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Addressing The Recreation And Social Participation Gap In Children With Disabilities: Program Development Of A Recreational Summer Camp

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ADDRESSING THE RECREATION AND SOCIAL PARTICIPATION GAP IN CHILDREN WITH DISABILITIES: PROGRAM DEVELOPMENT OF A RECREATIONAL SUMMER CAMP

by

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APPROVAL

This scholarly project, submitted by Benjamin Germolus in partial fulfillment of the requirement for the Degree of Occupational Therapy Doctorate from the University of North Dakota, has been read by the Faculty Advisor under whom the work has been done and is hereby approved.

Cheris Graves, PhD, OTR/L
Faculty Advisor

April 13, 2022
Date

PERMISSION

Title	Addressing the Recreation and Social Participation Gap in Children with Disabilities: Program Development of a Recreational Summer Camp
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Dearest Dad,

may you be proud and rest in peace

ABSTRACT

Recreation, social participation, and leisure are important occupations of children, however, children with disabilities participate in them less frequently and more often with parents when compared to their typically developing (TD) peers (Lin, 2020; Schreuer et al., 2014; Solish et al., 2010). Therapeutic summer camps have been shown to reduce these disparities in participation while achieving positive functional gains (Flynn et al., 2019; Guest et al., 2017; Kaboski et al., 2015; Petersen et al., 2020; Sakzewski et al., 2015; Sterman et al., 2016; Walker et al., 2010; Yang et al., 2021). However, few summer camp programs are available for occupational therapy practitioners to use. The purpose of this scholarly project was to develop an all-inclusive guide to running a therapeutic summer camp and to help to mitigate the occupational imbalance that children with disabilities face. The author of the product partnered with a pediatric outpatient therapy clinic, conducted an in-depth literature review, an on-site needs assessment, and synthesized all collected data to create the current product. The final product, *Hook'd on 'Arrdenture': A Pirate-Themed Recreation Day Camp*, includes program goals, activity descriptions, staff training materials, financial considerations, marketing materials, sustainability recommendations, evaluation methods, and relevant handouts for implementation of the program. It is anticipated that the final product will aid pediatric therapy practitioners in providing supported recreation, social, and leisure participation opportunities while helping to reverse the participation gap that children with disabilities face.

Chapter I

Introduction

An important part of child development is the participation in valued occupations, especially the participation of children together. Children and adolescents with disabilities, when compared to their typically developing (TD) peers, participate in less recreational, social, and leisure activities (Lin, 2020; Schreuer et al., 2014; Solish et al., 2010). In addition to participating less frequently, children with disabilities more often participate in activities at home and with their parents as opposed to like-aged peers (Solish et al., 2010). Many different person, context, or task related factors like poor motor skills, parental attitudes toward recreation, and lack of universally designed contexts increase this disparity in participation frequency (Bult et al., 2011; King et al, 2009; Schleien et al., 2014; Shikako-Thomas et al., 2008; Sterman et al., 2016). Therapeutic summer camps can be an effective way to both increase participation in recreational, social, and leisure activities while also having positive therapeutic gains like improved social skills, decreased social anxiety, improvement in self-care, improved family cohesion, and improved family attitudes toward outdoor recreation (Flynn et al., 2019; Guest et al., 2017; Kaboski et al., 2015; Petersen et al., 2020; Sakzewski et al., 2015; Sterman et al., 2016; Walker et al., 2010; Yang et al., 2021). The conjunction between the infrequent participation for children with disabilities and the demonstrated benefits of therapeutic-style summer camps indicate a need for more therapeutic recreation, leisure, and/or social participation summer camps for children with disabilities.

Needs Assessment

A needs assessment conducted for the design of the current product consisted of two phases: literature review and stakeholder data gathering. Information gathered for the literature

review was done through searching health science databases and governmental websites. A synthesis of the current literature on children with disabilities; recreation, leisure, and social participation; and therapeutic summer camps was completed. Literature review data was analyzed, and a select number of possible therapeutic summer camp models were selected based on the best available data.

The needs assessment was further expanded upon during on-site stakeholder data gathering methods at a pediatric outpatient therapy clinic. The author participated in informal interviews and observation of potential consumers, in addition to, gathering interest with a parent/child survey. Informal interview and observation helped the author determine both interest and general consumer characteristics for the program. Parent/child survey data demonstrated that there was strong interest in a recreation and social participation themed day camp. Synthesis of all needs assessment data made evident the need for supported recreational, leisure, and social activities for children with disabilities and that a therapeutic summer camp is a feasible, evidence–based, and sought-after method to help address the need. Therefore, the purpose of this project was to create an evidence-based recreational and social participation day camp that helps to reduce the participation gap for children with disabilities.

Objectives

The objectives for this product were developed based on demonstrated needs/barriers in the literature, theory, and needs assessment data. The overall goal of the program is to allow children with disabilities and their families to participate, barrier-free, in recreational and social activities while increasing the confidence of families to engage in a wide array of activities. The objectives are targeted toward participants in the program and the parents of participants. Objectives for participants include parent- and therapist-rated increase in social skills, self-rated

increases in confidence to engage socially with peers and in recreational activities, and therapist reports of meaningful participation in recreational and social activities. Parental objectives include a self-rated increase in both confidence and knowledge to engage children with disabilities in a wide variety of activities.

Theoretical Guidance

The Ecology of Human Performance (EHP) model is an ecological-based, occupational therapy model that was used to guide the development of the current product (Dunn et al., 1994). The EHP model was chosen as it was designed to be used with an interdisciplinary team and the current product was designed to be used by an interdisciplinary team of allied health professionals. The model uses three different constructs–person, task, and context–to account for the performance of a task (Dunn, 2017). Each unique individual is theorized to have a performance range or a specific number and type of tasks available to them based on the intersection between contextual and their own person factors (Dunn, 2017). Albert Bandura's (1977) social learning/cognitive theory was also used in the development of the product. This theory posits that learning is affected by cognitive, behavioral, and environmental factors and that learning may be done by directly observing others' actions and subsequent consequences (Bandura & National Institute of Mental Health [NIMH], 1986). Important concepts from this theory include vicarious learning, self-efficacy, human agency, and self-regulation. Individuals are motivated to meet their own goals and concepts like self-efficacy, human agency, and self-regulation are important concepts internal to the person that contribute to learning. Both theories were integrated in the creation of the product and referenced throughout.

Contribution to Pediatric Occupational Therapy Practice

Hook'd on 'Arrdventure': A Pirate-Themed Recreation Day Camp is an all-inclusive

guide to running a three, half-day recreation and social participation day camp for children with disabilities. The program includes activity descriptions with modifications, visual schedules, goals/objectives, staff training materials, budgets, marketing material, considerations for future iterations, program evaluation tools, and relevant documents related to supporting the program. The product is unique in that it is mobile–can be adapted to fit any facilities' needs–and that it provides an all-inclusive guide to starting, running, and improving the program for future iterations. The target audience for this product is pediatric occupational, physical, and speech therapy providers interested in hosting a supported day camp for children with disabilities to participate in recreational activities with like-aged peers. Gaps in participation for children with disabilities in both recreation and social activities were the impetus for creating this product. It is the author's hope that this program incentivizes pediatric therapy providers to create more supported opportunities for children with disabilities to participate with their peers. Secondarily, the author hopes that the implementation of this product will help reduce occupational imbalance for children with disabilities.

Key Terms, Concepts, and Constructs

- **Ecology of Human Performance Model** – This is an ecological occupational therapy model that is meant to be used by an interprofessional team. The model details the relationships between the "person, context, task, and performance" (Dunn, 2017, p. 210).
- **Social Learning/Cognitive Theory** – This learning theory posits that learning can occur by observing others and that cognitive, behavioral, and environmental factors can influence learning (Bandura & NIMH, 1986).
- **Attendee/consumer/participant** – any child that attends or participates in the summer camp.

- **Therapists/allied health professional** – any physical therapist, occupational therapist, speech language pathologist, or mental health counselor.
- **Recreation** – any activity with more structure and active participation, with a tendency to be in the outdoors.
- **Leisure** – any intrinsically motivated activity that someone would complete in their downtime—time not dedicated to sleep, care of oneself, or work (AOTA, 2020).
- **Social participation** – activities completed with others, involve social interaction, and support social interdependence (AOTA, 2020).
- **Occupational therapy** – "the therapeutic use of everyday life occupations with persons, groups, or populations for the purpose of enhancing or enabling participation" (AOTA, 2020, p.1).
- **Occupation** – activities central to everyday life that "people do as individuals, in families, and with communities to occupy time and bring meaning and purpose to life." (World Federation of Occupational Therapists [WFOT], n.d., para. 2).
- **Children/adolescents with disabilities** – any person under the age of 18 that has a disability; can be mental, physical, social/emotional, developmental, sensory, learning, etc.
- **Day camp** – a structure opportunity for participation in which the participants return home at the end of the day or event.
- **Summer/residential camp** – a structured experience in which the attendees either spend a significant portion of the day or stay overnight.

Chapter II

Literature Review

It is important to define occupation as it is central to the current project and to occupational therapy practice. Occupation can be defined as everyday life activities that hold meaning to a specific person; it can include things that persons are expected to, need to, or want to do (American Occupational Therapy Association [AOTA], 2020). Thus, occupational therapy (OT) can be "defined as the therapeutic use of everyday life occupations with persons, groups, or populations…for the purpose of enhancing or enabling participation" (AOTA, 2020, p. 1). One such population, person, or group that occupational therapists work with and that is relevant to the current project is children and youth. OT's role with children and youth changes because the clientele's occupations are different. Activities that are important to children include activities that help them learn and develop life skills, express creativity and enjoyment, and thrive in their development; these include the broad categories of self-care, social participation, play, education, recreation, and leisure activities (AOTA, 2015). For the current project, three of these important occupations will be the focus: social participation, leisure, and recreation.

Children and youth with disabilities experience life and development differently than their typically developing peers. Children and adolescents with disabilities, on average, participate in less recreational, social, and leisure activities than TD peers (Lin, 2020; Schreuer et al., 2014; Solish et al., 2010). Moreover, children with disabilities complete more leisure activities at home and with parents than TD peers (Solish et al., 2010). Many variables help to explain the why or how children with disabilities experience disparities in such occupations. Some include lack of universal design in community parks and playgrounds; corollary evidence

between gross motor function, cognitive ability, communication skills and decreased participation; and family-related barriers like time constraints, financial burden, and lack of support systems (Bult et al., 2011; Lynch et al., 2020; Shikako-Thomas et al., 2008). This lack of recreational opportunities for children with disabilities also negatively impacts family, particularly family quality of life (Bhopti et al., 2020). A way to help combat the disparities in participation opportunities and to help connect children with disabilities (and their families) is through a therapy-based camp.

Day camp, summer camp, and community-based program models have been researched and implemented to help increase social, recreational, and leisure participation in children/youth with disabilities (Dannenbaum et al., 2021; O'Neil et al., 2012; Smart et al., 2018; Spencer et al., 2020; Thompson et al., 2015; Zwicker et al., 2015). Although the literature shows promising outcomes, there are few studies with high levels of evidence, per Leiberman & Scheer's (2002) AOTA levels of evidence criteria. Other gaps in current research on the topic include a lack of heterogeneity to groupings, detailed descriptions of tasks completed in summer camps, and larger sample sizes using a summer camp model only for intervention. This leaves unknowns in the statistical power behind current summer camp-based treatments, what treatment groups have the best outcome, whether different age/diagnoses groups can be mixed, what measurements accurately capture outcomes in diverse groups, what the best treatment protocols are for evidenced-based outcomes, and how to replicate study protocols for similar outcomes.

Theoretical Framework

The literature review was guided through the use of an ecological-based occupational therapy model, the Ecology of Human Performance (EHP) model (Dunn et al., 1994). EHP theorizes that each unique individual has a performance range or a number/type of tasks

available to them based on the interaction between the person's characteristics and their contextual variables (Dunn, 2017). Each branch or construct of the model (i.e.. person, task, context, performance range) was used to create research questions. Social learning/cognitive theory was also used to help frame literature review conducted on social participation (Bandura, 1977) Concepts like self-efficacy, goal attainment, and reinforcement were important when scanning the literature. Next, a detailed review of the professional, scientific, and governmental literature was completed.

Person

Disability prevalence among pediatric populations has increased throughout the past two decades. A study by Zablotsky et al. (2019) revealed that the prevalence of any developmental disability increased from 16.22% in 2009 to 17.76% in 2017. This is a similar trend for children and youth served by special education services and Section 504 of the Rehabilitation Act of 1974. According to the National Center for Education Statistics (2021), children served under Part B of the Individuals with Disabilities Education Act (IDEA) has risen from 6.5 to 7.3 million or 14.3% of total enrollment in the past ten years. The United States Department of Education (2019) reported that an additional 1.4 million students receive services through Section 504, bringing the total number of children receiving services in public schools to 8.7 million.

The selected agency for the current project is located in the Bismarck/Mandan, North Dakota (ND) metro area. It is important to review relevant person factors of individuals and families residing in the area of the intended program. According to the United States Census Bureau [USCB] (n.d.), the population of Bismarck, ND was 73,622 and Mandan, ND was 24,206 in 2020. The Bismarck/Mandan area has an average of 6.4% of its population under age five and

21.8% of its population under age eighteen (USCB, n.d.). Approximately eighty-nine percent of the population is Caucasian and ten percent identify as one or more minorities (USCB, n.d.). Data for pediatric outpatient therapy services for the region are unavailable, thus national statistics were reviewed.

The modalities of speech, occupational, physical, and mental health therapy are used with children to improve overall functioning in society, school, and home. Children served by therapy services vary in age and diagnoses. The AOTA (2015) describes therapy services for children/youth as falling into four distinct categories: those having developmental, educational, injury-related, and/or emotional-behavioral needs. For children aged 3-17, 78.1% with depression, 59.3% with anxiety-based disorders, and 53.5% of children with behavioral disorders receive treatment (Ghandour et al., 2019). Statistics for numbers, developmentally related diagnoses, and ages of children that receive outpatient therapy treatment services were not available in the current literature.

Based upon the EHP model, individual person factors can be broken down into cognitive, sensorimotor, and psychosocial factors, and these factors might hold valuable information for selecting groups of children for therapeutic groups. A systematic review by Bult et al. (2011) investigated the variables impacting frequency of participation in leisure/social activities for children with disabilities. It was found that sensorimotor factors like lower gross motor functioning and manual ability contributed to less participation in leisure/social activities (Bult et al., 2011; King et al., 2009). Additional sensorimotor findings from the literature indicate that children with autism spectrum disorder (ASD) who score higher on the bystander and sensory sensitivity quadrants of the Short Sensory Profile 2 (SSP-2) participated less in social activities (Lin, 2020). Other factors impacting frequency of leisure participation that could be considered

either cognitive or sensorimotor include the presence of hearing or visual impairment (Bult et al., 2011). Cognitive functions like presence of a learning disability, lower intellectual ability, and restricted communicative function and speech all posed negative risk for participation (Alghamdi et al., 2017; Bult et al., 2011; King et al., 2009). Psychosocial factors like gender affect participation as well; girls participating more than boys in general leisure activities (Bult et al., 2011). Additionally, certain diagnoses like ASD, cerebral palsy (CP), and intellectual disability (ID) have been researched and found to have increased associations with lower participation in play, recreational, and social activities (Lin, 2020; Schreuer et al., 2014; Shikako-Thomas et al., 2008; Solish et al., 2010). These disparities in play, recreation, leisure, and social participation indicate a need for additional, structured opportunities for participation for children with disabilities.

Context

The EHP model breaks down context into four different categories: physical, social, cultural, and temporal. The physical context includes natural and human-made environments and objects within them (Dunn, 2017). Bismarck and Mandan, ND have many parks and playgrounds available. According to Bismarck Parks and Recreation (n.d.), all playgrounds meet or exceed Americans with Disabilities Act (ADA) guidelines for accessible play areas. However, universal design criteria were not provided and not all playgrounds are equipped with accessible surfaces, parking lots, ramps, transfer station, adaptive swings, accessible sand tables, or sensory-based equipment. Mandan Parks and Recreation (2021) does not have any statements regarding ADA compliance but does have one playground with universal features (Mandan Parks and Recreation, n.d.). Although the Bismarck-Mandan area has accessible physical contexts available, parents from OT-based research still identify lack of recreational opportunities as a

source of disappointment (Bhopti et al., 2020).

The cultural context consists of organizations, religious affiliation, ethnic, or other groups that contribute to a person's sense of identity or expectations for behavior (Dunn, 2017). The social context is closely tied to the cultural context and includes places like clubs, churches, organizations, family, friends, and governments that people engage with each other (Dunn, 2017). Census data shows that 5% of children above the age of five in Bismarck/Mandan, ND speak a language other than English and the disability prevalence is around 6% for people under the age of 65 (USCB, n.d.). Those without health insurance under the age of 65 account for around 7%, and persons in poverty account for 8.7% of the local population (USCB, n.d.). This information is useful for planning the current project. Multilingual and financial support can be implemented based on the language preferences and financial situation of potential consumers. A study completed by King et al. (2009) showed that predictors of recreational participation in children with disabilities–over time–were extrinsic to the child. Various examples of extrinsic predictors included family income, parental physical functioning, parent perception of safety with physical spaces/other caregivers, and parent perception of value of recreation (King et al., 2009; Schleien et al., 2014; Shikako-Thomas et al., 2008; Sterman et al., 2016). These cultural and social factors both inside and outside of childrens' homes are important to consider when supporting children's recreation and leisure participation. Another cultural context that impacts therapeutic outcomes is the allied health professionals' approach to treatment. A study completed by McCoy and colleagues (2020) demonstrated that pediatric occupational, physical, and speech therapy had better outcomes when therapy tasks were focused on the practice of specific tasks, were child-centered, and family-centered. More specifically, therapy that was focused on structured play/recreation led to an increase in family/recreational participation (Bartlett et al.,

2014; McCoy et al., 2020; Novak et al., 2013). An important part of a child with a disability's social context is their family/caregiver. Parents/caregivers of children with disabilities often describe their experiences as "hard," "limited," and "challenging" (Bhopti et al., 2020). Other evidence suggests that parenting a child with a disability leads to exhaustion, loneliness, disempowerment, isolation, and social marginalization; thus, impacting family quality of life (FQOL) (Bray et al., 2017). Although family life can be challenging having a child with a disability, there are ways to improve FQOL. Both respite care and supported recreational/leisure opportunities–in addition to medical and allied health interventions–have been shown to improve FQOL for families with a child with a disability (Bhopti et al. 2020; Brown et al., 2016). Cultural and social context factors impacting the therapeutic recreation outcomes of children with disabilities include geographic, extrinsic/familial, and therapy delivery.

Temporal contexts include variables like chronological age, stage of life, life cycle, and health (Dunn, 2017). The age of a child has a significant influence on type and frequency of participation in various activities. Increased age of a child has been associated with decreased participation both in frequency and range of activities (Bult et al., 2011; King et al., 2009; Steinhardt et al., 2021). Social participation is lower for younger children (King et al., 2009). This data is useful for determining what kinds of age groups and refining the types of tasks to target for a recreational, leisure, and social participation summer camp.

Task

A task is considered a set of objective behaviors that are necessary to complete a goal (Dunn, 2017). It is important to review what types of leisure, social participation, and recreation tasks that children with disabilities have increased difficulty with. It has been shown that children with disabilities participate less frequently in both social and recreational tasks

(Solish et al., 2010). However, TD children and those with disabilities participate in around the same amount of leisure tasks with the exception that children with disabilities complete them more passive and solitary–often in the home environment (Solish et al., 2010). Children with disabilities often experience disparities in participation but therapeutic summer or day camps can be an avenue for decreasing disparities.

Types of tasks that have been researched in a therapeutic summer camp setting vary greatly. A professional commentary done by O'Neil and colleagues (2012) detailed the planning, implementation, and outcomes of various community-based programs for children with disabilities and special healthcare needs. The types of tasks detailed include adapted ice skating, cultural arts discovery program, and children's fitness. Other types of summer camps have focused on a specific diagnosis and task combination. For example, there are multiple studies examining the change in social skills following a summer camp for children/adolescents with ASD. The tasks used in the studies varied from exercise-based video games, social skills training, positive behavioral supported interactions, social stories/scripts, and sports (Guest et al., 2017; Jozkowski & Cermak, 2020; Koegel et al., 2019; Walker et al., 2010). Another diagnosis specific camp present in the literature is children with CP. Many studies have examined the use of constraint-induced movement therapy (CIMT) with various tasks. Examples of tasks used within these CIMT summer camps include disc golf, basketball, water games, dice, card games, activities of daily living (ADLs), crafts, team-building activities, talent show, and precise muscle movements (Bonnier et al., 2006; Roberts et al., 2020; Thompson et al., 2015). Other therapeutic recreation, leisure, or social summer camps include a wide variety of diagnoses and include tasks like horseback riding, magic tricks, powered mobility training, goal-specific activities, and robotics (Candler, 2003; Kaboski et al., 2015; Rosenberg et al., 2020; Spencer et al., 2020;

Zwicker et al., 2015).

Performance Range

An individual's performance range is based upon the interaction between the person's unique characteristics and those of their environment. Individuals with disabilities have a unique set of person and contextual variables that limit or increase the number of tasks available to them. As shown in professional research on participation, many children with disabilities experience a wide variety of limitations to their performance range in leisure, social, and recreational activities. Person factors like gross motor ability, sensory sensitivity, lower cognitive functioning, restricted communication, and/or diagnoses of ASD, CP, or intellectual disability all contribute to lower performance ranges (Alghamdi et al., 2017; Bult et al., 2011; King et al., 2009; Lin, 2020; Schreuer et al., 2014; Shikako-Thomas et al., 2008; Solish et al., 2010). Contextual factors like accessible recreational opportunities, parent physical functioning, parent attitudes toward safety/value of recreation, family income, culture of allied health care, family quality of life, and age of the child all impact the performance range of children with disabilities (Bartlett et al., 2014; Bhopti et al., 2020; King et al., 2009; McCoy et al., 2020; Novak et al., 2013; Schleien et al., 2014; Shikako-Thomas et al., 2008; Sterman et al., 2016). Although performance ranges are limited for children with disabilities, a promising way to increase participation success is through therapeutic summer camps. Performance ranges can be increased by the attendance of therapeutic summer camps and can be categorized by diagnosis targeted, outcomes, and intervention protocols.

Therapeutic Summer Camps

Outdoor recreation camps provide trained support staff to aid in the successful participation in recreation for families of and children with disabilities. A repeated measures

design study was conducted at a residential recreation camp measuring psychosocial functioning of children with disabilities and chronic illnesses. The camp provided mental and physical support for opportunities to participate in "traditional camp activities" (Yang et al., 2021, p. 1115). The study showed that children had a self-reported increase in both emotional and social functioning immediately following the camp but not at one- and three-month follow up (Yang et al., 2021). A study examining both child and family response to a therapeutic recreation day program showed promising results in terms of increasing quality of life of families (Petersen et al., 2020). The study showed significant improvements in four measures of quality of life including self-efficacy, performance skills, family cohesion, and social participation (Petersen et al., 2020). Additional information in the research suggests that increased training is warranted for those providing outdoor recreation opportunities for children with disabilities, caregiver modeling of outdoor recreation is important for participation patterns of children, and that parent value behind outdoor play influences child participation frequency (Sterman et al., 2016). This information could be useful in the present project in the form of creating parental education and co-participation in therapeutic recreation. Residential or live-in summer camps have also shown positive effects on children with disabilities. For example, a longitudinal study following children attending a residential camp aimed at increasing social skills gathered data on single attendance and consecutive attendance outcomes. The study found that communication, self-control, self-help, positive attitude, and relationship building all improved from pre to post attendance (Flynn et al., 2019). Additionally, consecutive years of attendance was associated with stronger social skills at the beginning of camp (Flynn et al., 2019).

Diagnosis-specific camps can be an excellent way to induce therapeutic gains and have been established as an easier way to measure outcomes due to the homogeneity of groups

(O'Neil et al., 2012). ASD specific summer camps in scientific research have a wide variety of interventions for improving social functioning. Some have utilized activities considered leisure or recreation to help induce social interaction and improve social skills. A study completed by Guest et al. (2017) used a multi-sport style summer camp for girls with ASD as an intervention. The study taught sport-specific skills to a small group of girls over one week. Data gathered from pre- to post-intervention showed the sporting camp increased parent rated reports of social functioning, objective motor skills performance, and self-perception (Guest et al., 2017). These results held at a six-week follow-up measure (Guest et al., 2017). A study completed by Kaboski et al. (2015) evaluated the effectiveness of a robotics-themed camp on social/vocational skills and social anxiety of adolescent boys with ASD. The study used a pairing system to match TD peers with adolescents with ASD. Results showed that the robotics-themed camp helped to decrease social anxiety and increase social skills—although not at a statistically significant level (Kaboski et al., 2015). A study following a small group of children with ASD who were a part of an inclusive summer camp measured social participation goals on each child's individual education plan (IEP) (Koegel et al., 2019). Results from the study indicated that paraprofessionals, with supervision, can successfully facilitate and meet IEP goals in an inclusive summer camp setting (Koegel et al., 2019). More specifically, each participant met targeted IEP goals within the two-week camp and maintained social participation into the following school year in natural settings like school, home, and community (Koegel et al., 2019). Another social skills-based summer camp was completed for a heterogeneous group of youth with ASD by Walker and colleagues (2010). The half-day, eight-session long camp used drama, art, gross motor, and sensory activities to target verbal communication, transitions, attention to task, and social interaction. Both parent and therapist self-reports demonstrated statistically significant

improvements in social interaction and verbal communication from pre- to post- intervention, including generalization to home environment (Walker et al., 2010). In addition to summer camp delivery, general outpatient pediatric services have been shown to improve social, leisure, and recreational participation in children with ASD. A study completed by Jozkowski and Cermak (2020) found that young adults with ASD had increased enjoyment and decreased ratings of physical exertion when playing exercise-based video games with TD peers. A systematic review showed that the strongest evidence for improving social skills for children with ASD was in group-based social groups for both clinic and natural settings (Tanner et al., 2015). The same study demonstrated that the evidence for improving leisure/play participation is still emerging, but promising evidence exists for natural context interventions and social stories (Tanner et al., 2015).

Another diagnosis group common within the therapeutic summer camp literature is cerebral palsy. The most common interventions among therapeutic summer camp literature for children with CP are modified constraint-induced movement therapy (mCIMT) and bimanual therapy. mCIMT is an intensive intervention protocol involving restraining the non-affected limb of the child for prolonged periods of time and progressively challenging the functional use of the affected limb while bimanual therapy is the repetitious use of both hands during goal-directed activities (Roberts et al., 2020). Day camp models varied in both hours per day (4-7) and total duration (9-10 days) (Bonnier et al., 2006; Roberts et al., 2020; Sakzewski et al., 2015; Spencer et al., 2020; Thompson et al., 2015). Activities or intervention activities used in all the studies also varied. Activities included finger painting, crafts, unstructured play, sports, magic tricks, exo-skeleton assisted virtual reality gaming, recreational activities, talent show, parachute games, fine/gross motor manipulation activities. Most studies had an identified theme with theme-based

activities to boost stakeholder engagement. Outcome measures varied between studies but there remained some overlap. Various positive outcomes achieved in studies include improved hand dexterity, improved parent/participant satisfaction and performance on individualized goals, improved self-reported use of bilateral hands during daily activities, increased motor function of affected limb, improved grasp, parent reported increases in independence for self-care, and caregiver ratings of increased social functioning (Bonnier et al., 2006; Roberts et al., 2020; Sakzewski et al., 2015; Spencer et al., 2020; Thompson et al., 2015). The above literature demonstrates the possibilities of a mCIMT or bimanual summer camp to both immerse children with CP in leisure, recreation, or social activities while also improving occupational performance outcomes.

Best Practice OT for Pediatrics

There remain few studies in the professional literature on the setting of summer camps. Thus, it is important to discuss some of the most evidence-based pediatric interventions that have been researched outside of therapeutic summer camps. A systematic review examining the effectiveness of all OT interventions found that occupation-based activities, skill-based interventions with outside social interaction, small group service delivery, and interactive technological interventions for children with ASD or attention deficit hyperactivity disorder (ADHD) have better outcomes (Beisbier & Cahill, 2021; Cahill et al., 2020). Additionally, the authors found that group service delivery had better outcomes for youth at risk for mental health concerns and that sports activities can increase social interaction skills (Beisbier & Cahill, 2021). Another systematic review supported the latter assertion–in addition to yoga and life skills–that sports increased positive mental health, positive behavior, and social participation for children at risk for mental health concerns (Cahill et al., 2020). A systematic review investigating the

effectiveness of interventions targeted toward increasing ADL, play, and leisure participation found that occupation- or activity-based interventions should occur in natural contexts with naturally occurring social partners for the best outcomes (Laverdure & Beisbier, 2021). The same study found that collaborative goal setting, occupation-based training, technological supports, and environmental modifications all have positive outcomes for ADL, play and leisure participation (Laverdure & Beisbier, 2021). A large-scale systematic review by Novak and Honan (2019) involving high levels of evidence reviewed occupational therapy literature for the best evidence-based interventions for children/youth. “Green light” interventions applicable to the current project include bimanual therapy, CIMT, CIMT plus bimanual, family centeredness, task-specific practice, picture exchange communication system (PECS), and social skills training–peer mediated (Novak & Honan, 2019). Other important findings in the professional literature include OT guided education and intervention to help youth identify and remove contextual barriers helping to improve leisure participation in youth with physical disabilities (Law et al., 2015).

Implications for Program Development

A brief review of the professional literature on leisure, recreational, and social participation for children and youth with disabilities demonstrates that this population experiences disparities. Children with disabilities have decreased participation frequency compared to TD peers and participate in more home-based activities (Lin, 2020; Schreuer et al., 2014; Solish et al., 2010). They also experience participation limitations due to common person factors among this population like poor motor skills, cognitive difficulties, and limited communication (Alghamdi et al., 2017; Bult et al., 2011; King et al., 2009; Lin, 2020). Contextual factors like access/availability to universally designed physical contexts, parent

perceptions, FQOL, parental physical functioning, child age, and culture of therapy limit participation in social, recreational, and leisure activities (Bhopti et al., 2020; Bray et al., 2017; Bult et al., 2011; King et al., 2009; McCoy et al., 2020; Schleien et al., 2014; Shikako-Thomas et al., 2008; Steinhardt et al., 2021; Sterman et al., 2016). The paucity of supported opportunities for social, recreational, and leisure participation along with the unique challenges children with disabilities face demonstrates the need for more supported opportunities for engagement. Summer or day camp models for therapeutic delivery of services have been established as an evidence-based way to increase participation in social, recreational, and leisure activities while making functional gains. Evidence-based themes or examples of summer camps include social skills, recreational/sports, robotics, mCIMT, bimanual skills, magic camp, etc. These camps have positive functional outcomes such as increased social skills, improved recreational participation, decreased social anxiety, improved performance in self-care, improved family cohesion, improved family attitudes toward outdoor recreation (Flynn et al., 2019; Guest et al., 2017; Kaboski et al., 2015; Petersen et al., 2020; Sakzewski et al., 2015; Walker et al., 2010; Yang et al., 2021). Both the established disparities in participation for children with disabilities and the evidence-based summer camp approaches shown to alleviate said disparities justify the need for a supported therapeutic summer camp opportunity.

Conclusion

The current literature review has established that children with disabilities experience a decreased rate of participation in social, recreational, and leisure activities when compared to their TD peers. This is due to this population's unique person characteristics and contextual barriers. Various tasks that have been researched to help alleviate the participation barriers include therapeutic recreation camps with themes of social skills, adapted sports, arts and crafts,

general recreation, etc. The effect of these tasks on performance range are wide-ranging but include increased social skills/participation, increased recreational participation, gross motor function, improved FQOL, increased leisure participation, positive family attitudes toward recreation, independence in ADLs, and more. The literature review presented three broad categories of possible therapeutic summer camp themes that had the best outcomes for increasing social, recreational, and leisure participation of children with disabilities. The first of which is a non-diagnosis specific summer camp aimed at increasing recreational and social participation. The second is a summer camp for children diagnosed with ASD or similar disorder that specifically targets increasing social skills, although tasks for increasing them might include recreational or leisure activities. The final, potential summer camp opportunity is a mCIMT camp for those with hemiparesis. This could use recreational and leisure activities as a mode of improving social and motor functioning. A review of the literature demonstrated concerning participation disparities for children with disabilities and that therapeutic summer camps are an evidence-based way reverse these participation disparities. Therefore, the purpose of the current project is to design a therapeutic summer camp to help close the social, recreational, and leisure participation gap in the local community and increase functioning of the target population.

Chapter III

Methodology

Theoretical Framework

This scholarly project was developed using the Ecology of Human Performance (EHP) model (Dunn et al., 1994). Research questions for the literature review were developed using constructs and sub-constructs of the model to ensure person, contextual, task, and performance range factors were accounted for while developing the project. For example, a research question used to gather information on the "person" included inquiries into what cognitive, sensorimotor, or psychosocial factors are important for grouping children for therapeutic groups. The EHP model was also used in the final product design. Each of the constructs were used–in tandem with findings from the literature review–to create narrative instructions and design activities to increase performance range for all ability levels. A secondary theory used in the product development process was the social learning/cognitive theory (Bandura, 1977). The concepts of observational learning, motivation for goal attainment, self-efficacy, and positive/negative reinforcement were applied to goals/objectives, activity design, reward structure of summer camp, and to the program evaluations (Cole & Tufano, 2020). For example, the activity descriptions included suggestions for positively reinforcing appropriate social interaction with peers and for staff modeling of positive social interaction skills for attendees.

Project Procedure

Planning for the project began twelve to fifteen months before starting the on-site experience, with brainstorming potential ideas for projects. Once a project idea had been established, potential experiential sites were contacted, and project ideas were discussed. A draft

of the student authors' learning objectives, activities, and responsibilities were established seven to twelve months before on-site arrival once an experiential site and topic were confirmed. Topic and site confirmation led to the completion of a literature review on the selected topic of recreational, leisure, and/or social participation camps for children with disabilities. Research questions were developed using the EHP model and used to create search terms and inclusion criteria for the literature review. Efficient search terms were refined using Boolean search commands and different combinations (UND Libraries, 2022). A few examples of search terms used include: "(residential camp OR summer camp OR day camp) AND (child OR youth OR adolescent) AND (mental health OR social OR positive)" and "(parent OR caregiver) AND (child with disability OR child OR disability) AND (recreation OR leisure OR participation)". A basic set of inclusion and exclusion criteria were then established for each combination of search terms used. A literature review was conducted using databases deemed to be suitable for the type of data being collected (i.e.. governmental sites for census population data; health sciences databases for allied health research). A variety of electronic databases, governmental entity websites, expert testimony, and professional organizations were utilized in the literature review. Articles were screened via abstract review and eventually given full review if the inclusion criteria were met. Additional articles were found by completing a bibliographic search of fully reviewed articles. Literature review and brief synthesis of findings were completed two to seven months prior to the start of the on-site experience. A detailed description of student authors' duties, learning objectives, evaluation criteria, etc. were put into narrative form and agreed upon between university and partnered agency, two to four months prior to starting experience. The beginning of the on-site experience started in the middle of January 2022.

An expanded needs assessment was completed within the first three weeks on-site

consisting of synthesis of literature, collection of stakeholder interest data, and observation of multiple therapy disciplines' treatment. Preliminary literature review data was synthesized into a narrative form and expanded upon through more refined searches. Narrative summation of the literature led to three possible evidence-based themes for a summer camp program. A parent/child interest survey was created in collaboration with therapy management staff and distributed to stakeholders to gauge stakeholder interests in potential program themes. Information gathered include sex, mobility independence, communication ability, parent preferences for timeframe, child preferences for theme of summer camp, and child preference for activities. Data was then synthesized into a spreadsheet and analyzed. The student author also expanded on the needs assessment by observing/participating in speech, physical, and occupational therapy sessions in outpatient and community settings to gain a better understanding of the client population served by the agency.

At the end of week three the author met with the therapy management team to discuss information gathered from the parent survey, literature review, and future steps for program development. Program development steps were reviewed prior to meeting and a rough outline of student author responsibilities for the program was created. The therapy management staff meeting led to the solidification of a recreation-based theme with social participation embedded, goals for the program, preferred funding avenues, and setting. Program development steps were followed during the next four weeks to create detailed program instructions, activity descriptions/schedules, training materials, equipment/supply list, budgets, handouts/forms, marketing materials, evaluation tools, future recommendations, and other supplemental material for running the program. The student author continued to participate in occupational, physical, and speech therapy to further understand the target population during program development.

During the product development phase, the author met with various providers including mental health counselors and therapy management staff to gain input on how to make the product successful for the partnered agency. Additionally, the product draft was presented by the author to the partnered agency occupational and physical therapy staff during week eight and speech language pathology staff during week nine to solicit feedback. Suggestions for product improvement were implemented within a week of receiving them. The final weeks of the on-site experience were spent making final edits to the program, soliciting management team feedback, and presenting the final product to the upper management of the partnered agency.

Ethical Considerations of Project

One of the most important ethical rights of individuals receiving healthcare services is the right to autonomy through protected health information. The Health Insurance Portability and Accountability Act (HIPAA) is a federal law that mandates covered entities to follow strict rules to maintain privacy of protected health information (U.S. Department of Health & Human Services [USHHS], n.d.). One of the covered entities that are relevant to this project are healthcare providers, including volunteers (USHHS, n.d.). This project included a HIPAA compliance form for all volunteers to fill out if they choose to help staff the camp. Another ethical concern related to volunteers is proper training. It is important to ensure volunteers receive training on how to interact with children with disabilities and how to maintain the safety of attendees. As with any other healthcare service, it is important to give consumers the right to refuse services. Statements regarding the autonomy to withdraw from the summer camp program at any time are included in the registration forms. Justice is an ethical principle that ensures all have equal opportunity. The principle of justice is important to consider when creating accessible program admission options. Measures to increase inclusion from across the socioeconomic

spectrum have been considered. Advertising is a realm where the ethical principle of veracity is paramount. Flyers and other forms of marketing should ensure full disclosure regarding the services advertised (i.e. who is providing services, activities planned, etc.). During the implementation of the program, it is important that each participant is treated with respect and taught to treat others with respect. Lastly, copyrighted material and intellectual property must be properly cited when used in this project

Chapter IV

Product

Product Goal and Objectives

The product goal and objectives were developed in collaboration with the partnered agency's therapy management staff, based on empirical research gathered in a literature review on participation for children with disabilities, and with the partnered agency's mission and vision statement as a benchmark for outcomes. The desired outcome of the program is barrier-free participation of children with disabilities–and their families–in recreational and social activities while increasing overall confidence of families to engage in a wide array of activities. From there, more measurable and pointed objectives were established. Objectives included increasing parent and therapist ratings of child social skills by the end of the program, improved self-rated confidence to engage socially with peers and in recreational activities (participants), parent ratings of confidence and knowledge to engage child with disability in a wide array of activities, and therapist-rated level of participation in recreational and social activities with peers. These broad goals and objectives were used to guide the development of the program.

Application of Theoretical Framework

The Ecology of Human Performance (EHP) model was used in the design of the product by intentionally integrating each of its constructs into goals, objectives, activity descriptions and modifications, and evaluation methods (Dunn, 2017). The model was also chosen as it was designed to be used by interdisciplinary teams and the program is meant to be implemented by an interdisciplinary team of allied health professionals (Dunn, 2017). Goals and objectives were designed to increase person factors and ultimately increase the overall performance range of

children with disabilities and their families. Person factors like confidence, social skills, and knowledge were targeted in the objectives. These increased person factors–based on the theoretical framework–should, theoretically, increase performance range in the goal areas of participation in recreational and social activities (Dunn, 2017). All the person, context, task, and performance range factors, in addition to EHP-specific intervention strategies, were used in the development of activity description and evaluation methods (Dunn, 2017). For example, person variables like sensorimotor, psychosocial, and cognitive factors were mentioned in activity modifications and incorporated via the inclusion of a sensory calming corner for participants with extra sensorimotor needs. EHP intervention strategies like establish/restore, adapt/modify, alter, prevent, and create–in tandem with task/context considerations–were used to create activity modifications (Dunn, 2017). These activity modifications were made with the intention of increasing the performance range of select individuals (modify, prevent, establish, alter) or all individuals (create) (Dunn, 2017). Lastly, evaluation methods were based upon the goals and objectives created; thus, making them grounded in the EHP model. Person and performance range concepts measured in the evaluations included confidence, participation, social skills, and knowledge.

An additional theory was used when designing the product. The social learning/cognitive theory was integrated into the design of activities, goals, evaluation methods, and reward structure of the day camp (Bandura, 1977). Important concepts Bandura's (1977) theory like positive reinforcement and role modeling were incorporated into activities (Cole & Tufano, 2020). For example, the "Circle Name Game" activity is designed where participants introduce themselves and complete a unique action. Other participants can observe others complete positive social skills like introducing themselves to others. Staff are also encouraged in the

activity description to implement positive reinforcements like compliments or praising good participation. These collectively help to increase the self-efficacy of the participants by way of social learning (Cole & Tufano, 2020). The goals and evaluations methods are aimed at important concepts in social learning/cognitive theory like confidence (self-efficacy) and include positive reinforcement as a way of further encouraging participation in social and recreational activities. The reward system within the program helps to promote positive social behavior and participation in group activities via vicarious reinforcement and goal achievement (Cole & Tufano, 2020). Participants are rewarded and see others rewarded with gold coins for positive participation. Collecting gold coins to redeem a reward from the treasure chest encourages goal achievement and ultimately social learning (Cole & Tufano, 2020). Both EHP and social learning/cognitive theory were integral in the design of this product.

Product Overview

The product, *Hook'd on 'Arrdventure': A Pirate-Themed Recreation Day Camp*, was designed using Fazio's (2017) framework for creating occupation-based community programs. The final product includes three different sections meant to prepare the organization for implementing the program, for actual implementation of the program, and for future implementations. The product preparation section contains a brief overview of the program and the overall goal and objectives. This is meant to inform the reader and frame the entire rest of the program.

The implementation of the program section begins by laying out assorted items related to the structure of the program like schedules for activities, rules and expectations, and activity descriptions. Each of the activity descriptions include how to run the activity, suggestions to induce positive social interaction, equipment needed, and ways to modify the activity for various

ability levels. Topics related to supporting the program are next. These include staffing recommendations, staff training materials, volunteer training materials, and equipment/supplies list. Financial considerations of the program are covered in the budgeting section. This includes costs for start-up program runs, per program runs, and revenue streams. The implementation section of the program manual also includes items related to marketing. Both marketing materials and a market analysis were included. The last section of the product manual is for program review and evaluation.

Program evaluation materials include a narrative description on how to implement the evaluation tools and a description of responsibility for program evaluation. The various evaluation tools created include a parent survey, child survey, therapist report, and a focus group outline. Each of the evaluation tools were created to measure the program objectives and indicate areas for improvement or success in the program. The section regarding responsibility for program evaluation includes delegations of who is responsible for what parts of program evaluation, how to complete them, what to do with data gathered for sustainability, and a timeline for product improvement. An additional section was added to the last portion of the program to detail potential future avenues for program implementation. This section includes a list of community partners for program expansion or sponsorship, how to possibly change the program for future iterations, and future avenues for funding. Lastly, the appendices include various supplemental documents, forms, surveys, certificates, and handouts that were used in product development or that are meant to be used during the implementation of the program.

The following section includes only parts of the final product meant to give the reader a preview of the developed product. Readers are encouraged to contact the student author at

the contact information listed on the copyright page of this scholarly project if interested in the full program.

Table of Contents

Introduction

Theoretical Base

The Ecological Model of Human Performance (EHP) was used in the development of the summer camp (Dunn et al., 1994). Each of its constructs–person, context, task, and performance range–were used both to research and to frame activities. Activities included in the day camp have recommendations for person, context, and task modifications to help account for unique consumer characteristics and increase the ability to participate in planned activities. Each of EHP's five intervention strategies–establish/restore, alter, adapt/modify, prevent, create–were also incorporated into activity modifications to help support performance needs of potential consumers (Dunn, 2017). Establish/restore interventions are meant to improve the person's skills while adapt/modify makes adjustments to aspects of the context or task to improve performance. Alter interventions focus on finding the best context based on the person's characteristics. Prevent interventions assume a problem is likely to occur and change aspects of task, person, or context to prevent outcomes while create interventions do not assume problems are to occur and promote performance for all persons (Dunn, 2017). Secondarily, Albert Bandura's (1977) social learning/cognitive theory was used in product development. Recommendations to increase social learning like incorporating positive reinforcement and role modeling are given in each activity description. Other components of the theory like self-efficacy and goal attainment were integrated into outcome measurements and the reward economy of the summer camp.

Purpose

The purpose of this product is to promote recreational participation and increase positive social interaction among children with disabilities. The day camp offers a supported environment for children to participate in recreational activities that they might otherwise not be able to.

The "Why?"

Children with disabilities experience disparities in recreational, leisure, and social participation when compared to their typically developing (TD) peers (Bult et al., 2011; King et al., 2009; Lin, 2020; Schreuer et al., 2014; Solish et al., 2010). Providing a supportive environment with skilled professionals would help to eliminate the participation barriers that children with disabilities face. In addition to eliminating participation barriers, the service population, when surveyed by the author, expressed interest in a day camp model based on recreation and social participation. Refer to "Parent Interest Survey" for additional information collected from potential consumers.

Service Population

The service population is not limited to specific diagnoses. The general service age for the product is approximately 4 to 12 years of age. Children under the age of four may have difficulty with more complex motor activities and lack sufficient social/emotional development to participate effectively with peers. It is understood that some potential consumers may have significant delays that would impede their participation in the program. With that being said, it is up to the discretion of therapists and management staff to determine consumers that would be successful in the program. It is recommended that around 10-15 participants be a part of every iteration of the program. Activities included in the program are designed to be modified and adapted based on the service population. Therapists and management staff should read activity descriptions, including modifications, to determine which potential consumers would be appropriate and how to adapt the activities for them prior to implementation.

Brief Overview

The summer camp has an overall pirate theme with pirate-themed activities. A treasure

map with areas/activities to be found and clues for future activities will be handed out to all participants at the beginning of each day. The treasure map will lead participants on an adventure to the final treasure chest. The schedule has planned transition time to allow for activity set-up, sensory breaks, etc. Listed below are a list of sample transition activities that leaders can choose to complete with attendees; treasure map clues may also be used as a transition activity. The program uses a token economy to encourage participation and positive behavior during the activities. Tokens or "gold coins" earned in each activity are stockpiled and used to "buy" prizes from the treasure chest at the end of the day. Those with the most gold coins are granted first choice from prizes in the treasure chest. The product includes goals, schedules, activity descriptions, training material for both volunteers and staff, staffing recommendations, budget, marketing materials, suggestions for evaluation/sustainability, future directions, and relevant props and handouts.

Outcome Measures

The intended or desired outcome of the summer camp program is to increase participation in recreational/social activities, self-rated measures of confidence to participate in recreational/social activities, parent/therapist ratings of social skills/participation, and parent ratings of confidence and knowledge to engage their child in a variety of activities. Outcome measures take the form of post-test survey/ratings, parent satisfaction surveys, and focus group questions for qualitative data collection. Responsibility for collecting, analyzing, and using data for product improvement is detailed in the product.

Goals & Objectives

Goal:

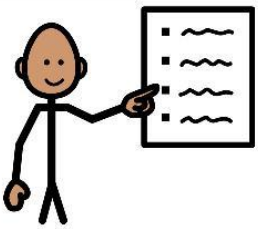
- The program will allow children with disabilities and their families to participate, barrier-free, in recreational and social activities while increasing the confidence of families to engage in a wide array of activities.

Objectives

- Upon completion of the program:
    - Participants will demonstrate an increase in social skills/participation per parent- and therapist rated measures
    - Participants will improve on self-rated measures of confidence to engage socially with peers
    - Parents will improve on self-rated measures of confidence and knowledge to engage children with disabilities in a wide variety of activities
    - Participants will increase self-rated confidence to participate in recreational activities (when appropriate)
    - Participants will demonstrate meaningful participation in recreational and social activities per therapist report.

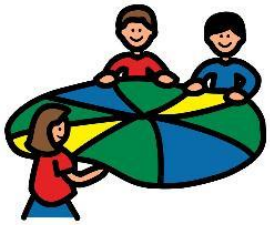
Camp Day 1

Circle Time

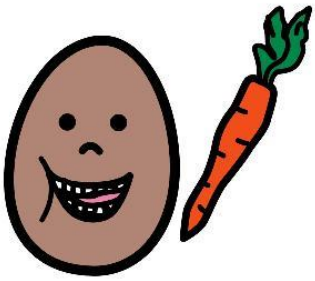


Rules/Expectations

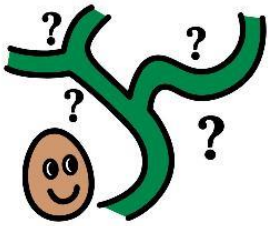
GAME: Hit the Deck



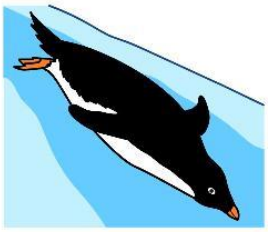
GAME: Parachute



SNACK



Scavenger Hunt



Slip n' Slide & Water Games

Treasure Chest

Sea Ya Later!

Treasure Map Visual(s)

1. From circle time to the sea, to find the pirate ship is the key

2. From the sailing sea to the sunny blue sky, this object will help you fall from way up high

3. Down from the sky falls a list, search for these items to make sure they exist

4. When you see it you will know, water is what makes this thing go.

5. Now that you have done your best, it is time to find the treasure chest

Circle Name Game (Ball)

Description: The purpose of this activity is to introduce participants in a fun way and incorporate some gross motor movements. All participants will position themselves in a circle with staff evenly dispersed throughout. A staff member will explain to the group that each person will have a turn to say their name and a fun fact about themselves. The only person that gets to introduce themselves is the one holding the ball. After each participant introduces themselves, all other circle members are encouraged to say, "hello *insert name*." The ball is then passed around and the process repeated until everyone has had a chance to introduce themselves.

- Alternative sharing topics: favorite food, favorite animal, favorite summer activity, something they are good at, favorite summer food, favorite TV show

Possible ways to encourage positive social interaction: Encourage shy members to say hello to peers, ask participants if they remember others' names/fun facts, encourage "nice throws" to circle members

Materials: ball (size depends on gross motor skills of group - larger ball for poorer motor skills or younger population)

Modifications:

- **Adapt/Modify**: Roll ball to participants with lower motor skills/slower reaction times
- **Adapt/Modify**: Hand ball to individuals with impaired upper extremity (UE) muscle control
- **Adapt/Modify**: HOH assistance to throw ball
- **Adapt/Modify**: Kick ball the ball for participants with impaired UE movement
- **Adapt/Modify**: Staff members sharing for or assisting with non-verbal participants
- **Prevent**: Encourage participants with sensory/behavioral needs to join when ready

Telephone

Description: Players are to gather in a circle. A random person is chosen to begin and whispers a silly phrase into the person's ear to their left. This process is continued with each person in the circle, trying to repeat what they heard from the previous person. The last person to hear the phrase in the circle must say, aloud, what they thought the phrase was. The game may be repeated, and a new starting person is chosen. The person starting the telephone may be chosen based on good behavior, rule following, raising hand, an ordered system, the next person in line, etc.

Possible ways to encourage positive social interaction: Encourage children to stand next to peers to facilitate social interaction; model good rule following, appropriate social interaction; and use positive reinforcement to those following rules

Modifications:

- **Adapt/Modify**: Those who use ADs to communicate can lower volume and bring it to person's ear
    - Staff assist with communication as needed
- **Adapt/Modify**: Staff assist participants who have difficulty processing auditory communication and/or communicating
- **Create**: Have circle members bend or get closer to children who have more difficulty positioning their body

Day 1 (Outdoor) Prep

Preparation Tasks:

- Place scavenger hunt materials
- Fill water balloons
- Prepare slip n' slide
- Gather materials in outdoor playing field
- Put items in calming corner

Materials needed:

- 1 large and 2 small parachutes
- 3-4 Balls of various sizes
- 6 Cones
- 3 Large tarps
- Hose with spray nozzle
- Dish soap
- Inner tubes
- Lengths of rope
- Small pool OR (2-3) 5-gallon buckets
- Water balloons
- Squirt guns/toys
- Sprinklers
- Zip ties
- Barrel of Monkeys
- Pool noodle
- Miniature pirate set
- Bowling ball
- Tumble Form 2
- Blue turtle bean bag
- Yellow frog bean bag
- Orange half ball
- Eye patch
- Toy shovel
- Toy anchor
- Portable balance beam
- Toy compass
- Toy telescope
- Pirate hat
- Notebook paper
- Pencils with grips

Volunteer Training Materials

- Who?: The attendees of this day camp will be children with various disabilities. Each of them will have unique sensory, physical, cognitive, and behavioral characteristics that make their engagement in the planned activities look a little different.
- What?: You will be assisting children with disabilities participate in various recreational games while encouraging them to interact positively with their peers.
- When?: The camp will be from 7:45am - 12pm on __ (insert dates)__.
- Where?: The day camp will be located at __ (insert organization name)__.
- Why?: Children with disabilities often participate in fewer recreational and social activities than their like-aged peers. The goal of this camp is to provide a safe, fun outlet for them to participate. It is also the goal of the camp to increase social skills and confidence of the participants to participate in recreational activities.
- How?: You will be helping a licensed professional engage a group of children in participating in the various planned activities. It is your responsibility to provide one-on-one support to your assigned attendee so that they may participate to their full ability in the planned activities. You may also be asked to participate in the activities yourself, set-up for activities, help children interact with their peers, and assist other children so that they may fully participate in the activities.

Supplies

For the purposes of this product, supplies can be defined as items that are expendable and have a short use span. The list below is a culmination of all the supplies needed to run the program one time.

Supplies	
Pencils (x24)	Printed Copies of Scavenger Hunt (x8)
Notebook Paper (x10)	Bottle of Dish Soap
Water Balloons (x200)	Zip Ties (x25)
Balloons (x100)	Empty Aluminum Pop Cans (x10-15)
Whiteboard Markers (x5)	Bingo Dauber (x2-3)
Friend Scavenger Hunt Copies (x10-15)	Snacks (x90) and Juice (x80)
A Variety of Colored Construction Paper	Double Sided Tape
Stress Balls (x10-15)	Earplugs (x10-15)
Sidewalk Chalk (1-2 buckets)	Bubble Wands (x30-40)
Prizes for Treasure Chest	First Aid Kit
Printed Copies of Treasure Map	

Child Survey

1. After coming to camp, talking with other kids is:

☹More difficult ☹Difficult 😐About the same 🙂Easier 😃Much Easier

1. After coming to camp, making friends is:

☹More difficult ☹Difficult 😐About the same 🙂Easier 😃Much Easier

1. After coming to camp, playing sports and games is:

☹More difficult ☹Difficult 😐About the same 🙂Easier 😃Much Easier

1. A thing I would not do again at camp is: _____

_____

_____

1. A thing I really liked about camp this year: _____

_____

_____

Responsibility for Program Evaluation

The evaluation of the program will be important for the sustainability of the current program. It is the responsibility of the organization that this program is designed for to implement program evaluation measures, synthesize data, and use data toward the betterment of the program. It will be the responsibility of program staff to distribute and collect the parent and child survey forms. This may include volunteers if needed, but it is recommended that providers that families are familiar with handout the surveys. Licensed professionals will be responsible for filling out the therapist survey. The focus group may be run with licensed professionals and volunteers as participants. The facilitator of the focus group is recommended to be a neutral party that was not present for the implementation of the camp to reduce bias. The facilitator is responsible for writing down themes from the various discussions had during the focus group.

All data collected from program evaluation methods should be collected by therapy management staff. A designated therapy management staff should be responsible for synthesizing and analyzing the data collected for themes. These themes should then be utilized to help improve the program. For example, the designated therapy manager finds that many parents wish that they were more included in the camp. A change could be made for the next implementation of the camp to have the entire family participate, have a family event at the end of each day, and/or have a staff member take more pictures and videos of the activities to share with parents. The entire process for program evaluation, data analysis, and program modification should be completed before the next implementation of the program. This will ensure that the program has increased success and better sustainability.

Post-Registration Parent Information Handout

What To Bring:

- Water, juice, and light snacks will be available.
- Parents are encouraged to pack their children a snack and/or flavored beverage for allergy reasons.
- Parents are encouraged to send their child with sunscreen due to allergy concerns.
- Please send your child with extra clothes and toiletry items if they require them.

Day 1:

- Your child(ren) will be participating in water-based activities. Please dress your child and send them with appropriate items for water games (swim diapers, ear-plugs, swimsuits, towels).

Day 2:

- Your child(ren) will be participating in a variety of sporting and intensive activities. Please dress your child in comfortable and cool clothing.

Day 3:

- Your child(ren) will participating in sporting and group games. Please dress your child in comfortable and cool clothing.
- A parent-child softball game will be played starting at 11 am and parents are <u>strongly encouraged</u> to participate.

Participation Certificate

THIS CERTIFIES THAT

_____

(INSERT NAME)

IS AN HONORARY MEMBER OF THE PIRATE ADVENTURE

_____

(INSERT DATES)

_____

CAPTAIN'S SIGNATURE

Chapter V

Summary

Overview

The purpose and goal of the project was to address the social and recreational participation gap that children with disabilities face. The current product, *Hook'd on 'Arrdventure': A Pirate-Themed Recreational Day Camp*, was developed by partnering with a pediatric outpatient clinic, conducting an in-depth literature review with needs assessment, gaining input from expert practitioners, and reviewing theoretical frameworks and program development procedures. Literature review consisted of searching credible health science databases and governmental websites. The literature review was guided by the Ecology of Human Performance (EHP) as research questions were formed based on its various constructs (Dunn, 2017). Data reviewed showed that children with disabilities, on average, experience social, leisure, and recreational participation disparities compared to their TD peers (Lin, 2020; Schreuer et al., 2014; Solish et al., 2010). Further literature review indicated that therapeutic summer or day camp models are evidenced-based ways to increase recreation, social, and leisure participation for children with disabilities–alongside functional outcomes (Dannenbaum et al., 2021; O'Neil et al., 2012; Smart et al., 2018; Spencer et al., 2020; Thompson et al., 2015; Zwicker et al., 2015). The needs assessment process continued by surveying stakeholders and gauging interest in various themes for a therapeutic summer/day camp. Results from the information gathered indicated that parents and children desired a recreation-based summer camp with social participation intermixed. The information gathered confirmed the problems found in the literature and narrowed the theme for the product.

The purpose of the current product is to provide an outpatient pediatric therapy clinic with a program and afford children with disabilities the opportunity to close the recreational and social participation gap. The final product is an all-encompassing guide to running a three-day, half-day social participation and recreation day camp. Its contents include goals, schedules, activity descriptions, training material, equipment lists, budgeting material, marketing considerations, evaluation methods, recommendations for sustainability, and supplemental handouts for running the program.

Program development began by reviewing program development procedures, seeking advice from pediatric therapy expert practitioners, and reviewing theoretical literature. The current product was designed using Fazio's (2017) program development guide for occupation-based community programs along with the EHP model and Bandura's (1977) social learning theory (Dunn, 2017). Fazio's (2017) program development guide aided the author in creating comprehensive program implementation and program evaluation/review materials for the product. The EHP model was used to frame overarching goals, activity descriptions, and evaluation methods (Dunn, 2017). Both person factors and performance range were targeted in goals and evaluation methods. The activity descriptions included modifications for person, context, and task factors whilst suggesting various EHP-based intervention strategies (Dunn, 2017). Social learning/cognitive theory was incorporated into the activity descriptions, evaluation methods, goals, and the reward system of the day camp (Bandura, 1977). Concepts like vicarious reinforcement, self-esteem, and role modeling were incorporated into staff instructions on how to interact with the participants and the way in which they are rewarded (Cole & Tufano, 2020). Goals and evaluation methods measure the important concept of self-efficacy; in particular, increased social skills and confidence to participate in recreational and

social activities.

Implications for Occupational Therapy Practice

The implementation of the current product would help to reduce the recreational and social participation disparities that children with disabilities face. Occupational therapy practitioners are uniquely qualified to run, staff, and evaluate this program as it is their duty to use occupations for the purposes of enabling participation (AOTA, 2020). This program may be used by a wide variety of pediatric therapy service organizations. It is recommended that the agency interested in running the program read it in its entirety to ensure proper adherence to the product protocol. This will ensure that each iteration of the program is run consistently the same and thus increasing the reliability of evaluation methods. However, the product may need to be adapted to fit the different organizations' business models, equipment availability, budgeting restrictions, marketing strategy, or insurance reimbursement options available in the state of practice. Each organization's implementation of the program may be different due to their unique contextual factors. This may reduce the reliability of evaluation tools and thus product improvement.

Recommendations for Product Sustainability

Product sustainability recommendations and instructions for the continued evaluation and improvement of the product are included within the product manual. The product manual contains goals/objectives, evaluation methods, narrative description of responsibilities for product improvement, and possibilities for future iterations. The goals and objectives were used as a guide to create evaluation methods. The evaluation materials gather quantitative and qualitative data on how successful the product was at achieving goals/objectives. The data gathered from the evaluation methods is meant to be synthesized and analyzed by program users

for trends. These trends are to be used to modify future implementations of the program to both increase success and goal/objective achievement. It is strongly recommended that evaluation tools be used after each implementation of the program to gather data on how the product can be improved. This will ensure product improvement and consequently better consumer experiences and outcomes. It is hypothesized that better consumer experiences and outcomes will lead to more uses of the product and thus sustainability. Possibilities and avenues for product modification for future iterations were also discussed. These recommendations could not be implemented in the current product development but may help increase sustainability by providing a different consumer experience. Different experiences may draw previous consumers to the product and thus increase demand and sustainability. Additionally, it is recommended that the product protocol be researched, and standardized assessments be used to measure goal achievement. This will help to validate whether this product's protocol is evidence-based and achieves the outcomes it is meant to achieve.

Strengths and Limitations

The strengths of the current product is that there is a well-documented need for recreational and social participation opportunities for children with disabilities, it was developed in collaboration with stakeholders, and that the author has experience in facilitating recreational and social participation for children with disabilities in a summer camp setting. It has been well-established in the professional literature that children with disabilities experience a disparity in recreation and social participation opportunities when compared to their TD peers (Bult et al., 2011; King et al., 2009; Lin, 2020; Schreuer et al., 2014; Solish et al., 2010). The needs assessment data collected by the author–from potential consumers–confirmed a demand for a recreational and social participation day camp. Management and therapy staff at the partnered

organization were both collaborated with to ensure a successful fit of the program to their organization's goals and culture. The combination of a dearth of opportunities, demand for the current product, and stakeholder input into the design of the product will help to ensure its success and sustainability. Lastly, the author has six months of total experience in facilitating recreational and social participation among a wide array of individuals with disabilities in a summer camp setting. This was reflective in the planning of activities and suggested modifications for universal success and participation of consumers.

The limitations of the current product are that no pilot runs of the program have been trialed, there is currently limited supporting research for included activities and target population, and that it was developed for stakeholders at a particular organization and region of the United States. The product was developed as part of the author's capstone project requirement to fulfill graduate school requirements. No trial run of the program was able to be completed in the time the author had with the partnered organization. This limits the product by not having evaluation data to help improve the product for future implementations. The state of research for therapeutic summer camps is sparse, lacks high levels of scientific rigor, and is generally targeted toward a specific diagnosis (Leiberman & Scheer, 2002). The activities included in the summer camp were based on general findings from diagnosis specific research, and that summer camp activities were generally effective at improving recreation and social participation outcomes. Since no research was available on a day camp targeted towards all children with disabilities, the camp is based on generalized results from various studies. This limits the current program by reducing its level of evidence-based rigor. Lastly, the product was developed in collaboration with and designed for a specific organization based in the upper Midwest of the United States. This limits the program's generalizability to be implemented elsewhere and with different

organizations.

Conclusion

The final product, *Hook'd on 'Arrdventure: A Pirate-Themed Recreation Day Camp*, was developed to close the recreation and social participation gap that children with disabilities face. It was developed through in-depth needs assessment, author experience, and expert practitioner opinion. It is the author's hope that the product will ensure children with disabilities have the supported opportunities to participate in activities, as their TD peers would, and to further break down the barriers of participation for children with disabilities and their families. Products like the *Hook'd on 'Arrdventure'* have the possibility to advance research, participation, policy, and overall quality of life for children with disabilities.

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