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Increasing Social Participation in Adults with Disabilities

Jerica R. Schomber

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Under the direction of the faculty capstone advisor:

Alison Nichols, OTR, OTD

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By

Jerica R. Schomber

Occupational Therapy Student

Approved by:

Faculty Capstone Advisor	**Date**
Doctoral Capstone Coordinator	**Date**

Accepted on this date by the Chair of the School of Occupational Therapy:

Chair, School of Occupational Therapy	**Date**

Abstract

Adults with disabilities can experience limited engagement in social participation due to limitations and barriers. There is a need for increased social participation of individuals with disabilities within the community setting. The purpose of this study was to enhance the quality of life of individuals with intellectual and developmental disabilities by developing a program to increase social participation within a community setting. Clients and staff at two adult day centers completed the social participation program. The program consisted of new activities that promoted social participation for the five rooms within the facility: Art, Recreation, Pre-Vocational, Music/Fitness, and Snoezelen, as well as educational materials for staff for implementation of future activities. The new activities were based on common barriers and facilitators of social participation as supported by literature. Social participation increased by 61-80% for client engagement in each of the new activities implemented. Staff demonstrated increased knowledge of barriers and facilitators of social participation in adults with disabilities. This programming is appropriate for increasing social participation in adults with intellectual and developmental disabilities within the community setting and enhancing staff knowledge of implementation of activities at an adult day center. Understanding the barriers and facilitators clients experience and providing educational materials to caregivers and staff can result in an increase of client participation and enhanced quality of life.

Keywords: social participation, adults, disability, barriers, facilitators

Background

The Ecology of Human Performance (EHP) was designed to emphasize the relationships between person and environment, human behavior and performance, and performance and context (Dunn, Brown & McGuigan, 1994). EHP is a practice framework theorized by Winnie Dunn and her colleagues at the University of Kansas Medical Center (Cole & Tufano, 2008). It was intended to be used by not only occupational therapists, but a variety of other professions including educators and rehabilitation specialists (Cole & Tufano, 2008). Dunn and colleagues centered the framework around four constructs: person, tasks, contexts, and personal-context-task transaction (Cole & Tufano, 2008). *Person* is the client`s cognitive level, individualized skills and abilities, and motivators (Cole & Tufano, 2008). *Tasks* are an endless "set of behaviors necessary to accomplish a goal" (Dunn, Brown & McGuigan, 1994, p.599). *Context* is generalized to represent a person`s temporal and environmental surroundings that can present as both facilitators or barriers for engaging in tasks including; the developmental level, chronological age, social environment and physical environment (Cole & Tufano, 2008). The last construct structuring EHP, *personal-context-task transaction*, is the overall performance of a person utilizing their skills and abilities to engage in a task within their specific temporal or environmental context (Cole & Tufano, 2008).

Each individual has a unique set of skills, abilities, and motivators that relate to their interests and experiences. Cole and Tufano (2008) explain that skills can be gained by altered or added interests or even lost due to illness or disability. Individuals with a disability may have a decreased personal-context-task transaction or performance of required tasks within a social/physical environment due to limited skills, abilities, and barriers, compared to those with a healthy person-context relationship (Cole & Tufano, 2008). As barriers impact the performance

of tasks within the social and physical environments, it results in individuals with disabilities having a decrease in social participation (Hammel et al., 2015).

The EHP`s personal-context-task transaction could provide a basis for structuring increased social participation in a life skills program at an adult day center for clients with disabilities. In order to create a healthy transaction for meeting the goals of increasing social participation, the program would have to consider each client's interests, skills, and functional ability to complete tasks and activities throughout the program. The social and physical environment of being at the day center is a factor that could alter the way a client would complete the tasks. To establish the ultimate goal of increasing participation at the day program, it is important to create the healthy transaction by considering how each client completes tasks within the social setting of the group at the day program, given their unique set of skills, interests, barriers and overall functional abilities.

Social Participation in Individuals with Disabilities

One out of every five individuals in the United States living within the community are affected by a disability including long term physical, mental, intellectual, or sensory impairments (Center for Disease Control and Prevention, 2018a). The CDC (2018a) explains that the barriers corresponding with disabilities may hinder an individual`s ability or motivation to engage in social participation with others. Due to a lack of social engagement within the community, individuals with developmental and intellectual disabilities are currently experiencing a higher level of social isolation within their social environments, primarily containing family and professionals (Simplican, Leader, Kosciulek & Leahy, 2015). A study including participants diagnosed with an intellectual disability concluded that the participants self-reported being less social and having fewer friendships than their peers (Zeedyk, Cohen, Eisenhower & Blacher,

2016). Zeedyk et al. (2016) also stated that more than 10% of the participants felt a sense of loneliness and social dissatisfaction. In addition to participation restrictions of social environments, individuals with disabilities may also encounter barriers within their physical, sociocultural, political, and economic environments limiting the performance of tasks within each environment (Hammel et al., 2015).

Barriers and Facilitators of Social Participation

Context or environment has a significant influence on the many roles and tasks individuals participate in throughout their daily lives (Hammel et at., 2015). Hammel et al. (2015) and Abbott & McConkey (2006) identified not only common barriers, but common facilitators impacting individuals with disabilities in relation to participating within their communities. In 2015, a study presented eight contributing factors that have created both barriers and facilitators for individuals with disabilities engaging in social participation: built, natural, transportation, assistive technology, information and technology access, social support and societal attitudes, systems and policies, and economic environment (Hammel et al., 2015).

Built. Built is defined as the human-made environment consisting of structures such as buildings, walkways, roadways, stations, and the environmental features (accessibility, noise, lighting, safety, etc.) that correspond (Hammel et al., 2015). In a 2006 study, participants concluded that a barrier limiting their participation within the community was the accessibility of workplaces and cross walks (Abbott & McConkey, 2006). Steps and curbs are common barriers causing individuals with a disability limited access to building and sidewalks (CDC, 2018a). Participants within a 2015 study, described built structures, such as ramps, wheelchair accessible bathrooms, and signs for visual/hearing impairment, as facilitating factors that increased ability to engage in social participation (Hammet et al., 2015).

Natural. Natural environment is the climate, weather conditions, geographical and topical features (Hammel et al., 2015). Barriers of the natural environment include ramps not being safe during snow or rain, as well as not being able to maneuver wheelchairs/assistive devices through sand or gravel (Hammel et al., 2015). However, facilitators of the natural environment could be the geographical features, such as living in an urban area where places are more accessible to get to without needing transportation.

Transportation. Hammel et al. (2015) described transportation as the means of getting from one place to another by either private or public modes. Not all means of transportation are wheelchair accessible, or there is limited availability of buses and taxis that are wheelchair friendly (Abbott & McConkey, 2006). On the other hand, having access to services that provide wheelchair accessible vehicles, planes, and public transportation could facilitate individuals accessing the community when they are unable to drive or unable to get from place to place alone.

Assistive Technology. Assistive technology is both the availability and use of products specialized to participate in daily tasks (Hammel et al., 2015). A participant within the Hammel et al. (2015) study explained that there is stress and fear while traveling due to assistive technology not always being readily available or easily accessible. However, assistive technology was a facilitator for that same participant when it comes to completion of tasks within the home or work environment, such as utilizing a voice recognition program for printing words on a screen based on spoken words (Hammel et al., 2015). Another participant reported that assistive technology allows increased independence within the home and work by assisting in tasks such as cooking or completing work tasks with voice recognition devices (Hammel et al., 2015).

Information and Technology (IT) Access. IT access is the knowledge and method for delivering and receiving information (Hammel et al., 2015). Without having available information, individuals lack the knowledge of events within the community or resources that could potentially be available to them (Abbott & McConkey, 2006). If information and technology are accessible, it tends to be primarily explained as facilitators of social participation by providing individuals with education and research on available resources (Hammel et al., 2015).

Social Support & Societal Attitudes. Social support is defined as the "availability of informational, instrumental and emotional support", whereas societal attitudes are the "factors related to group or attitudes about disability and participation" (Hammel et al., 2015, p.581). Barriers to social support and societal attitudes stem from lack of knowledge or awareness about disability creating stereotypes, stigma and discrimination (CDC, 2018a). With the lack of social support, individuals have decreased number of close friendships and increased feeling of loneliness (Zeedyk et al., 2016). Social support is reported as a significant facilitator for individuals with disabilities by providing support groups, physical and psychological assistance, and activities to engage in within the community (Hammel et al., 2015).

Systems, Services and Policies. Hammel et al. (2015) described systems, services and policies as the accessibility of systems to support participation (health care, housing, community participation, etc.). The CDC (2018a) explains that barriers of policies, services and systems happen because there is a lack of awareness and regulations for creating jobs and programs to be accessible for all individuals, with or without disabilities. Facilitators of policies and systems are incorporated with the Americans with Disabilities Act, allowing individuals to have more opportunities within their communities (Hammel et al., 2015).

Economic. Economic environment is the means of resources required to participate and live within the community (Hammel et al., 2015). Individuals with a lower socioeconomic status tended to have decreased social participation within the community (Goll, Charlesworth, Scior, & Stott, 2015). The economic environment has a critical influence on individuals with disabilities, decreasing chances of employment compared to individuals without disabilities (CDC, 2018a). For many individuals, the money obtained each month is only enough to pay the bills, which limits the resources and services available (Hammel et al., 2015). On the other hand, a facilitator of the economic environment could be the ability to afford services and resources, such as activities within the communities, assistive devices or technology, and other factors that would increase social participation.

Social Participation within Program Interventions

Dunn, Gilbert, and Parker (1997) explain that when planning program strategies, it is not important to focus on the diagnosis of the individuals within the group, but to instead establish the barriers and facilitators, skills and abilities, and needs for implementation of appropriate intervention/activities that increase participation and the overall personal-context-task transaction. If an individual`s needs are unknown, it is not possible to meet the needs throughout the program or intervention (Dunn, Gilbert, & Parker, 1997). Individuals' personal interest (art, music, fitness, etc.) along with availability and accessibility of specific leisure activities is a significant factor in how much an individual will participate (Ullenhag, Krumlinde-Sundholm, Granlund, & Almqvist, 2014).

Art, music, and physical activity were all areas of interest for many clients that were shown to improve social participation. A study with individuals with sensory impairments focused on decreasing social isolation utilizing a 12-week art program (Vogelpoel & Jarrold

2014). Throughout the 12-week program participants engaged in mainly group-related art projects with the addition of adaptations such as Braille, audio descriptions, and sign language as needed (Vogelpoel, & Jarrold, 2014). Vogelpoel & Jarrold (2014) described that during the process of creating group artwork, individuals increased their self-confidence and found common interests with peers. The study concluded that following the completion of the 12-week program participants gained a significant increase of self-confidence and decreased social isolation (Vogelpoel & Jarrold, 2014).

Eren (2015) implemented a study utilizing music to increase social interaction among a group of individuals with an intellectual disability. Participants of this study engaged in activities of singing, musical games, dance, and movement activities twice a month, with either a partner or in groups (Eren, 2015). Each session began with a warm up activity, brief massage to wake up the body, and a greeting song including each member's name (Eren, 2015). Following the warm up, the leader implemented rhythm games and dance activities. As a result of this program, participants began to express trust, openness, and involvement within the group interventions (Eren, 2015). Eren (2015) concluded that music interventions have a significant increase on social participation and social interaction for individuals with intellectual disabilities.

Physical activity was the focus of a study that addressed both the barriers and facilitators of physical activity in individuals with disabilities (Van Schijndel-Speet, Evenhuis, Van Wijck, Van Empelen, & Echteld, 2014). Throughout this study the participants engaged in activities including walking, dancing, gymnastics, cycling, gardening, and swimming (Van Schijndel-Speet et al., 2014). The study completed interviews and focus groups with participants to determine preferred activities, facilitators, and barriers (Van Schijndel-Speet et al., 2014). Van Schijndel-Speet et al. (2014) found that preferred activities were walking, cycling, dancing, and

gardening. The most common barrier was the dislike of an activity, followed by physical limitations, and fear of falling (Van Schijndel-Speet et al., 2014). Common facilitators were found to be enjoyment of activities, social support, and activities including others (Van Schijndel-Speet et al., 2014). Authors of this study concluded that feelings of enjoyment, confidence, and being comfortable during the activity significantly contributed to the participation in physical activity (Van Schijndel-Speet et al., 2014).

Conclusion

Individuals with disabilities, including clients at the adult day center, may experience a decrease in social participation due to barriers limiting their ability to engage in certain occupations or activities. Through identifying barriers and facilitators of the individuals and the surrounding environments, staff can design and implement activities to meet the skills and abilities of all clients within the group. If the program is designed around the interests, skills, and the abilities of the clients, it could lead to increased engagement in the tasks and a healthy overall personal-context-tasks transaction for all clients.

Screening and Evaluation

An adult day center for clients with intellectual and development disabilities in Batesville and Sunman, Indiana were the placements around which this Doctoral Capstone Experience project focused. The non-profit organization provides Life Skills programs for adults over the age of 18. The goal of the Life Skills program is to “provide social interaction, purposeful activities, community experiences, and exploration of interests and leisure skills for quality in life” (New Horizons Rehabilitation, 2017). The Life Skills program serves approximately 30 clients at the Batesville facility and approximately 50 clients at the Sunman facility. Each facility has team leaders and group leaders supervising the clients and the programs. The Life Skills

program addresses five areas: art, music/fitness, pre-vocational skills, recreational activities, and sensory(Snoezelen). The five areas were divided into different rooms throughout the facilities in which groups of clients and their designated group leader rotate through each day. A list of activities being implemented within each area prior to the DCE project are displayed in Appendix A.

A thorough needs assessment was completed in the facilities to analyze the current programming compared to what was still needed in order to enhance the program (McCawley, 2009). To initiate the needs assessment, a semi-structured interview was completed with the Program Director and Program Manager to determine what gaps were present in the current programs being implemented. Brief interviews were completed with each of the group leaders, team leaders, and clients at both sites to gain further knowledge of what was going well and what was lacking in current program. The information gained throughout the interviews created an area of focus for the Doctoral Capstone Experience project that would best benefit the Life Skills programs in both the facilities.

It was concluded that the area that would most benefit the Life Skills programs would be a project creating new activities to increase social participation and quality of life, as well as educating staff on barriers and motivators to implement program activities. The focus stemmed from an average of only 20-30% of clients engaging in group activities due to lack of interest in the activity or inability to participate due to deficits. Clients reported getting "bored" doing the same activities every day. Research supports that when activities were designed around the interests of the clients they were more willing to participate (Ullenhag, Krumlinde-Sundholm, Granlund, & Almqvist, 2014). On the other hand, many staff state they were "stuck in a rut," running out of activities to lead the groups. With those areas being gaps in the Life Skills

program, the project was aimed to increase the engagement of the clients in program activities and overall quality of life for the clients at both the Batesville and Sunman facilities.

As a result of the needs assessment, a Goal Attainment Scale (GAS) was created to establish three measurable goals with an expected level of outcome by the end of the Doctoral Capstone Experience (Ottenbacher & Cusick, 1990). The three goals included: creating new activities, increasing the percentage of client social participation, and providing staff with educational materials. These goals are laid out with their expected levels of outcomes in Appendix B. New activities were designed based on research and the interests of the clients including, but not limited to: sports, music, drawing, card games, etc. Along with knowing the interests of the clients, understanding the barriers and facilitators of social participation also influenced the willingness of the clients to engage in activities (Abbott & McConkey, 2006). By providing staff with educational materials on clients' barriers and facilitators of social participation, this allowed the staff to obtain strategies for developing new activities to increase group participation.

To measure the results of the program, each of the three goals on the Goal Attainment Scale were evaluated and scored based on the level of outcomes that were achieved. An exit survey was also created to assess implementation of new group activities, the percentage of clients participating within the activities, and the materials provided to the staff to increase participation rates. The surveys were completed at the end of the implementation phase in order for the staff to evaluate the overall satisfaction of the Doctoral Capstone Experience. The survey is displayed in Appendix C.

Compare and Contrast Community Vs Traditional Practice Areas

Occupational therapy within an emerging community setting like the Life Skills program at NHR can have both similarities and differences compared to a more traditional setting, such as a skilled nursing facility, outpatient or inpatient setting. The screening and evaluation process in traditional and emerging practice setting both take areas of socioeconomic status, age, level of functioning, health status, and health service utilization, into consideration when planning for implementation (Schmitt et al., 2010). However, during the screening and evaluation phase occupational therapists in an emerging community setting, would be evaluating a group of clients. To make activities and sessions client-centered with a group of clients, the occupational therapist identifies a common interest of the clients. On the other hand, in a more traditional setting like a skilled nursing facility or an outpatient facility, occupational therapists make treatment sessions client-centered by focusing solely on the interest and needs of the specific client rather than a group of clients.

An occupational therapist in a traditional setting could use similar aspects of the social participation program during implementation to increase engagement in the session. Within the emerging community setting, the aspects focused on increasing social participation with the group of clients. In areas such as a skilled nursing facility or outpatient setting the focus would be more to increase participation in treatment or activities outside of therapy. For example, an occupational therapist would still utilize a client`s barriers and facilitators to increase their participation in the treatment session. Like the implementation of the clients in the community NHR setting, barriers and facilitators were used to increase the overall participation in the group activities.

Challenges could arise from using this specific program in a traditional setting with only one client. The program used at NHR focuses on the general interests, barriers, and facilitators, of the group, which might not work for one client due to having a different set of factors that influence participation. If the facilitators and interests do not address the needs of the individual client they may have limited participation within the activity (Tak, Kedia, Tongumpun, & Hong, 2015). Implementation of all activities within the social participation program would not be feasible for traditional settings with individual clients, due to a majority of the activities being based on a group of six-eight clients versus one client. Though the process of a participation program in traditional and emerging practice setting have variations, the programs would have a similar outcome of enhancing social participations to have an increased quality of life.

Implementation

The Life Skills social participation program was designed to implement and present new activities corresponding with the five rooms: Music & Fitness, Recreation, Pre-Vocational, Art, and Snoezelen. Implementation of the program led by the occupational therapy student began week 8 of the Doctoral Capstone Experience. At the time of implementation for each room, a section of the binder was presented to the staff with ten new activities for each room, which is included in Appendix A. All of the activities provided included a list of materials, instructions, and potential modifications to utilize as necessary based on the clients' abilities. The first implementation was focused on Music & Fitness. The groups completing the implementation at each facility consisted of 6-8 clients, a group leader, and the occupational therapy student. Clients were arranged in a circle either standing or seated in a chair/wheelchair based on functional ability and safety precautions. The goal of the activity was to use teamwork and communication to not let a balloon touch the ground. Once the balloon was dropped, the goal

was to beat the time prior. Clients were hesitant of participation at the start of the activity due to limitations, but with motivation and modification of verbal cues and hand-over-hand assistance for catch and release of the balloon, all clients engaged within the activity.

Implementation of Art was designed around making holiday crafts for St. Patrick`s Day. In the art room, the clients were seated at two of the tables for the completion of this activity. The clients were to listen to instructions and utilize a visual demonstration to then gather materials, paint, glue, and piece together materials. Clients were encouraged to share materials, allowing opportunity for social engagement while completing the activity. Clients were enthused to show one another the craft after completion to compare finished artwork. Modifications of enlarged paint brush handles, hand-over-hand assistance for painting, and verbal cues for proper alignment of pieces were provided throughout implementation of art activity.

Recreation was implemented through a modified group basketball activity. During this activity, the clients were spread out throughout the recreation room with a “basket” in the middle of the room. Each of the clients were provided with a set of balls, which they aimed at the target until making each of their set of balls into the basket. Clients were again hesitant to initially engage in the activity due to limitations. Modifications were provided which allowed clients to move closer to the target as needed, or have occasional hand-over-hand assistance for grasp and release of ball. When given motivation and modifications, all clients engaged in the activity. Another activity that became popular within the recreation room after modifications for increased client engagement was the card game UNO. The clients enjoyed card games, but prior to modifications, engagement was difficult. Modifications of card holders, verbal cues, minimal assistance with fine motor skills, and grasp and release increased the engagement of clients in group card games within the recreation room.

Pre-Vocational tasks were implemented through an activity completed by sorting items into various categories. The clients were seated at a table in the pre-vocational room and given a board with a specific category: clothing, toys, food, etc. The clients then had to sort through cards with pictured and written items on it to identify which category it belonged in. Clients were given verbal cues throughout activity when needed. A modification of minimal assistance for fine motor coordination of picking up cards was provided as determined necessary. During the time of this activity, a client demonstrated challenging behaviors, which caused them to refuse to participate in the activity, even after encouragement from staff and the occupational therapy student. The behavior was distracting to the other group members, causing a delay in the activity. The group leaders were trained on behaviors of the clients and was able to calm the client in a timely manner, while the OT student continued the activity with the rest of the group.

Snoezelen activities were not implemented due to that room not being used on a daily basis. The Snoezelen rooms were only used during a time where there are an abundance of clients and the groups needed an additional space. Staff had however been presented the materials, instructions, and modifications of the ten new activities to be implemented when in Snoezelen.

Following the completion of activity implementation, the survey questions shown in Appendix C were distributed to the group leaders at both Batesville and Sunman facilities. The survey questions addressed skills needed for implementation, performance of implementation, and likeliness of carryover of activities and strategies.

Leadership Skills

Effective implementation in the community setting of adult day centers required the need for adequate leadership skills. One of the most important leadership skills that was necessary was

to be personable, with the ability to build rapport with both the clients and staff. In order for clients to engage in any activities within the groups, they needed a good rapport and trust in the individual leading the group. Once the rapport was built, then it was important to gain confidence while implementing the activities. Demonstration of confidence by the occupational therapy student during activities showed the clients that they too can be confident while engaging in activities instead of being hesitant due to limitations and low self-esteem. Along with the leader demonstrating confidence, it was important to have the skills to motivate clients. The clients were accustomed to being sedentary during their day program, prior to the implementation of new activities in this programs. Some of the clients were still in the mindset that they didn't have to do anything all day. Though it was their right to refuse and not have to participate, it was highly encouraged to engage in social participation while present at the day program. At times, many of the clients needed motivation to join the group activities. In addition to motivating clients, it was essential as the leader to understand each of the clients` personal motivators. On the occasion of a client demonstrating challenging behaviors and refusing to participate, the leader was able to get the majority of clients to engage in the group activities.

To provide effective implementation, leadership skills toward staff were significant as well. Similar to leadership with the clients, it was essential to have confidence. The staff were more receptive to the program, knowing that the occupational therapy student was confident with the knowledge and implementation of the activities. It was important as a leader to have good communication skills. In order for carryover of the program after discontinuation of DCE, the leader had to communicate to the staff the process of the program, in additional to the strategies and modification made throughout implementation. Adequate communication skills, provided

the staff with a comfortable environment to ask questions or concerns to better understand the process.

The promotion of staff development was also influenced by the leadership skills during implementation of group activities. Staff development was promoted during each implementation session. The staff were provided with educational materials throughout implementation sessions, regarding facilitators and barriers of client engagement. At times, staff did not fully understand the barriers impacting clients' abilities to engage in activities along with the rest of the group, or were uncertain on modifications that could enhance the participation of all clients. Not understanding the barriers and limitations could then often cause clients to engage in challenging behaviors, impacting their participation in activities for the rest of the day. Staff were educated on modifications and strategies throughout the daily activities to maintain an increase in participation for clients. The goal for staff development during this program was for staff to be provided with materials to continue adapting and modifying activities to the limitations and deficits of each of the clients after the discontinuation of the Doctoral Capstone Experience project for ongoing increased social participation.

Discontinuation

Discontinuation of the Life Skills social participation program was an ongoing process throughout the Doctoral Capstone Experience. The discontinuation process was designed for both clients and staff. The primary resource utilized for discontinuation was the binder created of ten new activities for each of the Life Skills rooms. Each of the activities in the binder were sorted into sections based on the room and given a list of materials, instructions, modifications, and benefits. The binder also included a section for education. This section included resources of barriers and facilitators of social participation for adults with developmental and intellectual

disabilities. The discontinuation process for all clientele was focused primarily on education of factors influencing social participation and the presentation of new activities from the binder for all rooms of the Life Skills program.

Client education was centered around the modifications and adaptations that increased social engagement during group activities. Clients were educated on how to modify and adapt activities to be both easier and more challenging. Clients with a higher functional ability believed that some activities were “childish” or “too easy” due to them being created for the average functional level of all clients. An example of a modification that made the activity more challenging was with a money management task in the pre-vocational room. The particular activity was designed for clients to add coins and bills to make the exact price of the item given on the chosen card. Each card had a picture of the item, price for the item, and visual cues for which coins/bills were needed. A client mentioned that activity was too easy. A modification suggested was to take multiple cards, add the prices together, and determine the price needed for the total amount of the cards. This same activity could also be graded down by matching the pictured coins and bills given on the card. Each activity presented in the binders were given modifications to utilize as needed. Clients demonstrated carryover of these suggested modifications throughout various activities implemented in the program. For example, clients began to utilize the visual cues on activities for matching the corresponding items instead of asking for assistance from the staff to sort the items or reading the labels. The modifications were provided for both clients and staff as a reminder of how to modify the given activities for increasing the overall client participation for group activities when implemented in the future.

The modifications within the binders were also intended for the staff of the Life Skills program to utilize during implementation of future activities. The modifications will continue to

provide the staff with strategies that will increase the participation while they lead the group activities upon discontinuation of the Doctoral Capstone Experience. In addition to the modifications provided in the binders, staff were provided with additional recommendations. The occupational therapy student provided recommendations to the staff of examples including: adapting art activities with increased circumference grips on art utensils, cues for grasp and release of objects during board games, hand-over-hand modification for catch and throw of balloons/balls, and more. To ensure carryover, staff demonstrated and verbalized understanding of the strategies during their implementation of activities.

Another factor mentioned previously was the educational section of the binder. The educational section was created to inform staff of common barriers and facilitators of social participation in regards to the clients. As staff received increased knowledge on the barriers and facilitators that influence participation, the activities implemented by staff will be designed to meet these factors leading to a continued increase in participation. The educational factors to both staff and clients provided by the occupational therapy student will give the facility an adequate basis for continuation of this program following the completion of the Doctoral Capstone Experience.

Outcomes

The primary outcome of the Life Skills program was to increase social participation of clients with developmental and intellectual disabilities at NHR. Increased staff education for implementation of activities was the secondary outcome for the Doctoral Capstone Experience project. These two outcomes were analyzed through setting goals on a Goal Attainment Scale (GAS). The GAS included three goals that were developed during the initial screening and evaluation phase of the Doctoral Capstone experience. The most likely outcome of the three

goals was: creating ten new activities for each room, increasing the percentage of client social participation to 41-60% of group, and providing staff with educational materials.

The outcome of the three goals have each been met during the process of the Doctoral Capstone Experience. Goal 1 received a 0 on the GAS scale, meaning that the most likely outcome was met with ten new activities for each room had been developed and presented. Goal 2 received a +1, with 61-80% of clients within the group engaging in the new activities implemented. Lastly, Goal 3 received a +2, concluding that educational materials were provided to the staff on barriers and facilitators of social participation, as well as 10 new strategies for increasing participation in current and new activities. All of the goals together created an overall increase in social participation for the clients at NHR in group activities.

Four of the group leaders completed the survey. The outcome of the survey was that all four staff answered each of questions 1-10 with a 5, meaning they strongly agreed with the corresponding statement. This indicates that the OT student demonstrated effective communication and leadership skills during implementation, the binder was perceived as helpful and beneficial for clients and staff, and staff plan to utilize skills and strategies for carryover for future implementation of activities.

Societal Needs

The societal need addressed throughout the Doctoral Capstone Experience project and the Life Skills social participation program was the need for individuals with disabilities to increase engagement in social participation within the community. Research suggested that individuals with disabilities have decreased engagement of social participation within the community (Simplican, Leader, Kosciulek & Leahy, 2015). Due to 61-80% of clients engaged in social participation with in the Life Skills program new activities, this need has been addressed at

NHR. Another societal need that corresponded with the social participation was the understanding of barriers that impact the ability to engage in activities within the community for individuals with disabilities. As barriers impact the performance of tasks within the social and physical environments, it results in individuals with disabilities having a decrease in social participation (Hammel et al., 2015). This societal need was addressed in Goal 3, with educational information being provided to staff through identifying the barriers and facilitators of social participation.

Overall Learning

Communication with clients, staff, family, and other professional at NHR was a key factor throughout the whole Doctoral Capstone Experience. On the first day of the Doctoral Capstone Experience, the Program Director requested an introductory letter to communicate the purpose and plan of the Life Skills program, along with the role of the occupational therapy student, to the clients, staff, guardians, caregivers, families, and other individuals within the NHR community. The introductory letter provided a written form of communication that initiated interaction and informed the NHR community of the role of the clients and staff in the program, as well as the goals and outcomes that were intended to be accomplished over the 14-week program.

The initial form of communication to the NHR community was followed by oral communication and interaction with staff and clients in the Life Skills programs. Communication continued during the screening and evaluation process with semi-structured interviews with clients and staff about the existing program and thoughts for the Life Skills social participation program. Communication and interaction with the Program Director, the group leaders, team leaders, and clients proceeded through implementation of activities and discontinuation of the

program. The implementation and discontinuation phases included not only oral communication, but written communication through instructions and modifications, and nonverbal communication with demonstrations.

All types of communication were essential for effective interaction with the staff and clients throughout the whole process of the Doctoral Capstone Experience. Each client had a different form of communication that best suited them. For example, one client communicated with their own form of sign language; in order to communicate with this client, it was necessary to understand their form of sign language. Many of the clients at NHR are nonverbal, which also required a different form of communication that had to be acquired. Communication and interactions with staff was also different from the clients. For example, with the Program Director, interaction occurred intermittently through written and oral communication about the process and update of the program. Interaction with team leaders and group leaders occurred daily through oral communication about implementation of activities and education. Throughout the program and Doctoral Capstone Experience, it was important to understand and utilize a variety of communication styles with clients and staff. After the occupational therapy student obtained the ability to communicate with each individual utilizing their suitable style, it created a foundation for the most effective outcome of the program and continuation of the program upon completion of the Doctoral Capstone Experience.

Leadership Skills

Communication was a core component of leadership skills, along with confidence, and building a rapport. These skills were crucial for the role of an occupational therapist. As an occupational therapist, these skills were important with each client, as well as their families and caregivers. Similar to the clients and staff at NHR, it was important to initially build a rapport

with clients. During the Doctoral Capstone Experience, rapport was built through being personable with the staff and clients through communicating on their levels and engaging in activities that were of interest to them. Once having that rapport with clients, as well as future clients in practice, it leads to trust in the practitioner and compliance with treatments. As the occupational therapist student became more confident over time in the implementation of the activities in the Life Skills social participation program, the clients at NHR also continued to become more confident in their ability to engage in the tasks without having barriers of limitations and low self-esteem holding them back. This will be similar in future practice as an occupational therapist. As clients see the confidence in their practitioner, they too will gain more confidence in themselves inside and outside of therapy with their skills and abilities. Lastly, communication with any client or staff is an important role. Communication with staff and clients at NHR grew throughout the process of the Doctoral Capstone Experience, after understanding the various communication styles and adapting the style for each individual. These styles varied from learning clients' individualized use sign language, to understanding the tone of voice which increases client productivity, utilizing nonverbal communication styles, and communicating on a more professional level with staff. An occupational therapist has to be able to communicate with coworkers within their field and interdisciplinary teams, as well as each one of their clients. Each of these individuals may require a different style of communication like the clients and staff at NHR. Therefore, understanding and utilizing the various styles of communication during the Doctoral Capstone Experience will be beneficial for the future role as a practitioner. Effective communication skills in practice are essential for the best quality of care to the clients.

Advocacy Skills

Leadership skills were not the only skills that improved during the Doctoral Capstone Experience. Advocacy skills were also influenced during the Doctoral Capstone Experience. Regardless of the setting or population, an occupational therapist's goal is to advocate for their clients. The population served in the Doctoral Capstone Experience was individuals with developmental and intellectual disabilities. The role of the occupational therapy student serving this population was to advocate for the individuals and their abilities to engage in social participation within their community. Many barriers limited clients' abilities to engage in tasks or activities. Advocacy was shown by developing modifications for individuals to engage in the activities within their functional limits. Advocacy was also shown by educating staff on barriers and facilitators of social participation, to provide them with the knowledge and understanding for them to develop increased social participation for all clients. Lastly, as an occupational therapy student, it was my obligation to advocate for the profession of occupational therapy. New Horizons Rehabilitation does not have an occupational therapist on staff, making it a priority to advocate the need and role of occupational therapy in a non-traditional community based setting. The advocacy skills developed during the time of the Doctoral Capstone Experience will carry over to the role as an occupational therapist, advocating for clients and their abilities.

References

Abbott, S., & McConkey, R. (2006). The barriers to social inclusion as perceived by people with intellectual disabilities. *Journal of Intellectual Disabilities*, *10*(3), 275-287.

Centers for Disease Control and Prevention (2018a) *Common Barriers to Participation Experienced by People with Disabilities* Retrieved from https://www.cdc.gov/ncbddd/disabilityandhealth/disability-barriers.html

Centers for Disease Control and Prevention (2018b) *What is Disability Inclusion?* Retrieved from https://www.cdc.gov/ncbddd/disabilityandhealth/disability-inclusion.html

Cole, M.B., & Tufano, R. (2008). *Applied theories in occupational therapy: A practical approach.* Thorofare, NJ: SLACK, Inc

Dunn, W., Brown, C., & McGuigan, A. (1994). The Ecology of Human Performance: A framework for considering the effect of context. *American Journal of Occupational Therapy*, *48*(7), 595-607.

Dunn, W., Gilbert, M. P., & Parker, K. (1997). The Ecology of Human Performance Framework: A model for identifying and designing appropriate accommodations for adult learners. *National Association for Adults with Special Learning Needs, 6,* 25-40.

Eren, B. (2015). The use of music interventions to improve social skills in adolescents with autism spectrum disorders in integrated group music therapy sessions. *Procedia-Social and Behavioral Sciences*, *197*, 207-213.

Goll, J. C., Charlesworth, G., Scior, K., & Stott, J. (2015). Barriers to social participation among lonely older adults: The influence of social fears and identity. *PloS one*, *10*(2), e0116664.

Hammel, J., Magasi, S., Heinemann, A., Gray, D. B., Stark, S., Kisala, P., ... & Hahn, E. A. (2015). Environmental barriers and supports to everyday participation: A qualitative insider

perspective from people with disabilities. *Archives of Physical Medicine and Rehabilitation, 96*(4), 578-588.

McCawley, P. F. (2009). Methods for conducting an educational needs assessment. *University of Idaho*, 23.

New Horizon`s Rehabilitation. (2017). *Our Services* Retrieved from https://nhrinc.org/life-skills-programs/

Ottenbacher, K. J., & Cusick, A. (1990). Goal attainment scaling as a method of clinical service evaluation. *American Journal of Occupational Therapy*, *44*(6), 519-525.

Simplican, S. C., Leader, G., Kosciulek, J., & Leahy, M. (2015). Defining social inclusion of people with intellectual and developmental disabilities: An ecological model of social networks and community participation. *Research in Developmental Disabilities*, *38*, 18-29.

Schmitt, E. M., Sands, L. P., Weiss, S., Dowling, G., & Covinsky, K. (2010). Adult day health center participation and health-related quality of life. *The Gerontologist*, *50*(4), 531-540.

Tak, S. H., Kedia, S., Tongumpun, T. M., & Hong, S. H. (2015). Activity engagement: Perspectives from nursing home residents with dementia. *Educational Gerontology*, *41*(3), 182-192.

Ullenhag, A., Krumlinde-Sundholm, L., Granlund, M., & Almqvist, L. (2014). Differences in patterns of participation in leisure activities in Swedish children with and without disabilities. *Disability and Rehabilitation, 36*(6), 464-471.

Van Schijndel-Speet, M., Evenhuis, H. M., Van Wijck, R., Van Empelen, P., & Echteld, M. A. (2014). Facilitators and barriers to physical activity as perceived by older adults with intellectual disability. *Mental Retardation*, *52*(3), 175-186.

Vogelpoel, N., & Jarrold, K. (2014). Social prescription and the role of participatory arts programmes for older people with sensory impairments. *Journal of Integrated Care, 22*(2), 39-50.

Zeedyk, S. M., Cohen, S. R., Eisenhower, A., & Blacher, J. (2016). Perceived social competence and loneliness among young children with ASD: Child, parent and teacher reports. *Journal of Autism and Developmental Disorders, 46*(2), 436-449.

Appendix A

Current Activities

Rooms	**Current Activities**	**New Activities**
Rec Room	Computer Time Socialization Board Games Reading Puzzles Coloring Cards Occasional Movies	Inflatable Bowling Modified Frisbee Golf Group Modified Basketball Balloon Volleyball Peg Board Patterns Life Size Hungry Hippos Outdoor Yahtzee Group Scavenger Hunt Shape sorters Building blocks
Snoezelen Room (Sensory)	Bean Bags Sensory bags Mats Scents Sensory Lights Lotions/Smells Sensory Bins	Sensory Board Sensory Color Sorting Water Bead Bins Tactile Discs Busy Boards Stretches Weighted Blankets Mindfulness/Meditation Rice Bin Sensory Ball Bin
Art Room	Styles of Art Art Projects Sewing Paper mache Clay Painting Tye dye Cleaning Supplies Putting Supplies Away Art from recycled Suncatchers Stenciling Stamp Art	Collaborative artwork Bird feeders Musical Instruments Sensory bottles/bags Tye Dye handkerchiefs Salt Painting Rock Art Fidget balls Gardening Planters Homemade Playdoh
PreVoc Room	Laundry Cooking Cleaning Hair/Nails Counting Pop Tabs	Hardware assembly NHR Cook book Money Sorting Which category am I Medication Management Laundry Matching and Sorting Matching Color Pieces Pricing Items What Ingredients Do I Need? Sorting Utensils

Music/ Fitness Room	Exercise Videos Instruments Exercise Equipment Piano Bike Keyboards Exercise Balls Radio Weights Shakers Consumer Lead Exercises Sing along Parachute Scarves Walk	Rhythm games Scarf Movement Games Group Balloon Toss Musical Beach ball Stretches Chair Bingo Dance Party Obstacle Courses Bean bag toss Chair Exercises

Appendix B

Goal Attainment Scale.

Level of Expected Outcome	Goal 1: Activities
+2 Much more than expected	A binder of 15 new activities for each room (rec, art, music/fitness, Snoezelen, and prevocational) specific to each of the Batesville and Sunman facilities
+1 More than expected	A binder of 10 new activities for each room (rec, art, music/fitness, Snoezelen, and prevocational) specific to each of the Batesville and Sunman facilities
0 Most likely outcome	A binder of 10 new activities for each room (rec, art, music/fitness, Snoezelen, and prevocational) for both Batesville and Sunman facilities
-1 Less than expected	A binder of 5 new activities for each room (rec, art, music/fitness, Snoezelen, and prevocational) for both Batesville and Sunman facilities
-2 Much less than expected	A binder of 2 new activities for each room (rec, art, music/fitness, Snoezelen, and prevocational) for both Batesville and Sunman facilities

Level of Expected Outcome	Goal 2: Participation
+2 Much more than expected	81-100% of clients participating in new activity
+1 More than expected	61-80% of clients participating in new activity
0 Most likely outcome	41-60% of clients participating in new activity
-1 Less than expected	21-40% of clients participating in new activity
-2 Much less than expected	0-20% of clients participating in new activity

Level of Expected Outcome	Goal 3
+2 Much more than expected	-Provide staff with educational materials including common barriers and facilitators of social participation in individuals with disabilities -Provide 10 strategies for increasing social participation during current activities and creating new activities.
+1 More than expected	-Provide staff with educational materials including common barriers and facilitators of social participation in individuals with disabilities

	-Provide 5 strategies for increasing social participation during current activities
0 Most likely outcome	-Provide staff with educational materials including common barriers and facilitators of social participation in individuals with disabilities
-1 Less than expected	-Provide staff with educational materials including common facilitators of social participation in individuals with disabilities
-2 Much less than expected	- Provide staff with educational materials including common barriers of social participation in individuals with disabilities

Appendix C

Survey Question

Please rate each question on a scale of 1-5.

1-Strongly Disagree 2-Disagree 3-Neutral 4-Agree 5-Strongly Agree

1. OT Student demonstrated ability to interact with clients and staff in a professional manner during Doctoral Capstone Experience (DCE).

1 2 3 4 5

2. OT Student demonstrated ability to effectively communicate with clients and staff during activities throughout DCE.

1 2 3 4 5

3. The Activities Binder provided New Horizons clients and staff with a new resource that can lead to increased levels of social participation in clients.

1 2 3 4 5

4. The new activities provided for each of the five rooms (Art, Music& Fitness, Pre-Vocational, Recreation and Snoezlen) were appropriate and suitable for clients.

1 2 3 4 5

5. Providing materials lists, instructions, modifications and benefits of the new activities could lead to more effective implementation of activities in the future.

1 2 3 4 5

6. Educational materials in the Education section of the Activities Binder provided staff with increased knowledge on barriers and facilitators of social participation.

1 2 3 4 5

7. Educational materials in the Education section of the Activities Binder provided staff with appropriate strategies to consider for increased participation in future activities.

1 2 3 4 5

8. OT Student demonstrated effective implementation strategies that increased social participation of clients during the 14 week DCE.

1 2 3 4 5

9. The DCE project aligned well with the needs and wants communicated by the NHR staff in regards to social participation.

1 2 3 4 5

10. Materials, strategies and information provided by OT student during the 14 weeks will be continued to be utilized at NHR following completion of DCE.

1 2 3 4 5

Additional comments regarding OT student or DCE: