# CREATION OF AN OCCUPATIONAL THERAPY FEEDING VIDEO FOR PARENTS & CAREGIVERS OF CHILDREN WITH FEEDING DIFFICULTIES

A Thesis submitted to the faculty at Stanbridge University in partial fulfilment of the requirements for the degree of Master of Science in Occupational Therapy

by

Ashley Iseri, Madison Markstrom, Kate Parks, and Maria Patricia Ylo Thesis advisor: Naomi Achondo, OTD, OTR/L,SWC

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# **Certification of Approval**

I certify that I have read *Creation of an Occupational Therapy Feeding Video for Parents* & *Caregivers of Children with Feeding Difficulties* by Ashley Iseri, Madison Markstrom, Kate Parks, and Trisha Ylo, and in my opinion this work meets the criteria for approving a thesis submitted in partial fulfillment of the requirements for the degree of Master of Science in Occupational Therapy at Stanbridge University.

nja –

Naomi Achondo, OTD, OTR/L, SWC

Instructor of Occupational Therapy

ACCEPTED Myka Persson

Myka Persson, OTD, OTR/L

Program Director, Master of Science in Occupational Therapy

# Dedication

This thesis project is dedicated to our families, friends, and professors at Stanbridge

University.

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#### Abstract

This thesis project describes the creation of an occupational therapy pre-recorded and self-paced video designed for parents and caregivers of children with feeding difficulties. The video aims to disseminate evidence-based strategies to address feeding challenges in young children between the ages of zero and 36 months. Previous studies demonstrate that training caregivers to implement feeding interventions independently in their home is an effective approach to increasing a child's acceptance of less preferred foods, reducing feelings of frustration or anxiety related to mealtime, and decreasing problematic mealtime behaviors. However, these studies do not necessarily evaluate the design or format of information dissemination to parents and caregivers as to whether the methods of teaching were effective, accessible, or helpful to the adult learner. Because the video is targeted towards parents and caregivers, the design of the video is grounded in adult learning theory. For example, the length of the video was determined by current research on adult attention span, previous experiences of parents and caregivers of children with feeding difficulties contributed to the pre-recorded and self-paced format, and interactivity and visual demonstrations were introduced whenever possible into the video structure. This educational occupational therapy video contributes to maintaining a family-centered approach to therapy and the creation of an OT feeding video that is grounded in adult learning theory will aid in the generalizability of OT services to a child's natural environment by effectively educating the parents and caregivers.

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# Creation of an Occupational Therapy Feeding Video for Parents & Caregivers of Children with Feeding Difficulties

According to the American Occupational Therapy Association's (AOTA, 2020b) "Occupational Therapy Practice Framework," feeding is an essential activity of daily living and is crucial for survival and daily participation in occupations. However, families of young children commonly report that their child demonstrates selective eating habits. In fact, almost half of all children of preschool age are reported by family members to be "picky" during mealtime (Cardona Cano et al., 2015). With these challenging mealtime routines and habits established at a young age, the child's health in terms of growth and development can become a concern. Evidence suggests that many children, designated as picky eaters by their caregivers, will continue to have problems related to mealtime behavior and nutrition beyond early childhood, leading to significant nutritional implications and disruption in the occupation of family mealtime (Cardona Cano et al., 2015).

Additionally, caring for a child with food selectivity is associated with having an influence on what other family members ate as well as higher rates of parental stress (Curtin et al., 2015). There are several evidence-based interventions used by a multidisciplinary team to address the complex nature of food selectivity in children, as well as the frustration experienced by caregivers during the mealtime experience. Inhome caregiver-implemented feeding programs have been shown to be effective in improving children's acceptance of foods and improving the mealtime experience for all involved. Several studies highlight the importance of an interdisciplinary team. A review of existing literature in these areas highlights a gap in the evidence for the most effective

way to educate parents on the use of an occupational therapy (OT) home feeding handout for in-home implementation. This is meant to improve family mealtime experiences and decrease feeding difficulties in young children.

The AOTA's "Vision 2025" states, "As an inclusive profession, occupational therapy maximizes health, well-being, and quality of life for all people, populations, and communities through effective solutions that facilitate participation in everyday living" (AOTA, 2017, p. 1). We are hoping to maximize the health, well-being, and quality of life for families experiencing feeding difficulties through a widely accessible video. Mealtime can be difficult and induce stress on caregivers of children with feeding difficulties. Existing at-home training programs and resources are limited in their capacity to teach caregivers fundamental techniques to reduce feeding difficulties. This pre-recorded video aims to educate and assist caregivers of children with feeding issues by disseminating evidence-based strategies to address feeding challenges in a way that would make it applicable, accessible, and easy to understand for caregivers.

## **Literature Review**

#### Fear of Malnourishment in Children Leads to Caregiver Stress

According to various studies, fear of their child's malnourishment can have an influence on a parent or caregiver's level of stress (Franklin & Rodger, 2003; Greer et al., 2008; Rogers et al., 2012). Mealtime problems with their child may contribute to psychological factors for parents. According to Franklin and Rodger (2003), children who have a medical condition that affects the gastrointestinal or cardiorespiratory systems may have symptoms that contribute to feeding problems, such as decreased appetite, altered nutritional requirements, and pain while eating. As such, managing nutrition becomes a critical task for caregivers. In their study, Franklin and Rodger identified a common a common theme amongst parents of children with feeding difficulties. Six of the families reported fear that their "child could have died as a result of their medical condition, inadequate nutrition, and their inability to feed" (Franklin & Rodger, 2003, p. 141). Rogers et al. (2012) focused their study on eleven mothers' challenges in feeding their children with autism spectrum disorder (ASD). This study revealed that the mothers' fear of their child's survival directly led to an increase in stress for the mother. The interviews revealed that two of the children were hospitalized when presented with only non-preferred food, and four of the mothers also indicated that their child was both underweight and did not meet the normal growth curve for children of the same age. As such, the mothers reported stress due to increased feeding difficulties and malnourishment. Finally, Greer et al. (2008) conducted a study that found that there is a significant decrease in overall stress in caregivers after their children were discharged from a feeding program. Such a significant decrease indicates that treatment of a child's feeding disorder decreases a caregiver's overall stress. The results of these studies indicate that there is a distinct correlation between stress and fear of malnourishment in their children.

# Parent and Caregiver Satisfaction with Current Training Programs for At-Home Implementation

While there are several feeding interventions that are primarily implemented by the occupational therapist practitioner (OTP) within a clinic setting, parents and caregivers report being satisfied with learning intervention strategies to implement athome on their own. Parents and caregivers play a central role in all areas of a child's life

and are often the most involved in feeding their child. Research further investigated parent training programs in which the parent felt empowered to implement strategies independently during their own mealtime with the child. In order for these types of interventions to be successful, parents and caregivers must feel satisfied with not only the content of the feeding program, but also the method in which they learned the information. This includes factors like the number of sessions, the time it takes to complete the program, or the usefulness of the teaching tools, such as videos or worksheets. Parents of children with ASD completed an 11-week training session that utilized integrated behavioral strategies and nutritional guidance to address their child's disruptive mealtime behaviors (Johnson et al., 2018). Participants reported that they would recommend the program to others and finished the program feeling more confident in the ability to address feeding problems in their child. Additionally, parents of children with food allergies and gastrointestinal conditions found multidisciplinary educational classes about improving child feeding behaviors to be an effective method of learning practical strategies to address their child's feeding struggles (Schwartz & Hopkins, 2021). These studies demonstrate that parents are satisfied with learning a parent-implemented at-home intervention through the method of parent-training classes. However, there is a need for further research into whether these existing parent training classes are the most simple, useful, and time-conscious format for parents to be educated in feeding interventions for their child.

### **Effectiveness of Training the Caregiver to Implement At-Home Interventions**

Several studies addressed the effectiveness of training or coaching the caregiver in OT interventions with regard to child mealtime behaviors. The dynamic and complex physical and social context in which mealtime occurs is an important consideration when implementing a feeding program. Parents or caregivers are present and often lead the mealtime experience for a child in the context of their own home. Cosbey and Muldoon (2016) aimed to address the gap between feeding interventions found to be effective when implemented by a therapist and their potential to be effective when led by the caregiver in the child's home. In this study, parents of children diagnosed with ASD were trained in the Easing Anxiety Together with Understanding and Perseverance (EAT-UP<sup>TM</sup>) intervention. Following the parents' training and independent implementation of the program in their home, parents reported their child's increased acceptance of less preferred foods and fewer feelings of frustration or anxiety related to mealtimes. This contributes to the knowledge that training parents in home-feeding programs is an effective and important method to address mealtime behaviors. Another parentimplemented program, Mealtime Promoting Routines of Exploration and Play, was found to be effective in decreasing problematic child mealtime behaviors in children who met diagnostic criteria for sensory food aversions (Caldwell et al., 2020). While a different parent-led intervention was chosen for participants with different diagnoses, results are consistent with what was found by Cosbey and Muldoon. This supports the notion that despite being trained in different interventions, coaching parents to implement a feeding program in the natural context of their home during mealtime can reduce challenging or disruptive mealtime behaviors (Caldwell et al., 2020; Cosbey & Muldoon, 2016). While these two studies focused on how training parents to implement mealtime interventions can decrease the incidence of children's challenging mealtime behaviors, a study conducted by Mlinda et al. (2018) measured improvement in specific child and caregiver

feeding skills after parents of children with cerebral palsy were coached. Parents reported improved skills in feeding speed and position, as well as improved caregiver-child interactions following their independent implementation of the strategies they were coached on. While these studies differ in the specific area of change targeted by the intervention and the diagnosis of the participant, they all are consistent in their support for the effectiveness of educating and empowering parents to implement evidence-based strategies at home to improve the mealtime experience with their child.

## Asynchronous Online Learning to Address Access to Care

Numerous studies acknowledged the significance of online training models as an effective resource to make evidence-based programs more readily available to parents and caregivers. One particular study evaluated the "effectiveness of an Applied Behavior Analysis-based parental online training for the management of problem behaviors" (Grenier-Martin et al., 2022, p. 3486). Twenty-nine families of young children with Intellectual Developmental Disorder were randomly assigned to either a waitlist control group or the experimental group. The results of the study revealed that the asynchronous online training model was effective at reducing problem behaviors in children with Intellectual Developmental Disorder and parenting stress while also improving caregiver's self-efficacy. This study provides foundational evidence for the use of an online training model to support caregivers of young children with Intellectual Developmental Disorder. Another self-directed, online parental training program designed for caregivers of children with ASD also proved to be useful in teaching caregiver interventions and in improving the skills and behaviors of the children (Dai et al., 2021). Sixty-three parents participated in the randomized control-trial of the online

training program which consisted of fourteen self-paced modules. The parents reported that the program was "acceptable, clear, effective, and facilitated improvement in their children" (Dai et al., 2021, p. 4174). The results of both studies prove that the implementation of asynchronous online training programs can be an effective way in disseminating information to parents and caregivers. Since parents and caregivers might not have equal access to care and often have limited time to participate in training programs, asynchronous online programs aim to address disparities to access and limited availability.

#### **Statement of the Problem**

A review of the existing literature in these areas reveals a gap in the evidence for the most accessible and simple way to educate parents on the use of an OT home feeding handout for in-home implementation to successfully improve family mealtime experiences and decrease feeding difficulties in young children. Improvement in mealtime is necessary because feeding is an essential activity of daily living, and it is crucial for survival and daily participation in occupations (AOTA, 2020b).

Studies conducted by Cosbey and Muldoon (2016), Caldwell et al. (2020), and Mlinda et al. (2018) demonstrate that training caregivers to implement feeding interventions independently in their home is an effective approach to increasing a child's acceptance of less preferred, reduce feelings of frustration or anxiety related to mealtime, and decrease problematic mealtime behaviors. However, these studies do not specifically evaluate the strategies used to teach caregivers and whether these were the most effective, accessible, or helpful ways for the parents to acquire the information. An important area of future study is to examine caregivers' perceptions of the type of training they received to implement at home with their child. Further research is needed into the ways that caregivers receive information about an at-home feeding program and whether they felt that was the best way to learn and be able to independently utilize the information.

Franklin and Rodger (2003) describe how parental anxiety about their children's nutrition and growth, directly and indirectly, contributes to stress during the feeding interaction. Additionally, Rogers et al. (2012) found that mothers reported stress due to increased feeding difficulties and fear of malnourishment. These studies highlight the importance of considering parental stress during mealtime when teaching or training parents to implement feeding strategies independently at home. However, there is a need for research that determines the best way to value caregiver's experiences and perceptions when training the caregivers in a home-feeding program and whether this would improve the caregiver and child's mealtime experience when attempting to independently implement the intervention.

## **Research Question**

This project aimed to answer the research question: What would be an effective mode to disseminate evidence-based feeding strategies to parents and caregivers of children who are picky eaters? The solution we have proposed is a pre-recorded video led by trained Master of Science in Occupational Therapy (MSOT) graduate students under the supervision of a registered OTP with specialty certification in feeding and swallowing.

### **Statement of Purpose**

The purpose of this project was to create an OT feeding program in a prerecorded, video format based on information from a feeding handbook of evidence-based strategies created by the previous MSOT cohort (Boggess et al., 2022) to address aversive feeding behaviors and educate caregivers/parents with children with feeding difficulties. The video was designed for the adult learner in order to effectively educate parents and caregivers in order to promote positive mealtime experiences with their child.

## **Theoretical Framework**

# **Adult Learning Theory**

Because our project is targeted towards parents and caregivers, our project was grounded in adult learning theory. Andragogy is a term developed by Malcolm Knowles that describes the method and practice of teaching adults (Loeng, 2018). Knowles proposed that adult learning and childhood learning are completely different (Loeng, 2018). Adults do not process, comprehend, or retain information in the same manner as children. Adult learning theory expresses how adults acquire knowledge, skills, and attitudes (Abela, 2009). According to this theory, an educational cycle exists that is helpful in planning medical classes like our video. According to Abela (2009), the cycle consists of four steps: "1) assessing the needs of the learner, 2) setting educational objectives, 3) choosing and using a variety of methods, and 4) assessing that learning occurred" (p. 15). We will utilize these steps in designing our video to best suit the learning styles and needs of the adult population. There are also two key principles of adult learning theory with particular relevance to our project. The first principle is that adults learn best when they are involved in the planning and evaluation of their instruction (Abela, 2009). The second principle is that adults learn best when the information has immediate relevance and impact to their personal life (Abela, 2009).

In designing our video, we utilized existing research that pertains to the caregivers' previous experiences in learning feeding strategies to address their child's feeding difficulties. In this way, the input of parents and caregivers of children with feeding difficulties will serve as the basis in designing our video. The pre-recorded, self-paced nature of our video also allows caregivers to be involved in their instruction and learning by moving through the educational material at their own pace. And finally, the concise and simple format of our pre-recorded video allows caregivers to be educated in feeding strategies that are relevant. They may even be implemented in the home following pediatrician and OTP advice.

Based on this adult learning theory, as well as perspective on adult cognition, educational material must be short and focused to accommodate adult attention span capacity for effective learning. Research suggests that the average adult learner's attention span begins to wane after approximately 20 minutes of sustained attention (Cooper & Richards, 2017). This is primarily due to limitations in working memory. A study conducted by Murphy (2008) investigated whether individuals would improve in the areas of learner reaction, learning score, and retention when workforce training were designed to match this current understanding of adult education. When the one-hour long training was broken into three 20-minute segments, results indicated a significant improvement in learner reaction survey scores, learning score achievement, and knowledge retention. This study, along with the current consensus on adult attention span to educational lectures, provides support for the duration of the OT feeding video that we created.

# **Person-Environment-Occupation-Performance Model**

Adult learning theories, specifically andragogy, can be tied to the personenvironment-occupation-performance model created by Christiansen and Baum in 2005 (Bass et al., 2017). The person-environment-occupation-performance model views occupational performance as an outcome of the interaction between the person, the environment, and the occupation. Through occupation, individuals are able to develop self-identity and desire a sense of fulfillment. There are four major constructs within this model: person, environment, occupation, and occupational performance and participation (Bass et al., 2017). The person construct includes intrinsic factors, while the environment construct has extrinsic factors. The occupation construct includes meaningful activities and tasks within it. In designing our video, we considered the physical and social environmental factors in which the occupation of feeding typically takes place for a child. For example, it typically involves a parent or caregiver in the physical context of their own home. Because this model emphasizes the importance of considering the interplay of the occupation, environment, and people involved in a child's mealtime experience, it served as a theoretical foundation to our project.

#### Methodology

We created a pre-recorded video model to disseminate evidence-based feeding strategies for children who ages zero to 36 months and have a primary diagnosis of either of the following: Avoidant/Restrictive Food Intake Disorder (ARFID), ASD, Sensory Processing Disorder (SPD), or developmental delays. The video contains evidence-based information from a previous MSOT thesis graduate project, *Feeding Handouts for Picky Eating* (Boggess et al., 2022). The design, however, is grounded in adult learning theory tailored to parents and caregivers. We searched articles in this field using keywords such as presentation, adult learning, asynchronous learning, feeding difficulties, ARFID, ASD, SPD, and developmental delays. Through this in-depth article review, data was extracted from relevant scientific articles to provide information associated with effective adult parent and caregiver learning of general information, and more specifically, OT feeding interventions. The inclusion and exclusion criteria were determined prior to implementing the search. Exclusion criteria included articles and websites that demonstrated bias or non-evidence-based literature. Also excluded were articles not written in English. We did not provide hands-on treatment to human subjects, but we still created a type of face-to-face intervention. There was no human recruitment for this project, so an Application of Study not Involving Human Subject Approval was completed, and approval was received by the Stanbridge University Research and Grant Writing Committee.

Initially, we combined information from the handbook created by previous MSOT graduate students with gathered data regarding theories on adult learning to create an outline of the design and content of the video in a way that was tailored to this particular audience. The video was determined to be approximately 25 minutes long and the outline for the video was created to be as follows: introduction, education on oral motor skills and video demonstrations of strategies to address deficits, education on ARFID and an explanation of applicable strategies to implement with their child, examples of fun food plates, social stories, food toys, and arts and crafts, education on SPD with video demonstrations of strategies to address deficits, education on for the video demonstrations of strategies to address deficits, education on for the video demonstrations of strategies to address deficits, education on for the video demonstrations of strategies to address deficits, education on for the video demonstrations of strategies to address deficits, education on for the video demonstrations of strategies to address deficits, education on for the video demonstrations of strategies to address deficits, education on for the video demonstrations of strategies to address deficits, education on for the video demonstrations of strategies to address deficits, education on for the video demonstrations of strategies to address deficits, education on for the video demonstrations of strategies to address deficits, education on for the video demonstrations of strategies to address deficits, education on for the video demonstrations of strategies to address deficits, education on for the video demonstrations of strategies to address deficits, education on for the video demonstrations of strategies to address deficits, education on for the video demonstrations of the education of the education of the video demonstrategies to address deficits.

significance of the video and a thank you statement. Breaks were not implemented into the layout because the video is self-paced, and breaks can be taken as needed by the viewer. A visual presentation was created using Canva software (canva.com) to guide the viewer through each of the sections. A mix of pictures, graphics, and text were included on each slide. A copy of the Canva presentation is located in "Appendix B: Presentation Slides." Then, a script was created that was eventually read and recorded. This audio was incorporated as the slides played in the video.

Finally, under the guidance of a feeding specialist, we recorded video demonstrations of each evidence-based strategy to address the respective feeding difficulty. Video recordings and audio were edited into a video utilizing the iMovie platform and downloaded as an MP4 file. A link to the final video is included in "Appendix C: Video Link."

## **Video Creation**

The purpose of our project was to address aversive feeding behaviors and promote positive mealtime experiences through a video designed for adult learners. The concepts and strategies presented in this video are derived from the previous cohort group's thesis project in which they constructed an OT home feeding handout for families to improve mealtime experiences in young children (Boggess et al., 2022). The handout explains disorders and areas of oral motor dysfunction and how they affect a child's ability to effectively feed. These dysfunctions are jaw instability, poor lip closure, poor tongue movement, and deficits in fine motor skills (Boggess et al., 2022). The disorders mentioned in the handout are ARFID, ASD, and SPD (Boggess et al., 2022).

However, this project focused on the design and delivery method of this information into a format that was geared towards the adult learner, as it is intended to be viewed by the adult parents and caregivers of children with feeding difficulties. In the video creation process, several elements of the video were included to be consistent with adult learning theory. The length of the video was determined to be approximately 25 minutes, which aligns closely with current research about adult attention span to educational lectures. Next, in designing our video, we utilized existing research that pertains to the parents/caregivers' previous experiences in learning feeding strategies from professionals and existing educational tools to address their child's feeding difficulties. In this way, the input of parents and caregivers of children with feeding difficulties served as the basis in designing our video and aligned with principles of adult learning theory. To involve adults in their own learning and adhere to adult learning principles, we introduced interactivity wherever possible into the video format. As an example, visual demonstrations done by the researchers and step-by-step instructions of several of the intervention strategies encourage the viewer to be an active participant. The pre-recorded, self-paced nature of our video also would allow caregivers to be involved in their instruction and learning by moving through the educational material at their own pace. The concise and simple format of the content, design, and use of Canva slides throughout the pre-recorded videos allows caregivers to be educated in feeding strategies that were relevant and could immediately be implemented with their child, following the video.

Some examples of strategies demonstrated by the researchers that can aid parents during mealtime include play-based approaches, oral motor exercises, and food chaining (Boggess et al., 2022). Play-based approaches presented in the previous cohort were expanded upon in the video by the presentation of various examples and instructions to activities such as various fun food plates, social stories, food toys, and arts and crafts (Boggess et al., 2022). Additionally, we provided lists, descriptions, and visually demonstrated strategies that can aid in children experiencing hyposensitivity and hypersensitivity during mealtime. Finally, the significance of this project and tips on maintaining these positive mealtime behaviors were presented towards the end of the video.

## **Ethical and Legal Considerations**

The ethical considerations for this project relate to the potential presentation and viewing our educational video. The *AOTA 2020 OT Code of Ethics* includes the principles of autonomy, veracity, and nonmaleficence (AOTA, 2020a). We took steps to ensure that the information presented in the video is truthful and accurate to the best of our ability, as we are publishing this video for parents and caregivers to view. Prior to creating and recording the video, all feeding strategies are evidence-based and have been reviewed and evaluated by an OTP feeding specialist for safety.

It is also important to consider the accessibility of our video. The video is free and accessible through a URL link for those who wish to view it. The pre-recorded video is designed such that viewers are able to stop and resume the videos at any time, which increases accessibility. This video is intended to be available for parents and caregivers of children with feeding difficulties by reducing the time and cost constraint. It is still vital to consider the ethical implications of introducing feeding strategies to caregivers. We want to ensure that, although this video is meant to aid parents and

caregivers of children with aversive feeding behaviors, we emphasize that this video is not meant to be an intervention at this time. Because parents may try to use the strategies they learned from our video during their child's mealtime, there is a risk of the child choking. Parents and caregivers are aware of the risk that comes with each mealtime experience, but the risk is necessary for the child to get proper nutrition for growth and development. So, while choking during mealtime is always a risk, the benefit of finding new evidence-based feeding strategies that work for the individual to improve the health of the child, and improve mealtime experience, outweighs this potential risk.

#### **Implications for OT**

Based on findings from the literature review, there is a need for simple and effective, evidence-based resources within the field of OT for at-home implementation by parents and caregivers to address feeding difficulties in young children. Utilizing a handbook of evidence-based strategies created by a previous cohort, as well as additional research on adult learning, we were able to design and create a video that could be used by OTPs as a resource in training parents in an at-home OT feeding intervention with their child. The studies by Caldwell et al. (2020), Mlinda et al. (2018), and Cosbey and Muldoon (2016) show strong evidence for the importance of caregiver involvement in the implementation of feeding therapy. Additionally, Matson et al. (2009) state that parent training is a critical element of OT interventions, specifically for generalization of skills to the natural environment of the child, such as in the home and community. Our pre-recorded OT video would add to the resources available for OTPs to provide education to parents/caregivers to help improve carry-over of progress outside of the in-person therapy sessions. This video contributes to maintaining a family-centered approach to therapy.

Next, it is important that resources given by OTPs to parents and caregivers are easily understandable, accessible, and provide practical suggestions for home use. This video has particular relevance and usefulness to this population as the design is grounded in adult learning theory. OTPs would be able to utilize the video with the family of their clients, knowing that it is specifically designed for this population to learn most effectively. Finally, the issue of food selectivity has been a concern of caregivers as they fear that their children are not getting sufficient food intake (Franklin & Rodger, 2003). With fear of malnourishment being a major concern for caregivers, this pre-recorded OT video could help OTPs to ease these anxious feelings of parents and caregivers during the feeding process by equipping them with evidence-based strategies that they can practice and use during mealtime in their home. Overall, the development and creation of an OT feeding video that is grounded in adult learning theory can aid in the generalizability of OT services to a child's natural environment.

## Limitations

This project presented a few limitations. The educational video does not replace individualized OT intervention services for feeding challenges in young children. While it is intended to be a resource for families, further consultation with the child's OTP and/or physician is required for safe implementation. Additionally, the video is designed for the adult learner based on current research pertaining to the experiences of parents and caregivers of children with feeding difficulties, as well as current research on adult learning and educational materials. However, no actual parents or caregivers were consulted in the making of the video, presenting a potential limitation to the perceived usefulness and understandability of the video to this particular audience. Finally, due to time constraints and approval for only a study not involving human subjects, we did not utilize actual children in our video demonstrations of each strategy. Instead, demonstrations were completed on adult women, MSOT graduate students, under the supervision of a registered OTP which could limit the viewers ability to generalize the strategy for use with their child.

## Conclusion

The AOTA considers feeding to be essential for survival and successful participation in daily activities (AOTA, 2020b). However, it is common for children to be designated as a "picky eater" from a young age which can lead to concerns over the child's health and development. While OTPs work with children and their families to address feeding difficulties in many ways, maintaining family-centered care is crucial to any type of feeding intervention (Matson et al., 2009). Studies demonstrate training caregivers to implement feeding interventions independently in their home is an effective approach to increasing a child's acceptance of less preferred foods, reducing feelings of frustration or anxiety related to mealtime, and decreasing problematic mealtime behaviors (Cosbey & Muldoon, 2016; Caldwell et al., 2020; Mlinda et al., 2018). However, a review of the existing literature in these areas revealed a gap in the evidence for the most effective way to educate parents on the use of OT home feeding strategies for in-home implementation to successfully improve family mealtime experiences and decrease feeding difficulties in young children. So, an OT feeding video that is grounded in adult learning theory was designed and created based on a handout created by previous MSOT graduate students. Our goal in designing this video was to improve the translation and successful implementation of evidence-based OT feeding strategies at-home by

parents and caregivers. The potential future dissemination of the video could promote positive and successful mealtime experiences for the parent and their children by reducing stress and increasing confidence with these strategies. Our team designed and created an OT feeding video as an accessible solution to bridge the gap between therapy sessions and training caregivers to implement therapy within the home environment. In turn, bridging this gap shows the importance of the involvement of a client's support system in improving the quality of life for children, parents, and caregivers.

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# Appendix A

# Link to Final Video

https://drive.google.com/file/d/1\_li\_LeWoqh6bRPUtTWJRR-

SB46vIZRJ7/view?usp=sharing

# Appendix B

# **Presentation Slides**



# CREATION OF OT FEEDING VIDEO



**OTD, OTR, SWC** Our guide for interventions and evidence-based practice



Achondo et al., 2023

Our Purpose



 Address aversive feeding behaviors
 Promote positive mealtime

experiences

3. Present in an accessible manner

Achondo et al., 2023











Lip Closure

### PROPER LIP CLOSURE

- Forming food into a ball within the mouth
- Decreases drooling
- Required for straw drinking

(Hiiemae & Palmer, 2003)

### HELP FOR POOR LIP CLOSURE

- Round lips around a lollipop and squeeze 3-5 times
- Blow bubbles



https://www.arktherapeutic.com/blog/oralmotor-lip-exercises-with-the-y-tips/

Achondo et al., 2023

Tongue Movement

### IMPORTANCE

 tongue awareness, moving the tongue side to side, back and forth, and up and down are all vital to a successful mealtime

(Hiiemae & Palmer, 2003)

Achondo et al., 2023

### HOW TO HELP

- Place a dab of pudding on the corners of the child's mouth and have them lick it off with the tip of their tongue.
- Place a cheerio on the tip of the child's tongue and have them touch it to the roof of their mouth, right behind the front teeth, for as long as they can.

Fine Motor Skills AFFECT ON MEALTIME HOW TO HELP • Difficulty with holding a • Fill a bowl with sand and spoon, scooping, and gold coins, then scoop bringing a spoon to the out the coins into a mouth separate pan • Use fingers to pull small (Manno et al., 2005) beads out of putty Achondo et al., 2023 Fine Motor Skills - How to Help Bowl of Sand Putty & Beads https://www.amazon.com/Creativityhttps://www.amazon.com/INNER-ACTIVE-Theraputty-Resistance-Occupational-Recommended/dp/B09FICCNRF Kids-Sensory-Bin-Ocean/dp/B08TW3K8XV?th=1 Achondo et al., 2023

Avoidant/Restrictive Food Intake Disorder



Achondo et al., 2023

Avoidant/Restrictive Food Intake Disorder

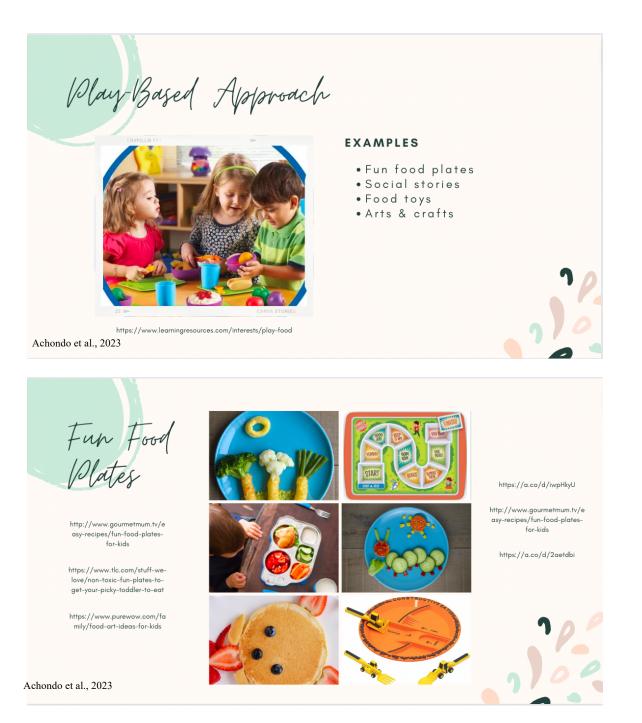
### DEFINITION

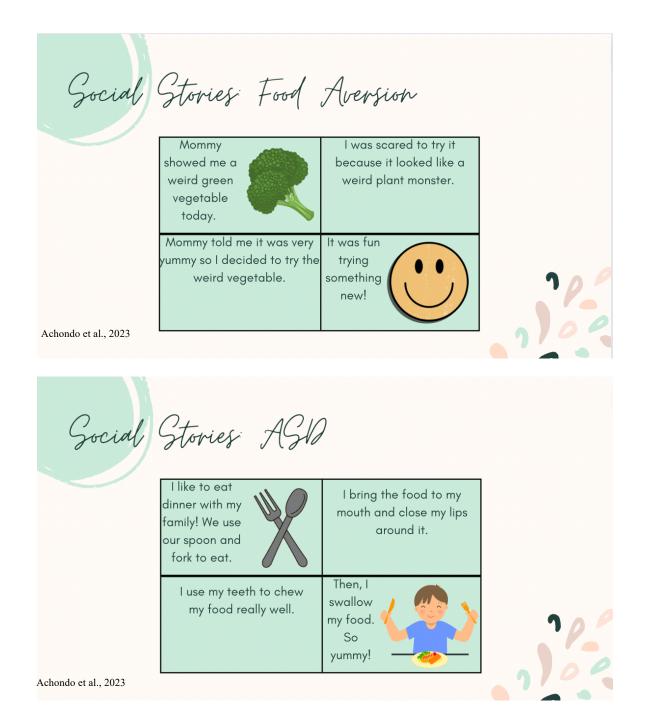
- Extreme picky eaters who have little interest in eating food
- Eat a limited variety of food, which can lead to poor growth and poor nutritional outcomes (Sherman, 2021)

#### SIGNS

- Significant Weight Loss
- Abdominal Pain
- Fatigue
- Fear of choking or vomiting
- Excess energy
- Only eat foods with a particular texture
- No fear of gaining weight
- No body image struggles
- Cold intolerance

(Gans, 2022).







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https://stylesatlife.com/article s/fruits-and-vegetables-craft-ideas/

https://www.pinterest.com.au/ catbest71/food-crafthealthyhabits-crafts/

https://www.pinterest.com.au/ catbest71/food-crafthealthy-habits-crafts/

Achondo et al., 2023



https://www.activityvillage.co. uk/food-crafts

https://www.freekidscrafts.co m/materials/food-crafts/

https://artsycraftsymom.com/p aper-sandwich-craft/



Example: Edible Slime

### **VEGAN & GLUTEN-FREE!**

- •1/4 cup instant
- pudding mix
- 1 cup corn starch
- •1/3 cup warm water



https://www.myfoodandfamily.com/brands/stemkit chen/recipe/585652/edible-jell-o-slime

Establish a mealtime routine

• Create a positive environment

Family-Centered Care Picky eating behaviors are heavily influenced by environmental factors To have a more positive mealtime experience, Role-model normal eating behaviors • Expose children to new foods Allow children to help make meals https://healthier.stanfordchildrens.org/en/tips-for-

https://healthier.stanfordchildrens.org/en/tips-for feeding-picky-eaters-during-distance-learning/

Achondo et al., 2023

Sensory Processing Disorder





SPD & Hyper-Sensitivity

#### DEFINITION

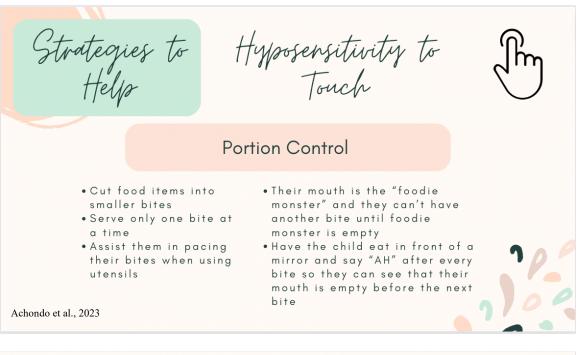
- Over-sensitivity to sensations in the body and the environment
- Feel overwhelmed in crowded, noisy, or bright environments
- Overly sensitive to certain clothing items or light physical touch

#### MEALTIME APPLICATION

- Overly sensitive to certain smells, textures, or tastes
- Avoids certain textures, smells, tastes, or environments with unpredictable sounds due to their sensitivity









Antism Spectrum Disorder RELATED TO FOOD FOOD AVERSION • Restricted behaviors • Hypersensitivity to texture Insistence on sameness • Difficulty expanding the • Inflexibility types of food the child eats • Hyper/hyporeactivity to sensory input Achondo et al., 2023 ASD & Food Aversion - Warning Signs • Commonly left over food • Difficulties controlling food • Overreacting to a specific in the mouth food • Taking longer than 35-40 • Consistently crying, falling minutes to eat a meal apart, or shutting down • Refusing entire categories when exposed to new foods of food textures or • Eating less than 20-30 nutritional groups total foods • Presenting as congested • Vomiting during or after while eating eating, consistently

Hyper Reactivity & Hypersensitivity PRESENTATION IN CAN LEAD TO SENSORY CHILDREN WITH ASD AVOIDANCE! • Overresponsive to certain • Try to avoid specific stimuli • Refrain from certain smells, sounds, sights, smells, tastes, touches, & body textures, and tastes of cues foods • Over reactive to changes in • Avoid foods that are balance & body positioning crunchy, chewy, wet, dry, sticky, mushy, and lumpy Achondo et al., 2023

Hypo Reactivity & Hyposensitivity

### PRESENTATION IN CHILDREN WITH ASD

- Under-responsive to sensory stimuli
- May have trouble recognizing sensations like taste and even hunger

# CAN LEAD TO SENSORY SEEKING!

Only eat foods with strong flavors



Strategies to Hypo and Hyper Help Sensitivity to Sound

#### **HYPOSENSITIVTY**

- Eliminate other sounds and distractions in their environment during mealtimes
- Use food chaining to desensitize the child to the sounds of higher textured food items

### **HYPERSENSITIVTY**

- Play calming music or loud white noise during mealtimes
- Use a fidget clicker if the child makes repetitive loud noises during mealtime
- Provide high-textured food items and snacks

Achondo et al., 2023

Strategies to Hypo and Hyper Help Sensitivity to Smell

### **HYPOSENSITIVTY** INVOLVE THEM IN MEAL PREPARATION TASKS

- Allow them to smell each ingredient
- Model positive response to smells
- Let them to taste items when curiosity arises

#### **HYPERSENSITIVTY**

PUT SCENTS INTO THEIR PLAY ROUTINE!

- Scented hand soap, body wash, shampoo, lotions, etc.
- Scented markers, crayons, stickers, and paints
- Scented sprays or essential oils on highly used fabrics, toys, blankets, and pillows

**Food Chaining** Food Chaining • 6-step plan to stop picky eating, solve feeding issues, and expand your child's diet. • Start with the preferred food item and slowly integrate non-preferred food items that have similar ingredients From Fruit Roll-Ups to Strawberries or taste. • Patience is key https://firststepnutrition.com/blog/food-chaining/ (Fishbein et al., 2006). Achondo et al., 2023 Strategies to Hypo and Hyper Help Sensitivity to Taste

### HYPOSENSITIVTY

- Allow the child to participate in grocery shopping and meal preparation tasks without added pressure to try specific food items
- Gradually introduce new flavors to their preferred food items

#### HYPERSENSITIVTY

- Introduce strong flavors and spices
- Add flavor enhancers
- Increase the temperature of food
- Allow the child to practice labeling flavors



Maintenance at Home

- 1. Creative plating
- 2. Food crafts
- 3. Food-related toy
- 4. Fun mealtime items





Achondo et al., 2023

Please wait!

Reach out to your child's pediatrician before taking any action. This presentation is for informational purposes only, not to encourage self-lead interventions for your child with feeding difficulties.





# Appendix C

# **Application of Study not Involving Human Subject Approval**

### Research and Grant Writing Committee Approval Number:

# Study ID #001 MSOTOC12\_Naomi Achondo\_Thesis Application

#### Re: Grant application approval

Dr. Sheila Espina <sespina@stanbridge.edu> Thu 10/19/2023 8:15 AM To: Frederick Poling <fpoling@stanbridge.edu>; Nja Therapy <njatherapy01@gmail.com> Cc: Kate Parks <kate.parks@my.stanbridge.edu> Thank you, Fred, for bring this to my attention.

Hello Dr. Achondo and Kate,

Thank you for your patience. The RGW Committee has approved your group's study application.

Best regards,

Dr. Sheila Espina, PT | Lead Physical Therapist & ACCE, Los Angeles sespina@stanbridge.edu | P. 626.655.9391 Ext. 5522 | F. 888.882.4216



Orange County | Los Angeles | Riverside