

Recruitment
Undergraduate degree coordinators from 70 universities with degree programs in both RT/TR and PR were contacted. Degree coordinators were asked to forward the survey link to undergraduate students enrolled in the degree program. Fifteen universities responded and the survey was forwarded to an estimated 2,839 students. Students were asked to complete a 15-minute survey. Those completing the survey could opt to receive a $5 Amazon gift card.

Instruments
This study utilized two primary instruments, one to identify the level of exposure respondent had to individuals with SMI and the other to identify attitudes towards community treatment of individuals with SMI. Additionally, a demographic questionnaire was used to understand participant personal and education characteristics. In order to understand the amount of contact respondents had with individuals
with SMI, participants completed the Level of Contact Report (Holmes, Corrigan, Williams, Canar, & Kubiak, 1999). Attitudes towards individuals with SMI was assessed using the Community Attitudes towards Mental Illness (CAMI; Taylor & Dear, 1981). The CAMI consists of 40 questions answered on a 5-point Likert scale. There are four subscales imbedded into the CAMI: (1) Authoritarianism; (2) Benevolence; (3) Social restrictiveness; and (4) Community mental health ideology, each with 10 questions. The CAMI was modified to be consistent with person-first language, which was suggested by Link and colleagues (Link, Yang, Phelan, & Collins, 2004). The CAMI was chosen, because it focuses on community attitudes.

Demographic information, level of contact, and CAMI subscale scores were analyzed using descriptive statistics. In addition, four blocked regressions were completed using each of the CAMI subscales as the dependent variable. Predictors were blocked into demographic variables (i.e., gender, age, race/ethnicity; Block 1), contact variables (i.e., level of contact report, frequency of contact, and perceived satisfaction with contact; Block 2), and education variables (i.e., TR or PR major, disability awareness course; Block 3). CAMI subscale means were also compared when grouped by disability awareness course.

**Results**

Two hundred and eight students accessed the survey, with 139 completing all information. Respondents were predominantly female (87.1%), white (86.3%), and were traditional aged college students (18-24, 87.1%). The majority (69.8%) of the respondents were TR/RT majors, with the remaining 42 individuals identifying as recreation, outdoor recreation, tourism, and other. Nearly 80% (n=111) of the respondents identified taking a course that focuses on disability awareness. The amount of contact the respondents had with individuals with SMI was split in thirds, with 30.9% ranging from 2 (Observed someone I believe has a SMI) to 6 (Worked with someone who had a SMI at my place of employment), 36% ranging from 7 (My job includes proving services to persons with a SMI) to 9 (A friend of the family has a SMI), and 33.1% ranging from 10 (I have a relative who has a SMI) to 12 (I have a SMI).

Descriptive statistics for the CAMI indicated participants had a mean of 22.5 (SD: 3.9) on the Authoritarian subscale, 40.0 (SD: 4.46) on the Benevolence subscale, 20.5 (SD: 4.6) on the Social Restrictiveness subscale, and 37.5 (SD: 5.0) on the Community Mental Health Ideology subscale, all with statistically normal distributions.

The Benevolence regression analysis was the only one found to be statistically significant. When all blocks were entered, the model explained 12.9% of the variance (R²=.129, p=.018). The only significant predictor in the model was taking a course that promoted disability awareness (β=-1.91, p=.041). Despite the non-significant findings of the other models, having a disability awareness class was consistently a significant predictor of the CAMI scores. Therefore, a paired t-test was run on each of the CAMI subscales comparing respondents who had taken a disability awareness course to those who had not. Table 1 reports the means by disability awareness course. The difference between groups was significant for all subscales.

**Discussion**

This study provides initial insight into how PR and RT/TR students view individuals with SMI. There are two major findings from this study: (1) a shift in societal attitudes towards individuals with SMI and (2) the impact a disability awareness course may have on attitudes.

First, the mean scores on each of the subscales were vastly different than the original results found in 1981 (Taylor & Dear, 1981). Taylor and Dear assessed community attitudes based on a number of demographic variables, with no total mean identified; however, the average mean for each of the subscales was nearly 10 points away from the means found in the current study (Authoritarian: upper
This is important, as it demonstrates that over the past 30 years, society has changed its attitude towards individuals with SMI. Specifically, the reduction in authoritarianism indicates individuals believe treatment should be less coercive; an increase in benevolence suggests individuals view those with SMI more sympathetically and believe in a societal responsibility towards treatment; a decrease in social restrictiveness suggests individuals perceive those with SMI less dangerously; and increased endorsement that individuals with SMI should receive services that are located within the community.

Second, based on the results of this study, it appears that taking a course focusing on awareness of individuals with disabilities has an impact on attitudes of individuals with SMI. This was particularly evident in the Benevolence subscale, as not taking a disability course reduced scores by approximately two points. While it is unknown the specific content of the courses, it is likely the courses focus on a wide range of legislative issues (e.g., the Rehabilitation Act, Americans with Disabilities Act, Individuals with Disabilities Education Act) broadly impacting individuals with disabilities. Knowing these courses have an impact on community orientation without specifically focusing on individuals with SMI suggests including information specific to individuals with SMI may be even more impactful. Furthermore, it was anticipated that RT/TR students might have higher scores that indicate a greater community orientation; however, this was not the case. In fact, as mental health services are more consistently community-based (Thornicroft & Tansella, 2004) and promoting goals such as community participation (Bellack et al., 2007), it becomes even more important for general community providers, like recreation providers, to have education courses that reduce stigmatizing attitudes that may prevent community participation.

**Limitations**

While this study provides preliminary information regarding the attitudes of RT/TR and parks and recreation students, a number of limitations should be noted. First, the sample cannot be viewed as representative of the respective student populations. There was a high representation of RT/TR students, female students, and individuals who had taken a course related to disability awareness. Online survey recruitment has a number of inherent limitations; most evident is the inability to provide a true response rate. While we attempted to identify programs that forwarded the message to students, other programs may have forwarded it. Additionally, there is no guarantee that student recipients actively (i.e., opened and read) received the email. Finally, while the measurement tools were purposefully selected, the age of the instruments and the noticeable difference between the current participants and the original sample suggests that the development of more current instruments may be warranted.

**Recommendations**

The relationship between provider and client is integral to successful outcomes in mental health services (Howgego, Yellowlees, Owen, Meldrum, & Dark, 2003). Future research should examine the impact attitudes of community (non-health) providers have on community participation of individuals with SMI. The education of RT/TR students and PR students should include courses that increase provider awareness of individuals with SMI. Educators need to evaluate these courses to ensure the content is consistent with recovery (Chiu, Ho, Lo, & Yiu, 2009) and reduces potentially stigmatizing attitudes that may prevent independent community participation.

**References**


<table>
<thead>
<tr>
<th>Disability Awareness Class</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
<th>t (df.)</th>
<th>Sig.</th>
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<tr>
<td>CAMI Authoritarian</td>
<td>Yes</td>
<td>111</td>
<td>22.13</td>
<td>3.89</td>
<td>-.37</td>
<td>-2.53</td>
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<td></td>
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<td>28</td>
<td>24.07</td>
<td>3.57</td>
<td>.67</td>
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<td>CAMI Benevolence</td>
<td>Yes</td>
<td>111</td>
<td>40.40</td>
<td>4.44</td>
<td>.42</td>
<td>1.99</td>
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<td></td>
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<td>28</td>
<td>38.57</td>
<td>4.32</td>
<td>.82</td>
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<td>CAMI Social Restrictiveness</td>
<td>Yes</td>
<td>111</td>
<td>20.05</td>
<td>4.66</td>
<td>.44</td>
<td>-2.24</td>
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<td></td>
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<td>28</td>
<td>22.10</td>
<td>4.25</td>
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<td>CAMI Community Mental Health Ideology</td>
<td>Yes</td>
<td>111</td>
<td>37.96</td>
<td>5.09</td>
<td>.48</td>
<td>2.17</td>
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<tr>
<td></td>
<td>No</td>
<td>28</td>
<td>35.89</td>
<td>4.35</td>
<td>.82</td>
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</table>
Two sets of longitudinal curriculum studies document the ebb and flow of professional preparation programs and the changing characteristics of undergraduate and graduate programs. One series of longitudinal studies commenced with a 1969 survey and follow-up every 10 years since, resulting in five data sets. The second series was initiated in 1996 and has undergone periodic updates. The most recent update in 2012 is the basis of this report.

**Method**

**Purpose**

The purpose of the project was to describe the current state of the art of therapeutic recreation (TR) curriculum nationally/internationally. This is the third follow-up within 15 years to identify the characteristics of therapeutic recreation curricula in higher education. The study replicates undergraduate and graduate studies previously completed by the two primary authors.

**Instrumentation**

The instrument used in the present survey was revised from prior TR curriculum studies (Stumbo & Carter, 1999a, 1999b; Stumbo, Carter, & Kim, 2004a, 2004b). The survey was converted using online survey software (SurveyMonkey®) and expanded to include both undergraduate and graduate curriculum information. Nine faculty who had recently retired or moved into non-academic positions served as the expert review panel. Over half of the items were revised following this panel review. The final online survey consisted of eight sections. There were 73 items concerning undergraduate, 19 items concerning master’s, 14 items on doctoral programs, with one “other comments” item. The total number of items was 107, with respondents only completing those portions/items that pertained to their individual program.

**Data Collection and Analysis**

Data were collected via an online survey of TR program coordinators, representing the 91 TR curricula previously identified in the US and Canada. TR program coordinators were identified through: 1) review of a curriculum list created by Temple University, 2) review of accredited programs listed on the NRPA website, 3) review of Department Chair’s list created through NRPA, 4) review of CTRA (Canadian Association) website, 5) review of researchers’ personal websites and web search, and 6) confirmation by NCTRC executive director of the compiled email list of program sites. In April and May 2012, the online survey was sent to program directors with a total of 73 (80.2%) surveys returned by the May 21, 2012 deadline. Descriptive data were generated and analyzed using Excel and regression analysis using Stata v12. Data are presented on the current state of TR education for the following variables: a) unit and department characteristics, b) faculty and student demographics, c) accreditation status, d) curriculum and course offerings, e) internship requirements, and, f) graduation and placement rates. What follows is selected data from the most recent curriculum research study.
and recreation (HPER), or recreation and leisure configurations. In terms of the number of TR students, the range for undergraduate TR majors was from three to 200, with a mean of 60.2. The variation in range of TR students within individual programs is wide, and may include part-time students in the total numbers. All respondents offered bachelor’s degrees, with fewer offering masters’ degrees, and even fewer offering doctoral degrees. The most frequent title for TR programs remains Therapeutic Recreation (80.8%), though there was an increase in the use of the title Recreation(al) Therapy (16.4%) from previous surveys.

**TR Faculty Characteristics**

A majority of the responding institutions (69%) had one or two full-time TR faculty members on staff. When asked about the total full-time equivalent (FTE) of TR faculty in their institutions, the range was from zero to 12, with a mean of 2.3. Most TR faculty carried titles of Instructor, often meaning they were in non-tenure lines. The next most frequent title was Associate Professor, with equal numbers at the Full and Assistant Professor positions. There was a total of 204 TR faculty identified at the 72 responding schools. When compared with the total number of TR faculty (204), female TR faculty members made up 74.5% of all TR faculty members in the US and Canada. Respondents reported a total of 18 TR faculty of color, constituting 0.9% of the TR higher education work force. The majority of TR faculty (82.4%) were NCTRC certified and 62.3% were members of ATRA. Nearly 70% of faculty were reported to be members of their state or provincial TR organization/chapter affiliate (n = 141, 69.1%). Most faculty (59.7%) taught the equivalent of four, three-hour classes per semester.

**Accreditation Characteristics**

With regard to accreditation status, 62.5% reported being accredited by the Council on Accreditation of Parks, Recreation, Tourism and Related Professions (COAPRT), and seven (9.7%) reported being accredited by the Committee on Accreditation of Recreational Therapy Education (CARTE). An additional 21 (29.2%) reported having neither of those accreditations. The top three reasons for seeking accreditation included: a) providing indication of quality of the department, curriculum, and faculty (75.0%), b) supporting mission of improving curriculum across the university (70.8%), and c) supporting mission of improving curriculum across the country (50.0%). The top four reasons for not seeking accreditation were: a) not valued by college/university (8.8%), b) quality can be provided without being accredited (8.8%), c) department/program does not meet standards (5.3%), and d) faculty do not have the time or resources to complete the self-study (5.3%).

**TR Curriculum Characteristics**

Although 54.5% of institutions had no specific admission requirements into TR programs, meeting grade point average thresholds was the most frequently reported requirement (40%). A small percentage of programs required taking and passing prerequisite courses (14.8%) and 10.9% of programs required personal statements/writing examples. Undergraduate TR class size ranged from five to 40, with 20.6 being the average. The majority (63.6%) reported that 100% of their classes were face to face only, with another 12.7% also reporting between 90 and 99% of their classes were face-to-face only. Only two (3.6%) reported only offering on-line courses and 12.3% reported offering hybrid courses. In terms of curriculum content, respondents identified at least one course in each of the following NCTRC content areas: Introduction/Foundations/Orientation to TR, Principles/Processes/Techniques/Methods/Procedures, Assessment/Programming/Evaluation and Disability Areas. Nearly all respondents (98.2%) indicated that they had at least one course in the content area of Administration/Supervision/Operations and most (92.7%) had at least one course addressing the Issues/Problems/Trends content area. Just over half of the respondents (56.4%) indicated that they had at least one course in the “Other” category.
Student Characteristics

In contrast to previous curriculum studies, enrollments were reported (n = 60) to be increasing for both undergraduate TR majors (70.2%) and minors (20.7%). For the 14 reporting TR masters programs, nine (64.3%) reported they were stable. No trends were detected in the TR doctoral enrollment pattern data. Undergraduate TR minors and majors, on average, were females over 80% of the time. Data reveal a very broad range of percentages of TR minors/majors of color (from zero to 100%). It is interesting to note that overall, approximately six percent of TR minors were individuals of color, and almost 23% of TR majors were individuals of color.

Conclusions, Implications, and Recommendations

Changes continue to be evident in many curriculum characteristics including: a) shifts in the administrative location of programs; b) increasing numbers of TR courses, on-line courses, and internship requirements; c) slight increases in student enrollments with decreases in the number of accredited programs; and d) diversity in requirements for degree programs, and the TR option or major. One consistent characteristic is that the average percent of female majors tends to remain higher than male majors.

It is concluded that TR curriculum vary significantly across the US and Canada. Numbers of majors, institutional placement of the program, and faculty loads are just a few of the instances of wide variance. Recommendations for future action and/or research include a call for more in-depth research to be conducted on the content of TR coursework, beyond course titles. The diversity of offerings suggests that commonality within course titles may not be assumed. A second recommendation is that, after more thorough research is completed, a national movement for consensus on curriculum design and internship requirements be initiated by the national membership, credentialing organizations, or other appropriate entity. The lack of uniformity is a cause for concern, if not, alarm. If there is no consistency of curricula, then it follows that there is no or little standardization of the degree or “exit skills” for graduates. This recommendation is repeated from the prior studies (Stumbo & Carter, 1999a, 1999b; Stumbo, Carter, & Kim, 2004a, 2004b). Lastly, an effort to describe longitudinal trends in TR curriculum development over the course of the past 40 years that consolidates the findings of the multiple surveys would be useful in tracking changes over time.

One implication of the study concerns the lack of consistency in professional preparation which may impact delivery of services and expected performance by entry-level professionals. Another implication for practice evolves from the apparently increasing numbers of majors and minors; professionals seeking to hire entry-level personnel have potentially larger candidate pools. Lastly, due to the higher continuous percent of female students, professionals are likely to experience more female applicants than male candidates.

1 For purposes of simplification and reader ease, the terms therapeutic recreation or (TR) are used throughout the manuscript and are intended to be inclusive of the terms recreation therapy and/or recreational therapy (RT).

References

4(2), 4-7, 25.
In North America, approximately 1.4 million individuals acquire traumatic brain injury (TBI) annually (Mascialino, Hirshson, Egan, Cantor, Ashman, Tsauusides, et al., 2009). Once survival is certain, community integration becomes the ultimate goal, and individuals following TBI focus on acquiring various knowledge and skills for community reintegration in least restrictive environments (Reistetter & Abreu, 2005). However, community reintegration has not been an easy task especially for the individuals experiencing a variety of life challenges such as loss of independence, disrupted social relationships, unemployment, and decreased involvement in leisure activities (Temkin, Corrigan, Dikmen, & Machamer, 2009). For example, one of the most significant barriers faced by individuals with a moderate level TBI were related to ineffective interpersonal skills including challenges with developing and maintaining relationships and lacking a sense of closeness with others (McColl, Bickenbach, Johnston, Nishihama, Schumaker, Smith, et al., 2000).

Griffen, Meachen, and Hanks (2010) stated the six significant factors contributing to successful community reintegration including (a) recreation and leisure integration, (c) social network integration, (c) residential integration, (d) employment and economic integration, (e) employment stability, and (f) personal satisfaction. In addition, Ashman and Seter (2008) emphasized that it is extremely pivotal for people with TBI to restore past capabilities by resuming a life of meaning and purpose. Among the various factors, enjoyable and meaningful engagement in leisure activities can facilitate the development and mobilization of personal strengths and, the reconstruction of a life story, and ultimately the reintegration back into the community (Theodore, Ashman, & Seter, 2008). Moreover, leisure involvement has a great potential contributing to the improvement of life quality for people with TBI (Douglas, Dyson, & Foreman, 2006). However, previous study explained that 92% of the participants with TBI experienced reduced opportunities in leisure and reported dissatisfaction with their leisure although engagement in recreation and leisure is an important aspect of the recovery process (Bier, Butil, & Couture, 2009). Therefore, it is necessary to expand the understanding of leisure experience for people with TBI in the process of community reintegration using an in-depth case study. The purpose of this qualitative study was to explore the influence of leisure on community reintegration for people with TBI.

Methods

Participants
The sample of this study consisted of 6 volunteer participants, who are a member of a local Brain Injury Association in Eastern Canada. Of the 6 participants, 2 were male and 4 were female with the age range from 27 to 46 ($M=36.67$, $SD=9.30$).

Interview procedures
A semi-structured in-depth interviewing was used to explore the influence of leisure
involvement in the process of community reintegration. Upon receiving permission from the participants, each interview was audio-taped using a digital voice recorder. Each interview last approximately from one to two hours in length. This study incorporated grand-tour and mini-tour questions (Spradley, 1979). The example grand-tour questions included: “Could you describe a typical day in your everyday life?” and “Could you please share your experience after the injury?” Then, the interviewer asked example and probing questions related to participants’ responses. The mini-tour questions were also asked to explore the lived experience of the participants. For example, the interviewer asked: “What has helped you most for community reintegration?” and “What do you do for fun in your spare time?”

Data Analysis

In terms of data analysis, a grounded-theory method was used in order to explore the leisure experience and community reintegration at a subjective level. This study used three phases of coding when analyzing and transcribing interviews including open, axial, and selective coding (Strauss & Corbin, 1998). In the process of the data analysis, leisure-related core themes on community reintegration were emerged. This study applied triangulation method, peer review, and external audits to ensure trustworthiness.

Results

Collectively, participants engaged in a variety of activities within their community. As the participants expressed their involvement within these activities, the results of data analysis revealed the three major themes: (a) escaping from the home or hospital and connecting to the community, (b) socializing with others, and (c) providing a sense of empowerment.

Escaping from Home/Hospital and Connecting to the Community

Escaping from home or hospital and connecting to the community was the first main theme that emerged from interview data. Participants described leisure as providing a sense of structure and keeping them busy and active when making the transition back into the community. The majority of participants expressed that structure in a daily routine was important to them.

For example, Preston’s participation in community garden allowed him to develop a sense of structure within his own home and garden. Preston, who is unemployed, proudly said “now I have my own little thing where I am living” By choosing to participate in certain leisure activities, individuals were able to keep busy and active, avoiding a sedentary lifestyle, and enhanced a sense of meaning within the community. In addition, leisure involvement played an important role experiencing a sense of productivity. A majority of participants found ways to engage in active leisure lifestyle in order to fulfill their basic needs for being productive and connected to the community.

Socializing with Others

Engagement in leisure activities provided opportunities for social interaction. Most participants felt that friendships were altered after their injury and a “weeding out” process took place. Leisure activities provided social spaces to build friendship and meaningful relationship, which are one of the critical components in the process community reintegration for individuals with TBI. Through engaging in various social activities such as walking with others and engaging in YMCA activities, the participants not only built relationships, but also experienced a sense of belonging and acceptance in the community.

Leisure as a sense of empowerment

Leisure engagement was more likely to provide opportunities for a sense of empowerment in learning and advocacy. The majority of the participants used learning activities (e.g., participation in art, writing, yoga-related activities) to express themselves and
feel as though they had the power to choose and engage in activities within their community. Many of the participants advocated for themselves and others within the community, which gave them a sense of empowerment. All the participants tried to “stand up for [themselves] and help [themselves] a lot of the time” in order to acquire necessary resources or receive appropriate supports. Volunteering was another way in which the participants felt connected to their community and experienced a sense of value and purpose in life. For example, a number of participants volunteered within their community at the local YMCA, walking dogs for St. John’s Ambulance, or coaching in local public schools. The participants found that they were able to establish a greater confidence in their abilities, strengths, and capacities to give back to the community and find a sense of purpose through learning opportunities and advocacy, respectively.

**Discussion**

Three major themes emerged in this study include (a) escaping from the home or hospital and connecting to the community, (b) socializing with others, and (c) providing a sense of empowerment. These themes support previous literature surrounding the benefits of leisure on community reintegration for individuals with TBI. First of all, the findings in this study explained that the participants used leisure in their community as a source to provide organization and meaning in their lives. These findings coincide with previous research, which discussed the need for daily and weekly structure for people with TBI (Finestone, Marshall, McComas, McCormick & Sveisterup, 2005). Furthermore, a sense of structure also assisted the participants in finding a sense of meaning and purpose through participation and engagement in the community. Aitchison (2003) argued that an alternative to employment for individuals who have experienced an injury, specifically individuals with intellectual disabilities, can use leisure to create greater significance in their life and enhance their sense of meaning.

One of the most interesting findings throughout this study was the experience of social support through leisure involvement. All the participants had the same opinion surrounding the idea of social support and relationship building as a part of their successful recovery and community reintegration. Doig, Fleming and Tooth (2001) described the importance of social support as a difficult, but important process. They stated “maintaining friendships, social participation and forming relationships are important activities that may be difficult during reintegration phases after a brain injury” (Doig, et al., p. 758). For the participants in this study, friendship was a main reason for participating in leisure. Additionally, the participants’ involvement in leisure programs provided a social context and time to build more meaningful and dependable friendships within their community (Chun & Lee, 2010).

An unexpected finding was that most participants in this study advocated themselves and their right to leisure, which facilitated the participants experiencing a sense of empowerment in their community. Leith, Phillips and Sample’s study (2004) showed that the participants with TBI felt they lacked informal advocacy in terms of communication, collaboration, and general networking between and among medical personnel, service providers, families, and persons with TBI. In this present study, all the participants indirectly advocated for their right and ability to experience leisure in the community. In addition, empowerment incorporated a sense of personal mastery and control over one’s life and improved connectedness in the community (Rappaport, 1987; Mactavish & Iwaski, 2005).

**Implications**

This research can be used to better educate recreational therapists on the specific needs of individuals with TBI and what can better contribute to their community reintegration process.
Furthermore, there is also a need for research to focus more on a holistic approach to health where all dimensions of health are covered during the clients’ treatment. Specifically, emotional, social, and spiritual health need to be placed more often on the front burner of treatment to better prepare individuals with TBI reintegrating back into the community. Lastly, understanding of the role of community integration will facilitate individuals with TBI to create clear and concise goals for recovery. The recreational therapy needs to address community integration as one of the target goals within the interdisciplinary rehabilitation team.

References


Practice Poster Summaries 2013

Project STRIDE: An Equine Assisted Intervention to Reduce Social Anxiety
Lauren Alfonso, Florida International University
Sarah Alfonso, University of Miami
Alexis McKenney, Florida International University
Project Stride is a theory-based, equine assisted intervention designed to reduce symptoms of social anxiety in young women, 18 to 29 years. The intervention has four client goals: Increase trust in themselves and in other people, identify and value their skills and talents, express feelings and emotions appropriately, and build and sustain positive relationships. Process indicators suggest a high degree of participant engagement during the intervention sessions. Participants report feelings of optimism and accomplishment when they complete challenging activities.

Analysis of Student Responses to Service Learning in Aquatics and Adventure
Ellen Broach, University of South Alabama
Kelly Edens, Shepherd Center
The purpose of this program was to involve recreational therapy students in service learning under the supervision of Shepherd Center Therapeutic Recreation practitioners. Analysis of three years of program evaluations found that this program Improved student knowledge of skills, personal values, thinking, problem-solving, disability, and leadership. For the agency service learning can inject new energy, enthusiasm, and perspectives into the organization's work and help prepare today's students to be tomorrow's prepared practitioner.

Accommodating Children with Autism in Community Recreation: An Outcome Study
Fran Stavola Daly, Kean University
Dina Trunzo, Somerset County Park Commission
This study examined the outcomes of an inclusion process model designed by a Certified Therapeutic Recreation Specialist (CTRS) in a community recreation setting. Two children with autism were assessed and accommodation plans developed to support each child’s successful participation in the community recreation program of his/her choice. Based on the initial results, the SCPC Model was an effective inclusion model and accommodations planned by a CTRS were effective in helping the children achieve the desired goals.

Family Battle Buddies Program
Rebecca Gilbert, Indiana University
Shay Dawson, Bradford Woods Outdoor Center
Bryan P. McCormick, Indiana University
Jonathon Beckmeyer, Indiana University
Kathleen Gilbert, Indiana University
Family Battle Buddies Program (FBBP) is a pilot program intended to strengthen resiliency processes and family well-being in post-deployment military families. The FBBP uses an engaging experiential challenge modality to enhance families’ resiliency in order to promote successfully family adapt to reintegration. FBBP is intended to help families discover and develop skills to successfully navigate the reintegration challenges associated with role ambiguity, readjustments of family relationships, and family communication.

ATRA Research Institute, Pittsburgh, PA, October 1-2, 2013
Using Technology to Overcome Social Isolation
Beth Gyger, Homecare Family Services, LLC
Peggy Bollinger, Homecare Family Services, LLC
Homecare Family Services’ (HCFS) Social Media Program is aimed to give clients who are homebound socialization to enhance quality of life by staying connected to family. As part of the Care Plan, HCFS will assist clients and their families in the creation and maintenance of social media accounts, set up and schedule video conferencing "meetings" with family and friends and will create, educate and maintain email accounts for their clients to use to stay in touch with loved ones.

Go Home! Impact of Community Re-Entry Program
Melanie Kline-Switzer, Dodd Rehabilitation at Ohio State University Wexner Medical Center
Morgan Mersy, Dodd Rehabilitation at Ohio State University Wexner Medical Center
Lauren Pfahler, Dodd Rehabilitation at Ohio State University Wexner Medical Center
Tracy Sturtz, Dodd Rehabilitation at Ohio State University Wexner Medical Center
Community Re-Entry (CRE) is a service provided to patients being seen by Recreational Therapy on the Brain Injury, Spinal Cord and Stroke Teams. Patients meet daily for 30 minute sessions to plan Thursday’s weekly CRE. Family members are strongly encouraged to be active participants in the CRE. Since implementing CRE group, overall patient satisfaction has improved; overall discharge to community has improved; and, patients and family verbally report increased confidence in returning to the community after participating in CRE.

Adaptive Zumba for Individuals with Spinal Cord Injuries
Keeli Rigdon, Georgia Southern University
Brent Wolfe, Georgia Southern University
Zumba is one of the newest fitness phenomena, combining international music and Latin dance styles with a cardio workout. When leading a Zumba session for individuals with spinal cord injuries (SCI), the therapist must consider levels of injury, current physical abilities, and identified goals. Since individuals with SCI have a wide variety of functioning, it would be beneficial to do individual Zumba sessions, or Zumba sessions with a small group of individuals with similar ability levels.

RT Outcomes Using Paro the Baby Seal Robot
Susan Ross, San Jose State University
Christina Yee, Veterans Administration
Paro is an animal-mimic robot. It has 12 tactile sensors covering most of its fur and touch-sensitive whiskers. It was used as an intervention in a veteran’s hospital with an aging population, diagnoses of dementia, depression, Alzheimer’s, and anxiety. Prior to intervention, residents were anxious and wandering. During interaction with Paro, the majority were actively engaged, showed improved moods, and increased interaction with peers. Positive outcomes continued after the Paro session.

Somatic Mindfulness Interventions in Acute Psychiatric Care for Adolescents
Susan Ross, San Jose State University
Audra Higbee
Recreation Therapy provided treatment using Somatic/Mindfulness practices on an adolescent acute inpatient psychiatric unit. Primary diagnoses included: depression, psychosis, mood disorders, drug abuse, bi-polar, schizophrenia, and borderline personality disorder. A majority of the participants experienced a decrease in their anxiety levels after the relaxation skills intervention. Data indicated that
a combination of stretching, qigong, tai chi, yoga, and guided imagery can lower the levels of anxiety in adolescents experiencing high levels of anxiety.

**Project Healing Waters Fly Fishing Program**  
Marian Skomksy, Wilkes-Barre Veterans Affairs Medical Center  
This is a collaborative program with Project Healing Waters Fly Fishing, Inc. and Veterans Affairs. The program is targeted for Veterans with mental health concerns (e.g., PTSD, depression, anxiety, bi-polar and schizophrenia). Client outcomes included: Increased self confidence; increased social interaction/ decreased social isolation; skill mastery in the sport of fly fishing; and, incorporation of fly fishing and fly tying as “Wellness Tools” into Veteran’s WRAP (Wellness Recovery Action Plan).

**Horses Helping Heroes**  
Marian Skomksy, Wilkes-Barre Veterans Affairs Medical Center  
This program is designed to help teach life skills needed to cope with difficult times and transitions experienced by the Veteran population. A six-session Horses Helping Heroes program was created to accomplish therapeutic goals though the use of experiential exercises. Client outcomes included: Increased confidence and self acceptance; realized self worth, pride and joy in an accomplishment which promoted well being; positive interactions with an animal, instructor, other participants and volunteers; and, improved emotional and mental outlook.

**Aquatic Intervention Effect on Emotions in Severe Mental Illness Population**  
Alysha A. Walter, Oklahoma State University  
The intervention focused on individuals living with severe mental illness. It included aquatic activities focused on improving positive emotions and decreasing negative emotions. Individuals were from an outpatient behavioral health facility, and the intervention took place at a YMCA. The modified Differential Emotions scale was chosen because it is specifically designed to rate an individual’s positive and negative emotions. Results indicated there was an increase in positive emotions after the intervention and a deduction in negative emotions for the participants.

**Understanding and Treating Agitation in Dementia through the Continuity Theory**  
Jacquelyn Gimbel, Temple University  
Therapeutic recreation (TR) can be used for the purpose of restoring or recreating continuity in situations where an older adult may not feel as though they have the means to access the adaptive skills to engage in leisure. As people age and experience functional, cognitive, vision or mobility impairments that disrupt continuity in their lives, TR can help older adults engage in meaningful activities through leisure, thus reducing the need for pharmacological intervention.

**Hope Theory at it Relates to Resiliency in Children with Pediatric Cancer**  
Sara Heinze, Temple University  
Because hope may aid in the battle against a life-threatening disease, such as cancer, it is important that professionals treating children who are chronically ill are educated on hope and how it is acquired. Knowing that it is this environmental response to chronic illness that fosters and accelerates the learning of hopeful thinking in children, professionals should make sure that both the hospital room and the people interacting with the child are positive and optimistic throughout the time of treatment.