

UNIVERSITY *of* **INDIANAPOLIS**®

School of Occupational Therapy

The Role of Education on Occupational Therapy Concepts within Child Care Services

Calliope Gray

May, 2018



A capstone project submitted in partial fulfillment for the requirements of the Doctor of Occupational Therapy degree from the University of Indianapolis, School of Occupational Therapy.

Under the direction of the faculty capstone advisor:

Dr. James McPherson, PhD, OTR

A Capstone Project Entitled

The Role of Occupational Therapy Concepts within Child Care Services

Submitted to the School of Occupational Therapy at University of Indianapolis in partial fulfillment for the requirements of the Doctor of Occupational Therapy degree.

By

Calliope Gray

The Role of Occupational Therapy Concepts within Child Care Services

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

This doctoral capstone project will focus on the education of staff, by a doctoral capstone student, within a daycare setting in order to improve their current knowledge and ability to implement concepts of occupational therapy into the daily routines of their classes. The purpose of this project is to educate the staff of a childcare facility on the topics of sensory awareness, behavior modification, health and wellness, and left brain/right brain, while working within the classrooms to identify areas of need and apply the topics in order to improve the knowledge and abilities of the staff. Education occurred through presentations regarding each topic, and classroom collaboration with the staff. Data was gathered through pre- and post- surveys in order to determine changes in staff level of competence, ability to relate the topic to the class, and resources available. Overall, improvements were seen in nearly all topics covered at the site, demonstrating that the staff's knowledge and implementation abilities increased due to the education they received on concepts involved within occupational therapy.

Introduction

Childcare facilities in the state of Ohio do not have the services of occupational therapy included in their businesses. While some children are able to receive services prior to entrance to Kindergarten, this only occurs when identifiable problems are noted in the child and are addressed by parents, doctors, or teachers. In 2010, it was recorded that 12.1 million children under the age of 5 attended care outside of their home, and 24% of these children were in a daycare setting (United Census Bureau, 2011). According to the United Census Bureau, children spend an average of twenty-five to thirty-three hours per week in a daycare setting (2011). This means, that children spend the majority of their week with their teacher in their classroom. If teachers have knowledge of occupational therapy and the topics involved within the practice,

then they may be able to better identify difficulties in the children that they are interacting with each day and address these difficulties as needed. By educating the teachers, this may help to ensure that all children's needs are appropriately met, and that teachers may understand the appropriate challenges that children need to grow and succeed. Given this information, it is relevant for teachers to understand the concepts of occupational therapy, since it is not directly provided at the daycare site. Staffs should be educated on current information and research to ensure they are utilizing up-to-date practices when leading their students. If teachers have current foundational concepts and are able to properly communicate with parents, the children in their classes may be better served, and the staff may have more foundational concepts to rely upon. If children's needs are not met within their daily classrooms, they may develop problems as they continue to age, such as difficulty with motor control, social participation, and behavior regulation (Cosbey, Johnston, & Dunn, 2010; May-Benson & Koomar, 2010). This doctoral capstone project will focus on the education of staff within a daycare setting in order to improve their current knowledge and ability to implement practices into the daily routines of their classes.

The Adult Learning Theory

The Adult Learning Theory, which is also known as andragogy, was created by Malcolm Shepherd Knowles (Learning Theories, 2017). This theory will apply to the staff at Evergreen Children's Center Inc., as it will aid in creating a better understanding of how the adults may learn (Merriam, 2008). Having knowledge of this will allow the DCE student to apply this information to presentations and classroom collaborations with the staff. Knowles theory contains five assumptions of adult learners, each of which will be used to ensure teachers at the site are able to learn effectively. These assumptions include self-concept, past learning experience, readiness to learn, orientation to learning, and motivation to learn (Pappas, 2013).

The aspect of self-concept will be used to ensure that teachers feel they obtain enough knowledge on each topic so that they may be able to self-direct and be independent on classroom implementation (Pappas, 2013). When presentations to the staff and collaborating within the classroom, past learning experience will be used in order for the staff to share experiences with their peers. The DCE student will also use these experiences to as further opportunities for learning when completing education (Pappas, 2013). Readiness to learn occurs from the site expressing their needs and asking their own questions in order to achieve the answers they need (Pappas, 2013). Orientation to learning will be affected by staff learning to apply the topics discussed with ease, rather than having to delay action due to lack of knowledge. By learning from the DCE student, staff will be able to effectively apply concepts efficiently and without delay in order to achieve better outcomes within the classroom (Pappas, 2013). The last assumption of Knowles to be used will be motivation to learn, which will occur internally within the staff and drive them to have a desire to obtain more knowledge on the topics to use in their future (Pappas, 2013).

In addition to the five assumptions playing a role in the education of staff at the site, the four principles of Knowles theory will also be used to ensure optimal learning (Learning Theories, 2017). Since self-direction is to occur through the assumptions, adults will be given the opportunity to provide input into their learning through asking questions in their surveys (Learning Theories, 2017). This will help to ensure that staff are active in finding answers to questions they may have. Since adults have past experience, they will use this information to add to their previous knowledge, which will be done through reflecting on past experiences and relating this to the current learning (Merriam, 2008; Learning Theories, 2017). Next, due to adults wanting practical learning, the content will remain focused on the staff members work and

difficulties which may arise within their classrooms in order to ensure information is relatable to their situations (Learning Theories, 2017). Finally, learning will focus on problem solving by having constructive conversation with teachers to ensure that they are not memorizing the information presented, but are applying it within the classroom setting (Learning Theories, 2017).

The Person-Environment-Occupation-Performance Model

The model that will be used while at this site is the Person-Environment-Occupation-Performance (PEOP) model (Cole & Tufano, 2008). By using this model, the teachers will be able to gather more understanding of how children within their classrooms may be having difficulty, and how they may work to make changes within the environment. The person discussed will be the children, and the environment will vary depending on where the class is interacting (Cole & Tufano, 2008). The environment at Evergreen Children's Center Inc. may vary between the Art room, S.T.E.M. room, Evergreen room, Library, playground, woods, and lunchroom. These environments may affect the children in various ways, so it is important to consider each one in order to best understand the children. Next, the children's occupations will be taken into consideration, which may include writing, completing projects, playing and more. Lastly, the child's ability to perform a task will be noted, and then this information will be relayed to the teacher. By displaying the information through concepts of this model, the teachers will be better able to understand what children in their classes most need to succeed and where changes are needed to create the most optimal environment for students (Cole & Tufano, 2008).

This doctoral capstone project examines four areas in which need is identified within the site, and addresses these topics with the staff and teachers. Each topic is discussed below with information pertaining to a review of the literature regarding each topic.

Sensory Awareness

Sensory processing includes an individual's ability to process their senses so that they may properly participate in their daily activities (Case-Smith & O'Brien, 2015). Sensory functions are a vital part of each individual and are an important body function which help to structure a person and their ability to perform daily activities (American Occupational Therapy Association, 2014). Research has found that 95% of children with a diagnosed developmental disability have diagnosed sensory processing difficulties. In addition to this, at least 14% of Kindergarteners and 16% of elementary-aged children have diagnosed sensory difficulties without developmental disabilities (Watling & Mori, 2017). Sensory difficulties may include children having low registration, being sensation seeking, being sensory sensitive, or having sensory avoidance, and vary between individuals (Dunn, 2007). Although these percentages are known, this only includes those children with severe sensory difficulties which have been properly diagnosed, and is unknown at this time the percentage of children with sensory difficulties which have not been diagnosed (Watling & Mori, 2017).

When working with children, it is important to review the seven senses which are important components to a child's development (Watling & Mori, 2017). The seven senses include vision, auditory, gustatory, olfactory, tactile, vestibular, and proprioceptive (Watling & Mori, 2017). During childhood, it has been found that years three through seven are the most foundation for the future of an individual's sensory abilities (Case-Smith & O'Brien, 2015). This relates to the DCE site as the children in attendance range from the ages of eighteen months through eleven years. Although not all children in attendance fall within the age range of three to seven, it is still important for children to experience the seven senses prior to the age of three, to ensure they are properly prepared to lay a foundation, and after the age of seven to ensure that

continued growth and development may occur (Case-Smith & O'Brien, 2015). If children are able to take part in sensory exploration, which comes naturally to most children, then they will learn to appropriately respond to situations within their environment and learn to form typical behaviors (Case-Smith & O'Brien, 2015). It is important for teachers to understand that although they may not have severe difficulties, the children in their class may benefit from changes to their environment. Children who have unmet sensory needs have been shown to have difficulty with social participation, which affects their ability to properly participate in their daily occupations (Cosbey, Johnston, & Dunn, 2010). Also, fine motor difficulties and gross motor planning can become affected if a child has continued sensory difficulties that are not addressed properly (May-Benson & Koomar, 2010).

Behavior Modification

Behavior difficulties can arise at any age, and in a variety of ways such as temper tantrums, lack of participation, defiance, and more (Osterman & Bjorkqvist, 2010). This topic is important for teachers and staff to have an understanding of, as behaviors occur in all children. About eighty-seven percent of parents report that their children have behavioral regulation difficulties (Osterman & Bjorkqvist, 2010). About sixty-four percent of children ages two to three years old have behavior difficulties, which then lessens to about fifty-one percent of children older than five, and then only about four percent of children over age eight have the same difficulties (Osterman & Bjorkqvist, 2010). Hence, as children get older, they are less likely to experience behavioral difficulties; however, when situations occur, they last typically between five and ten minutes (Osterman & Bjorkqvist, 2010). Teachers should have a more complete understanding of this so they are aware what are behavior is typical, what they may do for certain behaviors, and how they can best address those in need within their classrooms.

Having increased exposure to the topic at this time of the DCE can educate staff on new topics in research as well as provide insight into behavior management techniques which have not yet been attempted at the site.

Behavior modification is the process of changing a behavioral pattern through an individual's learning (Morin, 2017). When working with children with behavioral difficulties, it is important to ensure that teachers are recognizing the individual and have the means to address situations as needed (Eyberg, Nelson, & Boggs, 2008). Without having resources available, staff may not be able to sufficiently manage a situation within their classroom, and may need additional help in a situation. By ensuring staff have a meaningful understanding of behavior modification, they may feel more competent in their ability to handle situations, and use the resources they have to properly execute a plan within the classroom (Hayes, Gardere, Abowd, & Truong, 2008).

Health and Wellness

When educating the staff on health and wellness in children it is important to educate on the seven dimensions of wellness, to ensure that staff is considering all components of an individual in their classroom (University of California Riverside, 2014). The seven dimensions which will be included are social, emotional, spiritual, environmental, occupational, intellectual, and physical (University of California Riverside, 2014). When educating the staff, some dimensions may be more relevant to the staff needs, these include physical, emotional, social, and intellectual (University of California Riverside, 2014). The Centers for Disease Control (CDC) released data regarding physical wellness which showed that from 2015 to 2016 one in every five school aged children has obesity (2018). Healthy eating habits are also important to children's physical wellness, as forty percent of children's daily intake is from sugars and solid

fats, and sugar-sweetened beverages are ten percent of children's daily intake (CDC, 2017). Due to the obesity rates among children, it is recommended that children should get at least sixty minutes of physical activity per day, while also be educated on healthy eating habits in order to promote better physical wellness (CDC, 2018).

Although individuals should be educated on physical health for promotion of healthy eating habits, it has also been shown that emotional and mental health may relate to individual eating habits and obesity (Russell-Mayhew, McVey, Bardick, & Ireland, 2012). Mental health diagnosis in children is becoming more prevalent and more of a concern as the ability to diagnose children earlier arises (NAMI, 2018). More than fifty percent of children between ages eight and fifteen receive services for mental health, and children with unmet mental health needs have the highest dropout rate of any group with disabilities (NAMI, 2018). By educating staff and health and wellness, they will have the opportunity for expanded knowledge on the topic and concepts involved in order to allow for proper classroom implementation.

Left Brain and Right Brain

When discussing left brain and right brain, it is important to consider how each hemisphere affects the body, and ensure integration occurs for proper development (Olgakabel, 2014). The left hemisphere is to be more involved with language and motor control, while the right brain is known more for spatial representation and attention (Serrien, Ivry, & Swinnen, 2006). However, it has been shown that although these areas are more focused within each hemisphere of the brain, they cannot fully develop without communication between the two hemispheres (Serrien, Ivry, & Swinnen, 2006).

Since each hemisphere has control over the opposing side of the body, proper integration will allow for bilateral coordination, crossing the midline, and proper developmental stages to

occur (Olgakabel, 2014). Both hemispheres of the brain are used depending on which task is being attempted by an individual, which allows individuals to complete tasks to the best of their abilities (BrainoBrain, 2016). Brain integration can occur through numerous forms, such as completing movements and exercise that involves usage of both hemispheres (Olgakabel, 2014). If an individual does not have proper integration between the hemispheres, they may not have the necessary skills to complete tasks and address challenges of daily living (Field, 2017). Individuals with decreased left brain and right brain integration also may lack flexibility, spontaneity, and problem solving skills (Field, 2017). Hence, it is important to ensure individuals are given a variety of activities to address each hemisphere and allow for growth in the brain.

After reviewing each of the topics chosen for this doctoral capstone experience, it can be seen that all topics are relevant to the staff at the daycare center, and the concepts apply to children of all ages in attendance. The purpose of this project is to educate the staff of Evergreen Children's Center Inc. on the topics of sensory awareness, behavior modification, health and wellness, and left brain/right brain, while working within the classrooms to identify areas of need and apply the topics in order to improve the knowledge and abilities of the staff.

Screening and Evaluation

When reviewing the literature it can be seen that teachers and staff being properly educated is important to the development of the child. If teachers do not understand the different aspects of their students, then they may not be able to help them to the best of their abilities. It has been shown that less than one-third of teachers feel they are able to properly incorporate different individual needs into their daily classroom (AOTA, 2017a). Before arriving at the site, it was determined that there was no occupational therapist working at or with the site. Children served by the daycare site are determined to be between the ages of eighteen months and eleven

years. When reviewing available occupational therapy services, early childhood services occur birth through the age of three, school-based therapy occurs beginning in Kindergarten and then throughout the child's education, and outpatient services cover through the age of eighteen for pediatrics (Opp, A, 2018; AOTA, 2016). Hence, all children attending this site are age appropriate for occupational therapy services, meaning that all topics which staff are being educated on are appropriate for the students in attendance.

After determining this information prior to arriving at the site, the student then met with the director of Evergreen Children's Center in order to discuss areas which were to be addressed with teachers for further development of skills, and hence conduct an assessment of their needs. The areas of need were determined to be sensory awareness, behavior modification, health and wellness, and left brain/right brain, as were previously discussed within the literature review. These areas of need were identified collaboratively between the DCE student and the site mentor. The DCE student had previous opportunities to interact with the daycare staff and classes in order to determine that the areas of need described were relevant to the DCE. Sensory awareness arose as a need due to staff questioning how they could improve sensory experiences, and acknowledge sensory difficulties within the children (Case-Smith & O'Brien, 2015). Behavior modification is a topic necessary for education so that staff feel competent in their ability to address varying behavior situations (Osterman & Bjorkqvist, 2010). Also, staff would have the knowledge base of various approaches to behaviors which are seen among children at the site (Morin, 2017). Health and wellness is needed to educate the staff on various aspects of health and wellness, including the seven dimensions of wellness, in order to ensure the staff has a holistic understanding of the topic (University of California Riverside, 2014). Lastly, left brain and right brain is a need for staff to ensure they are addressing both hemispheres of the

developing brain in the children, and providing opportunities for integration throughout daily activities. (Olgakabel, 2014). Through collaborative discussions with the site mentor, it was determined that the student would be educating staff on the four concepts identified, and that the DCE student would be working with the classrooms as a supplement to the education they are receiving.

To begin the screening process, the occupational therapy student began by observing within each classroom. This allowed for an understanding by the DCE student of daily schedules, activities, and expectations which the teachers had for their classes. In order to further evaluate understanding of the topics to be addressed, all staff member were provided with a survey. These surveys contained three Likert scale statements and an opportunity for teachers to ask their own questions as well. The Likert statements were self-scoring and on a range of one to five, where one is strongly disagree, two is disagree, three is neutral, four is agree, and five is strongly agree. The three statements included in the survey were as follows: I feel that I am competent about this topic, I feel that this topic relates to the class I am teaching, and I have resources available to me about this topic. By having the teachers answer the question “What would you like to learn about this topic? Are there any questions you have?” at the end of the survey, there was an opportunity to further evaluate areas of concern and ensure these were addressed later. Pre-test survey information was analyzed to assess the amount of education needed, the resources presently available, and to ensure questions were answered within presentations. These surveys are to be used for each topic, as a measure of pre and post intervention, see Appendix A.

Relation to Other Settings

Due to their relation to the DCE site, it is important to consider how occupational therapy plays a role within other practice settings which treat similar ages. School based occupational

therapy is a well-known setting in the field of occupational therapy. When a child receives school-based occupational therapy services, these typically occur beginning in Kindergarten, and continuing throughout a child's education. Twenty-five percent of occupational therapists work in a school based or early intervention setting (AJOT, 2017b), demonstrating the prevalence of this practice area. Within this setting children work with an occupational therapist to improve areas such as sensory processing (Watling & Mori, 2017), behavior modification (Osterman & Bjorkqvist, 2010), health and wellness (University of California Riverside, 2014), and left brain/right brain (Olgakabel, 2014) by completing assessments, evaluations, and collaborating with a multidisciplinary team. By working with a multidisciplinary team, occupational therapists in the school setting are able to create an Individualized Education Plan (IEP) (AJOT, 2017a). An IEP helps all staff who interact with a child in the school system to have knowledge on their needs for success in the classroom (AOTA, 2017a). Hence, it is important for staff within a daycare setting to also have knowledge on these topics so that they may understand the relation to their own classrooms, and work to ensure all children have the highest levels of success that they can.

At this point teachers at the DCE site are not receiving education that is current on these topics, and are then not able to implement the best practices into their daily work. By educating the teachers on the importance of engagement for their students in these topics, they will have more opportunity to improve the quality of life in the children attending their classes, as well as increase the children's performance in necessary areas. It is important for the doctoral capstone student to educate staff at the site on the topics identified in order to ensure the teachers are providing the best quality of care and improving the functional abilities of their students (AOTA, 2014). Having occupational therapy within a daycare setting is similar to the school setting

because the children at the daycare in the morning are attending pre-school. Also, even though pre-school ends prior to the afternoon, it is still filled with structured and educational time.

However, one difference between daycare and school settings is that those children attending school have the opportunity to receive occupational therapy, but those only attending pre-school at the doctoral capstone site do not have occupational therapy services at this time. This also relates to the teachers, as those teachers in the school setting have the opportunity to interact with an occupational therapist and understand how they may best serve children in their classes.

Teachers at the doctoral capstone site on the other hand do not have the resource of a knowledgeable occupational therapist to provide information on the best practice for their classroom.

Another setting where children can receive occupational therapy is the outpatient setting. If a child is attending outpatient therapy, their teacher may be unaware of difficulties they are having, and may have no communication with the therapist. The staff at the DCE site has communication with families and has knowledge on outside services some children are receiving, but staff still does not have the opportunity to interact with the therapists. Outpatient therapy services are also different than having occupational therapy within a pre-school setting, as these children would already be attending the pre-school where the service is offered. With outpatient therapy, parents have to arrange for separate times to pick up their children and take them to therapy; however, if a child is arranged to have therapy at pre-school, this could be incorporated into their schedule and not take additional time out of the family's day.

The Implementation Phase

After completing the needs assessment with the director and receiving feedback from surveys filled out by the staff, the implementation phase may begin. For each of the four topics

discussed, the same implementation plan was put into place, as each topic was focused on for four weeks. The student began by reviewing surveys and questions which staff had, and began to compile power points with relevant information. Also, the student completed observations within the classrooms to determine themes that may be relevant to educate teachers on for classroom modification. Presentations were given twice over each topic, so that staff had an opportunity to choose which session they would attend. This worked to ensure that all staff members were able to attend each topic, while also confirming that classes were able to be covered and staff did not become short-handed due to the presentations. All presentations took between forty-five and sixty minutes including staff questions. Each presentation contained information relevant to the topic, and examples which may be included within the classroom environment.

The information included on the individual topics comprised of themes that were addressed through staff questions, and student observations. Themes included within the sensory awareness power point presentation were sensory strategies, definitions of sensory processing, and information on the seven senses (Watling & Mori, 2017). The next topic of behavior modification included information on making behavior modification plans, potential causes of behaviors, and approaches to behaviors (Osterman & Bjorkqvist, 2010). Health and wellness included themes of mental health, and physical health (UCR, 2014). Left brain/right brain included themes of crossing midline, bilateral coordination, and occupations involved within the hemispheres of the brain (Olgakabel, 2014). All presentations were provided to the site in digital format for future use and reference after the student's departure.

After presentations were given, the doctoral capstone student returned to the classrooms to further educate teachers on how they may use the topics discussed to better their classrooms and the children's education. While in the classroom the student had conversations with each

teacher in order to ensure individual understanding. When a teacher had questions, the student was also able to demonstrate solutions through the one on one interactions to provide the best quality of care. Throughout the time at the site the student also compiled resources for the teachers to have after the doctoral capstone experience is completed. The resources included: a list of sensory objects at the site, lists of recommended activity videos for physical activity indoors, outlines for age appropriate guidelines, a behavior modification plan outline, and other resources as requested by the site, which were all kept within a binder to be left at the site, as well as digital copies of presentations were stored as well. Once this implementation was complete, surveys were re-administered to staff to track improvements, and final outcomes.

Staff Development

While working with the staff, development occurs throughout the implementation phase. Staff can develop their own skills through one on one interaction with the student, having questions answered, and working within their own classrooms. There is also an opportunity for staff to develop group skills at presentations. These presentations allow for staff members to ask questions to not only the student, but to their fellow staff members. This may provide alternative perspective to a situation. By creating these opportunities for further interaction, the staff also may learn to continue to use this questioning after the student leaves in order to receive differing perspectives on a situation and alternative solutions.

Leadership

The doctoral capstone student demonstrated leadership at the site in numerous ways. Presentations were all given by the student, which allowed the student to lead the staff group attending for forty-five to sixty minutes. This allowed the student to practice commanding a group to ensure all topics were covered, while also working collaboratively with a group to

ensure the presentation was inclusive, interactive, and answered all remaining questions. This was a valuable opportunity for the student to learn the components of presenting to a small group. Leadership also occurred through the student taking initiative within the classrooms to demonstrate strategies to staff, answer various questions that arose, and individual interactions with staff and students. This allowed the student to have the opportunity to learn leadership in individual situations and through taking more initiative. Also, the student was able to learn to be proactive through observations to determine what areas may become questions for staff in the future.

Outcomes

Pre and post survey information was compiled into figures to assess improvement after the implementation phase of the DCE. Ten staff members filled out the surveys for sensory awareness, while eleven staff members filled out the survey for behavior modification, health and wellness, and left brain/right brain due to additional staff attending the latter three sections. Sensory processing, covered weeks one through four, discussed the senses and they may be

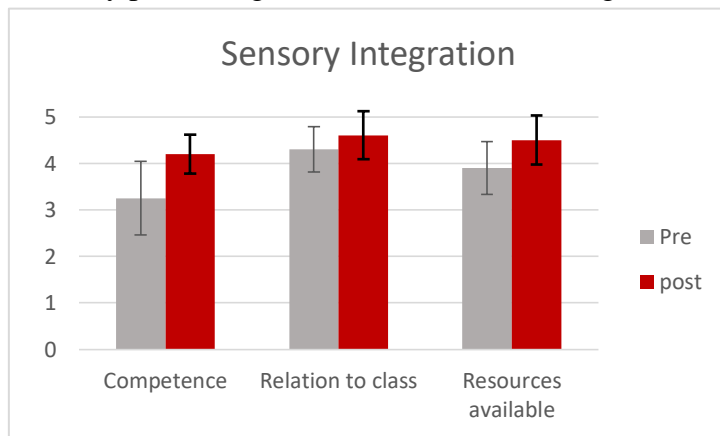


Figure 1. Sensory awareness results of pre and post surveys provided to ten staff members, showing increases in all areas.

incorporated into the classroom to benefit children's development (Watling & Mori, 2017). For sensory awareness, it can be seen in Figure 1 that after implementation occurred the teacher's level of competence, the teacher's ability to relate the topic to their class, and the amount of resources

the teacher obtained all increased. This demonstrates that teachers did feel that they were able to

have a greater understand and more ability to properly implement the concepts of sensory processing into their daily classrooms in order to meet the needs of their class. Staff was also able to see that this topic related to their class more than they originally believed. Additional resources were provided to the site through online resources, and handouts included within the resource binder regarding sensory clothing, sensory items available throughout the site, and suggested sensory activities. Throughout classroom time, the DCE student was able to demonstrate sensory table ideas, adaptive materials for sensory needs children may face, concepts for sensory inclusive art projects, and other various ways of activating all of a child's senses throughout their daily routine.

Behavior modification was the second topic discussed during weeks five through eight. This topic covered what it means for a child to have behaviors requiring modification, and how teachers can manage through with challenging behaviors (Osterman & Bjorkqvist, 2010). Results of the behavior modification topic can be seen in Figure 2. The surveys for this topic were completed by eleven staff members. This shows that staff felt more knowledge and competence

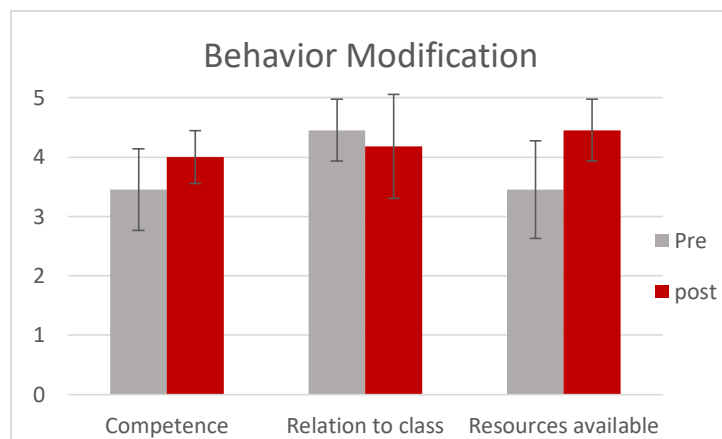


Figure 2. Behavior modification results of pre and post surveys provided to eleven staff members. Showing increases in competence and resources.

on the topic after implementation of the presentation and the DCE students working within the classrooms. Staff also felt that they had greater resources available, likely due to the inclusion of a behavior modification plan template, and online resources. When looking at relation to class it can be seen that less

teachers felt this topic related to their classroom. From discussion with teachers while working in

the classrooms, it was determined that numerous staff members believed children in their classes had behaviors which required modification; however, after implementation the teachers expressed that they no longer felt their children had behaviors requiring modification, but instead that these behaviors were typical of the age and could be handled in other ways. While working in the classrooms, the DCE student was able to demonstrate techniques for coping with children having behavior difficulties, and preventing behaviors from occurring by removing triggers within the child's environment.

The health and wellness topic at this site, covered weeks nine through twelve, discussed the importance of health components within a child's life (University of California Riverside, 2014). It can be seen in Figure 3 that staff improved in all areas after the implementation phase



Figure 3. Health and wellness results of pre and post surveys given to eleven staff members, showing increases in all areas.

was completed. This demonstrates that the staff felt more competence, relation to class and resources availability after the presentation and classroom interactions. Staff were provided with resources of recommended books for children on various aspects of health, as well as

recommended songs that include encouragement of healthy habits. A compiled list of indoor activities allowing for physical activity to occur was also provided to be used for days when the classes are unable to go outside. Throughout classroom time the DCE student was able to demonstrate hope to talk to children about their feelings, such as using social stories, and provide the staff present with feedback on classroom implementation.

The left brain/right brain portion of the DCE is in the implementation phase, as it is being completed weeks thirteen through sixteen (Olgakabel, 2014). Figure 4 demonstrates the increases seen in all areas of survey completion. This demonstrates that again staff felt more competence, relation to class and resource availability after implementation. Staff were provided with

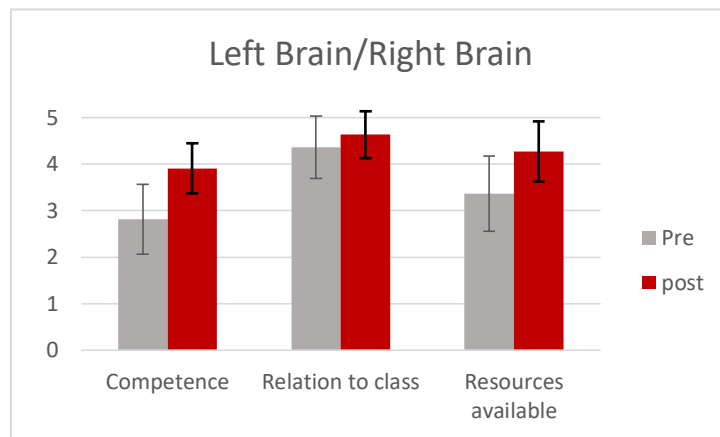


Figure 4. Left brain/right brain results of pre and post surveys given to eleven staff members, showing increases in all areas.

resources of recommended exercises, information on the hemispheres of the brain, and recommended activity to encourage brain integration.

Throughout classroom time the DCE student was able to demonstrate proper implementation of exercises. In addition staff then had the opportunity to understand what challenges with

crossing the midline may be, and how exercises may come to help those in their classrooms.

Overall it can be seen that the staff experienced increases in their competence, relation to class, and resource availability after implementation. This demonstrates that the staff did benefit from receiving education on occupational therapy concepts.

Quality Improvement & Impact on Society

Throughout the doctoral capstone experience the DCE student discussed with the staff at the site their expectations and the areas of their classrooms which may need addressed. This allowed for continued conversation throughout the experience to ensure the site was provided with what was needed to meet their ongoing needs. The student also had conversation with the site mentor throughout the DCE to ensure their needs and expectations were also met. A resource

binder being left at the site includes up-to-date information which the site may use in order to continue implementation within the classroom. After the DCE student leaves the site, it will be the responsibility of the director, or individually assigned teachers to continue implementation of the concepts within the classrooms.

Conclusion

Overall, it can be seen that when working with teachers and staff in a daycare setting, there is an overall improvement on teacher knowledge and concept implementation within the classroom. Staff are now more able to provide a variety of solutions for situations which may arise within their classroom. Throughout the experience staff had the opportunity to learn more about the situations they face daily, and the action they may take to face challenges their students obtain. Although it cannot be measured within the time allotted at this site, this will likely have a positive impact on the children in attendance at the site, as they may receive more educated care.

Overall Learning

By completing the DCE, the student was provided with the opportunity for interaction with a variety of individuals, and a chance to learn valuable experiences for future practice. The student had the opportunity to work with all staff members at the site, while also having the chance to work with children. Communication was a key component in these interactions, and was vital to the execution of the DCE. Oral communication was the main method of communication at the DCE site. Presentations were provided on each topic orally, and discussions throughout presentations also occurred to ensure proper understanding while information was being provided. While working in the classrooms, oral communication was vital to ensuring that the DCE student had a proper understanding of classroom functions. In addition, this form of communication was important to ensure that staff understood what the student was

observing within the classroom, which children may be having difficulties, and how the staff may come to address the children's various needs. This allowed for a dialogue to occur between the staff and the DCE student to ensure proper understanding of implementation and modifications necessary within each classroom. Nonverbal communication occurred mostly through the DCE student's interaction with children in the classrooms. By having these interactions, the DCE student was able to demonstrate to the staff, in a nonverbal manner, actions to take in a given situation to help a child best succeed. Written communication was completed first by the staff filling out surveys, and then by the student providing the site with handouts and resources for future use. These handouts were also provided to parents, by the staff, which created a greater outreach to the children's families and the public. Notes also provided a way for written communication to occur. If staff members had questions before or after the student was on site, they would leave notes in the main office for the student to address when they returned. Dissemination of this paper also provided written communication for those involved within the profession, or those of the public wanting to learn more about the topics included.

From this experience, the student learn the aspects of the Adult Learning Theory, and how to best use these principles to educate adults on various topics (Learning Theories, 2017). This will be beneficial to future practice as the student as more experience educating adults, and can apply the newly practiced principles of the Adult Learning Theory to individuals who may be seen in the future. The student also had the opportunity to apply the PEOP model to the DCE, which provided a chance for the student to apply these concepts and examine the individual roles of each person, their environment, their occupation, and their performance in the topic areas discussed (Cole & Tufano, 2008). This was applied to the staff, to ensure their knowledge and

understanding of each topic, but also to the children in attendance to ensure that their needs were being identified and addressed as necessary.

While the experience of using theories and models will be beneficial to the student's future practice, the chance to work with individuals on education was extremely beneficial. Opportunities for interaction with various ages was valuable to the DCE student as experience was gained working with different populations. Through working with the teachers, the student had the opportunity for further interaction with adults; however, there also was opportunity to work with and interact with the children at the site. By interacting with all ages throughout the time at the site, the student gained a valuable understanding of the role occupational therapy may play despite the age of an individual. Completing the doctoral capstone experience provided the student with insight into how to educate adults, and work to develop programs in order to educate a population on the importance of occupational therapy concepts.

Appendix A

Pre-test Survey

Topic:

-I feel that I am competent about this topic.

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

-I feel that this topic relates to the class I am teaching.

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

-I have resources available to me about this topic.

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

What would you like to learn about this topic? Are there any questions you have?

Post-test Survey

Topic:

-I feel that I am competent about this topic.

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

-I feel that this topic relates to the class I am teaching.

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

-I have resources available to me about this topic.

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

Resources

- American Occupational Therapy Association. (2014). Occupational therapy practice framework: Domain and process (3rd ed.). *American Journal of Occupational Therapy*, 68(Suppl. 1). doi: <http://dx.doi.org/10.5014/ajot.2014.682006>
- American Occupational Therapy Association (AOTA) (2016). Fact sheet: Occupational therapy in school settings. *American Occupational Therapy Association*. Retrieved from: <https://www.aota.org/~media/Corporate/Files/AboutOT/Professionals/WhatIsOT/CY/Fact-Sheets/School%20Settings%20fact%20sheet.pdf>
- American Journal of Occupational Therapy (AJOT) (2017a). Guidelines for occupational therapy services in early intervention and schools. *American Journal of Occupational Therapy*, 71 (2). Retrieved from: <http://ajot.aota.org/terms>
- American Journal of Occupational Therapy (AJOT) (2017b). Occupational therapy's role in inclusion and school routines. *American Journal of Occupational Therapy*. Retrieved from: <https://www.aota.org/~media/Corporate/Files/Secure/Practice/Children/OTs-Role-in-Inclusion-Infographic.pdf>
- BrainoBrain (2016). Integrating the two hemispheres of the brain. *BrainoBrain*. Retrieved from: <http://www.brainobrain.cz/en/2016/06/26/integrating-the-two-hemispheres-of-the-brain/>
- Case-Smith, J., & O'Brien, J.C. (2015). Occupational therapy for children and adolescents. (7th ed.). St. Louis, MO: Elsevier Mosby.
- Centers for Disease Control (CDC) (2017). Childhood nutrition facts. *Centers for Disease Control and Prevention*. Retrieved from: <https://www.cdc.gov/healthyschools/nutrition/facts.htm>

- Centers for Disease Control (CDC) (2018). Childhood obesity facts. *Centers for Disease Control and Prevention*. Retrieved from: <https://www.cdc.gov/healthyschools/obesity/facts.htm>
- Cole, M.B., & Tufano, R. (2008). Applied theories in occupational therapy: A practical approach. Thorofare, NJ: SLACK, Inc.
- Cosbey, J., Johnston, S. S., & Dunn, M. L. (2010). Sensory processing disorders and social participation. *American Journal of Occupational Therapy*, 64, 462–473. doi: 10.5014/ajot.2010.09076
- Dunn, W. (2007). Supporting children to participate successfully in everyday life by using sensory processing knowledge. *Infants & Young Children*, 20(2). 84-101.
- Field, T. A. (2017). Integrating left-brain and right-brain: The neuroscience of effective counseling. *The Professional Counselor*. Retrieved from: <http://tpcjournal.nbcc.org/integrating-left-brain-and-right-brain-the-neuroscience-of-effective-counseling/>
- Eyberg, S. M., Nelson, M. M., Boggs, S. R. (2008). Evidence-based psychosocial treatments for children and adolescents with disruptive behavior. *Journal of Clinical Child & Adolescent Psychology*, 37(1), 215-237. doi: 10.1080/15374410701820117
- Hayes, G. R., Gardere, L. M., Abowd, G. D., & Truong, K. N. (2008). Carelog: A selective archiving tool for behavior management in schools. *Tools for Education*. Retrieved from: <https://people.eng.unimelb.edu.au/vkostakos/courses/ubicomp10S/papers/healthcare/hayes-08.pdf>
- Learning Theories (2017). Andragogy-Adult learning theory (Knowles). *Learning Theories*. Retrieved from: <https://www.learning-theories.com/andragogy-adult-learning-theory-knowles.html>

- May-Benson, T. A., & Koomar, J. A. (2010). Systematic review of the research evidence examining the effectiveness of interventions using a sensory integrative approach for children. *American Journal of Occupational Therapy*, 64, 403–414. doi: 10.5014/ajot.2010.09071
- Merriam, S. B. (2008). Adult learning theory for the twenty-first century. *Wiley InterScience: New Directions for Adult and Continuing Education*, 119, 93-98. doi: 10.1002/ace
- Morin, A. (2017). What is behavior modification? *VeryWell*. Retrieved from: <https://www.verywell.com/what-is-behavior-modification-1094788>
- National Alliance on Mental Illness (NAMI). (2018). Mental health by the numbers. *National Alliance on Mental Illness*. Retrieved from: <https://www.nami.org/learn-more/mental-health-by-the-numbers>
- Olgakabel. (2014). How to integrate your right and left brain through movement. *Sequence Wiz*. Retrieved from: <http://sequencewiz.org/2014/08/13/integrating-right-and-left-brain/>
- Opp, A. (2018). Occupational therapy in early intervention: Helping children succeed. *American Occupational Therapy Association*. Retrieved from: <https://www.aota.org/About-Occupational-Therapy/Professionals/CY/Articles/Early-Intervention.aspx>
- Osterman, K., & Bjorkqvist, K. (2010). A cross-sectional of onset, cessation, frequency, and duration of children's temper tantrums in a nonclinical sample. *Psychological Reports*, 106(2), 448-454. doi: 10.2466/PRO.106.2.448-454
- Pappas, C. (2013). The adult learning theory-Andragogy-of Malcolm Knowles. *eLearning Industry*. Retrieved from: <https://elearningindustry.com/the-adult-learning-theory-andragogy-of-malcolm-knowles>

- Russel-Mayhew, S., McVey, G., Bardick, A., & Ireland, A. (2012). Mental health, wellness, and childhood overweight/obesity. *Journal of Obesity*, 1-9. doi: 10.1155/2012/281801
- Serrien, D. J., Ivry, R. B., & Swinnen, S. P. (2006). Dynamics of hemispheric specialization and integration in the context of motor control. *Nature Reviews: Neuroscience*, 7. 160-167.
- Retrieved from: <http://sequencewiz.org/wp-content/uploads/2014/08/Dynamics-of-hemispheric-specialization.pdf>
- United Census Bureau. (2011). Child care in the 21st century. Retrieved from: https://www.census.gov/newsroom/pdf/cspan_childcare_slides.pdf
- University of California Riverside (2014). Seven Dimensions of Wellness. *UC Riverside*.
- Retrieved from: https://wellness.ucr.edu/seven_dimensions.html
- Watling, R., Mori, A. B. (2017). Frequently asked questions (FAQ) about: Ayres sensory integration. *American Occupational Therapy Association*, 1-5.