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Increasing Independence and Participation in Mealtimes for Children with Feeding Problems: A
Feeding and Eating Program

Elizabeth Mathews

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Alison Nichols, OTR, OTD

A Capstone Project Entitled

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By

Elizabeth Mathews, OTS

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

Feeding and eating problems are common among children with and without disabilities and can have long lasting adverse effects on both the child and their family. After conducting a needs assessment at Bloom Pediatric Therapy, it was determined that Bloom and their clients would benefit from a structured eating program. The purpose of this Doctoral Capstone Experience (DCE) was to create and implement a program to increase independence and participation during mealtimes for children with eating problems. The program included eight handouts, each created to meet a specific discovered need. The handouts included: a session form, program information, eating problem facts, calorie boosters, food lists, food inventory checklist, homework form, and eating intake form. To evaluate the effectiveness of the program, the researcher utilized survey methodology in the form of a paper questionnaire to collect feedback about Bloom's eating therapy before and after the program was implemented. Parents (pre- $n=9$; post- $n=7$) reported greater satisfaction with their child's eating (pre-mean: 1.89; post-mean: 3.29) and reported their child ate an increased number of foods (pre-mean: 1.78; post-mean: 2.57). Overall, the program increased client satisfaction and improved parent reports of their child's participation and independence with eating.

Increasing Independence and Participation in Mealtimes for Children with Feeding Problems: A Feeding and Eating Program

Eating is an important daily occupation that begins in infancy and continues throughout life (Absolom & Roberts, 2011). Eating problems are common among children, and are one of the most frequent concerns parents discuss with pediatric health care professionals (Gueron-Sela, Atzaba-Poria, Meiri, & Yerushalmi, 2011). These problems can also have an effect on neurological and psychomotor development (Bryant-Waugh, Markham, Kreipe, & Walsh, 2010; Sharp, Jaquess, Morton, & Herzinger, 2010), as well as increase caregiver stress (Greer, Gulotta, Masler, & Laud, 2007). Occupational therapists and occupational therapy assistants (OT practitioners) are uniquely qualified to address these eating problems (American Occupational Therapy Association [AOTA], 2017). The purpose of this doctoral capstone experience (DCE) is to create and implement a feeding and eating program at a pediatric therapy clinic with the goal of increasing independence and participation during mealtimes for children with eating difficulties.

Review of Literature

Feeding and Eating

The process of bringing food from the environment into the stomach is a complex task that involves feeding, eating, and swallowing. AOTA defines feeding as “setting up, arranging, and bringing food [or fluid] from the plate or cup to the mouth” while it defines eating as “keeping and manipulating food or fluid in the mouth and swallowing it” (AOTA, 2014a, p. S19). Swallowing is defined as “moving food from the mouth to the stomach” (AOTA, 2014a, S19). For the purposes of this paper, unless otherwise specified, the process of feeding, eating and swallowing will be referred to simply as eating. Eating in its simplest form is the “process

of taking in adequate nutrition” which is “essential for normal growth and development” (Case-Smith & O’Brien, 2015, p. 389). It is also important for health and wellness as it plays a critical role in pediatric emotional, social, and cultural maturation (Case-Smith & O’Brien, 2015).

Eating is the most complex physical task individuals participate in, as it utilizes all of the body’s systems including many skeletal muscles, the brain, cranial nerves, gastrointestinal tract, heart, and the vascular, respiratory, endocrine and metabolic systems (Toomey, 2002).

Swallowing alone involves six cranial nerves (McCaffrey, 2013) and approximately 50 pairs of muscles (National Institute on Deafness and Other Communication Disorders, 2018).

Development of Eating

As nutritional requirements continually change from birth to adolescence, so does a child’s eating development, beginning from total dependence and moving toward independent self-feeding (Case-Smith & O’Brien, 2015). For the first month following birth, the ability to manage the physical coordination of eating is automatic but from one to six months of age, primitive reflexes—such as rooting, sucking, and swallowing—take over and pathways form in the brain for sensory and motor control over eating (Toomey, 2002). By six months, eating is a learned behavior (Toomey, 2002). Dr. Kay Toomey (2002), a pediatric psychologist and developer of the Sequential Oral Sensory (SOS) approach to feeding, identified the following six skills as necessary for successful eating: postural stability, oral-motor skills, jaw skills, sensory skills, hand-to-mouth skills, and parenting skills.

Postural stability. Postural stability or balance (Pendleton & Schultz-Krohn, 2017) refers to the ability to maintain the body’s position within space (Shumway-Cook & Woollacott, 2007). As foods become more difficult to manage, the ability to sit upright is critical for eating

and can be affected not only by the child's motor ability to control postural stability but the chair supporting the child's body (Toomey, 2002).

Oral-motor skills. The oral-motor skills necessary for table food differ from those utilized for taking the breast or bottle (Toomey, 2002). The tongue transitions from forward and backward movements during breast or bottle feeding to waves that move the food from the front to the back of the mouth when eating table food (Toomey, 2002). As the child ages the tongue is able to cup utensils, and lip closure occurs (Wolf & Glass, 1992). Tongue lateralization, the side to side movement of the tongue that places bites of food onto the molars to be chewed, is the skill necessary to transition from purees to more solid food (Toomey, 2002). Without tongue lateralization, food may become stuck on the tongue and cause gagging (Toomey, 2002). This skill is extremely important as children who often experience gagging may associate this unpleasantness with eating and might avoid certain foods or all foods completely (Toomey, 2002).

Jaw skills. The jaw is used minimally for breast or bottle eating, utilized only for compression movements; during spoon eating, it is utilized only for open and closing motions (Toomey, 2002). Jaw skills are necessary beginning at nine to ten months of age, as the child learns to break food apart by an up-and-down movement pattern called munching (Toomey, 2002). This munching pattern evolves into a more rotary movement at 12 to 14 months as the child is introduced to more complex and chewier foods (Wolf & Glass, 1992).

Sensory skills. Eating involves the integration of all sensory systems including not only smelling, seeing, hearing, tasting, and touching, but also balance, body awareness, and proprioceptive input or information from the joints (Toomey, 2002). For successful eating, this integration must occur with each chewing motion:

the sight of the food changes as it is chewed, how it feels changes, what it sounds like in the mouth changes, the taste and the smell actually change, and adjustments need to be made in balance, location of the food, and pressure being exerted (Toomey, 2002, p. 6).

Hand-to-mouth skills. Finger feeding and hand-to-mouth skills align with the fine and gross motor skills the child is developing. At four to six months, the child is reaching and transferring objects from one hand to another (Toomey, 2002). By six months the child has a palmar grasp and can rake food into their palm and bring it to the mouth (Toomey, 2002). Around eight to nine months, the child has a radial-digital grasp which allows the food to be held on one end and explored in the mouth on the other end (Toomey, 2002). At 10 to 12 months, the child uses a pincer grasp and is able to isolate picking up small pieces of food and place in the mouth (Toomey, 2002). By 14 to 16 months, self-feeding skills are typically mastered, then utensil use improves at two years and is mastered by age three (Toomey, 2002).

Parenting skills. A child's food preferences are strongly correlated to other family members (Skinner et al., 1998). Parents are responsible for where, when, and what the child eats (Phalen, 2013). Parents need to be mindful of the potential signals they are sending about food (Toomey, 2002). If a child senses that a parent dislikes a food or views it as unsafe, the child may reject the food (Toomey, 2002). Parents need to teach their child not only how to eat with developmentally appropriate food, but introduce a variety of foods on multiple occasions (Toomey, 2002). Mealtimes should be enjoyable, allowing the child to explore the food in fun and messy ways (Toomey, 2002).

Eating Concerns

Eating problems are common among children occurring in up to 50% of those typically developing (Phalen, 2013) and up to 80% of children with atypical development (Fishbein,

Benton, & Struthers, 2014). This occurrence is even higher within specific populations, such as autism spectrum disorder (ASD), where the prevalence is estimated to be as high as 90% (Kodak & Piazza, 2008). Pediatric eating problems can often last four to six years (Dahl, Rydell, & Sundelin, 1994; Dahl & Sundelin, 1992) and are thought to be correlated to adolescent and adult eating disorders (Marchi & Cohen, 1990; Kotler, Cohen, Davies, Pine, & Walsh, 2001). The following are pediatric conditions associated with eating problems: prematurity; chromosomal or genetic abnormalities, such as Down syndrome; craniofacial abnormalities, such as cleft palate or Pierre-Robin syndrome; gastrointestinal disorders, such as chronic constipation or reflux disease; acquired brain impairments, such as cerebral palsy, stroke, or traumatic brain injury; and neurodevelopmental disorders, such as intellectual disability or ASD (Phalen, 2013).

The American Psychiatric Association defines feeding and eating disorders in the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (2013) as a “persistent disturbance of eating or eating-related behavior that results in the altered consumption or absorption of food and that significantly impairs physical health or psychosocial functioning” (p. 329). Eating problems are expansive and varied including:

dysphagia (swallowing difficulty), feeding aversion (refusal to eat), oral defensiveness (gags or chokes easily while eating, resistant to tooth brushing), tactile sensitivity (increased sensitivity to touch), problem eating (restrictive range or variety of foods, usually fewer than 20 foods accepted, refuses entire categories of food textures or nutrition groups), picky eating (at least 30 foods accepted, eats at least 1 food from most food textures or nutrition group), failure to thrive (poor growth and weight loss), and related disorders (Fishbein et al., 2014, p. 636).

Eating problems are associated with health concerns including “adverse effects on nutrition, overall development, and general well-being” (Case-Smith & O’Brien, 2015, p. 390). In the acute phase, consequences can include poor growth, vulnerability to prolonged sickness, cognitive development deficits, and future eating disorders (Chatoor & Macaoay, 2008). Sharp et al., (2010) compiled from previous literature the following negative outcomes associated with chronic eating problems: developmental and psychological impairments, social deficits, malnutrition, decreased academic success, feeding tube placement or other invasive medical procedures, and even death.

Impact on Caregiver and Family

Eating is a shared process which involves complicated interactions between the parent and child (Gueron-Sela et al., 2011). Therefore, eating problems affect the entire family (Martorana, Bove, & Scarcelli, 2008). Stress is created for both the child and parents when mealtime participation is challenging (Nichols, Wasemann, Coatie, Moon, & Weller, 2018). This stress can lead to aversions to mealtimes and tension throughout the day (Silverman et al., 2013). Ultimately these negative experiences can lead to a decrease in quality of life for both the caregiver, and family (Fishbein et al., 2014). Parenting stress resulting from eating problems is equivalent to or exceeds that observed with other lasting pediatric disorders (Pedersen, Parsons, & Dewey, 2004).

Eating Therapy Settings

Eating problems can be addressed in a number of settings and include any combination of the following: inpatient or outpatient therapy, group or individual therapy, and intensive or weekly sessions. Different combinations are chosen based on each child’s needs, including the intensity of the eating problem. Intensive eating programs are generally for children with severe

eating problems (Dempster, Burdo-Hartman, Halpin, & Williams, 2015) who have often already failed traditional outpatient eating therapy (Linscheid, 2006). In a study comparing inpatient and outpatient settings, van der Gaag & Münow (2014) found inpatient treatment to be more successful but outpatient treatment to have fewer relapses. The duration of inpatient treatment is often shorter than outpatient treatment (van der Gaag & Münow, 2014), but this is not always feasible given the intensity of inpatient treatments. Outpatient settings are frequently utilized to address eating problems and have demonstrated good results (van der Gaag & Münow, 2014). There is limited research on group interventions for pediatric eating problems (van der Gaag & Münow, 2014).

Occupational Therapy

Occupational therapy (OT) has a long history of expertise in activities of daily living (ADL), including the eating performance of individuals across the lifespan (AOTA, 2017). OT practitioners possess the training, knowledge, and abilities needed to provide comprehensive management of eating problems including evaluations and interventions (AOTA, 2017). Due to the profession's holistic view, OT practitioners are uniquely qualified to address eating problems as practitioners assess "not only the physiological factors but also the psychosocial, cultural, and environmental factors involved with these aspects of daily performance" (AOTA, 2017, p. 1).

OT interventions focus on facilitating an individual's ability to participate in valued and fulfilling ADL related to eating, such as "eating independently, joining friends for lunch, and feeding a child" (AOTA, 2017, p.1). Interventions often involve not only the client but others including the family and caregiver (AOTA, 2017). Interventions can include positioning, adaptive equipment, environmental modification, eating strategies or techniques, and education to the client or caregiver (AOTA, 2017).

With children, OT practitioners frequently focus on increasing eating participation and improving mealtime behaviors by enhancing the mechanics of eating or promoting eating interactions (Howe & Wang, 2013). OT practitioners work with parents to enhance positive caregiver and environmental interactions (Howe & Wang, 2013). Some of the approaches to improving the mechanics of eating include: “establishing a developmental sequence of self-feeding skills,” such as teaching the child to hold a utensil; “improving acceptance of a wide variety of foods and textures,” by “using various sensorimotor-based feeding strategies or behavioral modification methods to improve feeding behaviors of children who have restricted food preferences or food aversion”; and “improving oral—motor skills,” such as sucking or chewing (Howe & Wang, 2013, p. 405-406).

Project Overview

Project Site and Targeted Population

Bloom Pediatric Therapy (Bloom) is a privately owned outpatient pediatric clinic in Bloomington, Indiana that began operating in June 2017 (Bloom Pediatric Therapy, 2017b). This clinic provides occupational therapy, physical therapy, and speech therapy services (Bloom Pediatric Therapy, 2017a). Bloom Pediatric Therapy (2017a) strives to assist every child to enjoy being a kid and reach his or her full potential. Bloom provides holistic, fun and encouraging therapy services that involve the entire family and everyday life (Bloom Pediatric Therapy, 2017a).

The OT department at Bloom is comprised of two occupational therapists, both of whom are well-trained in addressing eating difficulties (Bloom Pediatric Therapy, 2017b). There is not, however, currently an eating program in place. Both therapists complete eating evaluations and interventions based on their own personal training, style, and experiences. There are a variety of

approaches the therapists are trained in, including SOS, food chaining, and other nonspecific approaches.

Forty percent of the children on the OT caseload at Bloom are being treated for eating difficulties. This includes a wide variety of different diagnoses and conditions, as well as a range of ages. Eating appointments are generally one time per week and last 30-60 minutes.

Typically, children are assigned to one therapist, but often due to scheduling conflicts, the child might be seen by either therapist on different occasions.

Purpose

The purpose of this DCE was to develop and implement an eating program for Bloom Pediatric Therapy. This included creating standard handouts such as a food checklist, a parent questionnaire, and many others. Additionally, the program encompassed a way to hold parents more accountable to promote carryover from week to week and ensured a more defined starting and ending point for therapy. The program was designed to improve the independence and participation with mealtime for children with eating difficulties.

This program will be beneficial for Bloom as it served to create a more unified approach to eating throughout the organization. This may help provide a smoother transition for kids during scheduling conflicts when they must be seen by a different therapist. Additionally, creating educational information and handouts for parents and caregivers may improve quality of care and increase carryover at home.

Theoretical Framework

The approach of this eating program is guided by the Ecology of Human Performance (EHP) theory/model, as well as the sensory integration (SI) and behavioral frames of reference, including Albert Bandura's social learning theory.

Ecology of human performance. Eating problems are affected by the child's environment and the caregivers involved. This aligns with EHP's transactional contextualism which suggests that an individual affects and is affected by their environment and environmental press, indicating different environments may force different behaviors (Brown, 2014). This supports the idea that caregiver stress affects the child and the child affects the caregivers' stress.

EHP generally refers to the person as an individual, but for this project the person will instead be the population of children with eating problems. Performance range, which is based on the "transaction between the person and context," will represent the ability to functionally participate in mealtime (Cole & Tufano, 2008, p. 119). For a child to be successful, the performance range needs to grow and encompass as many tasks as possible. This is done by increasing the person's skills and abilities or by increasing the context. This piece is extremely important in guiding this project because not only do the child's skills and abilities need to be addressed but so does the child's context, which includes the child's supports, family, customs, and environment.

Sensory integration. Sensory integration (SI) was originally developed by A. Jean Ayres for children with learning disabilities and is defined by neuroscientists as the "brain's ability to organize sensory information received from the body and environment, and to produce an adaptive response" (Cole & Tufano, 2008, p. 229). Sensory skills were the fourth skill identified earlier as necessary for successful eating (Toomey, 2002). Several studies, including a systematic review by Koenig & Rudney (2010), demonstrated the correlation between sensory processing difficulties and challenges with eating. The goals of SI are to normalize sensory processing and produce an adaptive response (Cole & Tufano, 2008). According to SI, change can occur through guided sensory input (Cole & Tufano, 2008). This is because "the brain,

especially the young brain, is naturally malleable” (Ayres, 1989, p. 12), which means it has the “ability to reorganize itself in response to intervention” (Cole & Tufano, 2008, p. 229). This is true for eating because it involves the integration of all the sensory systems (Toomey, 2002). Therefore, this program’s eating sessions should include guided sensory input with food so the child can produce appropriate and adaptive responses.

Utilizing SI, the OT practitioner’s role should be aiding clients in identifying obtainable and socially acceptable tasks that contain the intensity and type of sensation needed to regulate sensory processing and allow an adaptive response to be produced (Cole & Tufano, 2008). Engagement in these activities allow the child to better regulate their sensory input and ideally increase their acceptance or tolerance of foods.

Behavioral approaches. According to the behavioral frames of references, behavior is learned and can therefore be reshaped with reinforcement (Cole & Tufano, 2008). Reinforced behaviors are often repeated (Cole & Tufano, 2008). For eating problems, desired actions and behaviors can be reinforced so that they continue. Intermittent positive reinforcement is the best way to promote desired behaviors, because rewards are unpredictable (Cole & Tufano, 2008). Shaping is reinforcing a desired behavior again and again until the individual learns to do the task (Cole & Tufano, 2008). Following behavioral approaches, the program will include both intermittent positive reinforcement and shaping. Additionally, due to the numerous steps involved in eating, the program will also include chaining with these steps. For example, when a new food is introduced the child will only be asked to tolerate it in the room and slowly move through a number of steps until the child is comfortable with touching the food and ideally ultimately eating it.

Albert Bandura's social learning theory. Bandura's social learning theory builds on reinforcement by introducing vicarious reinforcement, which suggests behaviors can not only be directly reinforced but can be reinforced by observing the reinforcement of others' behavior (Cronin & Mandich, 2015). Bandura's theory explains how human behavior is learned by considering the interaction between the person, behavior, and environment (Cole & Tufano, 2008). After six months, eating becomes a learned behavior (Toomey, 2002). Food preferences are influenced by many environmental factors including food exposure and obtainability (Sullivan & Birch, 1990), monitoring of food intake by parents (Klesges, Stein, Eck, Isbell & Klesges, 1991), and mealtime activities such as watching television (Coon, Goldberg, Rogers & Tucker, 2001). For eating problems, it is important to address not only the person and their behaviors, but also the environment including food exposure. Literature suggests food preferences increase with repeated exposure; two-year-olds require ten or more exposures (Birch & Marlin, 1982) and children ages four to five require eight to 15 exposures (Sullivan & Birch, 1990). For this eating program, food will be presented multiple times to increase exposure with the hopes of increasing the child's preferences.

Utilizing social learning theory as a guide, this project will strive to address all environmental factors. By age eight, a child's environmental influences on food expand outside the family to include peers (Birch, 1980), preschool or daycare (Briley, Jastrow, Vickers, & Roberts-Gray, 1999), school meals (Cullen, Eagan, Baranowski, & Owen, 2000), and nutritional education programs provided by the school (Resnicow et al., 1997). Skinner, Carruth, Bounds and Ziegler (2002) found that despite these added environmental influences the mother remains the primary influence of food preference. From this finding, Skinner et al. (2002) concluded mothers need assistance in teaching their child to enjoy different types of foods and should be

taught “effective strategies for coping with the transition from infant/junior foods to table foods” (p. 1646). Fraser, Wallis & John (2004) found a single parent education session significantly improved parent-rated attitudes and feelings about eating, as well as child mealtime behavior. This project will include education to parents/caregivers in the form of handouts.

The environment in which each eating event occurs and the event itself may contribute to the development of eating patterns in early and middle childhood (Skinner et al., 2002). For eating programs, it is important to provide positive interactions with foods. This means never forcing a child to move past the steps of feeding in which they are comfortable. Skinner et al., (2002) found that dietary variety in school-aged children was influenced by food-related experiences before age two. This aligns with Skinner et al. (2002), which suggested food preferences from age two to four were highly predictive of performance at age eight. Since it is important to identifying eating needs early, this project will create a handout to evaluate eating problems.

Bandura emphasizes observing and modeling as key components with learning new behaviors (Cronin & Mandich, 2015). Skinner et al. (2002) reported modeling by parents and siblings influenced potential food preference. Modeling, a form of teaching by example, (Cole & Tufano, 2008) has four crucial components (Cronin & Mandich, 2015). The first, attention to the model, explains exposure does not ensure coping behavior; the individual must attend and observe the behavior (Bandura & Walters, 1977). The second, retention of past experiences, clarifies the observer must remember what was observed or noticed (Bandura & Walter, 1977). The third, motor reproduction or the ability to reproduce the response physically, means the observer must possess the physical capability to complete the behavior and then perform the observed behavior (Bandura & Walter, 1977). The fourth and final component is reinforcement

and motivation to produce the response; this states the environment produces a response to the behavior that changes the probability that the behavior will occur again (Bandura & Walter, 1977). Individuals choose to imitate behaviors based on perceived outcomes and/or consequences (Cole & Tufano, 2008). Following the social learning theory, the eating program will include working through the four component of modeling to increase desired behavior and ultimately increase independence and participation with eating.

The above theoretical framework will be used in this project to guide program development in hopes to lessen the effects of common pediatric eating problems and allow children to better engage in occupations surrounding eating.

Screening and Evaluation

I began this project by completing a needs assessment at Bloom. The needs assessment included observing multiple eating therapy sessions, as well as conducting unstructured interviews with both occupational therapists on staff. Research supports the utilization of unstructured interviews when a researcher has a sufficient understanding of an issue but still remains open for that understanding to be changed by the respondents (Cohen & Crabtree, 2006). Prior to the interviews, I knew that Bloom was requesting revisions to their eating therapy, but I was open to what these changes should include. Additionally, unstructured interviews increase validity as this type of interview allows the researcher to gain a deeper understanding of the issue, request explanation or clarification, and permits the respondent to guide the direction of the conversation (McLeod, 2014). This was important as I wanted to allow Bloom to fully express their needs for this project.

I utilized survey methodology in the form of a paper questionnaire to collect feedback from parents on the existing eating therapy. This method was chosen to allow for convenient

and low cost data gathering (Creswell, 2009), as well as because literature supported the accuracy of mother-rated evaluations regarding food preferences (Skinner et al., 2002). I developed the novel questionnaire based on a review of the literature. Questions were developed to explore parent views on their child's eating challenges and Bloom's eating therapy. For novel questionnaires with no psychometric properties, expert reviewers are recommended to establish content validity by identifying and correcting technical issues (Carter, Lubinsky, & Domholdt, 2011; Dillman, Smyth, & Christian, 2014). I obtained feedback from both occupational therapists on staff and two doctoral OT student researchers. Based on this feedback I finalized a 10-item questionnaire that included closed and open-ended questions. See Appendix A for the finalized parent eating questionnaire. The finalized questionnaire was distributed to parents/caregivers of existing eating therapy clients at Bloom, ages 0-18 with a variety of diagnoses or impairments. Due to poor weather and many session cancellations, not all families received the questionnaire. Thirteen questionnaires were distributed and nine were returned.

Compare and Contrast Processes

The above screening and evaluation processes were based on the practice area and service provision model utilized by the site. Services in an outpatient pediatric setting are a traditional/existing practice area that generally follow the medical model for service provision. At Bloom, one-on-one services are provided directly, and these can be reimbursed by insurance or private payer sources. The current service model is mandated by policy, regulatory agencies, and reimbursement and compliance standards.

School-based services. Another traditional/existing OT practice area in pediatrics is school-based services. School OT practitioners work as a team with students, parents, teachers and other staff to ensure the student receives the best school experience possible (National

Behavioral Support Service [NBSS], 2011). OT practitioners in the school setting are required to address occupations specific to supporting a student's ability to participate in education (AOTA, 2016). This includes enhancing a student's ability to access and be successful in all learning environments (NBSS, 2011). Within the schools, OT practitioners support academic and non-academic outcomes related to education including: "social skills, math, reading, and writing (i.e., literacy), behavioral management, recess, participation in sports, self-help skills, prevocational/vocational participation, transportation and more" (AOTA, 2016, p. 1). Eating programs are not typically utilized within the school setting as outcomes are generally not directly related to education participation. However, an OT practitioner might see students in a group during lunchtime or address self-help skills related to lunchtime.

Even though school-based OT is a traditional practice area it does not follow the traditional medical model. Similar to Bloom, services in the school system can be provided directly one-on-one, but services can also be provided directly in a group, or even indirectly through consultation. School OT practitioners can serve individual students, groups of students, whole classrooms, and whole school initiatives (AOTA, 2016). In public school systems, OT services are not reimbursed by insurance or private payer sources but instead are funded by federal, state, and local funds depending on the purpose of the services provided (AOTA, 2014b). In states that have agreements with Medicaid programs, additional reimbursement can occur for school OT services (AOTA, 2014b).

OT in the school "is a related service under Part B of the Individuals with Disabilities Education Act (IDEA)" (AOTA, 2000, p.1). For a student to receive school-based OT services the child must be deemed eligible for special education determined through the individualized education program (IEP) process (AOTA, 2016). In order to receive an IEP, the student must be

evaluated and determined to meet eligibility as deemed from IDEA. If a student does not have an IEP, they are not eligible to receive OT services. Furthermore, having an IEP does not automatically ensure a student will receive OT services; this determination is a result of a multidisciplinary team and the OT evaluation (AOTA, 2000). Although many of the kids receiving OT services at Bloom would meet the eligibility for an IEP, this is not a requirement to receive services at Bloom. For a child to be seen at Bloom, a physician's referral is required; the occupational therapist then completes an evaluation to determine need for OT services. Services are determined by each child's need and this decision is determined by the occupational therapist and does not require a multidisciplinary team.

OT school-based services are also mandated by policy, regulatory agencies, and reimbursement and compliance standards, but given the differences in settings, these differ from those mandating the services provided at Bloom. What an OT practitioner is capable of doing with the results of an evaluation is mandated by reimbursement standards which is dictated by the practice area and site. An intensive eating program was identified through the needs assessment as something that Bloom desired but was discovered to be unfeasible due to reimbursement procedures. The main obstacle preventing this program was the high intensity needed for treatment sessions. Intensive eating programs require kids to be seen as many as 5 days a week for several weeks. This high intensity is not possible at Bloom, given the current reimbursement standards. Intensive programs are more conceivable within the school setting. As mentioned earlier eating programs are not typically utilized within the school setting, but if a practitioner found a need for another intensive program related to education it is probable to be implemented. The frequency and intensity a child is seen by OT within the school is established using the multidisciplinary team and listed within the IEP; this is not generally specifically

dictated by reimbursement standards as each treatment session is not typically individually reimbursed. If an OT practitioner discovered an intensive program that students would benefit from, the practitioner could approach the team to request the increase in intensity for that student. If the team agreed, this change would be noted in the IEP and the practitioner could treat the student more frequently. The OT practitioner would have to have the availability within their schedule but this could be possible in the schools where it is not at Bloom.

Community-based services. Community-based settings are often considered a nontraditional or an emerging OT practice area, depending on the specific setting. Approximately 18% of OT practitioners work in community-based settings (AOTA, 2010). Emerging community-based settings include adult day centers, senior centers, independent living centers, supervised housing like group home and community-based mental health programs, while more established community settings include early intervention and home health (Scaffa & Reitz, 2013).

Despite being a non-traditional practice area, community-based practice was introduced to the OT profession in the early 1900s by George Barton and Eleanor Clarke Slagle (Scaffa & Reitz, 2013). Over the years, community-based practice has expanded to allow for greater opportunities by overcoming many of the original obstacles experienced (Scaffa & Reitz, 2013). However, since community-based practice is a non-traditional setting, it does still experience more obstacles than established traditional settings.

Nontraditional or emerging practice areas often have limited research and experts, which could make creating a screening and evaluation process difficult. Since this project is at a site with a traditional practice area, the researcher was able to utilize literature to create the paper questionnaire for the survey methodology and expert reviewers to improve content validity of the

survey. This may not have been possible if the site was an emerging practice area because there might not have been literature or experts available to review.

Compare and contrast conclusion. Although what an OT practitioner is able to do is dictated by many variables within the setting, the overall purpose remains the same regardless of the setting. OT practitioners believe that participating in meaningful occupations can improve lives. Practitioners strive to aid individuals to live life to the fullest regardless of traditional or nontraditional practice area, the only difference is the means in which this is accomplished.

Project Clients

Due to the nature of the project, there are two groups of clientele that make up the DCE project clients: the OT department at Bloom Pediatric therapy and the population of children with eating problems, including their families. The results of the needs assessment identified two themes for the clients being served: the need for Bloom's eating therapy to be revised and the need to address the occupational performance and participation deficits surrounding eating for children with eating problems.

Implementation Phase

An updated eating program was developed for Bloom by revising the existing eating therapy. The new program's emphasis is on promoting participation and independence in eating for children with eating problems, which meets the needs of all clients being served. The revisions to the existing eating therapy included creating and implementing handouts. The specific purpose and use of each handout varies and falls within different types of interventions.

Development of Handouts

Each handout was created following the same steps. A need for a specific type of handout was discovered through the methods mentioned above. A review of the literature was

conducted in that specific topic area and relevant information was compiled. A rough draft of the handout was created. The draft was reviewed and assessed by both occupational therapists on staff, and changes were made as necessary. All handouts but one were piloted during one to five therapy sessions, and changes were made as necessary. The handout not piloted was the eating intake form because it had to be sent to an outside source for formatting and was not returned during the piloting timeline. For the remainder of this section, the phrase “all handouts” will refer to all handouts excluding the eating intake form.

Once the above steps were completed for each handout, all of the handouts were re-evaluated again as a whole, first by myself and then by both occupational therapists on staff. Changes were made as necessary, and then all revised handouts were piloted with one to two eating clients. Clients only piloted handouts relevant to their needs. At most three handouts were piloted per client; however, most clients only piloted one handout. A total of five families were included in this piloting phase. Verbal feedback was received from parents/caregivers of children who piloted the handouts, and changes were made as necessary.

A final needs assessment was conducted to ensure that the created handouts met all needs of the eating program and no additional handouts were necessary. This included informal interviews with both occupational therapists on staff, families that participated in the piloted handouts, and a final review of literature. No additional handouts were found to be needed.

After all the handouts were thoroughly evaluated and the need for additional handouts was eliminated, the finalized handouts were implemented to eating clients. Prior to this implementation, I met with both occupational therapists on staff to provide education and training in the use of each handout, including the purpose and function. This ensured the understanding of all handouts and a consistency among therapists. Not every handout was

implemented with every eating client; instead the OT staff chose only relevant handouts based off of each client's need. Given that multiple individuals implemented the handouts and that the handouts were chosen based on each client's need, the number of clients that participated in the implementation phase was not identifiable. Handouts were implemented for a total of three weeks.

Handout Details

There were a total of seven handouts created and implemented. Each handout was created to meet a need discovered during the needs assessment. The handouts as a whole were designed to increase participation and independence in eating for children with eating problems. The handouts included a session form, program information, eating problem facts, calorie boosters, food lists, food inventory checklist, homework form, and eating intake form.

Session form. This form was designed to be used by the therapist during each eating session. It allowed the therapist to write down which foods were explored that day and how the foods were explored. This included options like: prepare, look, smell, touch, kiss, lick, chew, and if eaten it allows for rating. Originally the rating scale for eating included a one to five scale which represented two thumbs down, one thumbs down, thumbs in between, one thumbs up and two thumbs up; however, during the implementation phase of the handout, the therapists indicated that different rating scales were used based on each child's age and cognitive abilities. Therefore, the rating box was left blank to allow each therapist to write in the appropriate rating scale for each child.

The session form allowed communication with parents/caregivers who were not present during the eating session. Additionally, it notified parents/caregivers of potential foods that were

received as positive and could be implemented at home. This information was beneficial to aid carryover outside of the therapy setting. The session form handout can be found in Appendix B.

Feeding and eating program. This handout was developed to educate parents/caregivers on Bloom's eating program. It includes a summary of the program, information about typical duration and frequency, goals and objectives, and a description of children that might benefit from the program. During evaluations, parents/caregivers are given a lot of verbal information, and it is often difficult to retain all of this information. This handout gives a hardcopy of the answers to many frequently asked questions regarding eating therapy. Additionally, the handout could be reviewed by other caregivers not present at the evaluation and could be given to parents/caregivers considering the program that do not yet have a referral or evaluation. The feeding and eating program handout can be found in Appendix C.

Eating problem facts. This handout was created to educate parents/caregivers on eating problems. It gives information on various topics including a brief overview of eating problems, statistics on eating impairments, differences in eating, feeding, and swallowing, description of what eating problems entail, and common pediatric conditions associated with eating problems. It explains how eating is a complex task and describes some of the effects eating problems have both on the family and the child. This handout serves to inform families on eating problems, and answer some potential questions that families might have regarding difficulties with eating. The eating problem facts handout can be found in Appendix D.

Calorie boosters that pack a punch. This handout was reproduced from a handout developed by Klein, Delany & Medvescek (1994) for parents. The information is the same, but the formatting was changed and images were added. This handout's purpose is to provide parents/caregivers with information on foods that can be added into foods their child already eats

to increase calorie intake. This information is important for all families that have children that need to gain weight but is essential for families trying to avoid having a feeding tube placed. The handout not only lists the foods that can be added and the calorie amounts, but includes ideas of how to make these additions. Foods on this handout include: butter, peanut butter, powdered milk, shredded cheese, sour cream, cream cheese, cooked egg yolk, heavy whipping cream, wheat cream, and avocado. The calorie boosters that pack a punch handout can be found in Appendix E.

Food lists. This handout was developed from information from the SOS approach to feeding. The purpose is to educate parents/caregivers on different types of food. The handout is divided into boxes with each box containing the title of the food category and examples of the types of foods within this category. Additionally, some boxes include a category definition. Categories on the handout include thin liquids, thick liquids, hard munchables, meltable hard solids, soft cubes, soft mechanicals, hard mechanicals, and purees. The information on this handout gives parents/caregivers a clear understanding of food categories. This is important when a child is only cleared to eat a certain type of food or when a therapist wants the family to explore a specific category of food. The food lists handout can be found in Appendix F.

Food inventory checklist. This handout is a checklist given to parents/caregivers during evaluation or the first eating session to allow them to identify foods that their child eats. Prior to the implementation of this handout, the therapist asked the parents/caregivers to report foods their child would eat in the following categories: fruits, vegetables, starch, protein, and smooth/purees. The therapist would think of examples of a type of food for each category reported. This handout has many food choices listed under each category. Additionally, there is an “other” section at the end of each category for the parent/caregiver to add foods. Having a list

of foods provides parents/caregivers with several more food options that might help them remember a food they otherwise would have forgotten. Categories on the handout include fruits, vegetables, beans, breads, meats, beverages, dairy, condiments/dressings/dips, breakfast cereal/bars, pasta/Mexican, soups and snack/misc. By gaining this information, the therapist can better chain food during eating sessions. Additionally, this checklist could be used to show progress for a child as they add food to their preferred list. The food inventory checklist handout can be found in Appendix G.

Homework form. This form was designed to be given to parents/caregivers to be utilized throughout the week at home and brought back to therapy each session. The form has a box that can be checked for each day the child is exposed to new food. It allows for the parent/caregiver to report difficult foods and successful foods, as well as questions or concerns to be discussed with the therapist. Additionally, there is a section where the therapist can provide suggestions or comments for the next week. This form was created to be simple and take very little time in hopes that parents will complete the form and bring it back to therapy. This form provides a way to track food exposures throughout the week and ensures carryover by holding parents accountable for the six days the child does not receive eating therapy. The homework form handout can be found in Appendix H.

Eating intake form. This intake form was not piloted or utilized during the implementation phase because it was not returned from formatting during these timelines. This form was created to be given to parents/caregivers at or before evaluation. Prior to the creation of this handout, there was only a short section on eating in the general pediatric intake form. This new intake form is to be used along with the original pediatric intake form because the information in the original form is not duplicated within the eating intake form.

The eating intake form provides the therapist with comprehensive information about the child's eating habits. It addresses goals, restrictions, eating therapy history, eating habits, mealtime routines, community eating settings, utensil use, drinking habits, and food preferences. The therapist is able to review the completed intake form or complete the intake form with the family and gain a good understanding of the child's overall eating habits and their potential needs. This assists the therapists in developing a more comprehensive and proficient treatment plan. The eating intake form handout can be found in Appendix I.

Staff Development

To promote staff development and ensure an understanding of each handout, I provided education and training to both occupational therapists on staff. The two therapists had seen the handouts a number of times during the evaluation and piloting phases, as both therapists had provided feedback. Therefore, both were already familiar with the content on each handout, but I wanted to confirm consistency among therapists. The education and training included meeting each therapist individually due to limited time in the therapists' schedules. Education encompassed an overview of each handout including the purpose and clients that might benefit from each form. I had an open conversation with both therapists and answered all questions. At the end of each training session, the therapist being educated demonstrated verbal understanding of each handout. Since the staff being trained were both occupational therapists familiar with eating therapy, I felt confident that one training session with verbal understanding demonstrated at the end was sufficient to ensure adequate staff development regarding the use of each handout and the eating program's purpose as a whole.

Leadership

Leadership is “a process of creating structural change wherein the values, vision, and ethics of individuals are integrated into the culture of a community as a means of achieving sustainable change” (Braveman, 2016, p. 4). There are many opportunities for OT practitioners to assume leadership roles, including acting as an expert leading innovations (Braveman, 2016). By assuming the role of a leader when developing a new program, the leader can impact how staff members view not only the organization but also their work (Braveman, 2016).

The DCE gives students a unique opportunity to serve as leaders of site mentors and other staff members. It is important for students to be mindful of the leadership skills they possess and what kind of leader they wish to be. For the many phases of this project, I chose to utilize the transformational leadership theory to guide me as a leader. In this theory, “leaders achieve change by expressing the value associated with outcomes and by articulating a vision of the future resulting in commitment, effort, and improved performance on the part of subordinates” (Braveman, 2016, p. 9). Aligning with the focus of early researchers of this theory, I primarily concentrated on building relationships with all staff members and expressing the significance of the program I was developing (Braveman, 2016).

Braveman (2016) identifies charisma, individualized consideration, and intellectual stimulation as three characteristics of transformational leaders. Charisma is defined as “instills, pride, faith, and respect in subordinates by transmitting a sense of mission that is effectively articulated” (Braveman, 2016, p. 15). By successfully educating staff members on the purpose and potential benefits of the program I developed, I was able to gain staff member respect. Braveman (2016) explains leaders who possess the characteristic of individualized consideration “delegates projects to stimulate the learning and growth of employees, coaches and teaches employees, and treats each employee with respect” (p. 15). I included both occupational

therapists on staff in a number of ways throughout the different phases of this project. I delegated specific tasks for them to complete and utilized each of them in different ways given their strengths and experiences. Braveman (2016) defines the final characteristic of intellectual stimulation as “arouses followers to think in new ways and emphasizes problem-solving and the use of reason before acting” (p. 15). Both therapists were well-educated in eating techniques, but I encouraged them to use other evidence-based strategies and challenged them to solve problems using different perspectives.

There are many traits associated with being an effective leader that go beyond those outlined by the transformational leadership theory. Some of these include “intelligence, integrity, openness, persistence, dominance, initiative, drive, self-confidence, sociability, honesty, cognitive ability, achievement” (Braveman, 2016, p. 7). To ensure the success of this project I chose to utilize as many leadership skills as possible. I increased my knowledge not only in eating problems but in outcome measures and in developing and implementing programs. I chose a project of interest so that my drive and persistence would continue to grow. I remained open and honest with all staff members from the beginning. This included explaining what I thought was realistically able to be accomplished during my 14 weeks on-site.

Four additional skills not mentioned on the above list I feel I utilized most often include: communication, flexibility, organization, and time management. I began this project as being flexible and open to how my project would start and have remained open and flexible as several things have changed and the project evolved. Communication was especially important in the implementation phase as I wanted to ensure consistency among OT staff. Open communication allowed me to identify and fix many problems with the program as they arose. With any project, organization and time management play a big role in success. I remained organized and

effectively utilized my time allowing me to complete the implementation phase of this project in the timeline allowed. By utilizing all of the above traits, skills, characteristics, and theory guidance I was able to effectively assume the role as a leader while successfully implementing the eating program.

Discontinuation and Outcome Phase

Program Evaluation

Once all identified problems were addressed after the implementation phase, I began the formal program evaluation. I repeated survey methodology in the form of a paper questionnaire to collect feedback from parents on the new eating program. This questionnaire was the same one given previously and was utilized to measure whether or not the program was beneficial. Similar to before, the questionnaire was distributed to parents/caregivers of eating therapy clients at Bloom, ages 0-18 with a variety of diagnoses or impairments. All families that received the pre-test were also given the post-test. However, the questionnaires were returned anonymously, so it is unknown if the same families completed both the pre-test and post-test questionnaires. For this reason, individual questionnaires were not compared, but instead the pre-test as a whole was compared to the post-test as a whole. Thirteen questionnaires were distributed and seven were returned.

Project outcomes. The following results were demonstrated after comparing the pre-test questionnaire with the post-test questionnaire; therefore, all outcomes are parent/caregiver reported. There was an increase in the satisfaction of both the child's eating (pre-mean: 1.89; post-mean: 3.29) and weight (pre-mean: 2.78; post-mean: 3.43). One mom reported:

We haven't had to use our g-tube in several weeks! Without the help of Bloom, we wouldn't be where we are today. There were times we didn't see an end in sight but now there is light at the end of the tunnel.

There was a decrease in the number of times something special needed to be done to help the child eat (pre-mean: 4.00; post-mean: 3.57), as well as a decrease in the child's eating habits negatively impacting daily routines (pre-mean: 4.11; post-mean: 3.29). One parent stated, "[my child] is now confident to eat lunch with his peers at school." There was an increase in the variety (pre-mean: 1.78; post-mean: 2.57) and number of foods a child eats (pre-mean: 1.78; post-mean: 2.57). There was an increase in the willingness of the of the child to try new foods (pre-mean: 1.89; post-mean: 3.00). One mom recounted "[my child] is a very tricky kid, although, he has not reached the feeding goal we all wanted, he is trying new foods". Another parent described, "[my child] is now exploring foods with little to no prompting". Finally, there was an increase in satisfaction of Bloom's feeding therapy (pre-mean: 4.56; post-mean: 5.00) and an increased likeliness to recommend the feeding program (pre-mean: 4.78; post-mean: 5.00). Parents/caregivers reported that this program: helped their child feel more confident, eased their child slowly into trying new foods, and taught education and tools to help their child succeed with food. One parent responded "I am thankful for everything that Bloom has done for [my child]". See Appendix J for the full list of mean, median and mode of the pre-test/post-test questionnaires.

Societal Need

Eating problems affect up to 50% of typically developing children (Phalen, 2013) and up to 80% of children with atypical development (Fishbein et al., 2014). Through my DCE, I addressed the societal need of pediatric eating problems that have long-lasting effects on not only

the child but also the family. I addressed this societal need with Bloom's population by implementing the eating program. Each handout I created served a specific purpose including educating parents/caregivers, allowing therapists to get a greater understanding of a child's eating habits so that a better treatment plan could be developed, and establishing accountability for parents/caregivers between therapy sessions. All of this together was designed to increase participation and independence in mealtime for children with eating problems. This will in return ideally decrease the effects of eating problems for both the child and the family, thus reducing the societal challenge of pediatric eating problems.

Quality Improvement

To ensure continuous quality improvement of the project, evaluations and adjustments to the program continued past the evaluation phase, through the implementation phase, and into the discontinuation and outcome phase. During the implementation phase, OT staff members and families were encouraged to discuss any issues or problems that arose. A few minor suggestions were discussed and implemented. This included changing the rating system used on the session handout. The implementation phase continued with no further issues identified. After the implementation phase, I again met with OT staff members to discuss any remaining issues that arose; however, no issues were identified. After the program was formally evaluated, I met one final time with OT staff to ensure concluding problems and suggestions were addressed; however, no issues were identified.

Sustainability

Sustainability of the program is probable given that both occupational therapists on staff are comfortable with the program and have been using it daily for approximately five weeks. Additionally, I have completed a number of steps to ensure sustainability, such as that I trained

both therapists on the handouts prior to implementation to ensure consistency. Also I not only made the electronic version of all handouts available to OT staff members, but I created hard copies and placed them in an easily accessible location. By seeing the implementation of the program through, I was able to fix many problems which means additional challenges are less likely to occur after I leave Bloom.

At the end of the DCE, the intake form was still not returned from formatting. I met with one of the owners to ensure her understanding and responsibility in implementing this handout and addressing issues if they arise, as I will no longer be on-site. She verbally acknowledged this commitment and stated she would follow-through with this handout once returned.

Since Bloom is a small but growing organization I wanted to ensure sustainability of the program even as Bloom grows and new OT staff are hired. To do this, I created a short PowerPoint presentation that could be shown to new employees in the future. The presentation is a voice-over so the new employee can independently learn about Bloom's eating program. The presentation reviews the purpose and function of each handout. Hopefully this presentation will ensure sustainability of the eating program when/if new staff members are hired.

Overall Learning

Throughout this entire experience I learned a great deal that will help prepare me to become a better future OT practitioner. This is true for both the implementation of this program and the development of my clinical skills. I have broadened my knowledge and experience with the entire pediatric population, especially related to children with eating problems. I have increased my exposure to many diagnoses/impairments and have learned strategies to address challenging behavior in children, as well as approaches to include families into treatment

sessions. I have learned how to effectively conduct a needs assessment, develop and implement a program, and how to evaluate outcomes of that program.

In addition to growing from many of my own created experiences, I have been able to expand and improve my professional characteristics by learning from colleagues. I observed effective communication, necessary flexibility, the benefits of teamwork, effectiveness of leading by example, and the importance of building rapport, and utilizing evidence to develop support and commitment from clients. I learned two strategies for communicating including effective listening and changing the communication approach based on the needs of the person with whom I am interacting. Whenever there are multiple individuals interacting together, everyone must remain open and flexible in order to get tasks accomplished; however, I learned that there are times when you should remain committed to your opinion. Effective communication and flexibility lead to good teamwork. It is difficult to accomplish tasks as a group without teamwork. Everyone must be willing to fulfill their own unique roles. There are many different leadership theories and many different ways an individual can choose to lead. I observed a few different leading strategies and found that leading by example was the most effective in this type of setting. Lastly and possibly most important to my growth as a new practitioner, is strategies to gain support and commitment from clients. With most therapy settings, the time spent outside of therapy greatly outnumbers the time spent in therapy; therefore, it is extremely important for clients to buy into what they are being asked to do. I learned two valuable ways of doing this. The first is building rapport, and the second is utilizing evidence-based practice. I observed and experienced both of these strategies making an impact on the effects of therapy for clients.

Effective Interactions

Throughout this DCE, I had the opportunity to interact in a number of ways with many different individuals in addition to the clients with eating problems. Taylor (2008) emphasizes that the success of OT depends on the exchange of thoughts and feelings, also known as effective communication. Communication spans over many social contexts, can be verbal or nonverbal, and can include “the sharing of facial expression, posture, body movements, and other body language, informal gestures, sounds, made-up language, or formalized language such as sign and spoken language” (Taylor, 2008, p. 157). I engaged with individuals using verbal and nonverbal communication, as well as written communication. With all face-to-face communication, I utilized positive nonverbal interactions. I remained aware of what I was potentially saying with my body and attempted to ensure my demeanor was true to what I was trying to communicate.

Sometimes communication involves only the OT practitioner and the client, while other times it includes many persons (Taylor, 2008). Although possible, OT practitioners rarely engage with clients in “complete isolation” (Taylor, 2008, p. 209). This is because the client and therapist usually come into contact with at least one of the following: friends, other clients, other professional or family members including parents, caregivers, partners, and spouses (Taylor, 2008). At Bloom, I interacted with the client and the client’s family including parents, caregivers, siblings, and occasionally extended family such as aunts/uncles or grandparents.

Contact with family members is extremely common in the pediatric population (Taylor, 2008). At a minimum, interactions occur with parents and caregivers “when transporting the client to and from therapy, when the therapist provides progress reports or assigns homework, or when the therapist makes other recommendations for resources or equipment” (Taylor, 2008, p. 209). Practitioners might request more than minimal interaction so that carryover can occur in non-therapy settings (Taylor, 2008). I encountered both types of interactions with

parents/caregivers at Bloom. Oftentimes kids showed better participation in eating therapy when their parents were not present. For this reason, most parent/caregiver interactions were conducted during transportation. Before therapy sessions, I always met with parents to discuss new concerns or recent information. After therapy sessions, I always discussed what was accomplished during therapy and things that could be done at home. Discussions before and after sessions were typically informal and verbal. Oftentimes after the sessions, I included written communication that described what was accomplished in detail and homework to be completed outside of therapy. During some sessions it was beneficial to have parents/caregivers present during some or all of the treatment. This occasionally included guiding the parents/caregivers in leading the treatment session. This was especially true for clients who were progressing well and would soon be discharged from therapy. By allowing parents/caregivers to lead the session, with corrections as needed, they were able to gain skills and confidence that would lead to success at home following discharge.

Taylor (2008) describes that the complexity of interactions rise as more persons are added to the interaction. Practitioners must address interactions intentionally with caution and expertise in order to support therapy goals and prevent maladaptive dynamics that could interfere with therapy outcomes (Taylor, 2008). A child's performance can be a sensitive subject for parents, and the way information is presented is extremely important. This was difficult for me at first, so I reviewed evidence and spoke to other site therapists to discuss their approaches. I learned that it is essential to always highlight positive information about the client and to frame negative information in a way that is easily received. Over the past several weeks, I have improved my ability to effectively communicate with parents/caregivers.

OT practitioners encounter many different healthcare professionals through interdisciplinary meetings, consultations, supervision, and co-treatments (Taylor, 2008). OT practitioners' collaboration can include the following healthcare professionals: other OT practitioners, physical therapists, speech language pathologists, physicians, recreation therapists, art therapists, psychologists, nursing professionals, social workers, aides, technicians and many more (Taylor, 2008). At Bloom, my interactions occurred with colleagues and other healthcare providers including client's personal nursing staff, applied behavioral analysis (ABA) therapists, occupational therapists, physical therapists, speech language pathologists, the office manager, and the clinic owners. Given the pediatric population age range, I had no interaction between significant others of clients. Additionally, given the purpose of my DCE and my site, I had limited interactions with the community and public.

Collaboration with other healthcare professionals can include a short-term verbal exchange of client information or long-term co-treatment relationships (Taylor, 2008). Regardless of the type, both professionals must remain "open to learning about and incorporating the others' unique point of view" for successful collaboration to occur (Taylor, 2008, p. 281). At Bloom, the short-term verbal exchange of client information occurred for each session between parents, caregivers, personal nursing staff, ABA therapists and anyone else who came with the child to therapy. This exchange also occurred occasionally between myself and one of the speech language pathologists or physical therapists if they were treating right after me or vice versa. Although I filled in on a few long-term co-treatment sessions, I never established this long-term interaction for myself.

Additionally, interactions on the child's behalf occurred with insurance companies and physicians but this was typically completed by one of the co-owners or the office manager. I

would interact verbally with one of the co-owners or the office manager who would then interact with the others verbally over the phone or formally through fax or e-mail.

Leadership and Advocacy Skills

Through the many phases of this DCE, I have utilized and developed many professional, leadership and advocacy skills.

Professional and leadership skills. This project has allowed me to increase my knowledge and experience with eating problems, outcome measures, developing and implementing programs, as well as allowed me to use and grow my skills in communication, flexibility, organization, and time management. Since this experience has been self-directed, I have developed confidence with my initiation skills and functioning independently. By taking the lead role in developing and implementing this program, I developed my leadership and delegating skills. I increased my knowledge and experience in professional writing and research. I improved my awareness of other disciplines including physical therapists and speech language pathologists by working alongside colleagues in the clinic, as well as ABA therapists, child psychologists, and lactation consultants through communication with them outside of the clinic. Through the course of this DCE, I had many opportunities to grow and develop my professional and leadership skills. This growth among these skills will aid in my future development into an OT practitioner.

Advocacy skills. In the third edition of the *Occupational Therapy Practice Framework (OTPF)*, advocacy is listed as a type of intervention and is defined as “efforts directed toward promoting occupational justice and empowering clients to seek and obtain resources to fully participate in daily life occupations” (AOTA, 2014a, S30). Advocacy supports “health, well-being and occupational participation at the individual or system level” (AOTA, 2014a, S30).

During the DCE, I had the opportunity to advocate for the profession of OT, my clients, my program, and myself in learning and observing things.

OT profession. I advocated for the OT profession to both families of clients and clinic staff members. I educated both parties on the purpose of OT and its broad scope of practice. As I gained experiences with advocating this to individuals, I developed different “elevator” speeches based on the recipient of the education. Additionally, I had a few occurrences where I was able to advocate for OT over the phone to different persons including nursing staff, psychologists, lactation consultants, and office managers from potential referral sources.

Clients. I advocated for and with many of my clients at Bloom including those with and without eating difficulties. I educated and collaborated with families to ensure clients received the best care possible. I educated families on how they could advocate for their child to receive reasonable accommodations in order to better participate in occupations. This included having discussions with families about community-based services, insurance restrictions, and IEPs within the school systems. I occasionally advocated for the services my client needed to their family, referral offices, or reimbursement sources. This included verbal conversations with families and typically written documentation, such as progress notes, to referral and reimbursement sources. Although I did not have the opportunity to formally raise public awareness about the impact of eating problems, I did often have the opportunity to discuss this with random individuals whenever asked what I was doing with my schooling. Additionally, the eating fact handout serves as a great advocacy handout for raising awareness of this problem and the potential impacts caused to children and families.

Eating program. I advocated for the program I developed to staff members and families of clients. After developing the program, I educated and trained both occupational therapists on

staff to advocate for its use. Additionally, I collaborated with both therapists to implement the program and advocate its use to families. This mainly consisted of educating and training parents/caregivers on the homework handout and the importance of carryover outside of the therapy setting.

Myself. In order to gain the most out of this DCE, I advocated for myself. This is true for both my knowledge and experience. I asked staff members for opportunities that would be beneficial for me. This included asking to observe additional treatments/evaluations and when comfortable asking if I could perform some of the treatments/evaluations. This was in addition to my normal caseload. Advocating for myself in this way allowed me to grow and maintain a just right challenge. I was challenged in my growth and knowledge but was not overwhelmed. This has led to me growing as a professional and as a future practitioner.

Summary

Throughout this experience I have accomplished many things. I have evaluated, interpreted, and resolved Bloom's needs by creating and implementing the eating program. I was able to expand Bloom's eating therapy, increase client satisfactions, and improve parent reports of their child's participation and independence with eating. I have developed many skills and abilities, and have grown as a professional and a future practitioner. I have expanded my clinical skills and experiences and feel that this DCE has not only prepared me to enter the OT profession but has allowed me to grow as an individual.

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Appendix A

Finalized Parent Eating Questionnaire

Bloom Pediatric Therapy	Bloom Pediatric Therapy
<p><i>Please fill out this questionnaire and return to a Bloom staff member. Thank you.</i></p> <hr/> <p>How satisfied are you currently with your child's eating?</p> <p style="text-align: center;"> <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 </p> <p>Very dissatisfied Very Satisfied</p> <hr/> <p>How satisfied are you currently with your child's weight?</p> <p style="text-align: center;"> <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 </p> <p>Very dissatisfied Very Satisfied</p> <hr/> <p>How often does your child's eating habits negatively impact daily routines?</p> <p style="text-align: center;"> <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 </p> <p>Never Always</p> <hr/> <p>How many foods will your child currently eat?</p> <p style="text-align: center;"> <input type="checkbox"/> less than 15 <input type="checkbox"/> 15-20 <input type="checkbox"/> 21-30 <input type="checkbox"/> 31-40 <input type="checkbox"/> 41-50 <input type="checkbox"/> 51+ </p> <p>If less than 15, please specify actual number _____</p> <hr/> <p>How often do you have to do something special to help your child eat?</p> <p style="text-align: center;"> <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 </p> <p>Never Always</p> <hr/> <p>My child eats a variety of foods.</p> <p style="text-align: center;"> <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 </p> <p>Strongly disagree Strongly Agree</p> <hr/> <p>My child is willing to try new foods.</p> <p style="text-align: center;"> <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 </p> <p>Strongly disagree Strongly Agree</p> <hr/> <p>How likely are you to recommend Bloom's feeding therapy to someone else?</p> <p style="text-align: center;"> <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 </p> <p>Very unlikely Very likely</p> <hr/>	<p><i>Continued</i></p> <hr/> <p>How satisfied are you with Bloom's feeding therapy?</p> <p style="text-align: center;"> <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 </p> <p>Very dissatisfied Very satisfied</p> <p>If less than 4, please provide feedback.</p> <hr/> <p><i>Please share any additional comments or suggestions.</i></p> <div style="background-color: #e6f2ff; padding: 5px;"> <p>Bloom Pediatric Therapy 443 S. LANDMARK AVE BLOOMINGTON, IN 47403 812.676.7000 http://bloomtherapy.org</p> </div>

Appendix B

Session Form Handout

Date: <input type="text"/>								
Today I explored the following:								
								
FOODS/DRINKS	PREPARE	LOOK	SMELL	TOUCH	KISS	LICK	CHEW	EAT/RATE

Foods I like and can be added at home: _____

Appendix C

Feeding and Eating Program Information Handout

FEEDING AND EATING PROGRAM



Bloom Pediatric Therapy develops every treatment plan from scratch. We begin with a thorough evaluation that identifies not only the primary feeding therapy goals but the goals and expectations of the family including details about family life.

This program addresses behavioral and/or sensory feeding issues, oral motor deficits, and/or swallowing impairments.

More complex swallowing dysfunction involves the collaboration of both occupational therapists and speech language pathologists.

DURATION AND FREQUENCY

- The duration and frequency of the treatment plan depends on the challenges your child is facing and the success he or she is experiencing. We take into account not only your child's needs but your family needs. A typical schedule involves one to two visits a week for three to nine months.

Your child may benefit from feeding therapy if they display any of the following:

- Tantrums or crying during mealtimes
- Oral motor difficulties/delays or difficulty achieving feeding milestones (transitioning to solid foods)
- Ongoing weight loss or poor weight gain
- Choking, gagging, coughing or vomiting during mealtimes
- Extremely limited variety of foods
- Sensory difficulties related to food
- Dependent on tube feedings

While one of our objectives is to increase the number of foods a child will accept, **we will never require your child to eat anything.** We want eating to be a positive experience.

GOAL:

Improve the independence and participation with feeding and eating for children with feeding difficulties

OBJECTIVES:

Lower caregiver stress



Improve mechanics of feeding



Improve feeding interactions with the child, caregiver(s) or parent(s) and the environment



Improve pre-feeding skills



Improve self-feeding skills



Improve acceptance of food or the number of foods that the child will eat



Improve oral motor skills

Appendix D

Eating Problem Facts Handout

EATING PROBLEM FACTS



Eating is an important daily occupation, that begins in infancy and continues throughout life (Absolom & Roberts, 2011). Eating problems are common among children and are one of the most frequent concerns parents discuss with pediatric health care professionals (Gueron-Sela, Atzaba-Poria, Meiri, & Yerushalmi, 2011). These problems can have impending effects on neurological and psychomotor development (Bryant-Waugh, Markham, Kreipe & Walsh, 2010; Sharp, Jaquess, Morton & Herzinger, 2010), as well as, increased caregiver stress (Greer, Gulotta, Masler & Laud, 2007).

Eating problems affect up to 50% of children with typical development and up to 80% of children with atypical development.

(Phalen, 2013; Fishbein, Benton & Struthers, 2014)

What's the difference between eating and feeding?

- Feeding- "setting up, arranging, and bringing food [or fluid] from the plate or cup to the mouth"
- Eating- "keeping and manipulating food or fluid in the mouth and swallowing it"
- Swallowing- "moving food from the mouth to the stomach"

(AOTA, 2014, p. S19)

Eating = Complex Physical Task

Involves all of the body's systems:

- skeletal muscles
- the brain
- cranial nerves
- gastrointestinal tract
- the heart
- vascular system
- respiratory system
- endocrine system
- metabolic system

(Toomey, 2002)

Eating problems can include:

- "dysphagia (swallowing difficulty)
- feeding aversion (refusal to eat)
- oral defensiveness (gags or chokes easily while eating, resistant to tooth brushing), tactile sensitivity (increased sensitivity to touch)
- problem eating (restrictive range or variety of foods, usually fewer than 20 foods accepted, refuses entire categories of food textures or nutrition groups)
- picky eating (at least 30 foods accepted, eats at least 1 food from most food textures or nutrition group)
- failure to thrive (poor growth and weight loss)
- related disorders"

(Fishbein et al., 2014, p. 636)

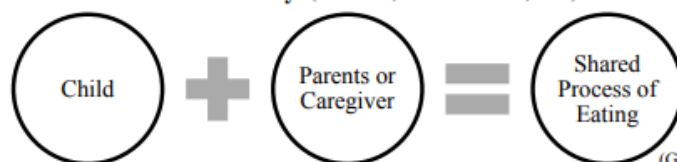
Pediatric conditions associated with eating problems:

- prematurity
- chromosomal or genetic abnormalities, such as down syndrome
- craniofacial abnormalities, such as cleft palate or Pierre-Robin
- gastrointestinal disorders, such as chronic constipation or reflux disease
- acquired brain impairments, such as cerebral palsy, stroke, or traumatic brain injury
- neurodevelopmental disorders, such as intellectual disability or ASD

(Phalen, 2013)

Eating problems can have "adverse effects on nutrition, overall development, and general well-being". (Case-Smith & O'Brien, 2015, p. 390)

Eating problems affect the entire family. (Martorana, Bove & Scarcelli, 2008)



(Gueron-Sela et al., 2011)

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Appendix E

Calorie Boosters that Pack a Punch Handout

CALORIE BOOSTERS THAT PACK A PUNCH



For some children, it's important to pack every mouthful with as many calories as possible. Try adding these calorie boosters to your child's foods. Small amounts provide big calorie payoffs!

BUTTER/MARGARINE, VEGETABLE OIL, MAYONNAISE



35 to 40 Calories/Teaspoon

Add to baby foods, vegetables, sandwiches, casseroles, soups, rice, pasta, and anything else you would like. These calorie boosters go with almost any food.

CREAM CHEESE

50 Calories/Teaspoon

Cream cheese makes the start of a good dip for crackers, vegetables, and fruits. It also makes a nice spread for baked breads and buttered muffins.

PEANUT BUTTER

100 Calories/Teaspoon

Makes a great spread on some vegetables, crackers, toast, muffins, waffles—but make sure your child has the feeding skills to eat it. Peanut butter also tastes great in milk shakes, cookies, and pudding.

COOKED EGG YOLK



About 60 calories/yolk

Cooked egg yolks can be added to all kinds of foods. The egg yolk must be already cooked if it is going to be added to a food that will not be cooked. This is to prevent salmonella infection. The American Heart Association suggests limiting whole eggs to three a week.

POWDERED MILK

25 Calories/Teaspoon

Your child won't even know when you add it to ground meat, milk shakes, mashed potatoes, cooked cereals, casseroles, and yogurt.

HEAVY WHIPPING CREAM

50 Calories/Tablespoon

Add a touch to drinks or desserts.

SPRINKLE ON CHEESE



About 100 calories/ounce

Add grated cheese or cheese sauce or sprinkle parmesan on buttered toast, creamed vegetables, mashed potatoes, rice, pasta, scrambled eggs, cooked cereals, casseroles, meat, and fish.

WHEAT GERM

25 Calories/Teaspoon

Wheat germ can be added easily to homemade baked goodies such as pancakes, cookies and breads. It is also good over yogurt, fruit, and cooked cereals.

SOUR CREAM

25 calories/tablespoon

Tastes great on potatoes or added to casseroles and sauces.

AVOCADO



75 calories per ¼ avocado


Kids usually like avocados. Try adding them to vegetables, on top of crackers, with meats or beans, and as a guacamole dip.

REFERENCES: Information came from page 331: Klein, M.D., Delaney, T.A., & Medvescek, C.R. (1994). *Feeding and nutrition for the child with special needs: Handouts for parents*. Tucson, Az.: Therapy Skill Builders.

Images came from: <http://clipart-library.com/search/>

Appendix F

Food Lists Handout

FOOD LISTS			
THIN LIQUIDS			
♦ Apple juice	♦ Grape juice	♦ Cranberry juice	
♦ Chicken/beef broth	♦ Gelatin	♦ Milk	
♦ Coffee/tea	♦ Water		
THICK LIQUIDS			
♦ Tomato juice	♦ Orange juice	♦ Egg nog	
♦ Creamed soups	♦ Milk shakes	♦ Buttermilk	
♦ Ice cream	♦ Sherbet		
HARD MUNCHABLES			
Needs to be small enough to get into the mouth, and large enough or hard enough that the child cannot bite a piece off. The is exploration, desensitization, and moving a gag reflex back further in the mouth—NOT bite, chew and swallow.			
♦ Gerber teething crackers	♦ Frozen bagels	♦ Frozen melon strips	
♦ Raw carrot sticks	♦ White veggie sticks	♦ Celery	
♦ Whole pickle	♦ Frozen waffle		
♦ For kids over 12 months with feeding delays: suckers, Slim Jim, beef jerky sticks, orange licorice			
MELTABLE HARD SOLIDS			
Solid foods that melt or dissolve in saliva so they can suck it down while they are learning to chew. No chewing is required.			
♦ Cheetos cheese puffs	♦ Town crackers	♦ Biter biscuits	
♦ Graham crackers	♦ Thawing frozen pancakes	♦ Oatios	
♦ Gerber's cereal squares	♦ Fruit loops	♦ Captain Crunch	
♦ Baby cookies	♦ Gaathiya		
♦ For kids over 12 months with feeding delays: Cheetos, chocolates, Pringles, popsicles, frozen fruit bars, orange creamsicles			
SOFT CUBES			
Solid foods that squish easily.			
♦ Avocado	♦ Over cooked squash	♦ Kiwi	
♦ Cucumber slices	♦ Diced peaches	♦ Gerber graduates fruit	
♦ Mandarin oranges	♦ Pear slices	♦ Boiled potatoes	
♦ Peas	♦ Bananas	♦ Bologna	
♦ Vegetable soup ingredients without the broth			
♦ For kids over 12 months with feeding delays: ice cream, cheese cubes			

SOFT MECHANICALS

Foods that break apart in the mouth very easily. Single texture is easier than mixed texture.

Single texture:

- | | | |
|--------------------------------------|--|----------------------|
| ◆ Fruit bread | ◆ Muffins | ◆ Breadsticks |
| ◆ Canned fruits/vegetables | ◆ Soft small pastas | ◆ Soft Pretzels |
| ◆ Cubed lunch meats | ◆ American cheese circles | ◆ Dried strawberries |
| ◆ Barley or scrambled eggs | ◆ Dried apricot | ◆ String cheese |
| ◆ Dry cereal softened in milk | ◆ French toast | ◆ Cottage cheese |
| ◆ Cooked vegetables (no skin) | ◆ Donuts/cakes (no nuts) | ◆ Mini waffles |
| ◆ Thin deli meats (small rectangles) | ◆ Soft pasta or meat soups without broth | |

Mixed texture:

- | | | |
|--|---------------------|------------------|
| ◆ Macaroni and cheese | ◆ Snap peas (crisp) | ◆ French fries |
| ◆ Microwavable children's meals | ◆ Spaghetti | ◆ Lasagna |
| ◆ Soft chicken nuggets | ◆ Fruit Roll-ups | ◆ Meatloaf/gravy |
| ◆ Chicken/tuna salad (no celery) | ◆ Potato/egg salad | |
| ◆ For kids over 12 months with feeding delays: fish sticks | | |

HARD MECHANICALS

Simple crunchy foods that break into pieces.

- | | | |
|---------------------|-------------------------------|-----------------|
| ◆ Cheerios | ◆ Thin pretzel sticks or rods | ◆ Ritz crackers |
| ◆ Saltine crackers | ◆ Graham crackers | ◆ Poptarts |
| ◆ Dried apple chips | ◆ Most other chips | ◆ Fritos |
| ◆ Honeymaid sticks | ◆ Apple breakfast bar strips | ◆ Other cereal |

PUREES

- | | | |
|---|------------------------------------|------------------------|
| ◆ Yogurt (all flavors) | ◆ Go-gurts | ◆ Cream soups |
| ◆ Cream cheese (try flavored) | ◆ Sour cream | ◆ Peanut butter |
| ◆ Apple butter | ◆ Almond butter | ◆ Cashew butter |
| ◆ Sunflower butter | ◆ Whipped dairy butters/margarines | ◆ Melted cheeses |
| ◆ Puddings (rice, soy, dairy) | ◆ Red nectar (Kerns) | ◆ Whipped cream |
| ◆ Ice cream | ◆ Tofutti | ◆ Sherbet |
| ◆ Rice Dream Ice Cream | ◆ Syrups (maple, strawberry) | ◆ Honey |
| ◆ Pureed fruits/vegetables | ◆ Jellies/Jams | ◆ Caramel sauce |
| ◆ Chocolate sauce | ◆ Hot fudge | ◆ Butterscotch topping |
| ◆ Apple sauce (try flavored) | ◆ Chip or vegetable dips | ◆ Nutella |
| ◆ Frosting | ◆ Pumpkin pie filling | ◆ Hummus |
| ◆ Mashed potatoes/gravy | ◆ Custard | ◆ Hot cereal |
| ◆ Sauces made to go over meats or pastas (spaghetti, alfredo, creamy parmesan, creamy dill, creamy tarragon, lemon) | | |
| ◆ Salad dressings (ranch, French, thousand island, mayonnaise) | | |
| ◆ Condiments (ketchup, mustard, BBQ sauce, pizza sauce, sweet & sour sauce) | | |
| ◆ Pureed meats (liverwurst, pate, deviled ham, or chicken) | | |
| ◆ Traditional dairy or Imagine's Cream Soup (non-dairy; rice base) | | |
| ◆ Jarred or canned cheeses (Nabisco's Easy Cheese, ricotta cheese) | | |

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Appendix G

Food Inventory Checklist Handout

FOOD INVENTORY CHECKLIST



FRUITS

<input type="checkbox"/> Apple	<input type="checkbox"/> Bananas	<input type="checkbox"/> Berries	<input type="checkbox"/> Grapes
<input type="checkbox"/> Melons	<input type="checkbox"/> Nectarines	<input type="checkbox"/> Oranges	<input type="checkbox"/> Peaches
<input type="checkbox"/> Watermelon	<input type="checkbox"/> Cranberry	<input type="checkbox"/> Strawberries	<input type="checkbox"/> Pears
<input type="checkbox"/> Kiwi	<input type="checkbox"/> Pineapple	<input type="checkbox"/> Cherries	<input type="checkbox"/> Mango
<input type="checkbox"/> Pomegranate	<input type="checkbox"/> Avocado	<input type="checkbox"/> Grapefruit	<input type="checkbox"/> Coconut

Other:

VEGETABLES

<input type="checkbox"/> Asparagus	<input type="checkbox"/> Broccoli	<input type="checkbox"/> Spinach	<input type="checkbox"/> Carrots
<input type="checkbox"/> Cauliflower	<input type="checkbox"/> Celery	<input type="checkbox"/> Corn	<input type="checkbox"/> Lettuce
<input type="checkbox"/> Mushrooms	<input type="checkbox"/> Cucumber	<input type="checkbox"/> Peppers	<input type="checkbox"/> Potato
<input type="checkbox"/> Squash	<input type="checkbox"/> Sweet potato	<input type="checkbox"/> Tomatoes	<input type="checkbox"/> Peas
<input type="checkbox"/> Green beans	<input type="checkbox"/> Zucchini	<input type="checkbox"/> Mixed vegetables	<input type="checkbox"/> Onions

Other:

BEANS

<input type="checkbox"/> Baked beans	<input type="checkbox"/> Butter beans	<input type="checkbox"/> Kidney beans	<input type="checkbox"/> Pinto
<input type="checkbox"/> Pork N beans	<input type="checkbox"/> Refried beans	<input type="checkbox"/> Northern beans	<input type="checkbox"/> Navy

Other:

BREADS

<input type="checkbox"/> Biscuits	<input type="checkbox"/> Bagel	<input type="checkbox"/> French breads	<input type="checkbox"/> Rolls
<input type="checkbox"/> Wheat/White bread	<input type="checkbox"/> Toast	<input type="checkbox"/> Bread stick	<input type="checkbox"/> Pita
<input type="checkbox"/> English muffin	<input type="checkbox"/> Cornbread	<input type="checkbox"/> Garlic bread	

Other:

MEATS

<input type="checkbox"/> Ground beef	<input type="checkbox"/> Hamburger	<input type="checkbox"/> Roast/Roast beef	<input type="checkbox"/> Steak
<input type="checkbox"/> Chicken breast	<input type="checkbox"/> Chicken nuggets	<input type="checkbox"/> Tuna	<input type="checkbox"/> Ham
<input type="checkbox"/> Turkey	<input type="checkbox"/> Bacon	<input type="checkbox"/> Pork chops	<input type="checkbox"/> Sausage
<input type="checkbox"/> Hot dogs	<input type="checkbox"/> Vienna sausage	<input type="checkbox"/> Pork roast	<input type="checkbox"/> Crab
<input type="checkbox"/> Fish	<input type="checkbox"/> Shrimp	<input type="checkbox"/> Salmon	<input type="checkbox"/> Bologna

Other:

BEVERAGES

<input type="checkbox"/> Juice	<input type="checkbox"/> Milk	<input type="checkbox"/> Water	<input type="checkbox"/> Soda
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Other:

DAIRY			
<input type="checkbox"/> Whip cream	<input type="checkbox"/> Butter	<input type="checkbox"/> Cottage cheese	<input type="checkbox"/> Cheese
<input type="checkbox"/> Cream cheese	<input type="checkbox"/> Yogurt	<input type="checkbox"/> Ice cream	<input type="checkbox"/> Eggs
<input type="checkbox"/> Sour cream			
Other: _____			

CONDIMENTS/DRESSING/DIPS			
<input type="checkbox"/> BBQ sauce	<input type="checkbox"/> Honey	<input type="checkbox"/> Ketchup	<input type="checkbox"/> Ranch
<input type="checkbox"/> Mustard	<input type="checkbox"/> Mayonnaise	<input type="checkbox"/> Peanut butter	<input type="checkbox"/> Salsa
<input type="checkbox"/> Soy sauce	<input type="checkbox"/> Syrup	<input type="checkbox"/> Cinnamon	<input type="checkbox"/> Salt
<input type="checkbox"/> Pepper	<input type="checkbox"/> Jam/Jelly	<input type="checkbox"/> Pickles	<input type="checkbox"/> Relish
<input type="checkbox"/> Teriyaki sauce	<input type="checkbox"/> Taco seasoning	<input type="checkbox"/> Pizza sauce	<input type="checkbox"/> Nutella
<input type="checkbox"/> Steak sauce	<input type="checkbox"/> Honey mustard	<input type="checkbox"/> Thousand island	<input type="checkbox"/> Gravy
Other: _____			

BREAKFAST CEREAL/BARS			
<input type="checkbox"/> Cereal bars	<input type="checkbox"/> Granola bars	<input type="checkbox"/> Pop tarts	<input type="checkbox"/> Oatmeal
<input type="checkbox"/> Cereals	<input type="checkbox"/> French toast	<input type="checkbox"/> Waffles	<input type="checkbox"/> Muffins
<input type="checkbox"/> Hash brown	<input type="checkbox"/> Pancake		
Other: _____			

PASTA/MEXICAN			
<input type="checkbox"/> Marinara sauce	<input type="checkbox"/> Alfredo sauce	<input type="checkbox"/> Spaghetti	<input type="checkbox"/> Burritos
<input type="checkbox"/> Lasagna	<input type="checkbox"/> Macaroni	<input type="checkbox"/> Spanish rice	<input type="checkbox"/> Tacos
<input type="checkbox"/> Pasta w/butter	<input type="checkbox"/> Tortillas	<input type="checkbox"/> Pasta w/tomato sauce	<input type="checkbox"/> Nachos
Others: _____			

SOUPS			
<input type="checkbox"/> Chicken and rice	<input type="checkbox"/> Chicken noodle	<input type="checkbox"/> Cream of broccoli	<input type="checkbox"/> Tomato
<input type="checkbox"/> French onion	<input type="checkbox"/> Cream of chicken	<input type="checkbox"/> Stew	<input type="checkbox"/> Potato
<input type="checkbox"/> Vegetable beef	<input type="checkbox"/> Vegetable	<input type="checkbox"/> Split pea	<input type="checkbox"/> Chili
Other: _____			

SNACK/MISC.			
<input type="checkbox"/> Candy	<input type="checkbox"/> Cookies	<input type="checkbox"/> Crackers	<input type="checkbox"/> Nuts
<input type="checkbox"/> Popcorn	<input type="checkbox"/> Applesauce	<input type="checkbox"/> Pretzels	<input type="checkbox"/> Raisins
<input type="checkbox"/> Brownie/chocolate	<input type="checkbox"/> Coleslaw	<input type="checkbox"/> Tater tots	<input type="checkbox"/> Pizza
<input type="checkbox"/> Macaroni/cheese	<input type="checkbox"/> Pudding	<input type="checkbox"/> Rice cakes	<input type="checkbox"/> Chips
<input type="checkbox"/> Fruit snacks/rollup	<input type="checkbox"/> Beef jerky	<input type="checkbox"/> Marshmallows	<input type="checkbox"/> Jell-O
<input type="checkbox"/> Danish/donuts	<input type="checkbox"/> French fries	<input type="checkbox"/> Potato salad	<input type="checkbox"/> Cake
Other: _____			

Appendix H

Homework Form Handout

Eating Homework



<i>New Food Exposures</i>						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
<i>Difficult foods this week:</i>						
<i>Successful foods this week:</i>						
<i>Questions/concerns to discuss with therapist:</i>						

Therapist suggestions/comments for next week _____

Appendix I

Eating Intake form

Feeding Intake Form

Goals

Goals for your child during feeding therapy _____

Goals for your family during feeding therapy _____

What issues are you trying to resolve?		
<ul style="list-style-type: none"> • Increase the volume of food my child eats • Improve oral motor skills • Decrease gagging during eating • Improve mealtime behaviors • Improve cup drinking 	<ul style="list-style-type: none"> • Increase the variety of foods my child eats • Increase weight gain • Resolve reflux or other GI issues • Reduce/eliminate constipation • Other _____ 	<ul style="list-style-type: none"> • Increase the texture of food my child eats • Decrease tub feedings • Decrease vomiting related to eating • Reduce/eliminate diarrhea

Restrictions

Does your child have any restrictions with their diet?	
Thickened liquids (please specify)	_____
Food allergies or sensitivities	_____
Special diet (kosher, gluten free)	_____

Feeding history

Did your child breast feed or bottle feed? _____

Did your child transition to purees, if yes when? _____

Did your child transition to table foods, if yes when? _____

By what means does your child receive his/her nutrition

NG tube

G tube

GJ tube

Orally

Was feeding interrupted at any time in the child's history? Yes No

☐ If so, for how long? _____

☐ If so, for what reason? _____

Feeding therapy history

Has your child ever had a feeding evaluation or feeding therapy before? Yes No

☐ If so, where, when, and with whom? _____

Feeding Habits

	Yes	No
Does your child like to eat?		
Do you think your child eats enough?		
Do you have to do something special to help your child eat?		
Do you have concerns about your child's weight?		
Does your child seem content after eating?		
Do you enjoy meal times with your child?		
Does your child sit up to eat?		
Does your child eat foods that have different food flavors?		
Does your child eat a variety of food textures?		

Overall description of my child's appetite:

poor fair good varies day to day
 Number of foods accepted _____
 Number of liquids accepted _____

My child does the following when eating: (check all that apply)		
<ul style="list-style-type: none"> • Gets upset when his/her face is touched at the start of feeding • Makes loud breathing noises • Chews but does not swallow • Refuses to eat • Does not chew • Does not swallow • Turns away from the cup • Arches his/her body • Chokes 	<ul style="list-style-type: none"> • Becomes limp or worn out before end of feedings • Puts hand in front of face • Pushes away food • Tantrums • Purposeful spit • Refuses bites offered • Takes food from others • Leaves the table 	<ul style="list-style-type: none"> • Falls asleep before the end of feedings • Messy eater • Throws food • Vomits • Gags • Cries • Coughs • Turns blue

What problems is your child now having?	
<ul style="list-style-type: none"> • Will not eat enough food by mouth • Refuses to eat certain kinds of food (smooth, lumpy, crunchy, spicy) 	<ul style="list-style-type: none"> • Seems to have problems taking liquids • Seems to have difficulty with solid foods • Seems to have difficulty with temperature of food or liquids (too hot or too cold)
When did you first notice feeding problems? _____	

What strategies have you tried to deal with your child's eating problems?		
<ul style="list-style-type: none"> • Distraction during meals (games, TV) • Skipping meals • Rewards • High calorie supplements/formula 	<ul style="list-style-type: none"> • Feeding child when she/he request food • Coaxing • Forcing • _____ 	<ul style="list-style-type: none"> • Allowing child to drink more fluids • Giving preferred foods • Punishment • _____

Mealtime routines

Describe your child's eating schedule _____

Describe your child's behaviors during mealtime _____

How does your child react to new foods? _____

What is your child's response to foods that he/she doesn't like? _____

Are there times during the day when your child eats best? If so, when? _____

What type of seating is provided for your child during mealtime?		
Caregivers lap	Booster seat	Infant seat
Highchair	Chair at table	Child stands
Child wanders around	In front of TV	Other
Where in the house is your child fed?		
Kitchen	Dining room	Living room
Walking around	Other	
With whom does your child usually eat/drink?		
Alone	With parent	With siblings
With peers	With nurse	Other
At what other locations does your child eat/drink?		
Daycare	School	Relative's home
In the car	Other	
Who feeds your child?		
Mother	Father	Sibling
Grandparent	Nurse	Teacher
Daycare provider	Other	
How long does it usually take to feed your child?		
Less than 30 minutes	30-60 minutes	More than 60 minutes
How does your child currently participate during mealtimes?		
Meal preparation	Setting the table	Sitting at the table during mealtimes
Clearing the table		

	Yes	No
Does your child eat the same food given to the family?		
Does your child show signs of hunger such as asking for food, crying when hungry?		
Does your child let you know when he/she is full?		
Does your child graze on foods throughout the day?		
Does your child eat more often than every two hours?		
Do you feed your child during the night?		
Do you feel that your child is anxious when trying new foods?		

In the past week	Never	1-2 meals	3-4 meals	5+ meals
How many meals did your child eat without an adult?				
How many meals did your child eat with the T.V. on?				
How often did you make your child a separate meal because he/she would not eat the family meal?				
How many meals eaten at home were with peers or siblings?				
How often did your child request food other than at scheduled meal or snack times?				

How many meals did your child not eat at the kitchen or dining room table?				
How many meals were eaten at "fast food" restaurants?				

Community Eating Settings

How does your child eat in restaurants? _____

How does your child eat when in someone else's home? _____

Utensil

Does your child pick up food with his/her fingers? Yes

No

What utensils does your child currently use spoon

fork

knife

How successful do they use utensils during mealtimes? Poor

Fair

Good

Are utensils preferred during mealtimes? Yes No

Drinking

How does your child consume liquids? Via tube sippee cup open cup straw

Are liquids a preference? Yes No

Oral Sensory Defensiveness

	Yes	No
Does your child lick/chew on nonfood items?		
Does your child mouth objects?		
Is your child unaware of food or liquid left on lips?		
Does your child drool?		
Does your child resist wiping their face or brushing their teeth?		
Does your child gag easily with food textures or utensils in mouth?		
Does your child often overstuff their mouth?		

Preferences

Texture preferences:			
Crunchy	Crisp	Lumpy	Uniform lumpy (ex. cottage cheese)
Hard	Chewy	Mixed consistencies	
Taste preferences:			
Salty	Sweet	Spicy	Tart
Flavored	Bland		
Temperature preferences:			
Hot	Warm	Cold	Cool
Room temperature			
List your child's favorite food liquids:			
1.			
2.			
3.			
4.			
5.			
List your child's least favorite foods/liquids:			
1.			

- 2.
- 3.
- 4.
- 5.

Additional

Other feeding/sensory concerns that you would like us to know: _____

Appendix J

Pre-test/Post-test Mean, Median and Mode

Question	Pre-mean	Post-mean	Pre-median	Post-median	Pre-mode	Post-mode
1	1.89	3.29	2.00	3.00	2.00	4.00
2	2.78	3.43	3.00	3.00	2.00	5.00
3	4.11	3.29	4.00	4.00	4.00	4.00
4	1.78	2.57	2.00	2.00	1.00	2.00
5	4.00	3.57	4.00	4.00	4.00	4.00
6	1.78	2.57	2.00	3.00	2.00	3.00
7	1.89	3.00	2.00	3.00	2.00	4.00
8	4.78	5.00	5.00	5.00	5.00	5.00
9	4.56	5.00	5.00	5.00	5.00	5.00