Mealtimes in Early Childhood Education Centers During COVID-19: A Mixed-Methods Assessment of Responsibilities, Interactions, and Best Practices

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Mealtimes in Early Childhood Education Centers During COVID-19:
A Mixed-Methods Assessment of Responsibilities, Interactions, and Best Practices

by

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A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
with a concentration in Community and Family Health
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Dedication

This work is dedicated to my family: for my parents, who always valued education and encouraged me to pursue my goals. For my brother, Matt, who taught me what the word “planet” means and how to look at the world in various ways.

For Kevin, my partner in all of the things and whose equal participation in child rearing should not be remarkable, but is. Thank you for supporting me and our family during this time.

Children are the best teachers. Eva transformed me from a person to a parent, and I am changed forever. Oliver inspired me to just keep doing the next right thing. Thank you both for attending every possible form of child care during your early years. Eva attended a Swiss krippe in 2012-2013 that opened my eyes to culturally-specific expectations of young children and child care settings. Finally, this work is dedicated to the children at U.C. Berkeley Child Care services from 1998 to 2000. I never would have imagined that work leading to this.
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List of Terms and Acronyms

**BMI**: Body Mass Index, a common metric for assessing the size of people (height and weight).

**CACFP**: Child and Adult Care Food Program, federal food assistance program that provides reimbursement for income-eligible children in ECE settings.

**ECE**: Early Care and Education, a broad term that includes settings in which children age 0-5 spend time out of the home and cared for by a non-relative caregiver. Includes preschools, child care, day care, centers, family child care homes, Head Starts, faith-based preschools.

**Formal ECE Centers**: Licensed or license-exempt centers. Does not include FFN care (family, friends, and neighbors) which is informal care.

**F&V**: Fruits and vegetables.

**FSM**: Family Style Meals, a way of eating in ECE settings that involves children serving themselves from shared bowls and/or platters and adults role modeling healthy eating.

**NAEYC**: National Association for the Education of Young Children

**NHANES**: National Health And Nutrition Examination Survey.

**SSB**: Sugar-sweetened beverages such as soda, juices with added sugars.

**WIC**: Women, Infants and Children, a federal program that provides nutrition resources for income-eligible pregnant women, mothers with an infant up to age 1 year, and children younger than age 5.

**SNAP**: Supplemental Nutritional Assistance Program, a federal program that provides nutrition resources for income-eligible families.
A Note on Terminology

Many words in the early childhood education (ECE) field have developed over time and been influenced by various factors. For example, ECE can include what used to be called preschool, playschool, day care, child care, child development center, etc. The acronym ECE came about in the later 1990s/early 2000s and was intended to be inclusive of all settings and acknowledge that children are learning, growing and developing in important ways in all settings with those names.

Along similar lines, in an effort to be inclusive, I am using the terms “teacher” and “school” whenever possible to describe the adults responsible for children’s care and education (teacher) and the centers in which the adults and children spend time (school). I am doing this first for the sake of simplicity and consistency. I realize this is a departure from typical terminology in the United States. My reasoning is that if children are learning from birth, and parents are children’s first teachers, that the adults responsible for children’s care and education during the day would also be called “teachers.” Similarly, ECE settings can be centers, homes, environments, formal, organized, licensed, license-exempt, informal, etc. This dissertation focuses on ECE centers and so I use that phrase whenever possible. However, sometimes the word “school” makes more sense.
Abstract

Background: Childhood obesity is a public health problem associated with many co-morbidities. The majority of young children in the United States (U.S.) attend formal early childhood education (ECE) programs, often consuming the majority of daily calories and engaging with teachers during mealtimes. Mealtime best practices support children’s development of healthy eating habits. This dissertation aimed to understand how COVID-19 has influenced mealtimes in ECE centers, including (1) the division of responsibility between adults and children during mealtimes, (2) the child feeding dynamic, and (3) how mealtime best practices have been included during COVID-19.

Methods: This dissertation used a concurrent mixed-methods design to describe and understand changes in mealtime responsibilities, feeding behaviors, and best practices in ECE centers during COVID-19. A theory-based survey for directors and teachers was distributed to more than 7000 ECE centers, and in-depth interviews with teachers were completed. Survey and interview questions were developed based on The Trust Model and Social Cognitive Theory. Analyses were conducted in SPSS and MAX QDA.

Results: Surveys were completed by 759 directors and 431 teachers, and 29 teachers participated in interviews. Surveys showed that teachers’ mealtime responsibilities increased, especially in terms of cleaning and health & safety, while children’s responsibilities decreased, particularly around food handling and serving. Even so, many teachers reported engaging in autonomy-supportive feeding behaviors, such as letting children eat until they are finished and talking about food at the table. Controlling behaviors included praising children for cleaning their plates and
requiring children to try one bite of a new food. Recommended mealtime best practices changed from pre-COVID to during-COVID, and centers varied in how they implemented mealtimes during COVID. Interviews revealed three explanatory models of mealtime practices during COVID-19: (1) modification: centers incorporated best practices into new routines, such as eating together but sitting farther away, (2) elimination: centers changed routines in ways that prevented best practices, e.g. teachers wearing masks and standing during meals, (3) minimal change: routines did not change due to COVID-19 and therefore, mealtime practices did not change.

**Conclusion:** These findings have implications for modifying mealtime routines both during COVID and as COVID restrictions are lifted. ECE centers that have successfully integrated COVID-19 modifications and maintained pre-COVID mealtime best practices (e.g., supporting children’s autonomy and learning to eat when they are hungry and stop when they are full) can serve as examples for others. Additionally, these findings raise further questions as to whether specific best practices are essential or if modified best practices are sufficient for supporting children’s healthy eating in general. Findings are generalizable to ECE centers in Florida and could be compared with other states.
Section One: Introduction

Public Health Problem

Childhood obesity is a persistent public health problem that has remained a risk to lifelong health for several decades in the United States (U.S.). Among children age 2-5 years old, the rate of obesity has nearly tripled since 1980, from 5% to almost 14% (Hales et al., 2017; Ogden & Carroll, 2010). In the same age group, overweight and obesity combined have increased from 14.7% to 33.4% (Fryar, Carroll, & Ogden, 2016). In other words, one in three children is considered overweight or obese before kindergarten age.

Measurement

Overweight and obesity among children are determined differently from adults. Body Mass Index, or BMI, is calculated by dividing weight in kilograms by height in meters squared (CDC, 2015). For children, the BMI is then compared to what would be expected for their age and sex group. Expected weight categories are based on CDC Growth Charts, which are developed by expert committee recommendations and based on data from NCHS and NHANES (for more detail on the history and development of the growth charts that are currently used, please see (Kuczmarski et al., 2002). Children at or above the 85th percentile are considered overweight; children at or above the 95th percentile are considered obese (CDC, 2018) (Appendix A). Although BMI cannot take into consideration more specific aspects of a child’s weight distribution (e.g., waist circumference, skin-fold thickness), as a population measure it has been shown to be a good screening tool that is associated with other measures of children’s
body fatness (CDC, 2018). Individual children with BMIs in the overweight or obese category should see a pediatric primary care provider for further guidance.

BMI as a measure has been criticized because of variation in BMI outcomes among race/ethnicity and socio-economic status (SES) groups (CDC, 2018). A recent article by Gillborn et al. states: “the persistent identification of working-class and people of colour as outside the boundaries of ‘healthy’ BMI could be argued to be a form of scientific racism (Gillborn et al., 2020).” While troubling, these differential patterns by race do not necessarily translate into disease risk. For example, Flegal et al. found that among non-Hispanic white and non-Hispanic black girls aged 8-19, while a high BMI was more prevalent among the black girls compared to the white girls, high adiposity (a term the authors use to mean fatness) was not (Flegal et al., 2010). A similar pattern has been observed among children of Asian ethnicity, in that body fatness and disease risk are present at lower BMI levels relative to other groups (de Wilde et al., 2018; Hudda et al., 2018). These studies demonstrate the complexity and variation in body types and that the reason obesity matters is its link to disease risk. BMI is a general measure intended to be used as a screening tool at the population level, not for individual diagnosis.

**Comorbidities**

Unfortunately, children who are overweight or obese tend to remain heavy as they grow up (Geserick et al., 2018; Nader et al., 2006). Young children who develop obesity face increased risks for physical health problems throughout the lifespan; during childhood, increased risks include high blood pressure, impaired glucose tolerance, and breathing and joint problems (CDC, 2016). Additionally, children with obesity may face increased problems with behavioral health, such as anxiety and depression, bullying, diagnosed learning disability and grade repetition (Halfon et al., 2013). Adults with obesity face increased risks of heart disease, diabetes
and some cancers (CDC, 2017). Overall, obesity during childhood is linked to many negative short- and long-term health outcomes.

**Healthy Weight and Healthy Eating Habits**

Maintaining healthy weight is an important proxy for children’s general health. While malnutrition is generally thought of as a problem for children who are too small, children with obesity can also be undernourished (Muttarak, 2019). The co-occurrence of obesity and malnutrition can result from chronic dietary patterns in which children take in too many nutrient-poor foods and not enough nutrient-rich foods. Young children need plenty of nutrient-rich foods to support their healthy growth trajectory and reduce susceptibility to infectious diseases (Dunn et al., 2020; Mehta, 2020; Naja & Hamadeh, 2020). ECE environments are opportunities for promoting healthy eating patterns in young children (McBride & Dev, 2014) (Appendix B).

**Environment**

The majority of young children age 2-5 years spend time in, out-of-home early care and education (ECE) environments, often consuming the majority of daily calories (Hassink, 2017a). ECE settings provide an opportunity to support children’s healthy weight from an early age (Ward et al., 2013). While ECE broadly may include informal care arrangements, such as grandparents, babysitters, or drop-in care (Le et al., 2018), this paper focuses only on ECE centers that are either licensed or license-exempt. Historically, ECE environments have been identified by public health and clinical health providers as important intervention points for health promotion on a variety of topics, including infectious disease (CDC & The Child Day Care Infectious Disease Study Group, 1984; Lu et al., 2004) injuries, (Alkon et al., 1999; Hashikawa et al., 2015) and staff health (Whitaker et al., 2013). More recently, as obesity prevalence has increased in the population, obesity prevention has been identified as an area for
intervention in ECE environments as well (Larson et al., 2011; Matwiejczyk et al., 2018; Ward et al., 2013).

The current COVID-19 global pandemic has brought renewed focus on health and safety in ECE environments. While infectious diseases are already known to spread more quickly in group care compared to private home environments (CDC & The Child Day Care Infectious Disease Study Group, 1984; Lu et al., 2004), the lack of prevention or treatment options for the novel coronavirus/COVID-19 combined with its highly infectious nature present uniquely urgent challenges in ECE. Recently vaccines have been developed for adults, and they are being disseminated. As of this writing there is no vaccine for children younger than 6 years old, and treatment options for adults and children remain limited. However, progress toward having a vaccine available for younger groups is ongoing. As of April 5, 2021, everyone age 18 and older is eligible to receive a vaccine, and people age 16-17 may receive a vaccine with a parent or guardian present (Florida Health, 2021). Additionally, as of May 4, 2021, the Pfizer vaccine may be authorized for use in children age 12 to 15 years old soon, with additional evaluation ongoing for children in 2 age groups: 5 to 11 years old and age 6 months to 5 years old. The vaccine for younger children may be available as soon as Fall 2021 (CNN, 2021). In the context of mealtimes with young children, the first priority is to reduce the risk that mealtimes would facilitate the spread of COVID-19. Teachers in ECE centers must balance protecting children and themselves from COVID-19 while also supporting children’s development of healthy eating behaviors and long-term health.

**Mealtimes in ECE before COVID-19**

Prior to COVID-19, there were three general models for meal service in ECE centers. Either there would be a kitchen on-site in which a cook or some other adult would be responsible
for preparing meals; parents would send in all food for the day; a catering company could provide all food for the day; or some combination of these (e.g., a kitchen for providing lunch and parents sending in snacks to share). The decision of which model to use would be largely determined by the structural setting and the owner(s) of a building. Catering and parent-bring options are generally used when facilities do not have space or capacity for a kitchen. In addition, schools with kitchens are subject to licensing requirements in terms of their kitchen and food preparation areas. While parent-bring models can be appealing to parents because they are typically less expensive than programs that provide meals, there is some evidence that the nutritional quality of parent-send meals is lacking (Almansour et al., 2011; Sweitzer et al., 2009).

Before COVID (and now), ECE centers also had the option of participating in the Child and Adult Care Food Program (CACFP, also called “federal food program) if there were enough children from families who met income eligibility requirements. Head Start programs, which provide early care and education for children in income-eligible families, typically participate in CACFP as well. CACFP provides evidence-based guidelines for meal patterns and portion sizes for children in ECE settings. Several studies have found that participation in CACFP is associated with healthy foods being offered and consumed (Erinosho et al., 2018; Ritchie et al., 2012). One study in the Miami area found that centers serving low- and middle-income families (most participating in CACFP) offered fruits, vegetables and skim milk at substantially higher rates than high-income centers (Chang-Martinez et al., 2018). Finally, one study found that participation in preschool was associated with lower odds of childhood obesity; however, all of the participants were in the WIC program, and their preschools would have been participating in CACFP, providing much healthier food than a typical preschool program (Koleilat et al., 2012). In other words, it was likely CACFP, not the preschool enrollment, was positively influencing
children’s risk of obesity. Similarly, another review article found decreased risk of obesity among preschoolers attending Head Start across several studies (Swyden et al., 2017).

**Overview of Child Feeding Practices in ECE Settings**

The general understanding of child feeding practices in ECE settings is based on research on food parenting practices, which is based generally on parenting taxonomies such as Diana Baumrind’s Authoritarian, Authoritative and Permissive/Indulgent scheme (Baumrind, 1966). Food parenting practices, also called caregiver feeding practices, generally fall along a continuum of behaviors with child-centered on one side and adult-centered on the other. Many of the agreed-upon best practices tend to fall along the middle ground of ‘autonomy support,’ where children’s emerging autonomy is supported by adult scaffolding, but the adult is neither intrusive nor disengaged (Vaughn et al., 2016) (Figure 1.1).

![Figure 1.1: Child Feeding Practices Continuum](image)
Family Style Meals

Before COVID-19, several national organizations recommended a practice called ‘family style meals’ or FSM, which is thought to support children’s dietary self-regulation (AAP et al., 2019; Benjamin Neelon & Briley, 2011; Department of Health and Human Services, Administration for Children and Families, n.d.; Institute of Medicine of the National Academies, 2011; US Department of Agriculture, Food and Nutrition Services, 2014). At the broadest level, FSM is a mealtime during which children and adults sit together and consume the same foods, children serve themselves and determine their own portion sizes, and adults role model healthy eating behavior. Programs that practice FSM could choose to implement a variety of aspects and/or variations of FSM (pilot observations, Summer 2019). (Appendix C).

FSM can be misunderstood as indulgent and overly child-centered, but this is an incomplete understanding of the practice. FSM requires a structured environment and careful responses from adults. FSM would actually fall into the middle ground of autonomy support because adult engagement is an important element of correct implementation (Figure 1.1). Without the structured mealtime environment in the room and the adult sitting with and engaging with the children at the table, it can easily become indulgent or uninvolved feeding practice.

Current Guidelines

A global infectious disease pandemic is unprecedented during modern times in which out-of-home ECE is the norm. Proper nutrition supports overall health and reduces susceptibility to infectious disease (Dunn et al., 2020; Mehta, 2020; Naja & Hamadeh, 2020). However, during economic recessions, household spending increases on energy-dense items and decreases on fresh fruits and vegetables (Griffith et al., 2013). Finally, it is well-established that food insecurity is linked to obesity (Brown et al., 2019), and obesity has been identified as a factor
related to more severe symptoms and poorer health outcomes among people with COVID-19 relative to people with COVID-19 who have healthy weight (Butler & Barrientos, 2020; Maffetone & Laursen, 2020). Therefore, while implementing infection control measures to protect child and teacher health, supporting healthy weight and healthy eating habits remains important for child and teacher short- and long-term health.

While the majority of public K-12 school systems and universities in Florida were closed and/or moved instruction online during this study period (August to October 2020), many ECE centers remained opened. ECE programs for essential workers, such as medical, nursing and health practitioners as well as first responders and migrant workers, remained open. Other ECE programs that are private could choose to remain open and how to modify their practices in response to the virus. Others closed temporarily or permanently; teachers may have lost their jobs or had hours reduced. In other words, the current composition of ECE programs that are open now (March 2021), and how characteristics of open centers may have changed compared with January 2020 is unknown.

Concerns about group child care facilitating the spread of the illness are causing major changes to all health and safety practices in ECE, including mealtime practice recommendations at the national level (e.g., CDC and Caring for Our Children). For example, children serving themselves is now actively discouraged. Current CDC recommendations state: “If meals are typically served family-style, plate each child’s meal to serve it so that multiple children are not using the same serving utensils” (CDC, 2020)(Table 4.1).

Locally, however, Florida Governor DeSantis announced an executive order on May 22, 2020 releasing licensed child care programs from any group size or ratio limitations other than those in current licensing regulations (Florida Department of Children and Families, 2020b; State
The CDC had previously recommended small group sizes of 10 total to limit exposure (i.e., 9 children with 1 adult, 8 children with 2 adults). Florida licensing regulations allow for high ratios and provide no group size limits (1:4 for infants, 1:6 for ones, 1:11 for twos, 1:15 for threes, 1:20 for fours, and 1:25 for fives) (State of Florida, 2019), and so small groups with lots of space between children are unlikely. It is not known how ECE programs adapted to the new recommendations and for how long. It is also not known how teachers and directors perceived the health threats and new recommendations, and whether and how they were able to implement changes, especially given the inconsistency between state and national guidelines. All K-12 public schools in Florida are currently open to all students full time per executive order from the state, 2020-EO-06, enacted in July 2020 (State of Florida Department of Education, 2020).

**Theories Guiding this Inquiry**

In order to understand changes to mealtime routines, this dissertation uses the Trust Model as the primary theoretical framework. Elements of Social Cognitive Theory facilitate applying the Trust Model to ECE environments.

*The Trust Model*

The Trust Model was first proposed in the 1980s by Ellyn Satter, a dietician and social worker who worked with children and families with feeding problems/eating disorders. An early publication about the feeding relationship included some content about division of responsibility (Satter, 1986). In later work, she described “eating competence” as a skill to be developed, along with the numerous other competencies children develop as they grow up (e.g., communication, motor skills) (Satter, 2007). Eneli coined the term “The Trust Model” in a 2008 article that outlined the key elements of the model (Eneli et al., 2008), in which children and adults have
separate responsibilities, with context describing the natural growth patterns of any individual child (Figure 1.2). These ideas re-framed disordered eating into a different lens. What was viewed as a temporary problem to be fixed became a skill to be developed and nurtured on an ongoing basis.

Figure 1.2: The Trust Model

Source: Adapted from Eneli et al., 2008, p. 2198.

In 2011, the American Academy of Dietetics articulated a key concept of the Trust Model, division of responsibility, in their statement of best practices:

“Division of responsibility is another approach to feeding that may help children self-regulate food intake. This method specifies that adults are responsible for the what, when, and where of feeding, whereas children are responsible for the how much and whether of eating. In theory, this approach facilitates child self-regulation, but there is no direct evidence to support this approach. The method is, however, consistent with other feeding practices that support healthful eating in children, including adult modeling, repeated exposure to novel foods, and family-style meals” (Benjamin Neelon & Briley, 2011)
The Trust Model links to Baumrind’s parenting taxonomy with the more modern term “food parenting practices,” (Vaughn et al., 2016) in which more controlling food parenting practices fall within the authoritarian parenting category, autonomy supportive food practices align with authoritative parenting, and indulgent or disengaged parenting can also be indulgent or disengaged food parenting. The Trust Model aligns with an authoritative food parenting style, in which the parent is a leader and a figure the child can trust, but is neither overly intrusive/controlling nor indulgent/permissive (Lohse et al., 2014). Although the Trust Model was originally designed for the home setting and as a treatment for already disordered eating, the current curriculum is intended to be used from birth (Satter Institute, 2019) and focuses on all caregiver/child feeding interactions (Eneli et al., 2015), supporting the idea that positive feeding behaviors and attitudes are applicable to all children at every stage.

Arguably the most important assumption of the Trust Model and its key concept, division of responsibility, is that children can self-regulate their food intake:

“[The Trust Mode] posits that optimal feeding depends on caregivers who both provide leadership with feeding and give the child autonomy with eating. That is, parents [and caregivers] take responsibility for food management and provide the structure and social context for feeding and thereby ensure a positive feeding environment. At the same time, parents [and caregivers] are trusting of, and responsive to, the child’s capabilities with respect to food acceptance, food regulation, and growth (Lohse et al., 2014).

There is evidence, which supports the Trust Model, that the vast majority of typically developing newborns have the internal ability to know when they are hungry and when they are full. However this behavioral skill of internal regulation (1) may be influenced by external factors early in life, even infancy; and (2) may be distributed differentially among individual children, even young children during the preschool age (Birch & Fisher, 1998). Any group of preschoolers will have had various experiences in the past and at home and in their communities that influence
their eating behavior. Whether the Trust Model can “un-do” negative practices and patterns is an ongoing question (Eneli et al., 2008) and outside the scope of this study. Still, the Trust Model assumes that children are capable of knowing how much of what they need to eat in order to feel satisfied, a major assumption that is not without controversy (Appendix D).

**Key Constructs.** The Trust Model has three key constructs: adult responsibilities, child responsibilities, and context. Adult responsibilities are to provide the what, when and where of eating. Child responsibilities are to decide whether, what and how much to eat from the foods provided by the parents/caregivers. The original meaning of context is that children are continuously growing and developing and as such, their physical size is not a factor in feeding behavior from adults. The concept of “Context” in the Trust Model is based on the home environment and inter-personal level, so the idea is that parents/caregivers respect the children’s natural growth pattern (i.e., context) and do not change feeding based on how the child looks (e.g., withholding additional portions or sweets from larger children, pressuring smaller children to eat more).

A more general understanding of context will be useful in ECE settings. Like parents, caregivers should not feed children differently according to their size. Unlike parents, caregivers must also be aware of the many external contextual factors, such as the classroom environment, other children, and general norms and expectations at school, that influence children’s feeding behavior at the ECE table. To be relevant for this study, context will mean the physical context around the mealtime. This will be especially important when considering modifications due to COVID-19, which will likely change the physical environments of mealtimes, such as spacing and location.
Using the Trust Model to understand mealtime practices in ECE environments will be an application to a new environment. The strength of this model is that it addresses the inter-personal level of mealtimes, which have been shown to be a difficult area in other studies (D. S. Ward et al., 2017). It also adds a dimension to the issue of child feeding practices: rather than just a continuum of more or less controlling on the part of the parent/caregiver, the Trust Model proposes a dynamic partnership between adult and child that facilitates the child’s development of an essential life skill. Young children’s early eating experiences have the potential to influence their self-regulation and eating in the absence of hunger, both risk factors for obesity. As such, the Trust Model proposes that mealtime environments be designed to support optimal feeding practices that support children’s ability to modify their intake across meals and situations as energy density and amounts of available food vary (Birch & Fisher, 1998).

**Social Cognitive Theory**

This study will use Social Cognitive Theory (SCT) as a secondary guiding theory. SCT has been used quite a lot in ECE healthy eating studies. In fact, it is probably the most commonly used theory (Ammerman et al., 2007; Ayala et al., 2015; Benjamin, Ammerman, et al., 2007; Benjamin, Neelon, et al., 2007; Cotwright et al., 2017; Mann et al., 2015; Messiah et al., 2017; Smith et al., 2017) (Appendix E). A few concepts overlap with the Trust Model, such as adult leadership and role modeling. The Trust Model focuses on individual adult-child interactions, and so the SCT concepts that involve the group dynamic, such as observational learning and group efficacy, are needed for the ECE environment. However, the Trust Model is the dominant framework.
Research Questions

The overall goal of my research is to understand the determinants and effects of mealtime practices in ECE settings. In the current context, addressing my topic involves understanding how the pandemic has changed mealtime routines, and determine how best practices can be implemented within new guidelines. I developed a framework based on Trust Model concepts, with context adapted for ECE environments, and two concepts from SCT added. Figure 1.3 shows how specific research questions are mapped to the framework: (1) How has the COVID-19 pandemic changed adult and child responsibilities during mealtimes in ECE centers? (2) How has the COVID-19 pandemic changed the caregiver-child feeding dynamic in terms of supporting children’s autonomy? and (3) How can best practices that support children’s healthy eating be implemented successfully within the current infection control guidelines?

**Theoretical Framework**

**RQ 1:** How has the COVID-19 pandemic changed adult and child responsibilities during mealtimes in ECE centers? (Satter, Eneli, Trevino, Elford, Brann)

**RQ 2:** How has the COVID-19 pandemic changed the caregiver-child feeding dynamic in terms of supporting children’s autonomy? (Vaughn, Dev, Swindle)

**RQ 3:** How can FSM best practices be implemented successfully within the current ECE mealtime guidelines? (CDC, CFOC)

**Adult Responsibilities**
- “What, when & where”
- Leadership, role modeling
- Support child self-regulation (autonomy support)
- Support positive caregiver-child feeding dynamic

**Child Responsibilities**
- “What, how much, whether”
- Self-regulation
- Observational learning
- Group efficacy
- Engage in positive caregiver-child feeding dynamic

**Context**
- Number of tables, children and teachers (i.e., ratios, group size)
- Where children are seated (i.e., spaced out or not)
- Where children eat (i.e., in classroom, cafeteria)

**Figure 1.3: Research Questions Mapped to Theoretical Framework**

*Observational learning and group efficacy are from SCT.*
**Data Collection Considerations and Rationale**

COVID-19 restrictions precluded any onsite data collection in the form of observations and/or in-person interviews. Therefore, collecting data from two perspectives (teachers and directors) and in two modalities (survey and interview) provided the most feasible way to attain a comprehensive answer to the research questions given the circumstances. It was important to include all ECE centers in the state because ECE centers are regulated primarily at the state level, and COVID restrictions were also implemented at the state level. Only ECE centers were included because they serve a larger number of children age 2-5 and they also serve more children per site, so it was more efficient to enroll a large sample.

**Study Design**

This is a convergent mixed-methods design with retrospective self-report (Creswell & Clark, 2018, pp. 68-72). Quantitative and qualitative data were collected during the same time period and then merged for analysis. Quantitative data were collected in the form of an online survey via Qualtrics (Qualtrics, 2021) that was open from August 10th to October 11th, 2020 (Appendices F, G, H and I). Qualitative data were collected in the form of phone/online interviews with ECE teachers from August 16th to October 16th, 2020 (Appendix J).

**Survey.** A statewide survey for all ECE centers was distributed via Florida Department of Children and Families. Survey questions were based on Trust Model and Social Cognitive Theory concepts, and designed to help answer all three research questions. The survey also included general descriptive information about the ECE programs, such as demographics, age of children served, total number of children, food service model (e.g., food is provided by the school, sent in by parents, or provided via catering), and where children eat (e.g., classroom or cafeteria). This information will be valuable for comparing this study to other areas of the
country, where typical mealtime practices can be quite varied. In addition, descriptive characteristics of ECE centers in Florida may have changed due to the economic impact of COVID-19, such as centers closing and/or parents losing jobs and disenrolling children.

Two surveys were developed, one for directors and one for teachers. The survey for directors asked “higher-level” questions about the context and issues related to general practices across the school. Teacher surveys asked more detailed questions about the classroom-level perspective, social interactions and mealtime practices. Both surveys cover all Trust Model and SCT elements included in this study (adult responsibilities, child responsibilities, context, and mealtime interactions). Both surveys were translated into Spanish (Appendices G and I). One study in Florida found that statewide 87% of the ECE workforce was fluent in English and about 25% were fluent in Spanish. The majority of bilingual and Spanish-speaking ECE respondents lived in the South Florida area (Clements et al., 2013).

**Teacher Interview.** Semi-structured interviews were conducted with ECE teachers as an optional follow-up to the survey (Appendix J). Questions were aligned with the survey and designed to elicit more depth. Teachers were selected to do the interview rather than directors because teachers are together with children and directly involved during the mealtimes and would be able to provide detailed information about the experience and changes. The interviews were essential for answering research question three. Interviews were conducted only in English.

**Dissertation Format**

This dissertation is written in manuscript format, with one manuscript to answer each of the three research questions. Section one contains the introduction to the public health problem and theoretical underpinnings of the inquiry.
Section two contains the first manuscript: “Just sit and eat.” Adult and Child Mealtime Responsibilities in Early Care and Education Settings During COVID-19 in Florida. Section two draws on both survey and interview data to understand adult and child mealtime responsibilities during COVID and how they may have changed. This first manuscript also contains the most detailed description of survey and interview methodology as well as participant and ECE center characteristics.

Section three contains the second manuscript: “I don’t get to model that we are going to eat healthy.” A Mixed-Methods Assessment of the Child Feeding Dynamic in Early Care and Education Centers during Covid-19 in Florida. This manuscript used only teacher surveys and interviews to understand the teacher perspective on mealtime feeding behaviors and how they may have changed due to COVID-19.

Section four contains the third manuscript: “I believe that eating with the children is essential.” A Mixed-Methods Assessment of How Early Care and Education Centers have Implemented Mealtime Best Practices Within New COVID-19 Guidelines. This manuscript draws on survey and interview data to understand how teachers and directors have included mealtime best practices during COVID restrictions in which previous best practices were not possible.

Section five contains emergent findings. COVID-19 influenced many aspects of daily routines, not just mealtimes, and so there were several emergent findings that are worth further inquiry. Emergent findings include The Workplace as Protective, Children are Resilient, Fear/Anxiety, Mask Wearing, and Family Style Meals are Slower.
Section six includes the conclusion, public health implications and next steps. The appendices contain literature reviews, detailed tables and figures, and one additional manuscript on mask-wearing behaviors (Appendix K).
Section Two: “Just sit and eat.” Adult and Child Mealtime Responsibilities in Early Care and Education Settings During COVID-19 in Florida

Abstract

Childhood obesity is a public health problem associated with many co-morbidities. The majority of young children in the US, those age 2-5, attend some form of early care and education (ECE) program. Children attending full time typically have 2 meals and 1-2 snacks each day. The ‘division of responsibility’ between adult and child means that the adults are responsible for the what, when and where, and the child is responsible for whether, what and how much to eat. This paper aims to understand how the division of responsibility between teachers and children in ECE environments has changed due to COVID-19 in Florida.

This paper is part of a larger study that used a concurrent mixed-methods design to describe and understand the influence of COVID-19 on ECE mealtimes. A theory-based survey for directors and teachers was distributed to more than 7000 ECE centers, and 29 in-depth interviews with teachers were completed. Questions were developed based on the Trust Model and Social Cognitive Theory. Questions for this paper focused on adult and child responsibilities. Descriptive statistics were conducted in SPSS and thematic analyses in MAX QDA.

Surveys were completed by 759 directors and 431 teachers. Surveys showed that 96% and 98% ECE teachers provided meals at the same time and place each day, respectively (when and where). Survey results indicated that children determined what and how much they ate, although less than 5% served themselves. Interview respondents shared that the COVID-19
pandemic increased their mealtime responsibilities in the form of more cleaning, supervision and focus on health and safety. Interviews confirmed children’s responsibilities decreasing in that some children no longer participated in any food handling due to concerns about COVID-19.

A balanced division of responsibility can support children’s development of healthy heating competency. These findings have implications for modifying mealtime routines in ways that both minimize the risk of COVID-19 and also support healthy eating with a balanced (or rebalanced) division of responsibility.

Background

Childhood obesity is a public health problem that is associated with numerous co-morbidities and shorter overall life expectancy (CDC, 2016; Halfon et al., 2013). While only 5% of children age 2-5 had obesity in 1980, by 2017 that figure had nearly tripled to 14% (Hales, 2017; Ogden & Carroll, 2010). While during previous decades, it was thought that young children might “grow out” of “baby fat,” current evidence indicates that simply waiting is not an effective strategy. Rather, the diet and physical activity of young children is important for their obesity risk even during the early years of life (Geserick et al., 2018; Nader et al., 2006).

While young children’s dietary intake and physical activity opportunities are somewhat determined by their family circumstances, a majority of children age 2-5 in the United States (U.S.) spend time in early care and education (ECE) settings, often consuming the majority of their calories for the day (Hassink, 2017b). Therefore, these settings have been identified as important for interventions that support healthy weight (Ward et al., 2013). Although some interventions have had success in improving BMIs (Alkon et al., 2014; Grummon et al., 2019; Messiah et al., 2017; Natale et al., 2014) others have not (Fitzgibbon et al., 2006; Zahnd et al., 2017), and the relationship between behavior change and anthropometric outcomes is unclear.
(Sharma et al., 2019; Ward et al., 2017). There is evidence that in addition to what children eat, how adults feed them influences healthy weight (Anundson et al., 2018; Gubbels et al., 2015; Hughes et al., 2007; Kharofa et al., 2016; Vaughn et al., 2016).

One framework for understanding how adults feed children is in the Trust Model, which was developed by Ellyn Satter in the 1980s as a method for addressing disordered eating among children in the home setting. A primary aspect of the Trust Model is the division of responsibility between child and adult during the feeding situation. According to the Trust Model, the adult is responsible for the what, when and where of the mealtime, and the child is responsible for the what, whether and how much to eat—starting from birth (Eneli et al., 2008) (Figure 2.1). While the Trust Model has been used to understand healthy eating in home settings, to my knowledge it will be a new application to use in ECE settings. This study draws upon a theoretical framework developed based on the Trust Model (Figure 2.2) (Collins & Stockton, 2018).

Before COVID-19, there was broad consensus around mealtime best practices, such as family style meals (FSM). FSM includes a balanced division of responsibility between adults and children in order to support children’s emerging autonomy and ability to eat when they are hungry and stop when they are full (Appendix C). The COVID-19 pandemic resulted in new guidelines that presumably created many changes in ECE routines and health and safety practices, including mealtime routines (Table 4.1). (“Presumably” because due to pandemic circumstances, no direct observation was allowed.) CDC guidelines for ECE mealtimes emphasized protection from this new infectious disease (CDC, 2020) and also may have influenced the division of responsibility. Therefore, understanding any changes in the division of responsibility may provide insight for supporting practices that support children’s healthy eating. This paper addresses the following research questions: (1) How did ECE directors and teachers
in Florida describe the adult and child mealtime responsibilities during COVID-19? (2) What changes (if any) did ECE directors and teachers in Florida describe in adult and child mealtime responsibilities due to COVID-19?

Methods

Study Design, Setting, and Participants

This paper is part of a larger study that used a concurrent mixed-methods design to describe and understand changes in mealtime, responsibilities, interactions, and best practices in ECE centers during COVID-19 (Figure 2.2). All research activities took place within Florida. The list of ECE centers and contact information was obtained in collaboration with the Florida State Department of Children and Families and included licensed and license-exempt programs.

Instrument Development

Survey (Directors and Teachers). Trust Model constructs were used to develop survey questions. Versions of the survey were created for directors and teachers first in English and then translated into Spanish. After pilot testing with 10 local ECE directors in one county and making minor adjustments, the cross-sectional survey was distributed to more than 7000 ECE centers in Florida on August 10, 2020.

A few questions were the same or similar between teacher and director surveys, but most were unique to the director and teacher in order to elicit information from their specific point of view. Teachers were asked 9 questions about Adult Responsibilities (When, Where, What) that provided 2 or 3 closed-ended options (yes, no, sometimes). Teachers were asked ten questions about Child Responsibilities (Whether, What and How Much) that provided a 6-point Likhert scale (Always, Very Often, Often, Sometimes, Rarely, Never). (Tables 2.5 and 2.6). Directors and teachers were also asked the same question about changes in responsibilities due to COVID-
19 with 9 closed-ended options for directors, 7 closed-ended options for teachers, and an “other” option for both to fill in free text (Table 2.8). Surveys were distributed via Qualtrics (Qualtrics, 2021) and data were analyzed in SPSS version 27.0 (IBM Corp., 2020).

**Interview (Teachers only).** A semi-structured, open-ended interview guide, also based on Trust Model constructs, was used to interview a total of 29 teachers. Interview questions included in this analysis were designed to elicit responses about participants’ perceptions of their own responsibilities during the mealtime (*Adult Responsibilities*), the children’s responsibilities during the mealtime (*Child Responsibilities*). Follow up questions asked if any responsibilities had changed due to COVID-19 (Table 2.1).

**Table 2.1: Interview Questions for Teachers about Adult and Child Responsibilities**

<table>
<thead>
<tr>
<th>Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tell me about your responsibilities as a teacher during the lunchtime.</td>
</tr>
<tr>
<td>What do you feel responsible for during the lunchtime?</td>
</tr>
<tr>
<td>Do you think that your responsibilities as a teacher during lunchtime</td>
</tr>
<tr>
<td>have changed since COVID-19? If so, how?</td>
</tr>
<tr>
<td>Tell me about what the children are doing during lunchtimes at your</td>
</tr>
<tr>
<td>school. What are they responsible for during the meal?</td>
</tr>
<tr>
<td>Do you think that the children’s responsibilities during lunchtime have</td>
</tr>
<tr>
<td>changed since COVID-19? If so, how?</td>
</tr>
</tbody>
</table>

**Data Collection Procedure**

**Survey.** The academic year begins in early August in Florida, and some ECE centers close or change their curriculum during the summer. Due to feedback about the hectic pace of this time of year, after the first invitation on August 10, 2020, subsequent reminders were delayed and sent out September 15, September 23, September 28, and October 2, 2020. The
survey was closed on October 11th at midnight. Directors were instructed to complete their survey and forward the survey link to one teacher who was involved in mealtimes at the school. The aim was to have one director survey and one teacher survey completed per school.

**Interview.** At the end of the teacher survey, respondents were invited to share their contact information and participate in a follow-up interview in order to understand their point of view more in depth. The first 10 interviewees were selected by contacting all who responded and completed the interview. After the 10th interview, participants were purposefully selected to add unique counties in order to gain as much variation as possible in terms of regions of Florida represented. All interviews were conducted via phone or Zoom and recorded and transcribed verbatim by JFM. Interviews were completed from August 16, 2020 to October 16, 2020. Participants who completed the interview were compensated with a $25 e-giftcard to Amazon. The Institutional Review Board at the University of South Florida designated this study as exempt.

**Data Analysis**

**Survey.** Survey data were analyzed using descriptive statistics and frequencies in SPSS.

**Interview.** Interviews were uploaded into MAX QDA (VERBI Software, 2020) and analyzed with a “top-down” theory-based set of initial codes based on the Trust Model (Houghton & Houghton, 2018; Maguire & Delahunt, 2017). Grounded theory with constant comparison was used to identify emergent themes, and the codebook was reassessed and updated after every five interviews (Bernard et al., 2017). A second doctoral student (AWB) coded six manuscripts (about 20%) selected at random and achieved inter-coder reliability with Kappa greater than .80 for all six.
**Data Integration.** Quantitative and qualitative data were integrated across the key Trust Model constructs, *Adult Responsibilities* and *Child Responsibilities*. For example, frequencies in responses to survey questions about *Adult Responsibilities* were compared to interview responses to questions about *Adult Responsibilities*. (Creswell & Clark, 2018). (Appendix L).

**Results**

**Participants**

Director surveys were completed by 759 respondents (735 in English and 24 in Spanish), representing 56 unique counties out of 67 in Florida (84%) (Figure 2.3). Teacher surveys were completed by 431 respondents (411 in English, 20 in Spanish), representing 40 unique counties out of 67 in Florida (60%) (Figure 2.4). The combined response rate for directors and teachers was 17% \([759+431]/7000=0\cdot17\]. Interview respondents were from 19 unique counties (28%) (Figure 2.5).

Demographic questions were completed by about 100 fewer directors and 50 fewer teachers (n = 639 and 381, respectively). Directors and teachers had an average age of about 40 years old. Directors had an average of 20 years of experience while teachers had an average of 14 years of experience. The majority were female and white, which is consistent with the ECE workforce nationally (Deloitte, n.d.). The majority of directors held a Florida director’s credential, and the majority of teachers had either a Florida staff credential or a national CDA (Child Development Associate) degree.

It is worth noting some detail about participants’ self-reporting of race and ethnicity. About 24% of teachers and 21% of directors reported Hispanic ethnicity, which is consistent with the sizable and diverse Hispanic community in parts of Florida. There was a choice to select “other” and then it was optional to write in a response. For directors, 8.3% or 53 individuals
selected “other” for race. Of the 36 who filled in a response, 16 indicated they were of Latin
descent (e.g., Cuban, Haitian, Puerto Rican, Mexican, Hispanic). The next most frequent
response was mixed race, written in by 6 participants (e.g., bi-racial, mixed race). Five (5) wrote
responses that did not answer the question, such as “human” or “na.” Additionally, 5 wrote
responses indicating they were white, such as “Scottish,” “Canadian” and “white.” Of the
remaining 4, the responses were “Hebrew-Israelite,” “MENA,” “COG,” and Indio-American.

Among teachers, 6.3% or 26 participants responded “other” to the questions about race.
Of the 19 who wrote in a response, 9 indicated they were of Latin descent (e.g., Brazilian,
Haitian, Hispanic, Mexican, Puerto Rican, Spanish), 3 wrote in mixed race (e.g., mixed,
mestizo). The remaining responses were presumably white Americans: 4 wrote “white,”
“European American,” or “American,” 2 wrote “human” and 1 wrote “unsure.” (Table 2.2)

Table 2.2: Characteristics of Respondents

<table>
<thead>
<tr>
<th>Employment Status</th>
<th>Directors n=643</th>
<th>Teachers n=385</th>
<th>Florida ECE workforce*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Time (30 hours or more per week)</td>
<td>96.9%</td>
<td>88.8%</td>
<td></td>
</tr>
<tr>
<td>Part Time (less than 30 hours per week)</td>
<td>3.1%</td>
<td>11.2%</td>
<td></td>
</tr>
<tr>
<td><strong>Hours Changed</strong></td>
<td><strong>n = 642</strong></td>
<td><strong>n = 384</strong></td>
<td></td>
</tr>
<tr>
<td>My hours are about the same</td>
<td>57.6%</td>
<td>71.1%</td>
<td></td>
</tr>
<tr>
<td>My hours have decreased due to COVID</td>
<td>15.9%</td>
<td>19.5%</td>
<td></td>
</tr>
<tr>
<td>My hours have increased due to COVID</td>
<td>26.5%</td>
<td>9.4%</td>
<td></td>
</tr>
<tr>
<td><strong>Employment Status Changed</strong></td>
<td><strong>n = 639</strong></td>
<td><strong>n = 381</strong></td>
<td></td>
</tr>
<tr>
<td>My employment status has not changed</td>
<td>91.9%</td>
<td>88.7%</td>
<td></td>
</tr>
<tr>
<td>My employment status has changed from Full Time to Part Time due to COVID</td>
<td>6.4%</td>
<td>8.4%</td>
<td></td>
</tr>
<tr>
<td>My employment status has changed from Part Time to Full Time due to COVID</td>
<td>1.7%</td>
<td>0.3%</td>
<td></td>
</tr>
</tbody>
</table>
### Table 2.2: Characteristics of Respondents (Continued)

<table>
<thead>
<tr>
<th>Gender</th>
<th>n = 640</th>
<th>n = 384</th>
<th>n = 632</th>
<th>n = 382</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>98.0%</td>
<td>96.4%</td>
<td>97.4%</td>
<td>20.9%</td>
</tr>
<tr>
<td>Male</td>
<td>1.9%</td>
<td>2.3%</td>
<td>2.6%</td>
<td>79.1%</td>
</tr>
<tr>
<td>Other</td>
<td>0.2%</td>
<td>1.3%</td>
<td>na</td>
<td>0.2%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hispanic Ethnicity</th>
<th>n = 632</th>
<th>n = 382</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>20.9%</td>
<td>23.8%</td>
</tr>
<tr>
<td>No</td>
<td>79.1%</td>
<td>76.2%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Race</th>
<th>n = 639</th>
<th>n = 389</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>67.0%</td>
<td>62.0%</td>
</tr>
<tr>
<td>Black or African American</td>
<td>21.8%</td>
<td>24.9%</td>
</tr>
<tr>
<td>Asian</td>
<td>1.7%</td>
<td>1.5%</td>
</tr>
<tr>
<td>American Indian or Alaska Native</td>
<td>0.9%</td>
<td>0.5%</td>
</tr>
<tr>
<td>Native Hawaiian or Pacific Islander</td>
<td>0.3%</td>
<td>0.8%</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>8.3%</td>
<td>10.3%</td>
</tr>
</tbody>
</table>

*The workforce study did not have a gender category “other,” and it did not allow respondents to select both “White” and “Hispanic.”

### Characteristics of Participating Centers

The director survey included a question that asked respondents to describe their programs. Most centers participated in VPK, which is essentially a voucher program that reimburses ECE providers for about 15 hours per week for one academic year for all children who are 4 years old in Florida. About half were for-profit private centers and close to half participated in School Readiness, a subsidy program for children from income-eligible families. Percentages of centers participating in CACFP and Head Start are consistent with what is known about levels of participation in these programs in Florida (FRAC, 2019; US DHS, 2020) (Table 2.3).
Table 2.3: Characteristics of Directors’ ECE Centers

<table>
<thead>
<tr>
<th>Center Characteristic (n = 728)*</th>
<th>%</th>
<th>ECE Workforce Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>VPK (state-wide universal preschool)</td>
<td>55.0%</td>
<td>52.1%</td>
</tr>
<tr>
<td>For-profit private</td>
<td>51.0%</td>
<td>65.5%</td>
</tr>
<tr>
<td>School Readiness (subsidy)</td>
<td>44.2%</td>
<td>56.6%</td>
</tr>
<tr>
<td>Non-profit private</td>
<td>36.0%</td>
<td>12.4%</td>
</tr>
<tr>
<td>CACFP (Food Program)</td>
<td>33.8%</td>
<td>41.1%</td>
</tr>
<tr>
<td>Faith-based</td>
<td>19.9%</td>
<td>17.2%</td>
</tr>
<tr>
<td>Head Start/Early Head Start</td>
<td>7.6%</td>
<td>11.3%</td>
</tr>
<tr>
<td>License Exempt</td>
<td>4.0%</td>
<td>8.8%</td>
</tr>
</tbody>
</table>

*more than one selection allowed

**Interview Themes and Sub-Themes**

Themes and sub-themes were identified across the 29 interviews. Teacher mealtime responsibilities included *health & safety, food handling, cleaning, handwashing,* and *behavior management.* Children’s mealtime responsibilities included *self-regulation, food, cleaning, handwashing* and *behavior.* Theme and sub-theme definitions are listed in Table 2.4.

Table 2.4: Themes and sub-themes Related to Mealtime Responsibilities

<table>
<thead>
<tr>
<th>Themes and sub-themes</th>
<th>definitions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Teacher Responsibilities</strong></td>
<td>Descriptions of teacher responsibilities during the mealtimes, and any changes, increases or decreases in responsibilities.</td>
</tr>
<tr>
<td>Health &amp; Safety</td>
<td>Teachers being responsible for children's health and safety during the meal. Includes wearing gloves, hairnets, goggles, masks during mealtime. Includes focus on healthy foods.</td>
</tr>
</tbody>
</table>
Table 2.4: Themes and sub-themes Related to Mealtime Responsibilities (Continued)

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Food</strong></td>
<td>Adult responsibilities related to managing the food during the mealtime, such as plating the food, serving the food to the children, managing seconds. Includes helping children open items from home and telling them what to eat first. Includes getting a head count for the Food Program. Excludes cleaning up food/drink spills. (See Teacher Responsibilities/Cleaning)</td>
</tr>
<tr>
<td><strong>Cleaning</strong></td>
<td>All cleaning responsibilities before, during, and directly after, related to the mealtime, including cleaning and sanitizing surfaces, cleaning up any food/drink spills. Excludes cleaning that does not involve food, such as cleaning the bathroom or nap mats/sheets. (See Changes due to COVID/Cleaning)</td>
</tr>
<tr>
<td><strong>Handwashing</strong></td>
<td>Descriptions of adults washing their own hands and helping or reminding children to wash their hands. Includes anything related to handwashing, frequency, rashes, lotion, etc. Excludes descriptions of feelings about handwashing, such as fear, anxiety (See Adult's Social Adjustment/Fear)</td>
</tr>
<tr>
<td><strong>Behavior Management</strong></td>
<td>Anything related to controlling the children's behavior during the mealtime, such as making sure they eat, telling them to keep their hands to themselves or not touch anything; Excludes Behavior issues outside the mealtime (see Children's Social Adjustment)</td>
</tr>
<tr>
<td><strong>Child Responsibilities</strong></td>
<td><strong>Descriptions of child responsibilities during the mealtimes, and any changes, increases or decreases in responsibilities.</strong></td>
</tr>
<tr>
<td>Self-regulation</td>
<td>Descriptions of children regulating their food and beverage intake. Excludes general behavioral self-regulation.</td>
</tr>
<tr>
<td><strong>Food</strong></td>
<td>Children's responsibilities related to food during the mealtime, including handling the food such as serving themselves or others; eating or not eating the food. Includes going and getting their lunch boxes and opening their own food brought from home. Includes helping such as passing out napkins and/or silverware. Excludes cleaning up any food/drink spills (see Child Responsibilities/Cleaning).</td>
</tr>
<tr>
<td><strong>Cleaning</strong></td>
<td>Any cleaning responsibilities directly before, during or after the mealtime related to cleaning. Includes wiping tables, cleaning up any food/drink spills. Includes setting the table and throwing away trash. Excludes cleaning not about food (e.g., toys).</td>
</tr>
</tbody>
</table>
Table 2.4: Themes and sub-themes Related to Mealtime Responsibilities (Continued)

<table>
<thead>
<tr>
<th>Handwashing</th>
<th>Descriptions of children washing their hands. Includes handwashing frequency, any physical issues like needing help or dry skin. Excludes fears or anxiety about handwashing (see Children's Social Adjustment/Fear)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavior</td>
<td>Descriptions of children being responsible for their own behavior during the mealtime, including children needing to stay separate from each other, have good manners, stay seated, stay in their designated seat, keep hands to themselves. Excludes any behavioral issues outside the mealtime, such as wearing masks, social distancing on the playground or indoors.</td>
</tr>
</tbody>
</table>

**Adult Responsibilities (When, Where and What)**

The survey questions about adult responsibilities included several best practices and Trust Model concepts. The majority responded that children eat at the same time (95.3%) and location (97.6%) each day *(when and where)*. Similarly, nearly all served all food items at the same time and included milk and water with the meal *(what)*. About half had additional responsibilities during lunchtime *(e.g., paperwork, putting out nap maps)* (Table 2.5). Among the 166 respondents who wrote in an optional explanation of other responsibilities, more than half *(56%)* described preparing for nap, such as “while the children are eating sometimes I need to set up for nap to stay on schedule”, “putting out cots” and “putting mats down for naptime.”

**Table 2.5: Adult Responsibilities (When, Where and What)**

<table>
<thead>
<tr>
<th>Survey Questions for Teachers</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do children eat lunch at the same time each day? (n=409)</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>393 (96.1)</td>
</tr>
<tr>
<td>No</td>
<td>16 (3.9)</td>
</tr>
<tr>
<td>Do children eat lunch in the same location each day? (n=409)</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>399 (97.6)</td>
</tr>
<tr>
<td>No</td>
<td>10 (2.4)</td>
</tr>
<tr>
<td>Question</td>
<td>Yes</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>Are all lunch items served at the same time? <em>(n=406)</em></td>
<td>387 (95.3)</td>
</tr>
<tr>
<td>Is milk served during lunch? <em>(n=407)</em></td>
<td>278 (68.3)</td>
</tr>
<tr>
<td>Is water served during lunch?</td>
<td>257 (63.9)</td>
</tr>
<tr>
<td>Do you sit with the children during lunch? <em>(n=406)</em></td>
<td>253 (62.3)</td>
</tr>
<tr>
<td>Do you eat the same foods as the children during lunch? <em>(n=405)</em></td>
<td>158 (39.0)</td>
</tr>
<tr>
<td>Are additional servings of food available during lunch?</td>
<td>174 (42.8)</td>
</tr>
<tr>
<td>Do you have additional responsibilities during lunchtime? <em>(n=401)</em></td>
<td>214 (53.4)</td>
</tr>
</tbody>
</table>
During interviews, adults generally described their mealtime responsibilities in terms of keeping everyone healthy and safe, cleaning, food handling and management, handwashing (self and children) and behavior management.

**Health and Safety.** Keeping children healthy and safe from COVID-19 was a clear, primary theme as teachers commented: “So first and foremost is of course supervising and protecting the children, making sure they are doing things that are safe and appropriate for what we are transitioning to. Which involves cleaning up toys, and washing hands and getting seated in their seats.” (Teacher 007) Another stated: “well now there is more cleaning and to keep them safe and keep the distance so they are safe.” (Teacher 003) Health and safety were often co-occurring with other sub-themes, but still remained a primary concern: “I’m responsible for the food, their health, their safety, the behavior management still watching them, the most important thing right now is this COVID, making sure they’re being safe from COVID.” (Teacher 001) Similarly: “My primary responsibility during the meal is to make sure that everyone is eating safely, reducing any type of droplet spread or contamination of someone else's things like a spoon touching a spoon or a spoon touching someone else’s plate” (Teacher 008).

**Cleaning.** Cleaning was another primary theme that came up during interviews as adult responsibilities. Even during non-COVID times, cleaning is part of mealtimes with small children. However, cleaning and sanitizing activities became more important during COVID. “We clean more the tables, now we are washing more hands, before and after, between, now we have all the kids separate at tables, we have two kids per table” (Teacher 003) Another participant described the increase in cleaning responsibilities “I mean, we have staff support I mean, a company that comes in at night, but during the day, it's all us. And we've just I mean, we've all, we've always done it. But again, just because it's even that much more.” (Teacher 017).
Another participant described her increased awareness of needing to sanitize surfaces: “We have chilled water fountains in the bathroom so we're really lucky and they just hit the button and it arcs, but they know how to arc it into the cup now and then they'll tell me ‘I got water’ so they'll know that I'm going to go in there and wipe [disinfect] the button.” (Teacher 008) Finally, one respondent described how the additional cleaning increased her responsibilities and decreased the children’s involvement:

“sometimes I’ll help them clean up and put their stuff away, which has changed because most of the time it was just them doing everything. But I try and clean up as it [the meal] goes, just because their trash sometimes gets everywhere. And so I try and, not to make it easier on them, but to, so their trash doesn’t mix with everyone else’s.” (Teacher 005)

**Food Handling.** Teachers described *Food Handling* as a main part of their responsibilities as well: “So the teachers we have to wear gloves, and we have to pass out, like, everything.” (Teacher 004). Another described how she served the children and also talked about the food: “Yeah, so what they usually do is bring the food in. And then I, you know, put the food on the plates for them. And, you know, if they want more, I give them more.” (Teacher 016) Another participant explained that children’s meals are prepared individually and passed out by classroom teachers: “we have a cook on site, who actually cooks all the meals and then brings them out and me and my assistant, we actually pass them out to each kid. So they're individually made, and then we pass them out to each kid” (Teacher 018).

**Handwashing.** Several teachers commented that although *Handwashing* has always been an important part of taking care of young children, COVID-19 brought a stronger focus. One teacher described how she added hand sanitizer after handwashing to make sure hands are clean before lunch: “And what I do also, I, just before lunch, I take them to the bathroom, have them wash their hands. Then when we get back to class, I give them hands sanitizer so their hands are
Finally, one teacher talked about how she felt more responsible for keeping her own hands clean:

“Well yeah no, I definitely feel more responsibility to be totally germ free when I do help the children, you know like so if I didn’t, you know, do gloves, you know. I’d wash my hands, you know like I’d wash my hands between every [child], so there’s a lot of that, you know, running back to the bathroom.” (Teacher 002)

**Behavior.** Teacher responsibilities involving behavior could include managing children’s behavior during the meal for issues unrelated to COVID, such as:

“Well you may have some kids that want to take their cups and dump the milk, dump them on themselves, [they] just want to be class clown. We have some kids that will try to throw the food on the floor if they don't want to eat it. So things like that. You have some that will just want to be goofy.” (Teacher 012)

COVID-19 added new behavioral expectations and therefore additional responsibilities and sometimes stress for teachers:

“’It’s more stressful. Because you have to watch them even closer. And you have to keep them away from each other... and they can’t show each other food and stuff anymore like they used to so it’s, it’s a little more stressful because you have to be on them a lot. You have to be more persistent and more careful.” (Teacher 008)

Similarly, another teacher commented: “I would say just watching where kids put their hands has increased a lot just because, when I did lunch, you didn’t have to watch where they put their hands, but now you have to make sure they are not putting their hands where they’re not supposed to.” (Teacher 005) Another teacher described how she had to actively discourage the children from sharing food at the table:

“One of the, like the biggest problem I have with my kids that they want to share. So, and that’s always, and they’re telling them that even though it’s nice to share, we cannot be sharing food right now. Like I have [some] they like to share their food, like they like to share their milk, they’ll drink on the cup and give it to the next person.” (Teacher 020)
Other Responsibilities. Additional responsibilities can influence teachers’ ability to participate fully in the mealtime. One noticed: “Children do not nap in that room. So I do not have the responsibility of making sure that mats get put out or anything like that, which often happens in a preschool classroom. So I am free to sit with the children eat with them, have a conversation with them.” (Teacher 027) In contrast and consistent with the survey, another participant stated: “Because when they first start eating, and I'm eating my food, I'm putting out all the mats and the blankets.” (Teacher 013)

Child Responsibilities (Whether, What, and How Much)

The Trust Model involves children being responsible for the whether, what, and how much to eat. Therefore, the teachers were asked how often children made decisions about what, whether and how much they ate and drank. Children’s responsibilities also include communicating when they were hungry and when they were full. About half of teachers reported that children always, very often or often decide the what and how much to eat. About three quarters responded that children usually decided whether to eat or drink, and two thirds said that children decide what not to eat or drink. About half of teachers reported that children usually communicate their hunger and fullness, while about half did not (Table 2.6).

Table 2.6: Child Responsibilities: (Whether, What, and How Much)

<table>
<thead>
<tr>
<th>Survey Questions for Teachers</th>
<th>Always, Very Often, or Often n (%)</th>
<th>Sometimes, Rarely, or Never n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>How often do children decide: what to eat? (n=392)</td>
<td>209 (53.3)</td>
<td>183 (46.7)</td>
</tr>
<tr>
<td>how much to eat? (n=386)</td>
<td>199 (51.6)</td>
<td>187 (48.5)</td>
</tr>
<tr>
<td>whether to eat? (n=388)</td>
<td>285 (73.5)</td>
<td>103 (26.6)</td>
</tr>
<tr>
<td>what not to eat? (n=388)</td>
<td>260 (67.0)</td>
<td>128 (33.0)</td>
</tr>
</tbody>
</table>
Table 2.6: Child Responsibilities: (Whether, What, and How Much) (Continued)

<table>
<thead>
<tr>
<th>How often do children decide: what to drink? (n=393)</th>
<th>275 (70.0)</th>
<th>118 (30.0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>how much to drink? (n=389)</td>
<td>174 (44.7)</td>
<td>215 (55.3)</td>
</tr>
<tr>
<td>whether to drink? (n=391)</td>
<td>286 (73.2)</td>
<td>105 (26.9)</td>
</tr>
<tr>
<td>what not to drink? (n=387)</td>
<td>221 (57.1)</td>
<td>166 (42.9)</td>
</tr>
<tr>
<td>How often do children tell you they are hungry? (n=393)</td>
<td>200 (50.9)</td>
<td>193 (49.1)</td>
</tr>
<tr>
<td>How often do children tell you they are full? (n=393)</td>
<td>231 (58.8)</td>
<td>162 (41.2)</td>
</tr>
</tbody>
</table>

Interview respondents described the children’s responsibilities as increasing in some ways due to COVID-19 but decreasing in others. Children’s responsibilities were described as including Cleaning, Handwashing, Food, and Behavior.

**Cleaning.** Most cleaning responsibilities for children involved cleaning up after themselves and disposing of their own trash. For example: “So yeah they are typically required to throw away a plate and a napkin because right now to prevent mixing germs on plates we are using paper plates.” (Teacher 007) Others made similar comments: “They're responsible for picking up all their trash and throwing it away.” (Teacher 019) Another respondent describes “Packing, throwing their garbage away, repacking their lunch, and then they have to like, clean up around their area, push in their chair before they go and like pack up and put everything away for the day.” (Teacher 011)

**Handwashing.** Just as handwashing was discussed as a major responsibility for teachers before and during COVID-19, children also had handwashing responsibilities. One teacher commented: “Obviously, washing their hands before and after.” (Teacher 025) Another replied
simply, “And then um, we ask them to wash hands obviously before, but then afterwards too.” (Teacher 006). Finally, another teacher describes: “So they have to clean all of that up, go to the bathroom, wash hands and go to the bathroom. Yeah they have a lot to do too.” (Teacher 007)

One teacher described bringing in lotion because of the increase in handwashing: “They're into the routine and washing their hands as soon as they get there. We wash our hands so much, honestly, I have lotion that I keep in the class, for our hands. [I ask for clarification] yeah they, I have to keep lotion in the classroom because they are washing their hands so much, you know.” (Teacher 009)

**Food Handling and Meal Preparation.** Although COVID recommendations precluded children from being directly involved in food handling, some teachers described still involving them in helping prepare for the meal: “Every day we have children that the one will pass the napkins. One will pass the plate, one will pass the cup and they go around and they at the end they ask like, ‘Does everybody have a napkin,’ so that’s their responsibility.” (Teacher 010) Similarly: “the teacher’s helper will put the plates out.” (Teacher 013) In contrast, another teacher describes how the children were not allowed to help anymore: “The only difference now is that we don’t let them scoop out [the food] because before we let them help us. You know. So it’s part of the learning of the teacher and child and school, pass the napkins, pass the plates and help to clean but not anymore. Not anymore.” (Teacher 003).

**Behavior.** Behavioral expectations were often described as wanting the children to just focus on eating. One teacher described the children’s responsibility to be “mainly just, just to eat. And we really try to push that they, like I said, eat as much as possible. So they’re full, you know, have the best table manners, and we really do push for them to drink all of their milk.”
Similarly, one matter-of-factly stated that the children’s responsibility during the mealtime was to: “just sit and eat.” (Teacher 020)

Finally, especially in programs with parent-send lunches, some respondents emphasized the goal of children being independent as a way of preventing them from touching each other’s items:

“well we’re trying to transition them to being totally independent, you know they are getting their own lunches out of their cubbies, we really shouldn’t be needing to touch, we are teaching them to put them there, they get them out of their own bag in the morning, put them there, so that they can know exactly where it is so when we say ‘go get your lunch’ they can go and do it. Do you know, without us interfering, and the same with helping them with opening, the goal would be for them to be totally touch free, you know they’re, maybe the only person that would need to touch anything from the moment they get to the school to the moment they leave school we shouldn’t have to touch their snack or um, or lunch. So that is the goal and that is their responsibility” (Teacher 002).

Overall, teachers did not seem to conceptualize children’s mealtime responsibilities as including making choices about whether, what and how much to eat, and communicating about hunger and fullness. Rather, children’s responsibilities were generally characterized around cleaning and handwashing routines as well as some help with mealtime jobs and meeting behavioral expectations.

Discussion

This paper aimed to contribute to understanding child and adult responsibilities during mealtimes, and how they may have changed during the unusual situation of the COVID-19 pandemic. Adult responsibilities increased in terms of cleaning and food handling, and child responsibilities decreased in terms of food serving. Division of responsibility in child feeding practices has been studied previously, and there is evidence that a balanced approach, with adults using responsive feeding practices, is most supportive of healthy eating habits (Tovar et al., 2016; Vaughn et al., 2016). Supporting children’s healthy eating habits is especially important
during a pandemic and recession, during which the risk of food insecurity increases (Dunn et al., 2020).

This study includes the application of the Trust Model to a new setting. There is some evidence that, perhaps due to different roles and environments, appropriate child feeding practices in ECE settings may be different from those in the home (Elford & Brown, 2014; Hughes et al., 2007). The experience of COVID-19 may be influencing adult and child mealtime responsibilities in various settings, such as home environments. For example, one recent study found that during COVID-19, controlling feeding practices, such as pressure to eat, were greater among parents with higher food insecurity (Adams et al., 2020).

In ECE centers, before COVID-19, family style meals, during which children were responsible for serving themselves. The extent to which centers practiced family style meals pre-COVID, including self serving, is not known. Family style meals and food sharing were recognized as a best practices, although there were barriers to participation, such as teacher beliefs that it would spread germs (Dev et al., 2014; Wallace et al., 2020). Certainly concerns about germs inform current recommendations to not allow self-serving.

However, now children cannot serve themselves. The idea that serving oneself is a critical part of learning the skill of self-regulation has been proposed by several national organizations. For example: “Serving foods and beverages family style, where children select their own portions and serve themselves, may encourage better self-regulation of intake...

Division of responsibility is another approach to feeding that may help children self-regulate food intake” (Benjamin Neelon & Briley, 2011). In the absence of self-serving, ECE centers and local agencies could consider alternatives for supporting children’s development of self-regulation of food intake. For example, nutrition education designed to teach about self-
regulation could be developed and disseminated; teachers could be supported in incorporating verbal cues to promote and support self-regulation. The shift in division of responsibility does not have to eliminate children’s self-regulation, but it may need to be supported in different ways.

**Limitations and Strengths**

This study has several limitations. First, although the survey was pilot tested, it was not validated prior to implementation due to time constraints. Future work could involve face and content validation. Second, the survey was also cross-sectional and only measured one point in time, and interviews could assess perceptions of change only retrospectively. Future work could involve re-sending the survey and doing a pre/post comparison. Third, participation could be biased toward individuals with the time and interest in responding to the survey and interview. Additionally, this study only included centers that were open and does not represent centers that were closed.

This study also has many strengths. The response rate including directors and teachers was 17%, and surveys and interviews covered many counties in Florida, which is a diverse state with several key regions that were all represented (e.g., the panhandle, south Florida, the ‘space coast,’ etc.). Also, using the Trust Model to understand mealtime practices in ECE settings is a novel contribution to the fields of child feeding practices and supporting health weight in ECE. Finally, these findings show how the COVID-19 pandemic influenced mealtime responsibilities and can contribute to modifying routines as restrictions are lifted.

**Conclusion**

COVID-19 has presented unique public health challenges for ECE settings, resulting in modifications designed to reduce the risk of infectious disease. Although some modifications,
such as restricting children’s handling of food, shifted more responsibility to teachers, children still generally determined *What* and *How Much* to eat. Future studies could include direct observation of the mealtime to assess division of responsibility, as well as interviews with both teachers and parents to understand both home and school environments.

The increase in teachers’ responsibilities has implication for workforce training and support. Once vaccination has become more widespread and it is allowable to have additional adults in the classroom, ECE centers could invite parents and/or high school interns to volunteer during mealtimes to provide additional support. At the policy level, regulatory and quality agencies could recommend more adult support during mealtimes to account for teachers’ increased responsibilities and support children’s development of healthy eating practices.
Figure 2.1: The Trust Model

Source: Adapted from Eneli et al., 2008, p. 2198.
Observational learning and group efficacy are from Social Cognitive Theory

Figure 2.2: Theoretical Framework for Research Question One
Figure 2.3: Counties from which at least one Director Survey was Completed

Figure 2.4: Counties from which at least one Teacher Survey was Completed
Figure 2.5: Counties from which at least one Teacher Interview was Completed
Section Three: “I Don’t Get to Model that we are Going to Eat Healthy”:
Assessment of the Child Feeding Dynamic in Early Education Centers During COVID-19

Abstract

Childhood obesity is a public health problem among young children age 2 to 5 years old. Most young children in the U.S. attend early care and education (ECE) programs, in which caregivers and teachers engage with children during mealtimes. Caregiver feeding practices can range from controlling to permissive, and autonomy-supportive practices are ideal. The range of caregiver feeding practices is based on Diana Baumrind’s authoritarian, authoritative, permissive/indulgent parenting taxonomy. This paper describes caregiver feeding practices among ECE centers in Florida within the context of the Trust Model, which conceptualizes the idea of autonomy support. This paper also examines whether and how mealtime feeding practices changed due to COVID-19.

This paper is part of a larger study that used a concurrent mixed-methods design to describe and understand changes in mealtime responsibilities, interactions, and best practices in ECE centers during COVID-19. This study assessed the child feeding dynamic based on surveys and interviews with directors and teachers. Survey questions were developed based on the Trust Model and existing literature. Interview questions were developed based on the Trust Model and Social Cognitive Theory. Interviews were semi-structured, open-ended questions. Questions for this paper focused on adult and child interactions. Descriptive statistics were conducted in SPSS and thematic analysis in MAX QDA.
Surveys showed that most teachers reported engaging in autonomy-supportive behaviors, such as letting children eat until they are finished (90.2%), asking children if they are hungry (61.3%) or full (58.0%), and talking about food at the table (83.6%). The most common controlling behaviors were praising children for cleaning their plates (70.0%) and requiring children to try one bite of a new food (59.4%). Interviews provided context and explanation for survey results. Autonomy-supportive practices were often modified due to COVID, while controlling behaviors were often rationalized within an existing rule system. In terms of changes in mealtime interactions, most participants described their mealtimes as basically the same.

Understanding teachers’ practices and perspectives will be important for supporting mealtime interactions that support children’s emerging autonomy as COVID-19 continues to influence ECE environments.

**Background**

Childhood obesity is a public health problem, with children as young as age 2-5 demonstrating an increase in rates of obesity and overweight during the past few decades that is similar to other age categories (Hales, 2017; Ogden & Carroll, 2010). Young children should never be unattended while eating, and adults are typically involved in eating situations together with young children. The majority of young children 2 to 5 years of age in the United States attend some form of early care and education (ECE) environments, in which teachers are responsible for feeding them and supporting their development of ‘competent eating.’ Competent eating refers to children’s development of a positive attitude toward food and eating, engaging with parents and caregivers during mealtimes, and generally eating when they are hungry and stopping when they are full (Satter, 2007).
‘Child feeding practices’ refers to how adults feed children. The general understanding of child feeding practices in ECE settings is based on food parenting practices, which is based on parenting taxonomies such as Diana Baumrind’s authoritarian, authoritative and permissive/indulgent scheme (Baumrind, 1966). Food parenting practices, also called caregiver feeding practices, generally fall along a continuum of behaviors with child-centered on one side and adult-centered on the other (Figure 3.1). Many of the agreed-upon best practices fall along the middle ground of ‘autonomy support,’ in which children’s emerging autonomy is supported by adult scaffolding, but the adult is neither intrusive nor disengaged (Vaughn et al., 2016). Feeding practices that support children’s emerging autonomy also support children’s development of competent eating and healthy weight.

A few studies have looked at child feeding practices in terms of teacher engagement and interactions with the children. One cross-sectional study found that teacher behaviors increased average number of tasted fruits and vegetables and lower number of tasted foods high in fat/sugar when teachers (1) determined fullness before removing the plate (2) ate with the children, and (3) talked about healthy foods. Similarly, an observational study of Dutch children found that when teachers explained to children what they were doing during food and meal preparation, the children ate more fruit; when teachers let children help, the children consumed fewer sweets; and when teachers encouraged eating, the children consumed more fruits and vegetables (Gubbels, Gerards, & Kremers, 2015). Another observational study found that staff sitting with children and eating with them was positively associated with children eating more vegetables and fewer overall calories. (Kharofa et al., 2016). All of these studies support the idea that positive adult engagement with children around food and mealtimes has the potential to support children’s healthy and competent eating.
The COVID-19 pandemic created many changes in ECE routines, including mealtimes. This paper is part of a larger study (Figure 3.2) and addresses the following research questions:

(1) How did ECE teachers in Florida describe the caregiver-child feeding dynamic during COVID-19? (2) What changes (if any) did ECE directors and teachers in Florida describe in the caregiver-child feeding dynamic due to COVID-19?

Methods

Study Design, Participants, and Setting

This paper is part of a larger study about mealtimes in ECE centers during COVID-19 (Figure 3.2). A mixed-methods concurrent design was used to describe and understand mealtime practices in ECE centers in Florida during COVID-19. Participants in this paper include only classroom teachers.

Instrument Development

Survey (Directors & Teachers). A theory-based survey and interview questions were developed based on the Trust Model and existing literature on child feeding practices. The survey was developed first in English and then translated into Spanish. The survey was pilot-tested with 10 local ECE teachers in one county and, after making minor adjustments, was distributed to more than 7000 ECE centers in Florida on August 10, 2020.

Only teacher surveys were included in this paper because directors were not asked questions about mealtime social interactions. Teachers were asked 13 questions about their mealtime social interactions with the children. The questions were designed with a 6-point Likert Scale (Always, Very Often, Often, Sometimes, Rarely, Never). Questions asked how often teachers engaged in mealtime activities that had been defined as either controlling or supportive of children’s autonomy based on a review of the literature (Table 3.3).
Teachers were also asked whether COVID-19 had changed their mealtime interactions:

“Has COVID-19 changed the way you interact with the children during a typical lunchtime?”

The question included 8 closed-ended responses, “no” or “other” (Table). Participants could select more than one response (Table 3.4). Surveys were distributed via Qualtrics (Qualtrics, 2021) and data were analyzed in SPSS version 27.0 (IBM Corp., 2020).

**Interview (Teachers only).** A semi-structured, open-ended interview guide, based on Trust Model constructs, was used to interview 29 teachers. Participants described mealtime interactions in response to all questions, and so all interview questions are included in this paper and listed in Table 3.1. Specific concepts measured by these questions are based on the child feeding practices literature: *Social Interactions: Controlling* and *Social Interactions: Autonomy Support*. The interview also captured responses related to *Changes due to COVID-19*.

**Table 3.1: Interview Questions for Teachers**

<table>
<thead>
<tr>
<th>Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.a. Tell me about the mealtimes at your school, specifically thinking</td>
</tr>
<tr>
<td>about lunchtimes. What is it like right now?</td>
</tr>
<tr>
<td>1.b. How have mealtimes changed at your school since COVID-19?</td>
</tr>
<tr>
<td>2.a. Tell me about your responsibilities as a teacher during the</td>
</tr>
<tr>
<td>lunchtime. What do you feel responsible for during the lunchtime?</td>
</tr>
<tr>
<td>2.b. Do you think that your responsibilities as a teacher during</td>
</tr>
<tr>
<td>lunchtime have changed since COVID-19? If so, how?</td>
</tr>
<tr>
<td>3.a. Tell me about what the children are doing during lunchtimes at your</td>
</tr>
<tr>
<td>school. What are they responsible for during the meal?</td>
</tr>
<tr>
<td>3.b. Do you think that the children’s responsibilities during lunchtime</td>
</tr>
<tr>
<td>have changed since COVID-19? If so, how?</td>
</tr>
<tr>
<td>4.a. How are the children doing in general right now?</td>
</tr>
<tr>
<td>4.b. How are the children doing with the social changes due to COVID?</td>
</tr>
<tr>
<td>5.a. How are the teachers doing in general right now?</td>
</tr>
<tr>
<td>5.b. How are the teachers doing with the social changes due to COVID?</td>
</tr>
</tbody>
</table>
**Data Collection Procedure**

**Survey.** The survey was distributed to more than 7000 ECE directors in Florida. It was initially sent on August 10, 2020. Subsequent reminders were sent out on September 15, September 23, September 28, and October 2, 2020. The survey was closed on October 11th at midnight. Directors were asked to forward the survey to a classroom teacher involved in lunchtime.

**Interview.** At the end of the survey, teachers were invited to participate in a follow-up interview. The first 10 interviewees were selected by contact all who responded. After the 10th interview, participants were purposefully selected to add unique counties in order to gain as much variation as possible in terms of regions of Florida represented. All interviews were completed from August 16th, 2020 to October 16, 2020. Participants who completed the interview were compensated with a $25 e-giftcard to Amazon. The Institutional Review Board at the University of South Florida designated this study as exempt.

**Data Analysis**

**Survey.** Survey data were analyzed using descriptive statistics and frequencies in SPSS.

**Interview.** Interviews were audio recorded and transcribed *verbatim* before uploading to MAX QDA (VERBI Software, 2020) for thematic analysis. The initial set of codes included *a priori* codes based on the Trust Model and Social Cognitive Theory and used a deductive process to identify concepts. *Social Interactions and Changes due to COVID* were *a priori* codes. Inductively, sub-codes including *Controlling, Autonomy Support* were defined and refined as these concepts emerged from the data.
**Data Integration**

Quantitative and qualitative data were integrated across the key concepts such as *Controlling Feeding Practices* and *Autonomy Supportive Feeding Practices* (Appendix L). Interview responses within concepts were assessed for whether they were consistent with survey results.

**Results**

**Participants**

Surveys were completed by 431 teachers (411 in English, 20 in Spanish), representing 40 out of 67 counties in Florida (60%). Interview respondents were from 19 unique counties (28%). The combined response rate for directors and teachers was 17% [(759+431)/7000=.17]. Fewer teachers than directors responded because directors received the survey first and were asked to forward the survey link to a classroom teacher. Teacher email addresses are not public.

Most teachers who responded to the survey were full time, and their hours and employment status had not changed due to COVID-19. The majority (96%) were female, which is consistent with general demographics of the ECE workforce nationally (Deloitte, n.d.). Among survey respondents, 24% reported they were of Hispanic origin, 62% White and 25% Black (Table 3.2). The 29 interview participants were from 19 unique counties and from context they represented a range of program sizes and types (although they were not specifically asked about their program type).
Table 3.2: Teacher Demographics from Survey

<table>
<thead>
<tr>
<th>Employment Status</th>
<th>Teachers n=385</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Time (30 hours or more per week)</td>
<td>88.8%</td>
</tr>
<tr>
<td>Part Time (less than 30 hours per week)</td>
<td>11.2%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hours Changed n = 384</th>
</tr>
</thead>
<tbody>
<tr>
<td>My hours are about the same</td>
</tr>
<tr>
<td>My hours have decreased due to COVID</td>
</tr>
<tr>
<td>My hours have increased due to COVID</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Employment Status Changed n = 381</th>
</tr>
</thead>
<tbody>
<tr>
<td>My employment status has not changed</td>
</tr>
<tr>
<td>My employment status has changed from Full Time to Part Time due to COVID</td>
</tr>
<tr>
<td>My employment status has changed from Part Time to Full Time due to COVID</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender n = 384</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
</tr>
<tr>
<td>Male</td>
</tr>
<tr>
<td>Other</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hispanic Ethnicity n = 382</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Race n = 389</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
</tr>
<tr>
<td>Black or African American</td>
</tr>
<tr>
<td>Asian</td>
</tr>
<tr>
<td>American Indian or Alaska Native</td>
</tr>
<tr>
<td>Native Hawaiian or Pacific Islander</td>
</tr>
<tr>
<td>Other (please specify)</td>
</tr>
</tbody>
</table>
**Mealtime Interactions**

**Survey.** Table 3.3 shows the frequency with which teachers reported several common mealtime interactions. Interactions were either controlling or supportive of children’s autonomy based on the theoretical framework (Figure 3.1). In terms of supporting children’s autonomy, nearly all teachers responded allowing children to eat until they were finished, 75% or more talked about food and non-food topics at the table, and about half or more asked children about their hunger and fullness and used adult and peer role modeling to encourage healthy eating. The only item on which the majority did not respond with autonomy support was about allowing a child to not eat.

The most common controlling behavior was praising children for cleaning their plates (70%), followed by requiring children to try one bite of each food item (59%). Less than half of respondents reported typically engaging in the remaining controlling behaviors, although 40% reported encouraging children to eat more out of concern they were not getting enough to eat at home (Table 3.3).

**Table 3.3: Frequencies of Mealtime Interactions, Controlling and Autonomy Support**

<table>
<thead>
<tr>
<th>Autonomy Support</th>
<th>Always, Very Often</th>
<th>Sometimes, Rarely</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>I let children eat until they are finished.</td>
<td>90.2%</td>
<td>9.9%</td>
<td></td>
</tr>
<tr>
<td>I talk with the children about food.</td>
<td>83.6%</td>
<td>16.4%</td>
<td></td>
</tr>
<tr>
<td>I talk with the children about non-food topics.</td>
<td>74.6%</td>
<td>25.4%</td>
<td></td>
</tr>
<tr>
<td>I ask children if they feel hungry.</td>
<td>61.3%</td>
<td>38.8%</td>
<td></td>
</tr>
<tr>
<td>I ask children if they feel full.</td>
<td>58.0%</td>
<td>42.0%</td>
<td></td>
</tr>
<tr>
<td>I encourage children to try a new food by trying it together with them.</td>
<td>53.3%</td>
<td>46.7%</td>
<td></td>
</tr>
</tbody>
</table>
Table 3.3: Frequencies of Mealtime Interactions, Controlling and Autonomy Support (Continued)

<table>
<thead>
<tr>
<th>Autonomy Support (Continued)</th>
<th>48.3%</th>
<th>51.7%</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>I encourage children to try a new food by pointing out other children eating the food.</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>If a child is not hungry, I let them sit through the entire meal without eating.</em></td>
<td>18.2%</td>
<td>81.9%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Controlling</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><em>I praise children for cleaning their plates.</em></td>
<td>70.0%</td>
<td>30.0%</td>
</tr>
<tr>
<td><em>I require children to try one bite of each food.</em></td>
<td>59.4%</td>
<td>40.5%</td>
</tr>
<tr>
<td><em>I encourage children to eat more food when I worry they are not getting enough at home.</em></td>
<td>39.6%</td>
<td>60.4%</td>
</tr>
<tr>
<td><em>I stop children from eating too much of any one food so there will be enough for everyone.</em></td>
<td>6.5%</td>
<td>93.5%</td>
</tr>
<tr>
<td><em>I encourage children to eat quickly so we have time to transition to the next activity.</em></td>
<td>4.9%</td>
<td>94.9%</td>
</tr>
</tbody>
</table>

**Interviews.** During interviews, teachers also described mealtime interactions across a continuum of controlling and autonomy support. Several examples of the survey items were described in more detail.

**Autonomy Support.** Descriptions of autonomy support were consistent with survey results. Teachers described children as being free to eat until they were full, engaging with the children about food and non-food topics, and using adult and peer modeling to support children’s healthy eating.

One teacher described an example of supporting children’s autonomy in terms of allowing them to eat until full: "So you know, at the dinner table, no matter what age group,
including babies, if I sense that they need more or act like they're still hungry, they can get more to eat." (Teacher 021)

Other teachers described having conversations about food and non-food topics: “they’re still close enough that they can have conversations, we talk about who has fruit in their lunchbox, and ‘oh [CHILD’S NAME] and another friend both have strawberries.” (Teacher 014).

Finally, several teachers described examples of adult and peer modeling, which is one way of supporting children’s autonomy by providing a role model to follow rather than to simply telling children what to do. One example of peer modeling: “and if they see them [other children] eating salad, they’ll eat salad, you know.” (Teacher 016). Similarly:

“I would kind of really like the lunchbox kids to eat my food [which is provided by the school] and get used to what's going to happen in the cafeteria, and also to try something they might be reluctant to try, or watch somebody else eating and go ‘oh, maybe broccoli with ranch dip is not that bad.”’ (Teacher 008)

**Controlling Feeding Practices.** Controlling feeding practices were often incorporated within a framework of rules. Examples of controlling feeding practices included encouraging children to eat so they would be full and not wake up hungry, encouraging children to take one bite of something before rejecting it, and controlling the order of foods presented from home lunches to make sure children ate healthy foods first.

For example, quite a few described encouraging the children to eat, which is consistent with the survey in which most teachers would not allow a child to sit through an entire meal without eating. “You don’t have to eat it, but at least eat your yoghurt and maybe a little bit of your chicken or whatever. Because I want them to have something in their stomach [so they won’t] wake up after nap and be starving to death.” (Teacher 013) Similarly: "So the children of
course are required to eat. They choose what they eat... as long as they have 2 different colored foods on their plate." (Teacher 007)

Along similar lines, teachers described encouraging children to take “no thank you bites” which means taking one bite of a food and then saying “no thank you” rather than rejecting a food without trying it: “We don't force them to eat, we encourage them to take ‘no thank you’ bites." (Teacher 012)

Finally, a big issue around the lunches sent from home was the order in which foods were presented to the children. Several teachers expressed concern that if children had access to all of the food at the same time, they would eat the unhealthy foods first and not the main meal. For example: “You’re not eating those chocolate chip cookies until you eat the meat and cheese and crackers out of your [NAME BRAND LUNCH].” (Teacher 013) Another explains that she has some children who are ‘picky’ and need encouragement:

I have some children that are very picky eaters. So I have to make sure that they’re eating food because some of them won’t even touch their food, so I’ll encourage them to try even take a bite or two, and then with some encouragement they’ll try but without me encouraging them to try it, they’ll just throw it in the garbage and not eat anything. (Teacher 020)

Another teacher described how important it is to know the children in order to make decisions about plating their lunches brought from home in order to ensure that they eat something other than a sweet:

With my heavy eaters that I know, they will eat all their food, because that's, you know, that's how they are they typically eat all their food every day, it's something that I know they've eaten before, I'll go ahead and plate all of it. And they'll pick and choose and eat it. You know, by the end of lunch, it's all gone. Regardless. For those who tend to be more picky eaters, or tend to have a sweet tooth, I will hold back whatever the dessert is for lunch.” (Teacher 024)
Finally, another teacher described her role as guiding the children toward healthier foods:

“So yeah so we, you know like, so I do feel more, like I said, like guiding children toward the part that they want to eat the most, basically.” (Teacher 002)

**Changes in Mealtime Interactions**

Survey. Teachers responded to one question about how COVID had changed their mealtime interactions. Interestingly, the most frequent response was that interactions were basically the same. The next two most common responses involved keeping a distance from the children and focusing on eating healthy food, both reasonable changes due to new COVID precautions. Responses about parent concerns were not frequently selected, which could reflect the lower amount of contact between parents and teachers relative to pre-COVID times (Table 3.4).

**Table 3.4: Changes in Mealtime Interactions**

<table>
<thead>
<tr>
<th>Has COVID-19 changed the way you interact with the children during a typical lunchtime? (please select all that apply) (n=432)*</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No, my interactions with the children during the meal are basically the same.</td>
<td>185 (42.8)</td>
</tr>
<tr>
<td>Yes, now I do not get as close to the children to avoid sharing germs.</td>
<td>140 (32.4)</td>
</tr>
<tr>
<td>Yes, now I encourage the children to eat more healthy foods so that we will all stay healthy.</td>
<td>118 (27.3)</td>
</tr>
<tr>
<td>Yes, now I spend time helping children with their masks before and after eating.</td>
<td>83 (19.2)</td>
</tr>
<tr>
<td>Yes, we used to eat together “family style,” but now I do not eat together with the children.</td>
<td>69 (16.0)</td>
</tr>
<tr>
<td>Yes, parents have more concerns about their children eating healthy foods at school.</td>
<td>37 (8.6)</td>
</tr>
<tr>
<td>Yes, now I encourage the children to clean their plates more often so that we do not waste food.</td>
<td>27 (6.3)</td>
</tr>
<tr>
<td>Yes, parents have more concerns about their children eating enough food at school.</td>
<td>25 (5.8)</td>
</tr>
</tbody>
</table>
Table 3.4: Changes in Mealtime Interactions (Continued)

| Yes, now I bring additional food for children I know are not getting enough to eat at home (e.g., crackers to add to a child’s lunch). | 24 (5.6) |
| Other, please describe: | 21 (4.9) |

*multiple selections allowed

**Interviews.** Interviews were consistent with survey results in that many described their mealtime interactions with the children as being generally similar compared with pre-COVID-19. Several participants described small changes that were not difficult to adjust to. Participants also talked about changes in terms of keeping a distance from the children and spacing them out. They also described encouraging healthy eating in the midst of the COVID-19 changes. Although the percentage who responded on the survey that they help children with masks seems low, it is consistent with approximately the percentage of centers that required masking for children (Mackie et. al., in preparation).

**Interactions Are Basically The Same.** Several teachers described changes in mealtimes as small and not a big disruption. For example: “More cleaning, more washing hands, and more distance... before we were close to each other, and [the children] pass the spoons and they help the teacher and that changed. But the other things no they are still the same.” (Teacher 003) Similarly, one teacher described spacing the children out as the only real change to their mealtime: “before this they used to bring their own lunch so that has stayed the same. What has changed is the fact that they don’t sit that many children per table.” (Teacher 006). Another sums up that the changes are small and do-able:

But you know, surprisingly, like, it’s really not that hard. You know, it’s just a different routine. And, and that’s it, everybody just has to get accustomed to a little bit different routine. If it’s going to make everybody safer, you know... I think is a good thing...it’s not that hard, we can do this.” (Teacher 011)
**Interactions are different.** Other teachers described some of the changes in mealtime routines due to COVID-19: “Before the kids were more hands-on as far as even the cutting up process. They would get the spoons, they would get the forks, they would set up the cups, they would set up the napkins, but now, you know they can’t touch any of that stuff. (Teacher 004). Similarly: “Yeah I know we don’t provide lunch, or snack anymore, before we used to but now we don’t.” (Teacher 006). Another teacher described how the children used to line up together for their food, but now they have to sit and not touch anything while the teachers bring the food:

Now as opposed to lining up for their food, they sit down. And we bring them the food, to the table. Before they could walk around, it was more sociable, you know they would talk and share with each other, and get this and get that. But now they sit down, I serve them at the table, and everyone has to have their hands in their laps until they get their food. (Teacher 001)

Another described how her ability to role model for the children had changed due to COVID:

We do not, we remain kind of separated from them. Like for me, I sit at my desk and eat, where normally I would sit with the children at the table and model the table manners and behavior and things like that, and interact more with them. But because of the restrictions of the social distancing and the masks and everything, we’re encouraged not to. (Teacher 022)

**Physical Distancing.** Many teachers described the physical distancing during mealtimes that is recommended during COVID. “Now we have all the kids separate at tables, we have two kids per table, [at] each corner” (Teacher 003). Similarly: “OK for the lunchtime, the lunchtime is at 11:30[am], and the students for the most part they, um, don’t wear a mask for lunch, they are spaced out 6 feet apart, and so that has [decreased] the amount of students we have” (Teacher 004).

Another teacher described how she continued to eat together with the children, but moved her chair away from the group to comply with COVID guidelines:
“Yes, yes, I have my chair so I sit far away I try to stay that you know the distance [6 feet] and yeah we are still eating together I don’t use the table because I have to sit in the corner, and I just hold my food. Before I sit with them at the table and eat with them but now, I just eat in my chair and move back my chair and use it there.” (Teacher 003)

Another describes how she makes an effort to stay away from the children’s food as an explanation for why they don’t sit together anymore: “We’re trying to avoid touching anything, um we don’t, I don’t sit down with them like I used to... I try not to get anywhere near their food, um, unless I need to” (Teacher 002).

**Healthy Eating.** Some teachers commenting on using different strategies to encourage healthy eating at the table. One described a change in the mealtime interactions in that she no longer served as a role model for healthy eating:

That I don’t get to um [pause] that I don’t get to model that we’re going to eat healthy, I don’t get to interact as much about what they’re eating because I can’t really—I can talk to them when they’re eating, but I try not to. We’re trying not to hover and we don’t really want them talking too much when they’re eating (Teacher 008)

Another described how she changed from role modeling to providing verbal encouragement for healthy eating due to COVID:

“so for this particular group they are not really eating at all. Our main task is to try and encourage them to eat the food, and so we have been telling them, you know, ‘eat your food so you’ll get big and strong, big and strong’ and so we’ve been doing that more and more to encourage them to eat because before the pandemic the teachers we used to eat together with the child, to help encourage the students to eat.” (Teacher 004)

**Discussion**

COVID-19 brought unexpected changes to ECE settings across daily routines. Mealtimes are of particular concern because the virus spreads via droplets, which come from mouths and noses, which cannot be covered while eating.

Some teachers described behaviors that could be considered controlling feeding practices. However, they were often rationalized within a set of rules, which would be predictable for the
children. The literature is not clear on whether controlling feeding practices in ECE is necessarily as “bad” for children as they are at home. Some studies find that authoritative feeding practices, like authoritative parenting, is the preferred style that will promote children’s healthy eating (Arlinghaus et al., 2018; Patrick et al., 2005). However, other studies indicate that the ECE setting may be different in ways that are important to what feeding style is most supportive. One study finds that permissive feeding behaviors by ECE caregivers leads to children eating more vegetables (Hughes et al., 2007). Another paper from the UK articulates that ECE teachers have a unique role and are not part of the children’s families, and therefore interactions and expectations would be different (Elford & Brown, 2014). Teachers at school are in a different role from parents at home, and similarly, children at school are part of a same-age peer group (typically, in the U.S.), not a family system that may involve siblings of various ages.

Another consideration is that the ECE food environment is much more rigid than home food environments. Meals and snacks are served on a schedule, and children do not have independent access to food while at school (unlike at home). The structure of the ECE environment is predictable, and therefore, the effects of food rules on children’s eating behaviors must account for the differences in their environments.

Teachers in this study articulated an awareness about the importance of adult role modeling and child peer modeling, and the challenges presented by masks and physical distance. Role modeling has been shown to be important for children’s eating behaviors, both at home (Trofholz et al., 2018; Vaughn et al., 2018) and at school (Matwiejczyk et al., 2018). This is an emergent issue that should be studied further.

A final emergent issue is that several teachers talked about putting out foods brought from home in specific ways to control which foods some children ate first. Given that some
studies have found the nutritional quality of parent-send lunches to be less than ideal, (Almansour et al., 2011; Sweitzer et al., 2009, 2010) and that changing to parent-send could be a reasonable decision for centers during COVID, the topic of how teachers serve parent-send meals should be investigated further.

**Conclusion**

Mealtimes are a central part of the day for young children and teachers in ECE environments. COVID-19 will continue to influence ECE routines as behavior change remains the primary method of reducing the risk of COVID-19 among young children. These findings show that there is a range of controlling and autonomy-supportive feeding behaviors happening during COVID-19, which means that it is possible to support children’s autonomy during this pandemic. Continuing to support children’s emerging autonomy during COVID-19 will be essential for children developing healthy eating habits and supporting their overall health.
Figure 3.1: Continuum of Child Feeding Practices
Figure 3.2: Theoretical Framework for Research Question Two
Section Four: “I believe eating with the children is essential.”

Assessment of how ECE Decision-Makers included COVID-19 Guidelines and Mealtime Best Practices

Abstract

Childhood obesity is a public health problem, even among children age 2 to 5. Most young children in the United States (U.S.) are in early care and education (ECE) programs, often consuming most daily calories. Mealtime best practices support children’s healthy eating habits. Family style meals is a best practice that involves teachers sitting together with children, eating the same food, and appropriately supporting children in serving and feeding themselves.

COVID-19 has changed mealtimes in ECE. This paper (1) describes if ECE directors and teachers adapted mealtimes to include best practices during COVID-19, and (2) identifies common adaptations made to comply with COVID-19 guidelines.

This paper is part of a larger study that used a concurrent mixed-methods design to describe and understand changes in mealtime responsibilities, interactions, and best practices in ECE centers during COVID-19. A survey for directors and teachers was developed based on the Trust Model and Social Cognitive Theory, and distributed to more than 7000 ECE centers in Florida. In addition, 29 follow-up interviews with teachers were completed and transcribed verbatim. Descriptive statistics and frequencies were calculated in SPSS and thematic analysis in MAX QDA.
Surveys were completed by 759 directors and 431 teachers. Less than 5% of directors and teachers reported that children served themselves food. Almost 90% of teachers reported sitting with children during at least part of the mealtime; however, only 36% ate the same foods. Interviews revealed three explanatory models: (1) modification—centers incorporated best practices into new routines, such as eating together but sitting farther away (2) elimination—centers changed routines such that best practices were no longer possible, such as teachers wearing masks and standing during meals, and (3) minimal change—centers made minimal changes due to COVID-19 and therefore, mealtime practices did not change.

Current guidelines do not allow children to self-serve, which previously was considered a key aspect of family style meals and autonomy support. These findings raise further questions as to whether specific best practices are relatively more or less important for supporting children’s healthy eating. In other words, do several best practices need to happen simultaneously (e.g., sitting together and role-modeling), or are there specific aspects of mealtime routines (e.g., self-serving) that make a measurable difference for children’s health eating?

ECE centers that have successfully integrated COVID-19 modifications and maintained mealtime best practices can serve as examples for others. These findings are generalizable to ECE centers in Florida and could be compared with other states.

**Background**

Childhood obesity is a public health problem among young children age 2 to 5 years old. For very young children, overweight and obesity combined have increased from 14.7% to 33.4% (Fryar, Carroll, & Ogden, 2016). Unfortunately, once children develop obesity, they tend to remain heavy. The diet and physical activity of young children contributes to their level of obesity risk during the early years of life (Geserick et al., 2018; Nader et al., 2006).
Most young children in the United States (U.S.) are in early care and education (ECE) environments, often consuming most calories for the day. Mealtime best practices, including family style meals, are important for encouraging healthy eating habits and supporting children’s emerging autonomy. Family style meals is a best practice that involves teachers sitting together with children, eating the same food, and appropriately supporting children in serving and feeding themselves. Family style meals incorporates a group of best practices that happen together: there is a division of responsibility between child and adult; children serve themselves; children decide what and how much to eat and drink; adults serve as healthy role models; adults practice responsive feeding; and adults facilitate peer modeling and socialization at the table (California Department of Education, 2018). The general idea is that this group of best practices enacted together will facilitate children’s ability to develop the skill of competent eating (E. Satter, 2007).

The theoretical model guiding this inquiry is the Trust Model. Developed by Ellyn Satter in the 1980s, the Trust Model proposes that adults are responsible for the what, when and where of a mealtime, and children are responsible for whether, what and how much (Eneli et al., 2008). Although originally designed for addressing disordered eating in home environments, it serves as a useful model for understanding mealtime behaviors in ECE. One element, context, is used in a slightly different way. Rather that referring to children’s natural growth patterns, in ECE context simply means the physical environment surrounding teachers and children.

Before COVID-19, family style meals were recommended by many national agencies (AAP et al., 2019; Benjamin Neelon & Briley, 2011; Department of Health and Human Services, Administration for Children and Families, n.d.; Institute of Medicine of the National Academies, 2011; US Department of Agriculture, Food and Nutrition Services, 2014). However, due to
infection control concerns, food sharing and self serving by the children is no longer recommended. COVID-19 restrictions have changed how teachers serve and how children eat at school. This paper describes if and how ECE teachers have adapted mealtimes to include best practices, including family style meals, modifications of family style meals, and/or inclusion of individual best practices, during COVID-19 (Table 4.1).

Table 4.1: Guidelines for Mealtimes before and during COVID-19

<table>
<thead>
<tr>
<th>Before COVID-19</th>
<th>During COVID-19 (now)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adults and children <strong>sit together</strong> and eat the <strong>same food</strong>. Everyone encouraged to <strong>serve themselves</strong> (AAP et al., 2019).</td>
<td>• Serve food outside or in classrooms.</td>
</tr>
<tr>
<td>Adults help children learn to understand <strong>internal hunger and satiety cues</strong> (Benjamin Neelon &amp; Briley, 2011).</td>
<td>• Seat children with space between them.</td>
</tr>
<tr>
<td>Eating times are learning times. FSM is encouraged to support <strong>children’s development</strong> and socialization (Office of Head Start, 2019).</td>
<td>• Do not allow children to serve themselves from common bowls or platter. Pre-plate food. (CDC, 2020)</td>
</tr>
<tr>
<td>Adults and children <strong>sit together</strong> and <strong>eat the same food</strong>. When serving family-style, children <strong>serve themselves</strong>. Support children’s <strong>internal cues</strong> (Institute of Medicine of the National Academies, 2011).</td>
<td></td>
</tr>
</tbody>
</table>

Methods

**Study Design, Setting and Participants**

This paper is part of a larger study of changes in mealtime routines, responsibilities, and best practices in ECE centers during COVID-19. Trust Model constructs and some concepts from Social Cognitive Theory were used to develop a framework to guide this inquiry (Figure 4.1). A mixed-method designed was used to implement a survey and interviews among ECE center teachers and directors in Florida. The list of ECE centers and contact information was
obtained in collaboration with the Florida State Department of Children and Families and included licensed and license-exempt programs.

**Instrument Development**

Survey. Versions of the survey were created for directors and teachers and then translated into Spanish. After pilot testing with 10 local ECE directors in one county and making minor adjustments, the cross-sectional survey was distributed to more than 7000 ECE centers in Florida on August 10, 2020 and remained open until midnight on October 11th, 2020.

Survey questions included in this analysis were based on Trust Model concepts as well as best practices identified in the literature, include some elements of family style meals. Directors and teachers were asked the same question about division of responsibility, “Which of the following best describes the mealtime routine now?” (Table 4.5). This question has been used in a previously validated instrument (Ward, 2008). Directors and teachers were also asked the same question about changes in mealtime routines due to COVID-19 (Table 4.6). Teachers were asked a series of questions about individual best practices (e.g., do you sit with the children, do you eat with the children, do you eat the same food). These questions had 2 or 3 closed ended response choices (e.g., Yes, No, Sometimes) (Table 4.7). Finally, teachers were asked if they had additional responsibilities during lunchtime (e.g., setting out nap mats).

Interview. Interview questions were also based on the Trust Model and existing literature on mealtime best practices. During interviews, participants described current mealtime routines and any changes due to COVID-19. During these responses, participants had the opportunity to contrast current practices with pre-COVID practices. Comments about current and previous best practices, and any changes in best practices, were identified and analyzed thematically.


**Data Collection Procedure**

**Survey.** The survey was distributed to more than 7000 ECE directors in Florida. It was initially sent on August 10, 2020. Subsequent reminders were sent out on September 15, September 23, September 28, and October 2, 2020. The survey was closed on October 11th at midnight. Directors were asked to forward the survey to a classroom teacher involved in lunchtime.

**Interview.** At the end of the survey, teachers were invited to participate in a follow-up interview. The first 10 interviewees were selected by contact all who responded. After the 10th interview, participants were purposefully selected to add unique counties in order to gain as much variation as possible in terms of regions of Florida represented. All interviews were completed from August 16th, 2020 to October 16, 2020. Participants who completed the interview were compensated with a $25 e-giftcard to Amazon. The Institutional Review Board at the University of South Florida designated this study as exempt.

**Data Analysis**

**Survey.** Survey data were analyzed using descriptive statistics and frequencies in SPSS.

**Interview.** Interviews were audio recorded and transcribed verbatim before uploading to MAX QDA (VERBI Software, 2020) for thematic analysis. The initial set of codes included *a priori* codes based on the Trust Model and mealtime best practices literature and used a deductive process to identify concepts such as *Mealtime Interactions, Adult Responsibilities* and *Child Responsibilities*. Emergent codes included *Mealtime Interactions: Family Style Meals, Mealtime Interactions: Education,* and *Teacher Responsibilities: Health & Safety.*
Data Integration

Quantitative and qualitative data were integrated across the key concepts that help explain and understand the different ways that mealtimes are happening now during COVID-19 (Appendix L).

Results

Participants

Director surveys were completed by 759 respondents (735 in English and 24 in Spanish). Teacher surveys were completed by 431 respondents (411 in English, 20 in Spanish). Twenty-nine (29) teachers participated in interviews. Demographic questions were completed by about 100 fewer directors and 50 fewer teachers (n = 639 and 381, respectively). Directors and teachers had an average age of about 40 years old. Directors had an average of 20 years of experience while teachers had an average of 14 years of experience. More than 90% were female and just over half were white. About 24% of teachers and 21% of directors reported Hispanic ethnicity, which is consistent with the sizable Hispanic community in parts of Florida. The majority of directors held a Florida director’s credential, and the majority of teachers had either a Florida staff credential or a national CDA (Child Development Associate) degree (Table 4.2).

Table 4.2: Characteristics of Participants

<table>
<thead>
<tr>
<th>Employment Status</th>
<th>Directors n=643 %</th>
<th>Teachers n=385 %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Time (30 hours or more per week)</td>
<td>96.9%</td>
<td>88.8%</td>
</tr>
<tr>
<td>Part Time (less than 30 hours per week)</td>
<td>3.1%</td>
<td>11.2%</td>
</tr>
<tr>
<td>Hours Changed</td>
<td>n = 642</td>
<td>n = 384</td>
</tr>
<tr>
<td>My hours are about the same</td>
<td>57.6%</td>
<td>71.1%</td>
</tr>
<tr>
<td>My hours have decreased due to COVID</td>
<td>15.9%</td>
<td>19.5%</td>
</tr>
<tr>
<td>My hours have increased due to COVID</td>
<td>26.5%</td>
<td>9.4%</td>
</tr>
</tbody>
</table>
Table 4.2: Characteristics of Participants (Continued)

<table>
<thead>
<tr>
<th>Employment Status Changed</th>
<th>n = 639</th>
<th>n = 381</th>
</tr>
</thead>
<tbody>
<tr>
<td>My employment status has not changed</td>
<td>91.9%</td>
<td>88.7%</td>
</tr>
<tr>
<td>My employment status has changed from Full Time to Part Time due to COVID</td>
<td>6.4%</td>
<td>8.4%</td>
</tr>
<tr>
<td>My employment status has changed from Part Time to Full Time due to COVID</td>
<td>1.7%</td>
<td>2.9%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender</th>
<th>n = 640</th>
<th>n = 384</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>98.0%</td>
<td>96.4%</td>
</tr>
<tr>
<td>Male</td>
<td>1.9%</td>
<td>2.3%</td>
</tr>
<tr>
<td>Other</td>
<td>0.2%</td>
<td>1.3%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hispanic Ethnicity</th>
<th>n = 632</th>
<th>n = 382</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>20.9%</td>
<td>23.8%</td>
</tr>
<tr>
<td>No</td>
<td>79.1%</td>
<td>76.2%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Race</th>
<th>n = 639</th>
<th>n = 389</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>67.0%</td>
<td>62.0%</td>
</tr>
<tr>
<td>Black or African American</td>
<td>21.8%</td>
<td>24.9%</td>
</tr>
<tr>
<td>Asian</td>
<td>1.7%</td>
<td>1.5%</td>
</tr>
<tr>
<td>American Indian or Alaska Native</td>
<td>0.9%</td>
<td>0.5%</td>
</tr>
<tr>
<td>Native Hawaiian or Pacific Islander</td>
<td>0.3%</td>
<td>0.8%</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>8.3%</td>
<td>10.3%</td>
</tr>
</tbody>
</table>

**Characteristics of Centers**

The director survey included a question that asked respondents to describe their programs (Table 4.3). More than half of centers participated in VPK, which is essentially a voucher program that reimburses ECE providers for about 15 hours per week for one academic year for all 4 year olds in Florida. About half were for-profit private centers and close to half participated in school readiness, a subsidy program for children from income-eligible families. Percentages of
centers participating in CACFP and Head Start are consistent with levels of participation in these programs in Florida (FRAC, 2019; US DHS, 2020).

Table 4.3: Characteristics of Directors’ ECE Centers

<table>
<thead>
<tr>
<th>Center Characteristic (n = 728)*</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VPK (state-wide universal preschool)</td>
<td>400 (55.0)</td>
</tr>
<tr>
<td>For-profit private</td>
<td>371 (51.0)</td>
</tr>
<tr>
<td>School Readiness (subsidy)</td>
<td>322 (44.2)</td>
</tr>
<tr>
<td>Non-profit private</td>
<td>262 (36.0)</td>
</tr>
<tr>
<td>CACFP (Food Program)</td>
<td>246 (33.8)</td>
</tr>
<tr>
<td>Faith-based</td>
<td>145 (19.9)</td>
</tr>
<tr>
<td>Head Start/Early Head Start</td>
<td>55 (7.6)</td>
</tr>
<tr>
<td>License Exempt</td>
<td>29 (4.0)</td>
</tr>
</tbody>
</table>

*more than one selection allowed

Food Models of ECE Centers

Food models refers to whether ECE centers had a kitchen on-site, catering, or had parents send in food for the day. It is important to note that due to COVID-19, some schools may have changed from kitchen on-site to parent bring, in order to minimize germs and infection risk. Among the respondents to the director survey, 44% reported that the school provides all food, close to 20% had parents send in all food for the day, and 15% used catering. Some centers used a combination of these (Table 4.4).
Table 4.4: Center Food Models

<table>
<thead>
<tr>
<th>Center Food Model (n = 728)*</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>School provides all</td>
<td>323 (44.4)</td>
</tr>
<tr>
<td>School provides some</td>
<td>61 (8.4)</td>
</tr>
<tr>
<td>Parents send all</td>
<td>137 (18.8)</td>
</tr>
<tr>
<td>Parents send some</td>
<td>73 (10.0)</td>
</tr>
<tr>
<td>Catering all</td>
<td>110 (15.1)</td>
</tr>
<tr>
<td>Catering some</td>
<td>45 (6.2)</td>
</tr>
</tbody>
</table>

*more than one selection allowed

Survey

Division of Responsibility. Less than 5% of teachers and directors reported that children served themselves food. The most frequent response regarding division of responsibility was that adults serve the food and adults decide how much food to give children (Table 4.5).

Table 4.5: Division of Mealtime Responsibility

<table>
<thead>
<tr>
<th>Which best describes the mealtime routine now? (please select only one):</th>
<th>Directors (n = 660)</th>
<th>Teachers (n = 408)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adults serve most foods, and adults decide how much to give to children.</td>
<td>311 (47.1)</td>
<td>155 (38.0)</td>
</tr>
<tr>
<td>Adults serve most foods, and children decide how much to take.</td>
<td>85 (12.9)</td>
<td>41 (10.0)</td>
</tr>
<tr>
<td>Children serve themselves most foods, and adults decide how much children may take.</td>
<td>18 (2.7)</td>
<td>5 (1.2)</td>
</tr>
<tr>
<td>Children serve themselves most foods, and children decide how much to take.</td>
<td>34 (5.2)</td>
<td>12 (2.9)</td>
</tr>
<tr>
<td>Food arrives at the school already portioned on each child’s plate.</td>
<td>63 (9.6)</td>
<td>69 (16.9)</td>
</tr>
<tr>
<td>Children bring food from home.</td>
<td>149 (22.6)</td>
<td>126 (30.9)</td>
</tr>
</tbody>
</table>
Changes in Routines due to COVID-19. Directors and teachers were also asked about changes due to COVID-19. Both responded most frequently that cleaning responsibilities had increased and children were seated with more space between them. Other suggested responses were not selected by a large percentage of either group. (Table 4.6) This is consistent with findings from the interviews in which cleaning and handwashing were emphasized as adult and child responsibilities.

Table 4.6: Changes to Mealtime Routines

<table>
<thead>
<tr>
<th>Have your lunchtime routines changed due to COVID-19? (please select all that apply):</th>
<th>Directors n = 728 n (%)</th>
<th>Teachers n = 432 n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, we implemented more cleaning activities (e.g., increased handwashing and/or sanitizing surfaces).</td>
<td>436 (59.9)</td>
<td>254 (58.8)</td>
</tr>
<tr>
<td>Yes, we changed where children sit (e.g., putting more space between children)</td>
<td>383 (52.6)</td>
<td>265 (61.3)</td>
</tr>
<tr>
<td>Yes, we changed groups sizes of mealtimes (e.g., now we eat at staggered times rather than all at the same time)</td>
<td>137 (18.8)</td>
<td></td>
</tr>
<tr>
<td>Yes, we changed where children eat (e.g., changed from cafeteria to classroom)</td>
<td>137 (18.8)</td>
<td>67 (15.5)</td>
</tr>
<tr>
<td>Yes, now teachers help children with their masks before and after eating</td>
<td>134 (18.4)</td>
<td></td>
</tr>
<tr>
<td>No, lunchtime routines are basically the same</td>
<td>129 (17.7)</td>
<td>49 (11.3)</td>
</tr>
<tr>
<td>Yes, we changed where children eat (e.g., changed from cafeteria to classroom).</td>
<td>93 (12.8)</td>
<td></td>
</tr>
<tr>
<td>Yes, we changed the source of our meals (e.g., changed from kitchen-onsite to parent bring).</td>
<td>40 (5.5)</td>
<td>20 (4.6)</td>
</tr>
<tr>
<td>Yes, we changed the types of foods that are served (e.g., serving more healthy foods, or serving less expensive food).</td>
<td>24 (3.3)</td>
<td>19 (4.4)</td>
</tr>
<tr>
<td>Other</td>
<td>70 (9.6)</td>
<td>50 (11.6)</td>
</tr>
</tbody>
</table>

Best Practices. While 90% of teachers reported sitting with children during at least part of the mealtime, only 36% ate the same foods. About 25% reported that parents instructed them
about what and how to feed their children. About half of teachers reported having additional responsibilities during lunchtime (Table 4.7).

**Table 4.7: Best Practices**

<table>
<thead>
<tr>
<th>Survey Questions for Teachers</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you sit with the children during lunch? (n=406)</td>
<td></td>
</tr>
<tr>
<td>Yes, during the entire mealtime</td>
<td>253 (62.3)</td>
</tr>
<tr>
<td>Yes, during part of the mealtime</td>
<td>108 (26.6)</td>
</tr>
<tr>
<td>No</td>
<td>45 (11.1)</td>
</tr>
<tr>
<td>Do you eat the same foods as the children during lunch? (n=405)</td>
<td></td>
</tr>
<tr>
<td>No, I do not eat while the children are eating</td>
<td>158 (39.0)</td>
</tr>
<tr>
<td>Yes</td>
<td>147 (36.3)</td>
</tr>
<tr>
<td>No, I eat different foods</td>
<td>100 (24.7)</td>
</tr>
<tr>
<td>Are all lunch items served at the same time? (n=406)</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>387 (95.3)</td>
</tr>
<tr>
<td>No</td>
<td>19 (4.7)</td>
</tr>
<tr>
<td>Do you have additional responsibilities during lunchtime? (n=401)</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>214 (53.4)</td>
</tr>
<tr>
<td>Yes</td>
<td>187 (46.6)</td>
</tr>
</tbody>
</table>

**Interviews**

Interviews provided context and clarification around the changes in mealtimes best practices due to COVID-19. Teachers described their mealtimes in three general categories: (1) *modification*, in which both COVID-19 infection control and mealtimes best practices were both successfully incorporated into modified mealtimes; (2) *elimination*, in which COVID-19 infection control made mealtime best practices very difficult, if not impossible; and (3) *minimal*
Modification. Several teachers described modifying their usual mealtimes to incorporate changes due to COVID-19. For example, one teacher described how mealtimes were basically the same, everyone was just a little more spread out:

“I’m trying to space them out like every other [chair]... They’re still close enough that they can have conservations, we talk about who has fruit in their lunchbox, and ‘oh CHILD’S NAME and another friend both have strawberries.’ And like we’re talking, I’m reading books sometimes. We’re doing different strategies to kind of help them grow in their language and things. We’re still doing all of those strategies that we were doing before. Just a little bit of a more spaced out manner.” (Teacher 014)

Another teacher who was no longer eating together with the children talked about how the overall of the feeling remained the same, and pointed out the positive aspect that not eating together allowed her to go and get resources to answer questions:

I would say that while the location has changed and it’s a little stricter about how we have to serve it, the overall spirit of how our meals work hasn’t changed. We still spend the entire time talking about the different types of foods that they eat and the food groups, how they help their bodies like ‘oh the proteins going to help your muscles get tougher, the milk’s going to help your bones get stronger,” (Teacher 007) (emphasis added).

Similarly, several teachers described incorporating conversation and education into the meal, regardless of whether they were eating together or not. “And you know, and I'm talking about the, you know, the different foods and what food groups and things they're going to as for, you know, as I'm passing it out” (Teacher 027)

Although children serving themselves from shared containers is not recommended under current guidelines, one teacher shared how her table is set up for the children to pour their own milk in the morning: “in the morning when it’s breakfast time, if they have cereal, you know the
milk is already in the cup, so when it comes to them they can pour it, their own milk into their cereal bowl.” (Teacher 004) This modification allows for physical distance and avoids cross-contamination to protect against COVID, and also allows the children to experience serving themselves.

Another described how the changes due to COVID facilitated talking with the children a little more sometimes during meals: “And then I kind of like talk to them. You know, if I have time, you know, usually I’m passing out [the food] but with a smaller group, I feel like I have more time with them. So I actually could sit down and have a conversation about their day, or ask them what they’re eating and encourage them to try new food, especially their vegetables.” (Teacher 018)

Another who wore a mask during most of the day but took it off to eat together with the children commented: “It's like a family style. So, I sit with them at lunchtime and then that's the time we ask—I—we ask like what is the, what are you eating, what is good for you? Veggies, and what color is, are the veggies and what color is the fruit and then what color is the milk and that way at the same time they are getting educated and learning colors and what is good for them.” (Teacher 010)

Two teachers articulated higher-level reasons for why it's so important to maintain mealtime best practices in the form of eating together and socializing at the table:

I believe that eating with the children is essential. Only because it's your time to have, you know, sit with them, and have, you know, one on one conversation to talk about what they want to talk about. And then, you know, you put in those little reminders of, ‘Okay, this is how we open our sandwich’ or whatever, you know, things like that. But I believe it's big for the relationship between the teacher and the student for you to have that time to sit and eat with them. (Teacher 011)
Similarly, another described all of the learning, including social learning, that happens at the table:

“They're learning table manners, they're learning. They're learning how to communicate likes, dislikes, without showing excessive emotion. They're learning how to handle the disappointment, of not getting what they want. All kinds of things, but it's a very social event and eating has always been a social event for humans. So might as well, you know, start early.” (Teacher 024)

**COVID Priority.** In some centers, the changes to reduce the risk of spreading COVID-19 also meant that previous mealtime best practices had to be suspended. Several commented on the change in not sitting together with the children anymore. For example:

We used to do family, family style to a point only because they're so young, but we do let them, we were letting them pour their own water, depending on the type of foods like sandwiches or sliced fruit, before COVID, again, they would be able to self-serve them, you know, self-serve. Unfortunately, since COVID, that has changed there is no food left on the table, the only food on the table is in their, you know, ah, is in their plate, we serve it. That's the biggest change and we don't sit with them as before, because once everybody is served and then put the, the extras out [food] that we could sit with them and just have conversations, [but] just due to lack of space we don't sit with them. *We stay masked, gloved and we have goggles as well through the entire--unless we decided to take a bite, we can take our mask up. But usually it's just so busy that we are serving them. So we are masked gloved, like I said and have goggles, so the biggest change is just not sitting with them.* (Teacher 017)

Another teacher described how she used to combine foods into bowls so that the children would experience self-serving, but with COVID they were not allowed to do that anymore: “it was like that before but I used to put it [the food] in, like, containers and put it on the table so they can serve themselves and pass it around. But we can't do that anymore. Like I used to have milk in a pitcher. And they poured their own milk.” (Teacher 028)
Along similar lines, “we try to call it a family style dining lunch, and the teacher is encouraged to sit down and eat with the kids. So she has her own lunch, we can eat with the kids if we want. But most of the time, it doesn’t work out that way. Because the kids are... asking for seconds and thirds of things and so you’re constantly having to get up and, you know, get things served.” (Teacher 018)

Another teacher in a center that had previously served family style meals identified not sitting together with the children as a substantial loss. She questioned whether she would ever go back to eating “like a family at school,” even after COVID. Additionally, she identified sitting together and serving family style as the worst change in their mealtime routines:

and I just think, I think that um, I just [pause] think that, I don’t think that, one thing is I don’t think children will ever, that went through this, I don’t know that we’ll ever get back to normal and I don’t think that we will ever serve family style again. I just think we will always be leery of, unless there’s a really good vaccine, of the possibility of this coming back that we lost that part of it, _and that's the worst part of it, that we don't eat like a family anymore, and I don't think I'll ever feel comfortable serving like a family anymore [long pause].” (Teacher 008) (emphasis added)

Finally, one teacher described how Plexiglass barriers implemented by the center administration were disruptive and made family style meals impossible: “we used to have like family style dining where everybody dines together. But now they put up Plexiglass on the 2 tables that we did have. So the children are separated. So they don’t like the Plexiglass. They push it, knock on it and tell each other to ‘open the door’” (Teacher 028).

**Minimal Changes.** In some programs, major changes due to COVID were not implemented, and so therefore, the mealtime routines did not change significantly. As one teacher explains, the children do not serve themselves but this has not changed due to COVID: “we don’t do that [let the children serve themselves]... it’s always been like that because they changed it because the Food Program that we belong to wants the teacher to do it now [serve the
food].” (Teacher 016). Similarly, another teacher described the mealtimes were: “pretty much like it was before, to be honest. I have two big tables together. So everybody’s kind of spaced out around the table. And we do family style where we eat together” (Teacher 016).

Another described how she sometimes eats with the children but other times doesn’t, unrelated to COVID: “Sometimes I eat with them. It depends on what I have that day. And if I’m feeling like it.” (Teacher 026). Similarly, “we don’t eat with them, [you know we’ll] sit down with them like, our teachers will be at one table and I’m at another table, and she’s talking to them over there... if depends on how we feel, if we have food left we’ll eat with them.” (Teacher 015).

In another school where masks were not worn except to greet parents at the door, the teachers sat together and ate with the children as usual:

“So then we will, we are, teachers, obviously they sit with, you know, a table, there are mainly two teachers in the room and they’ll sit down, or if I’m in there as well. I’ll have a seat with the children. So we do eat with the children... We eat the same food, the same foods... normally it always, we eat what they eat.” (Teacher 012)

Similarly, in a school in which the children wore masks into the building but then took them off in the room, the teacher described:

“During the lunch time, I just encourage them to talk to each other. I like to see them having, you know, a discussion, talking with their peers. That’s why I really, I talk to them sometimes.” (Teacher 023)

**Discussion**

Current guidelines do not allow children to self-serve, which was considered a key aspect of mealtime best practices and autonomy support (AAP et al., 2019). These findings show that it is possible to include some best practices—e.g., discussions of food and non-food topics at the table, verbal support of children’s autonomy—but not all. Further questions include whether
specific best practices influence children’s healthy eating or if modified best practices are sufficient. The role of children serving themselves has been studied previously and it remains unknown as to whether self-serving influences what or how much children eat. In terms of how much children eat, one older study (Branen et al., 1997) found that children ate more when they could serve themselves, but the difference, although significant, was very small. Another study by Fisher has been misinterpreted to conclude that children serve themselves more when they self-serve. The children in the Fisher study were serving themselves after being served double portions by adults in an experiment to see if portion size influenced intake (it did). When they returned to the normal condition, their intake “did not differ significantly from that at the reference-portion lunches” (Fisher et al., 2003).

There is tentative evidence that self-serving influences what children eat. One study that allowed children to serve themselves snacks found that serving a variety and allowing choices increased children’s consumption of fruits and vegetables (Roe et al., 2013). Two other studies that assessed whether family style meals (including self serving) influenced children’s intake were inconclusive (Harnack et al., 2012; Schwartz et al., 2015). Given the lack of substantial evidence, during COVID, perhaps children’s autonomy can be supported via social engagement even with individual plating. Future work could compare individual plating and family style self-serving during and/or directly after COVID-19.

Additionally, some routines may never go back to the way they were before. For example, about 30% of respondents in this survey said that children bring all food from home, which is higher than one study in which only 10% of centers responded that all food was sent from home (Sigman-Grant et al., 2008). This could reflect a shift in that ECE centers are changing their food service model in order to lower the risk of COVID-19, although without a
“pre” measure it is not possible to know for sure. However, meals sent from home are known to be less healthy and safe compared with meals provided by schools, particularly schools that participate in CACFP (Almansour et al., 2011; Chang-Martinez et al., 2018; Sweitzer et al., 2009, 2010). A larger percentage of ECE centers requiring food to be brought from home would shift the understanding of mealtime best practices because the children would all have different foods individually prepared. A follow-up survey could assess whether the percentage of ECE centers providing food has remained the same.

**Conclusion**

ECE centers that have successfully integrated COVID-19 modifications and maintained mealtime best practices can serve as examples for others. They can also provide understanding of the variety of ways that mealtime best practices and infection control can be combined. Implementing both best practices and infection control will look different depending on several factors, such as whether food is brought from home, how it is served, and the role of the teacher in the classroom during the mealtime. Moving forward, sharing ways to include best practices and maintain infection control safety will be important. These findings are generalizable to ECE centers in Florida and could be compared with other states.
Figure 4.1: Theoretical Framework for Research Question Three

Theoretical Framework

**Adult Responsibilities**
- “What, when & where”
- Leadership, role modeling
- Support child self-regulation (autonomy support)
- Support positive caregiver-child feeding dynamic

**Child Responsibilities**
- “What, how much, whether”
- Self-regulation
- Observational learning
- Group efficacy
- Engage in positive caregiver-child feeding dynamic

**Context**
- Number of tables, children and teachers (i.e., ratios, group size)
- Where children are seated (i.e., spaced out or not)
- Where children eat (i.e., in classroom, cafeteria)

**RQ 1:** How has the COVID-19 pandemic changed adult and child responsibilities during mealtimes in ECE centers? (Satter, Eneli, Trevino, Elford, Brann)

**RQ 2:** How has the COVID-19 pandemic changed the caregiver-child feeding dynamic in terms of supporting children’s autonomy? (Vaughn, Dev, Swindle)

**RQ 3:** How can FSM best practices be implemented successfully within the current ECE mealtime guidelines? (CDC, CFOC)
Emergent Findings

Several topics outside the scope of this dissertation emerged in the process of data collection and analysis. In general, topics involved risk and protective factors for children and adults. First and foremost was The Workplace as Protective. Additional topics are Children are Resilient, Fear/Anxiety, Mask Wearing, and Family Style Meals are Slower.

The Workplace as Protective against Social Isolation

There has been general discussion in the media about the importance of school for children’s social development, including several high-profile articles in academic journals that were also prominent in mainstream media (e.g., (Levinson et al., 2020)) but little about the effects of social isolation and connectedness among teachers. The concept came up during several interviews for teachers who had experienced periods of school closure, either in March 2020, for summer break, or intermittently due to cases of COVID-19 in the ECE center. The teachers missed being at work and being with the children every day. Some described the major source of stress due to COVID as coming from outside sources, such as the news or family members:

“I told my friends, it’s like, for me it's been easier because I came over here to work every day and be with the children with the same routine, it’s like, me, haven’t shocked me with the coronavirus because since I left the house every day to come to work, go back, and see the children, see my coworkers. It helped me a lot through this pandemic. Because I was able to see the childrens every day, talk to them, play with them. And that way, you know, you forget a little bit about. It's only when you get home and you turn the
TV on, that you see the news. That's when you remember that this thing is on. But while you’re here and you’re busy all day, it doesn’t hit you.” (Teacher 010)

Similarly, an older teacher with adult children described how she just kept going to work and only felt stressed when her children expressed concern for her health:

“I have adult children and just hearing their anxiety and thinking and they're like, ‘how are you not worried?’ And because I you know, what I work in and I'm like, I just I can't, I did not get myself too crazy. And of course, then I got it [COVID]. But, thankfully, but, you know, but so I mean, if anything, I probably had more anxiety from my family and friends. Not so much coming in here, we just all we put, we put on our best face that we had to, we did what we had to and the kids thankfully didn't pick up on that. Be it my personality. I don't know, I can't speak for other teachers, but I just had to put, you know, put my best foot forward and just, you know, there's nothing I can do. This is what I do for a living and we were not ever furloughed. So, we did what we had to do, and it just became that's just what we did.” (Teacher 017)

Another elaborated about how it’s good for both teachers and children to be together at school, and how excited the teachers were to come back after being away:

“But you could tell like, they, they're better, you could tell like, you know, they're very welcoming, they’re excited to see the children, you know, so you can see like, the day to day, we love the children, and we want them to be there. And we're so excited. And you could see that the teachers, as they're coming back, that they're excited to be there. And they're not scared and they're becoming more relaxed, and like, Okay, this is our new normal, and just kind of going with the flow.” (Teacher 018)

Finally, toward the end of an early morning interview, as we were wrapping up, one teacher said:

“it doesn’t exist while we’re inside these walls. It’s not there.” (Teacher 024)

The complexity in protecting mental health by increasing risk of physical health (i.e., COVID infection) illustrates some of the impossible choices teachers, parents and families were faced with (and still are faced with) during COVID-19. What worked as a short term solution (“lock downs” or social isolation) are not feasible in the long term. These comments highlight the need to prioritize school safety so that people—children, students, teachers, administrative staff—may access the social support of workplaces.
**Children are Resilient**

Several respondents described how the children are resilient, even in the face of big changes to their daily lives: “it’s a little different, but you know the kids are so resilient. They’re still happy and [COVID-19] has nothing to do with their happiness” (Teacher 002). Another described how the children “bounce back”: “Honestly, I think they are adjusting pretty well, kids are resilient, they bounce back really fast” (Teacher 009). Another described how the children’s resilience helped her with explaining the situation to them: “Kids are so resilient... they know that’s a germy virus that they don’t want to get, so they understand... I’m really big in explaining everything to the kids, so they do understand.” (Teacher 011). Similarly, another teacher talked about how the children’s resilience helped with the changes in routines: “So I think they’re been pretty flexible with all of it, and really resilient and the learning of new routines and transitions, and they’ve done really great with it.” (Teacher 014) Finally, one teacher talked about how the children’s resilience helped with navigating the situation: “But they are resilient, I mean, that makes me, I’m just so glad... [because] there’s nothing I can do. This is what I do for a living” (Teacher 017).

**Fear/Anxiety/Frustration for Teachers**

Although many participants were generally positive about their experience overall, even after describing difficulties, others described fear and anxiety about going to work during COVID-19. For example, teachers would describe hearing a child cough or sneeze and wanting to get away from them:

And, you know, like you were saying it was chaotic and yours, everybody was so worried. *You know, somebody coughed and you just wanted to curl up in a ball.* And so but because we were so low, we could spread out and we did spread out but it was, it was definitely a calming and because they slowly come back. (Teacher 017)
Another described her frustration in feeling that she had to actively discourage children from interacting with each other, in general:

“You know, and it's very sad, because I see so many of them be like, ‘I can help you open that’ and I have to stop them. And that's not that's not how I learned to teach. You know, when I when I went to college and did my early childhood education degree, it was, you know, I modeled, we all learn from each other. We all came together that way. And now I feel like I have to put up a barrier. And I don’t feel that it’s fair for the children.”
(Teacher 022)

*Fear/Anxiety/Frustration for Children*

Another described how sometimes the children would express fear when they heard another child cough. In this example, the teacher quickly redirects the conversation:

um, there are some kids that um more fearful, uh, we’ve seen some, um, I’m not a clinician, but I would say anxious behavior, I wouldn’t say anxiety but I have seen some anxious behavior. If somebody coughs, how some kids are a little bit more like, he's coughing, Is he sick? Does he have the virus, you know, and you're like, no, you know, he's just choking on that water that he's drinking too quickly. Let's talk about that. [both laugh] (Teacher 008)

Another described the general chaos of changes at school and at home, how children’s situations changed and maybe when they returned to school, friends who had previously been there had left:

*It was, it was, like shell shock for them. Because, you know, you went to the same like the um ‘no mommy don’t leave me’ you know because they had been home for so long, you know? You know, and then all of a sudden, you know, mommy has to go back to work. Yeah, mommy can't work at home anymore. So he has to go back to work. And Daddy has to go back to work. So now you have to go back to school. And 'where's all my friends? My friends aren’t here.’ You know, it was a lot of adjustment. And the routines and the classes, all classes. Because some parents were just like, No, I'm gonna stay home. I'll pay my fee. And we're gonna stay home with my kids because I can work from home. Okay. You know? And then there's some kids that just didn't return. Their parents didn’t go back to work. You know, or they just decided no, it's not worth it. You know, just so much about this disease that we don't know anything about.* (Teacher 013)
**Mask Wearing**

A major topic that was outside the research questions was the issue of mask wearing in ECE environments. The CDC made recommendations, and the state of Florida made various recommendations as well. During some interviews, in response to the first question, which was just “tell me about mealtimes at your school right now” the participant would immediately start talking about masks and mask wearing, sometimes not related to mealtimes at all. The impact of mask wearing among young children, who are developing so rapidly, is unknown. It was the biggest and most visible change. There is some concern that among young children and children with special health care needs (CHSCN) or those who may be developing atypically (and in the 2-5 age group, CSHCN often have not yet been identified) that mask wearing could be detrimental to development, especially speech/language/communication skills (Paulauskaite et al., 2021; Stajduhar et al., 2021).

A few examples, one teacher with some children with special health care needs in her class described how she couldn’t use “the Feelings Buddies,” a set of dolls designed to teach children how facial expressions have meaning:

“We have something called Conscious Discipline at our school. I don't know if you're familiar with that. [jfm: no] Supposed to teach them. We have a Safe Place in our classroom where they can go if they're feeling upset, or they just need a little break. We have the Feeling Buddies over there in the Safe Place where, they look like little gingerbread men. They’re supposed to be little people, I guess. And they're called Feeling Buddies. And they, they each have different emotions on them, like Happy and Sad, and Disappointed and Frustrated and Scared. *You're supposed to go ‘Your face looks like this, so you’re feeling sad’ and I’m like, ‘I can't show what my face looks like because I have a mask on.’* [laughing through the whole thing]... it’s still do-able it just adds a challenge to it.” (Teacher 029).

Another teacher described her personal difficulty in keeping the mask on:
“just the mask, I can't really, you know, breathing with the filter is like, something is on my face. I gotta keep talking to the kids sometimes. And they’re looking at me, like, they look at me, like, ‘huh?’ Because they can't really understand me with the mask on, they can’t really see my face. Or, you know, my emotions and my feelings. On what as far as we're playing, you know, playing house with them or playing dress up with them. And I’m like ‘aw, this baby is so cute.’ Like, they can't really see my smile, they can't really see how I feel. So they are trying to like, take my mask off, to see my face, and I think it's cute. But oh my gosh, the best thing, that's one of the things, that's one of the things, that's one of the things that's hard for us, is the mask.” (Teacher 015).

Finally, one teacher talked about how the children would be putting masks on the babies in the dramatic play area if they were allowed to have cloth in the room, because children need to act and play out the things that are happening to them and around them:

“I can imagine that if I had masks in my dramatic area— if we had anything that was fabric which we do not we don't have any clothing for our, for babies has no diapers, no anything on them, because we're not, you know, allowed to use those right now... But I would imagine that if I provided masks, all of the babies would be wearing masks in there every day. So you know... I'm quite sure after this is all over with and we get to utilize things like that. I'm gonna have to have some masks in there for them because it's in their experience. Again, to help them process it, I think it'll be helpful to them. (Teacher 027).

As weeks became months and we approach the one year mark, concerns about the pros and cons of mask wearing for young children are being articulated (Esposito & Principi, 2020b).

Appendix K contains a draft manuscript on mask wearing.

**Family Style Meals Feel Slower**

I had a particular interest in family style meals at the beginning of this dissertation. An unexpected finding was that a couple of respondents who had previously done meals family style with the children serving themselves described preferring this because it was a slower pace:

So, so, you know, that's the big thing is just not sitting with them and spending, you know, *kind of a slow download*, whereas this is just like get, you know, get it done, get it
done, get it on the table, get it clean, you know, clean in between, clean after, clean before. (Teacher 017)

Another teacher specified that it was the children serving themselves that slowed down the lunch, and she described this as a positive aspect of the mealtime:

And I like that too, because it, um, *it makes lunchtime go by a little bit slower when they have to do it themselves*, which is when they have to do it themselves we have to kind of like to time management a little bit better. (Teacher 009)

The same respondent continues:

Like usually we would before we would give them small portions *and let them eat it slowly* and then give them seconds but now we are just putting the full entire amount on the plate. (Teacher 009)

This would be an interesting future direction specifically about family style meals, to understand whether it does slow down the mealtime and allow for some of the more general best practices, such as social engagement, with the children.

**Testing Relationships between Characteristics and Outcomes**

A final future direction would be some exploratory inferential statistics to understand whether any characteristics of centers, such as type of center (Head Start, CACFP), type of food service (kitchen on-site, catering, parent bring), or region of the state are more or less likely to engage in specific mealtime practices. For example, testing whether type of center (independent variable) is related to outcomes such as changes made due to COVID-19, controlling feeding practices, and mealtime interactions (dependent variables). Such tests were outside the scope of this dissertation but could be a future direction for providing specific feedback and support.
Section Six: Conclusions and Public Health Implications

Overview of Results

The results of this study describe and explain how COVID-19 influenced mealtimes in ECE centers in Florida. Adult mealtime responsibilities increased, especially in terms of cleaning and health and safety, while children’s mealtime responsibilities decreased, particularly around food handling and serving. Many teachers reported engaging in autonomy-supportive feeding behaviors, such as letting children eat until they are finished and talking about food at the table. Controlling behaviors included praising children for cleaning their plates and requiring children to try one bite of a new food, but it is not known whether these changed due to COVID-19 (probably not). Best practices varied. ECE centers generally followed 3 models of incorporating COVID-19 precautions and mealtime best practices: (1) modification: centers incorporated best practices into new routines, such as eating together but sitting farther away, (2) elimination: centers changed routines in ways that prevented best practices, e.g. teachers wearing masks and standing during meals, (3) minimal change: centers made minimal changes due to COVID-19 and therefore, mealtime practices did not change (Figure 5.1).
Figure 5.1: Answers to Research Questions

**Theoretical Framework with Answers**

**RQ 1:** How has the COVID-19 pandemic changed adult and child responsibilities during mealtimes in ECE centers? *Teachers’ mealtime responsibilities increased, especially around cleaning and health & safety; children’s responsibilities decreased, particularly around food handling and serving.*

**Adult Responsibilities**
- “What, when & where”
- Leadership, role modeling
- Support child self-regulation (autonomy support)
- Support positive caregiver-child feeding dynamic

**Child Responsibilities**
- “What, how much, whether”
- Self-regulation
- Observational learning
- Group efficacy
- Engage in positive caregiver-child feeding dynamic

**Context**
- Number of tables, children and teachers (i.e., ratios, group size)
- Where children are seated (i.e., spaced out or not)
- Where children eat (i.e., in classroom, cafeteria)

**RQ 2:** How has the COVID-19 pandemic changed the caregiver-child feeding dynamic in terms of supporting children’s autonomy? *Autonomy-supportive behaviors included letting children eat until finished and socializing at the table. Controlling behaviors included praise for cleaning plates and requiring children to try one bite of a new food.*

**RQ3:** How can best practices be implemented successfully within the current guidelines? *Centers either modified mealtimes to include infection control and best practices; eliminated best practices in favor of infection control; or made minimal changes.*
There are several implications of these results. First, both data sources show that classroom teachers are implementing both CDC guidelines and mealtime best practices to some degree. The extent to which these activities are happening is largely determined by higher-level policy. Higher-level policy sources include ECE center-level rules, county health department decisions, state licensing and CDC (federal level) guidelines. Another way to say that is teachers are not simply making decisions based on their individual beliefs. They are following directives, which is not unexpected and also means there would be uniformity at the center level. But the implication is that the information (about COVID, mealtimes) is there. Any gaps in practice are implementation issues. However, variation across centers is not necessarily a problem. ECE centers tend to be responsive to parent and community norms and expectations, and those will vary.

**Theoretical Implications**

The Trust Model combined with elements of Social Cognitive Theory provided a useful framework for explaining the experiences of teachers and children in ECE environments. This model could be used for future work to understand teacher and child eating behaviors in ECE.

**Study Strengths and Limitations**

This study has several limitations. First, although the survey was pilot tested, it was not validated prior to implementation due to time constraints. Future work could involve face and content validation. Second, the survey was also a retrospective self-report and only measured one point in time. Respondents could assess perceptions of change only retrospectively. This study does not identify best practices that may not have been implemented to begin with. Third, participation could be biased toward individuals with the time and interest in responding to the survey and interview. Also, social desirability bias could have played a role in responses to both
interview and survey questions. For example, respondents may have been hesitant to respond in ways indicating that they were not following recommended guidelines such as masking and physical distancing. Therefore some issues may have been undercounted/underreported. Additionally, public emails were used and so the majority of participating centers were open, and centers that were closed may have characteristics that are systematically different from this sample.

This study also has many strengths. Although the response rate of 17% is not as strong as some other survey-based studies in ECE, which reported 26% (Erinosho et al., 2018) and 31% (Ritchie et al., 2015), the surveys and interviews covered many counties in Florida. Florida is a diverse state with several key regions that were all represented (e.g., the panhandle, south Florida, the ‘space coast,’ etc.). Also, using the Trust Model to understand mealtime practices in ECE settings is a novel contribution to the fields of child feeding practices and supporting healthy weight in ECE. Finally, these findings show how the COVID-19 pandemic has influenced mealtime routines in ECE and can be useful in informing policy and practice to promote children’s overall health and healthy eating.

**Implications for Policy, Practice and Future Research**

**Policy**

The policy environment surrounding any ECE classroom is (1) complex (2) variable and (3) hierarchical. The complexity comes from the push and pull of quality versus cost (Feinberg-Peisner & Burchinal, 1997). The importance of quality is undeniable at this point (Berrueta-Clement, 1984), but costs of providing high-quality ECE for every child are unsustainable within current structures. The median cost of ECE in Florida is more than $8,000 per year for an infant and more than $6,000 per year for a preschooler (Committee for Economic Development, n.d.).
The resolution to this problem is beyond the scope of this dissertation, but COVID-19 hit the ECE industry at a time when the balance of resources and quality was already precarious.

The policy environment is highly variable because ECE is regulated primarily at the state level, and states choose to implement various standards. In Florida, the Department of Children and Families regulates licensed ECE settings. State licensing is intended to ensure a basic level of safety for operation. The public health response to COVID-19 was also largely determined at the state level via a series of executive orders from the governor and the commissioner of education. Therefore, across the U.S., states responded to COVID-19 in ways that were very different. In Florida, the state-level response to COVID-19 in ECE settings was to place some restrictions on group sizes at the beginning of the pandemic, but restrictions were lifted in May 2020 (Florida Department of Children and Families, 2020b). As of May 3, 2021, masks were not required in public anymore per executive order (State of Florida Office of the Governor, 2021). The executive order was phrased to supersede any local ordinances.

Finally, the policy landscape is hierarchical. There are national standards that are voluntary via Caring for Our Children and the National Association for the Education of Young Children. Compliance with national regulations is required for Head Start and CACFP programs. Both Head Start and CACFP have specific sets of regulations they must follow. State regulations are required for operation of all licensed programs (including Head Start and CACFP). The COVID-19 response was determined at the county level, and some decisions about schools, including ECE, were determined at the county level (e.g., Miami-Dade county). Finally, center-level policies are largely determined by directors. The findings in this study illustrate how interpersonal mealtime practices are determined by policy decisions at various higher levels.
**Practice**

Implementation gaps are not unusual in ECE programs (Chang-Martinez et al., 2018) as well as other workplace settings. Similarly, variation in workforce knowledge, motivation and self-awareness is common across early education (Dev et al., 2016) as well as other vocations. In Florida, ECE teachers can obtain coursework needed for certification via local community colleges. Some high schools have programs that place students in ECE classrooms.

Findings from this study do not indicate a need for further knowledge or training, but rather professional support as COVID continues. During COVID-19 teacher mealtime responsibilities increased, such as food handling and serving as well as managing masks, navigating Plexiglass barriers and any other new modifications. Classroom teachers could benefit from the professional support of having another adult in the room. CDC recommendations of group sizes of 10 could have been more specific to include at least 2 adults so that managing COVID modifications in addition to usual responsibilities would not fall on only one person.

It remains to be seen how COVID-19 will change the ECE landscape nationally as there could be population shifts. Some children may stay at home with an unemployed parent or relative. Others may into less expensive unlicensed or informal care. There could be a need to support healthy mealtime practices and healthy eating in new arenas.

**Future Research**

Future research could include direct observations as well as interviews with parents and directors to provide additional points of view. Direct observation could contribute to understanding how mealtimes have been modified, and whether changes due to COVID-19 have influenced children’s dietary patterns and healthy eating practices. As COVID-19 continues, re-sending the survey to establish a “time 2” measure could inform how practices have changed or
remained the same after more than one year. Finally, the survey included two questions about decision-making for the directors that were outside the scope of this dissertation. However, future work could include understanding how directors make decisions about implementing health practice behavior in ECE classrooms.

Final Remarks

At the highest level, this study was about supporting health, safety and quality in early education. Historically in the U.S. there has been an arbitrary distinction between early education and K-12 education that does not exist everywhere. However, the COVID-19 pandemic has highlighted the importance of educational settings for both children’s healthy development and parents’ ability to participate fully in the workforce. For example, several news articles have come out comparing K-12 schools to ‘child care’ as if it is a derogatory term (for example (Covert, 2020)). Especially now, during a pandemic, ECE environments can be sources of social support for children and teachers, and parents can feel supported knowing their children are in healthy and safe environments. I hope this work contributes to highlighting the importance of ECE environments for promoting family and community health and continuing to build the evidence for meaningful investments in all ECE environments.
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Appendix A: Body Mass Index (BMI) Percentiles for Age 2 to 20

Figure A1: Body Mass Index (BMI) Percentiles for Age 2 to 20
Appendix B: Literature Review of Supporting Healthy Weight in ECE

Dietary Patterns Related to Childhood Obesity

There are several aspects of dietary patterns that are related to childhood obesity. The first is related to energy balance and the concept of ‘energy-dense foods’ or ED foods. ED foods are those that contain a large number of calories per weight in grams. Examples of ED foods include those that are high in sugar and fat, such as fried foods, sweets, and full-fat meat and dairy products. Non-ED foods are those that contain a small number of calories per weight in grams. Examples of non-ED foods include those with relatively lower calories per gram and higher water and fiber content, such as fruits and vegetables, whole grains, and low-fat meat and dairy (L. L. Birch & Ventura, 2009; CDC, n.d.; DHS, 2015; Romieu et al., 2017).

Energy-dense foods

There is a strong relationship between a dietary pattern high in ED foods and low in non-ED foods and obesity among children (and adults). One study used a representative sample of more than 2400 children from NHANES data to assess food intake and healthy weight/BMI in children age 2-8 and found that children with obesity had a diet higher in ED foods and lower in low-ED foods. Similarly, healthy-BMI children consumed low amounts of high-ED foods and high amounts of low-ED foods. The difference between groups was so large, children who consumed the lowest-ED foods (i.e., lots of fruits and vegetables) ate nearly double the weight of food compared to children consuming the highest-ED foods. Nevertheless, these children eating low-ED foods still consumed less energy overall and had healthier BMIs compared to children in the high ED group, illustrating the link between overall dietary patterns and children’s obesity risk (Vernarelli et al., 2011).
Another article, an umbrella review, referenced another review and stated that there is ‘probably evidence’ that obesity risk among children could be reduced with a diet containing low-ED foods (Biro & Wien, 2010). Additionally, the CDC recommends a diet high in low-ED foods as a strategy for maintaining healthy weight while still consuming appropriate nutrients (CDC, n.d.). One possible explanation for these patterns is that high ED foods may contribute to childhood obesity by disrupting children’s natural ability to know when they are full, facilitating overconsumption of calories.

**Nutrient-dense foods**

A concept similar to energy-dense foods is ‘nutrient-dense’ foods. Nutrient-dense foods contain nutrients that are needed for the human body to function—such as vitamins and minerals—without added sugar and/or fat that increases the energy density of the food. Examples of nutrient-dense foods include all fruits and vegetables as well as whole grains, fish and lean meat, eggs, beans, nuts and low-fat dairy. Not surprisingly, there is a generally inverse relationship between energy-dense and nutrient-dense foods, in that nutrient-dense foods tend not to be energy-dense and vice versa. A few exceptions that are both energy- and nutrient-dense include nuts, olive oils, full-fat cheese and peanut butter (DHS, 2015). These foods can be useful for individuals who need or want to maintain or increase calories with healthy foods.

Nutrient-dense foods are important for everyone, but children are growing while adults are generally maintaining the same size, and so it is especially important for children to have nutrient-dense foods. Similar to the pattern with energy-dense foods, diets low in nutrient-dense foods may contribute to childhood obesity by limiting the child’s ability to get the nutrients they need to grow and develop in a healthy weight pattern without going over their calorie limit (DHS, 2015).
Sugar-Sweetened Beverages (SSBs)

Dietary patterns that include sugar-sweetened beverages (SSBs) are another dietary contributor to childhood obesity. The link between SSBs and childhood obesity is quite strong, so much so that the American Academy of Pediatrics has a policy statement supporting taxing SSBs, reducing marketing to children, and allowing only healthy drinks in federal nutrition programs (e.g., Women, Infants and Children (WIC), and the Child and Adult Care Food Program (CACFP)) (Muth et al., 2019). Another review finds strong evidence of the link between SSBs and childhood obesity in the context of SSBs being high-ED substances (Romieu et al., 2017).

One study on the relationship between SSBs and childhood obesity randomly assigned 641 Dutch children to receive either 8 oz of a sugar-sweetened beverage or a sugar-free, artificially-sweetened beverage each day at school. At the end of the 18-month trial, the sugar group had increased BMI, weight, and skin-fold thickness relative to the sugar-free group. The authors suggest that the children in the sugar-free group did not compensate for the reduced calories by consuming more from other sources because they felt satisfied by their sugar-free beverage. These findings indicate that reducing SSBs and replacing them with water or other low-calorie options may be effective in preventing obesity (de Ruyter et al., 2012).

The same author group published two follow-up articles based on the same population. In the first, they find that the sugar-sweetened and sugar-free beverages produced the same levels of satiety as reported by the group of children overall, indicating that the amount of liquid, rather than the amount of calories, led to a feeling of fullness or satisfaction with the drink (de Ruyter et al., 2013). However, the second article added an element of complexity by looking at children in different starting-BMI groups. They found that children at a higher starting BMI were
differentially affected by the intervention. The treatment had a greater impact on children’s BMI and weight gain when they started at a higher BMI. Children in the sugar-free group who were already heavy did not replace as many of the missing calories. The authors imply that the healthy-BMI children may have a greater ability to sense their calorie needs, calculating that the healthy-BMI children replaced 65% of the ‘missing’ calories in the sugar-free beverage while higher-BMI children replaced only 13%, which explains why the intervention was more effective for them (Katan et al., 2016). All of these studies link SSBs and children’s satiety sensations and indicate that SSBs may be implicated in childhood obesity because children can easily overconsume calories from drinks.

**Large portion sizes**

Large portion sizes have been shown to be a dietary contributor to childhood obesity because of young children’s developmental stages. Some older studies show that younger children age about 3 years will eat the same amount of food regardless of the portion size. However, 5-year old children will tend to eat more when they are given a larger portion, indicating their increased susceptibility to external influences (Benjamin Neelon & Briley, 2011; Fisher, Rolls, & Birch, 2003; Rolls, 2000). A more recent review article found that portion sizes as well as early feeding practices by both parents and caregivers can influence the food intake of young children (Kral & Hetherington, 2015).

**Fruits and vegetables**

In a review of risk factors for childhood obesity, Birch & Ventura (2009) identify low intake of fruits and vegetables as a risk factor. This fits with the discussions of energy-dense and nutrient-dense foods (above) because most fruits and vegetables are both nutrient-dense foods
and non-ED foods, and so they may create a sensation of fullness at a lower level of calorie intake compared with low-nutrient, high ED foods.

A small, older study looked at normal-weight children with at least one obese parent to understand the role of fruit and vegetable (F&V) intake related to obesity risk for the children, who are presumed to have increased risk because of the parent’s or parents’ obesity. Participants were randomized into 2 groups, one that encouraged only increasing F&V, and the second encouraged only decreasing fats and sugar. After 1 year, the ‘Increase F&V Group’ increased their F&V, and also decreased their fat and sugar; subsequently this group had a significant decrease in participants with overweight BMI. In contrast, the ‘Decrease Fat and Sugar Group’ decreased their fat and sugar, but did not increase their F&V. The key finding of the article is that it was more effective to tell people what they can eat rather than what they cannot eat, but findings also suggest that increasing F&V on its own can influence weight in a healthy direction (Epstein et al., 2001). Perhaps increasing F&V can help children feel more full and therefore consume less energy-dense foods. In other words, increasing F&V consumption may displace calories from other sources while still providing children with needed nutrients and a feeling of satisfaction.

**Supporting Healthy Weight in ECE Environments**

**Parent Engagement**

Several studies with positive results have included an element of parent engagement, reasoning that although children consume a lot of their daily calories at school, the home environment also has a strong influence on children’s nutrition and eating behavior. Parent engagement could include parent report, and also some studies can engage the parents as participants. One randomized controlled trial that found a positive effect on children’s BMI
included a parent education component (Alkon et al., 2014). Another pre-post intervention study in Family Child Care Homes included handouts, enrollment packets and materials for parents (Woodward-Lopez et al., 2018). Another randomized controlled trial intervention called HC2 (Health Caregivers-Healthy Children) included parent engagement elements, such as self-report checklists about the children’s home nutrition and physical activity as well as parent role modeling (Natale et al., 2017). The HI-HO program (Healthy Inside, Healthy Outside) included monthly educational parents dinners and at-home activities (Natale et al., 2014). Finally, an intervention using Community-Based Participatory (CBPR) methods included 30 “family nights” for parents to attend and learn about nutrition as well as vouchers for parents to purchase fruits and vegetables (Schaefer et al., 2015).

**Professional Support for ECE Staff**

Professional support for staff could include ongoing consultation or technical assistance during an intervention or evaluation. One randomized controlled trial in 3 states implemented the intervention with child care health consultants, who are health professionals who can support ECE staff on topics of health and safety in child care (Alkon et al., 2014). Similarly, another study with strong outcomes included for teachers: “weekly technical assistance instruction on wellness promotion within a childcare setting. During these weekly visits, curriculum specialists targeted the cognitive, cultural, and environmental barriers to consuming a healthy diet and increasing fruit/vegetable consumption” (Natale et al., 2017). Finally, a 6-month intervention to encourage implementation of new nutrition guidelines included: “an implementation support officer to provide expert advice and assistance to facilitate nutrition guideline implementation” (Seward et al., 2017).
Participation in CACFP

CACFP provides evidence-based guidelines for meal patterns and portion sizes for children in ECE settings. Several studies have found that participation in CACFP is associated with healthy foods being offered and consumed (Erinosho et al., 2018; Ritchie et al., 2012). One study in the Miami area found that low and middle-income centers (most participating in CACFP) offered fruits, vegetables and skim milk at substantially higher rates than high-income centers (Chang-Martinez et al., 2018). Finally, one study found that participation in preschool was associated with lower odds of childhood obesity; however, all of the participants were in the WIC program, and their preschools would have been participating in CACFP, providing much healthier food than a typical preschool program (Koleilat et al., 2012). In other words, it was likely CACFP, not the preschool enrollment, that was influencing children’s risk of obesity. Similarly, another review article finds decreased risk of obesity among preschoolers attending Head Start across several articles (Swyden et al., 2017).

Multiple levels of intervention

Finally, there is general consensus that interventions targeting obesity prevention in ECE settings should address multiple levels, such as child, teacher, parent, environment, and policy. This can be seen in the literature as well, in that some studies with a single-level focus did not have strong outcomes (Cotwright et al., 2017; Finch et al., 2019; Hollar et al., 2018). Examples of studies with multiple levels of intervention and strong outcomes include (Alkon et al., 2014; Grummon et al., 2019; Seward et al., 2017; Woodward-Lopez et al., 2018).
Appendix C: Family Style Meals

All of these dietary risk/protective factors indicate that teaching children to respond to their internal hunger and satiety cues may be key for supporting healthy weight and preventing obesity. In ECE environments, young children learn about food and eating norms. One style of eating in ECE, family style meals (FSM), is thought to support children’s dietary self-regulation (Benjamin Neelon & Briley, 2011). At the broadest level, FSM is a mealtime during which children and adults sit together and consume the same foods, children serve themselves and determine their own portion sizes, and adults role model healthy eating behavior. Programs that practice FSM could choose to implement a variety of aspects and/or variations of FSM (pilot observations, Fall 2019).

A more detailed description includes children sitting in child-sized chairs at child-sized tables with an adult sitting close enough to assist as needed. Ideally, the adult sits at a table so that each child is within arm’s reach. All food and beverages needed for the meal should be on the table already before the children sit down and the adult should remain sitting throughout the meal. Food is served in large bowls and/or platters and everyone passes the bowls to each other, with appropriate adult help, to serve themselves. This helps children practice sharing, turn taking, and waiting. Adults are important role models during FSM. They support children’s ability to serve themselves, practice responsive feeding, and provide a role model for healthy eating during the meal. Adults facilitate a conversation with the children about the day, modeling general social skills, such as conversing with adults and peers at the table. Adults also incorporate general educational concepts (e.g., the color or shape of the food, the number of food items) as well as nutrition education and healthy eating role modeling into the FSM experience (AAP et al., 2019).
There is no one fixed definition of FSM, but common elements tend to be: (1) the children serve themselves and self-regulate their food intake (2) adults use responsive feeding practices (e.g., asking about fullness before offering more) (3) adults role model healthy eating behavior and provide nutrition education (4) the experience supports children’s social skills, such as sharing, turn-taking, using polite communication (Virtual Lab School, n.d.).

Support for Family Style Meals.

Several national sources recommend and rationalize the use of FSM as a way of incorporating responsive feeding practices in ECE. Although technically no authoritative organization requires FSM, the practice is strongly recommended by several organizations that influence ECE practices.

The American Academy of Dietetics

The American Academy of Dietetics has published a position statement: “Benchmarks for Nutrition in Child Care,” which includes using FSM in ECE settings as a mechanism for “Child care providers to work with children to understand feelings of hunger and satiety and should respect children’s hunger and satiety cues, once expressed” (Benjamin Neelon & Briley, 2011). The authors reason that FSM provides young children with the opportunity to serve themselves and therefore self-regulate their dietary intake, referencing an older study:

Young children are aware of feelings of hunger and satiety, but by age 5 years, this ability begins to wane. Specifically, 3-year-olds consumed consistent amounts of food, regardless of portion size, whereas 5-year-olds increased consumption as the size of the portion increased. Serving foods and beverages family style, where children select their own portions and serve themselves, may encourage better self-regulation of intake in children (Benjamin Neelon & Briley, 2011) summarizing (Rolls, 2000).

In addition to identifying self-service as a mechanism for children’s self-regulation, this description also identifies the early childhood period as an important developmental time,
suggesting that there is a limited time window during which adults can support children’s self-regulation of their dietary intake based on internal cues.

**The Institute of Medicine**

The Institute of Medicine published a policy paper on preventing childhood obesity that focuses on environmental factors and includes a section on Healthy Eating in addition to other evidence-based obesity prevention practices (e.g., providing enough physical activity, limiting screen time). The paper lists goals and recommendations related to each goal. Within the goal of creating “a healthful eating environment that is responsive to children’s hunger and fullness cues” the IOM recommends that ECE regulations require responsive feeding practices. The specific description of responsive feeding practices includes:

- requiring adults to sit with and eat the same foods as the children; when serving children from common bowls (family-style service) allowing them to serve themselves; when offering foods that are served in units (e.g., sandwiches) providing age-appropriate portions and allowing children to determine how much they eat; and reinforcing children’s internal cues of hunger and fullness (Institute of Medicine of the National Academies, 2011).

While not explicitly requiring FSM, this statement includes FSM as one way of facilitating responsive feeding practices and supporting children’s autonomy. It also specifics how to implement FSM if it is going to be used, indicating that the self-selection of portion size and supporting children’s internal cues are defining aspects of the practice.

**Head Start**

Head start is a federal ECE program that provides child care for income-eligible families. Head Start programs are required to follow state licensing regulations and Head Start Quality Standards (Department of Health and Human Services, Administration for Children and Families, n.d.). In addition, because all Head Start children quality for the federal Child and
Adult Food Program (CACFP), they must follow CACFP rules as well (US Department of Agriculture, Food and Nutrition Services, 2014). The link between FSM and Head Start is so strong, one research article mistakenly states—4 times—that Head Start programs are required to use it: “The Head Start Program Performance Standards require the use of FSMS [family style meal service] while the USDA Child and Adult Care Food Program (CACFP) recommends this approach.” (Dev et al., 2014). This misunderstanding is important because it highlights the complexity of regulations Head Start programs must follow, as well as the variation among states and local areas. These authors are probably in an area where most Head Starts do practice FSM.

Regardless, the Head Start performance standards frame nutrition practices in terms of the learning environment, stating:

A program must implement snack and meal times in ways that support development and learning… Snack and meal times must be structured and used as learning opportunities that support teaching staff-child interactions and foster communication and conversations that contribute to a child’s learning, development, and socialization. Programs are encouraged to meet this requirement with family style meals when developmentally appropriate. (Department of Health and Human Services, Administration for Children and Families, n.d.).

It is important to note that Head Start ‘encourages’ but does not require the use of FSM. Because Head Start programs are administered at the local level, this provides flexibility in how programs implement their mealtimes. Several Head Starts in Central Florida implement a modified version of FSM, with some meal components pre-plated and others self-served, while other Head Starts may use entirely pre-plated trays and implement the social-emotional elements of FSM (i.e., conversation, helping, nutrition education) without the self-serving (pilot observations, Fall 2019).
The Child and Adult Care Food Program (CACFP)

As mentioned above, all Head Start children qualify for CACFP. CACFP provides free and reduced-cost meals for young children in ECE settings other than Head Start as well as K-12 public schools and, in some states (but not Florida), adults in institutional care (Florida Department of Health, 2019). Like Head Start, children may qualify for free or reduced-cost meals via income eligibility. The language in the CACFP Handbook for Independent Child Care Centers does not explicitly require FSM, however, it encourages FSM and provides a detailed rationale that includes group observational learning and children’s autonomous choices:

Centers that use [FSM] might find that the children enjoy it and prefer it. Unlike preset service methods, family style meal service can increase children’s acceptance of offered foods and their willingness to try new foods. This is because they will see other children choosing certain food items and feel a sense of control over choosing foods and how much to take (US Department of Agriculture, Food and Nutrition Services, 2014).

The Federal Register is a publicly available resource that documents proposals and changes to federal rules and regulations (National Archives, 2019). On the topic of FSM, the Federal Register clarifies the expectations for ECE settings participating in CACFP, highlight the complexity of the issue and acknowledging that it may not be feasible in all settings:

This final rule codifies the proposed practices that must be followed when a center or day care home chooses to serve meals family style. In line with the nutritional goals of CACFP, family style meal service encourages a pleasant eating environment, promotes mealtime as a learning experience by allowing children to serve themselves from common platters of food (with assistance from supervising adults) and provides educational activities that are centered around food. While serving meals family style is highly encouraged, FNS [Food and Nutrition Service] recognizes that family style meal service may not be appropriate for all CACFP settings and FNS wants to emphasize that serving meals family style is optional for CACFP providers and not a requirement (US Department of Agriculture, Food and Nutrition Services, 2016).

The only elaboration on the circumstances under which FSM would not be appropriate came from groups opposed to requiring it: “other commenters opposed serving meals family style
because they believed it would increase food waste, increase costs, or is unrealistic for certain setting due to space constraints” (US Department of Agriculture, Food and Nutrition Services, 2016).

Finally, an important concept within CACFP and FSM for young children is ‘offer versus serve.’ For CACFP programs that serve adults and after-school children, programs can choose whether to ‘offer’ rather than ‘serve’ each food item. The rationale is that this will cut down on waste. However, offer versus serve is not allowed for younger children (USDA, 2016). This is important because for picky eaters, sometimes even having a non-preferred food item on the plate can be a behavioral challenge. Therefore, it is important for adults to establish trust with each child and assure him or her that FSM does not require children to eat a non-preferred food. FSM is a way of serving the meal, but it does not mandate anything about children’s consumption.

**Caring for Our Children**

The most comprehensive rationale for serving meals family style in ECE comes from Caring for Our Children, a collaborative publication from the American Academy of Pediatrics, the American Public Health Association, and the National Resource Center for Health and Safety in Child Care and Early Education. Caring for Our Children is a 600-page evidence-based resource freely available online that includes best practice recommendations, rationales, and references for all aspects of health and safety in ECE. The current edition includes a chapter of about 50 pages on Nutrition and Food Service. It recommends the use of FSM and includes a detailed rationale, which is that FSM supports (1) social development, (2) fine and gross motor skills, and also (3) language development. In addition, the adult at the table prevents problematic behaviors (AAP et al., 2019).
Studies of Family Style Meals in ECE Settings

Qualitative Studies

In spite of recommendations and some supporting evidence, even before COVID-19, FSM could be challenging to implement. One qualitative study examined barriers and facilitators to implementing FSM by interviewing 18 ECE providers from Head Start, CACFP programs and non-CACFP programs. This study used qualitative analysis of interview data to determine motivators and barriers of using FSM in the classroom. Motivators included FSM promotes a pleasant mealtime, supports children’s development, supports children’s self-regulation and self-help skills, and that it allows adults to role model healthy eating. Barriers were that it is hard to change mealtime practices, FSM can be messy and perceived as unsanitary, costly, and that children cannot self-regulate or take correct portion sizes, children are too young, and finally some teachers report misunderstandings about CACFP rules (e.g., whether children have to be served a specific quantity or if they have to consume the food) (Dev et al., 2014).

Another qualitative study based on teacher interviews found that FSM was an important element of supporting a positive mealtime environment. Teachers articulated the belief that FSM at school provides children with something important they may not get at home. In an interesting reversal, teachers described wanting to provide a pleasant mealtime experience for the children because: “[Children] need to eat for nourishment because it is a lot of hurried lives. [Children] are thrown in front of a TV and fast food, and we try to create an environment where [children] can all sit down and eat like a family.” (Mita et al., 2015)
**Outcomes Studies**

A small number of studies have looked at children’s nutritional outcomes and FSM in ECE settings. One is an observational study and three are interventions. The three intervention studies tended to be small and took place within one school. The three intervention studies reviewed for this paper all used a crossover design and/or the same children as their own controls.

The first study observed 135 low-income children eating family style meals in one Head Start setting to understand how much they were eating. Specifically, the authors wanted to know whether children were consuming the recommended amounts of each food component according to guidelines from the USDA. Children’s intake was directly observed during breakfast and lunch during three consecutive days. Results showed that in spite of higher-than-average obesity among the children (25% compared to 14% nationally (Hales et al., 2017)), the children consumed less than half the recommended calories for breakfast and lunch. Interestingly, the authors noted several implementation problems with the FSM processes. For example, teachers often served the children rather than allowing the children to serve themselves. Also, observers noted that children were sleepy during breakfast, which may have limited their motivation to serve themselves and diminished how much they were eating (Treviño et al., 2015).

Two studies used a crossover design to test variations in mealtime service and the influence on children’s dietary intake. The first looked at children’s dietary intake during three different mealtime scenarios: the control condition was traditional FSM with all components served at once. The second condition was standard provider-portioned meal, and third was FSM with fruits and vegetables served first, with the rest of the meal (including milk) coming 5 minutes later. The children experienced each condition for one week, and each condition twice
for a total of 6 weeks. Findings were that serving fruits and vegetables first had a significant positive effect on children’s intake of fruits (but not vegetables). Also, children’s total energy intake (calories) and fat was highest, and fruit and vegetable intake lowest, during the provider-portioned condition (Harnack et al., 2012).

The second study was in one Head Start and also assessed children’s nutritional intake during two variations of FSM. In the first condition, similar to the Harnack study, fruits and vegetables and milk were brought out first, with the remaining items (meat, grains) brought out 5 minutes later. The second condition was the same as the first except the meat and grain items were taken out of sight once they were served, leaving only fruit, vegetable and milk on the table. Children could ask for and receive seconds of any item (presuming there is no meaningful variation in children’s communication skills at this age), but the meat and grain items were out of sight. The findings from this study showed that this school was atypical at baseline in that the children were already consuming CACFP-recommended quantities of fruits and vegetables. This likely created a ‘ceiling effect’ preventing consumption of fruits and vegetables from increasing. The authors did find that milk consumption increased with leaving the milk pitcher on the table, and that for one meal the meat and grain consumption substantially decreased during the condition of removing them from sight. However, baseline consumption was 2-3 times what was recommended and so a decrease was not surprising (Schwartz et al., 2015).

Only one study looked explicitly at whether children’s intake of calories were different between FSM and individually-portioned snacks, and it is more than 20 years old. Brannen et. al. assessed whether the style of mealtime influenced children’s food intake, waste, and the time they took to eat during a snack time. During FSM, the children selected their portion sizes from common bowls. During the provider-portioned condition, the children still passed bowls, but
they selected a self-contained item that was pre-portioned and equal to all others. In other words, they did not determine their portion size. Outcomes showed that children consumed more calories during FSM compared to individual portions and there was no difference in waste or the time taken to eat. In this study snack time was observed and measures were in units of portions—so 1 portion, ½ portion, and ¼ portion were the units of measure. When children served themselves during the FSM snacks, they ate almost 1½ portions, while during the individually served snacks they ate about 1.0 portion, and this difference was statistically significant (Branen et al., 1997).

Finally, a study looking at snacks served family style found that serving a variety of choices increased children’s consumption of fruits and vegetables. In another crossover design, 61 children in one school were offered their afternoon snack as either one item (cucumber, sweet pepper, or tomato) or a choice of all 3. Similarly, they were offered individual fruits as snacks (apple, peach, pineapple) and on the 4th afternoon they were offered all 3 together. During each condition the pieces of fruit or vegetable were the same size, so assessment was done by observation and counting pieces. When the children had a choice of all 3 types of fruit or vegetable, their likelihood of choosing anything increased and their overall consumption also increased (Roe et al., 2013), providing tentative support for the idea that children will consume more fruits and vegetables when they have choices and autonomy.
Appendix D: The Trust Model

The Trust Model challenges conventional norms that what and how much children eat needs to be controlled by adults, and disagreements remain ongoing (Satter, 2014). For example, the Trust Model has been criticized by Kirschenbaum and Kelly as an inadequate treatment for childhood overweight and obesity. For example, Kirschenbaum and Kelly claim that the Trust Model posits that “Children WILL self-regulate food intake effectively when exposed to unlimited quantities of highly desirable foods” (Kirschenbaum & Kelly, 2009). This is a misunderstanding, the Trust Model does not encourage children—or anyone—to be exposed to “unlimited quantities of highly desirable foods.” The Trust Model does posit that no food should be off limits and children should decide whether and how much to eat, but adults are responsible for providing a variety of reasonable food choices at the table and taking a leadership role in structuring the mealtime and food environment.

Another important differentiation is that the Kirschenbaum and Kelly article is focused on treatment of obese children in the home environment, rather than obesity prevention in the ECE environment, and the authors acknowledge they are employees of a company that provides in-home childhood obesity treatment services (Kirschenbaum & Kelly, 2009). To be fair, Satter also has a disclaimer at the end of one of her publications indicating that she receives royalties from the sales of her materials (Satter, 2014). Although the disagreement between these authors is focused more on nutrition practice and the treatment of feeding disorders rather than broad prevention, their publications illustrate the strong opinions about the appropriate roles of adults and children during feeding activities.

More recently, Satter and colleagues have been openly critical of current efforts to prevent childhood obesity, pointing out that many large-scale interventions have not produced
expected results (Anchondo et al., 2015). These ongoing debates tell us two things: (1) preventing obesity in children is likely very different from treating obesity in children, especially in very young children; and (2) ECE settings/caregivers and home environments/parents have similarities and differences that are important for interventions.
Appendix E: Social Cognitive Theory

Origin and Historical Underpinnings

Social Cognitive Theory (SCT) started as Social Learning Theory, which was developed in the 1960s by Albert Bandura. Up until that point, learning was thought to occur via a one-way process from teacher to learner, with positive or negative feedback generally influencing people’s choices. Bandura thought this was too simplistic and started developing new ideas in the 1960s. He argued for a more complex understanding of how people learn new behaviors. He formally published SCT in 1986, which proposed that people learn through interactions with others and their environments, and that people observe others, and practice new behaviors by imitating perceived role models (Glanz et al., 2015). These would have been radical ideas at the time. That learning, and especially behavioral patterns, could be learned via dynamic and interactive processes, overturned previous thinking.

Constructs

There are many variations in SCT and it has changed over the years. The primary components of the basic SCT are Personal Factors, Environmental Factors, and Behavioral Factors. Constructs within Personal Factors include self-efficacy, outcome expectations and knowledge. Constructs within Environmental Factors include observational learning, normative beliefs, and social support. Constructs within Behavioral Factors include behavioral skills, intentions and reinforcements.

Key constructs that were a departure from previous thinking are observational learning and reciprocal determinism. observational learning was a significant change because it means that learners, such as children, may pick up new behaviors even if the adult or teacher is not intending to teach them anything. This empowers learners to simply observe and learn rather
than be instructed. reciprocal determinism is the phenomenon in which people simultaneously influence their environment and are influenced by the environment in an ongoing exchange. As explained above, learning had previously been understood as more of a one-way transfer of knowledge. reciprocal determinism re-framed learning as a more iterative process than previously thought.

An example of reciprocal determinism might be seen in that people start to bring refillable water bottles to school because they want to have healthy drinks during classes. The school responds by putting in more drinking fountains and water bottle refill stations; the students, because more water is available, consume more water (discussion PHC 6500 Spring 2018).

**Assumptions**

The main assumption of SCT is based on the key construct of reciprocal determinism, that behavioral learning is a dynamic social experience, and that people learn through complex interactions with their environments and each other. It also assumes that changes in the environment will affect the behavior of people in the environment, and that people shape the environments around them. These assumptions may not be true in all behavioral learning situations, or they may be true differentially across a group, depending on individual characteristics.

**Strengths and Limitations**

SCT is especially applicable in understanding how children learn behaviors from each other and adults. SCT seems like a great fit for a situation involving a group of children learning a new behavior with an adult role model, and several constructs are useful for understanding the situation. Two ECE mealtime data collection instruments that are widely used are based on SCT.
One is the Nutrition and Physical Activity Self-Assessment for Child Care, or NAP-SACC (Benjamin, Neelon, et al., 2007). The second is a companion to the NAP-SACC in that they can be used together, called the Environment and Policy Assessment Observation (EPAO) (Ward, 2008). The NAP-SACC was originally designed to be used by an ECE program director or teacher, while the EPAO was designed to be completed by a trained observer.

However, SCT has some limitations when applied to ECE settings. First, SCT does not really explain individual emotion and variation within children and adults; nor does it account for variation of influences from home environments. It also does not account for children who may be developing atypically and learn behavioral patterns differently from the group. In addition, one of the key constructs, Reciprocal Determinism, describes how a group will influence their environment and vice versa (as previously described with the water example). In fact, ECE environments tend to be rather inflexible in that they are regulated by the state, and facility owners ultimately decide any changes to the environment that may be implemented. The ability of the preferences of the group of children and staff to influence their environment is likely very limited. ECE programs also tend to have scarce resources, and so any changes that would be costly are generally avoided (e.g., complying with regulations for having a kitchen on-site) (Sweitzer et al., 2009).

The NAP SACC instrument illustrates this point. Studies have shown that relatively easier items to change, such as the presence of written policies in the center or the % milk served (e.g., fat free, 2%, whole) will change quite a lot following intervention (Benjamin, Ammerman, et al., 2007). However, items that require sustained behavior change, such as positive feeding behaviors between staff and children, are less accurately captured (Fallon et al., 2018). In fact, one item, on not using controlling feeding behaviors, had a Kappa of 1.0 in the original
validation article (Benjamin, Neelon, et al., 2007), indicating zero variation in responses. In other words, everyone knows that using controlling feeding practices is socially undesirable and no one self-reported using them, even though another study found that staff understanding of what controlling feeding practice means can be inconsistent (Dev et al., 2016).

In summary, SCT has elements that are useful in understanding the dynamics of ECE mealtime behaviors, but several gaps exist that support looking at further theories to provide a more comprehensive explanation of how various environmental and individual factors influence children’s healthy eating behavior in ECE. For these reasons, SCT is used as a secondary theory, rather than the main theory, for this study.
Appendix F: Survey for Directors (English)

https://usf.az1.qualtrics.com/jfe/form/SV_2hiWnKzNSplYNRb

Informed Consent to Participate in Research
Information to Consider Before Taking Part in this Research Study
Title: Mealtimes in Early Care and Education during COVID-19
Study # Pro001199

Overview: You are being asked to take part in a research study. The information on this page should help you to decide if you would like to participate. This study is being led by the Principal Investigator, Joanna Mackie, who is a Doctoral Candidate at the University of South Florida (USF), College of Public Health. She is being guided in this research by her faculty advisor, Dr. Russell Kirby. Other approved research staff may act on behalf of the Principal Investigator.

Study Details: The purpose of the study is to understand mealtime routines and responsibilities in early care and education settings (ECE), and how these may have changed due to COVID-19. The research includes one survey for an ECE center director, one survey from an ECE center teacher, and one interview with an ECE center teacher. The survey should take 10-15 minutes, and the interview should take 30-40 minutes.

Participation: You are being asked to take part because you are a director or teacher in an ECE center in Florida. Your participation is voluntary. You do not have to participate and may stop your participation at any time. We do not know if you will receive any benefit from your participation. There is no compensation for completing this survey. Even if we publish the findings from this study, we will keep your study information private and confidential. Anyone with the authority to look at your records must keep them confidential. This research is considered to be minimal risk. If you take part in this study, you will be asked to complete an online survey. Data are collected anonymously and will not be linked to your identity in any way.

Voluntary Participation: You should only take part in this study if you want to volunteer. You should not feel that there is any pressure to take part in the study. You are free to participate in this research or withdraw at any time. If you decide to withdraw after submitting your survey, we may not be able to remove it from analysis because we are not collecting individual-level identifiers.

Privacy and Confidentiality: We will do our best to keep your records private and confidential. The only people who will be allowed to see these records are: the Principal Investigator, her faculty advisor, and any research assistants. It is possible, although unlikely, that unauthorized individuals could gain access to your responses because you are responding online. Confidentiality will be maintained to the degree permitted by the technology used. No guarantees can be made regarding the interception of data sent via the Internet. However, your participation in this online survey involves risks similar to a person’s everyday use of the Internet.
Contact Information: If you have any questions, concerns or complaints about this study, call Joanna Mackie at 310-592-0564. If you have questions about your rights, complaints, or issues as a person taking part in this study, call the USF IRB at (813) 974-5638 or contact the IRB by email at RSCH-IRB@usf.edu. We may publish what we learn from this study. We will not publish anything else that would let people know who you are. You can print a copy of this consent form for your records.

Informed Consent: I freely give my consent to take part in this study. I understand that by proceeding with this survey, I am agreeing to take part in research and I am 18 years of age or older.

Yes _________

No __________
Instructions:

Thank you for participating in this study. I’m conducting a survey of early care and education (ECE) professionals in Florida to understand how the COVID-19 pandemic has influenced mealtimes in ECE settings, including what mealtimes are like now and how they may have changed for children age 3-5 years. For all questions, please think about children in your school age 3-5 years who are eating normal “table foods.”

For the purposes of this survey, the word “teacher” will mean any adult who would typically be called a teacher, child care provider, teaching assistant, classroom assistant, student assistant, volunteer, or other adult with direct interaction with and responsibility for children in care. The word “school” will mean your child care center, child care program, preschool, day care center, or other phrase referring to your entire ECE program.
SECTION ONE: GENERAL INFORMATION

This set of questions will ask about your general program characteristics.

(1) What is your County _____________

(2) What is your 5-digit Zip Code ______________

(3) In what type of program do you work? (please select all that apply):
   (a) Non-profit private _______
   (b) For-profit private _______
   (c) Faith-based _______
   (d) Head Start or Early Head Start _______
   (e) Food Program participant (CACFP) _______
   (f) Subsidized Child Care participant (School Readiness) _______
   (g) Voluntary pre-kindergarten participant (VPK) _______
   (g) License-exempt _______
   (h) Family Child Care Home _______
   (i) Other (please describe) ____________________________________________

(4) In what year did your school originally open? (please use 4 digits, e.g., 2017, 1995, etc.) ___

(5) Is your school currently open?  Yes _____  No _____
   [if No, skip to the end]

(6) How many children total are enrolled at your school? (please be as accurate as possible)____
   (6a) How many children age 0-5 are enrolled at your school? _____
   (6b) How many school-age children are enrolled at your school (kindergarten and up)? ___
(7) Has the number of children in your school changed due to the COVID-19 pandemic?

Yes, the number of children has increased ____

Yes, the number of children has decreased ____

No, the number of children is about the same ____

(8) Has the number of teachers employed at your school changed due to the COVID-19 pandemic?

Yes, the number of teachers has increased ____

Yes, the number of teachers has decreased ____

No, the number of teachers is about the same ____

(9) How many teachers are employed now? _______

(10) Was your school closed for any amount of time due to COVID-19? Yes ____  No ____

If Yes, (10a) On what date did you close: ___________

If Yes, (10b) On what date did you re-open: ___________

SECTION TWO: TYPICAL LUNCHTIMES

This set of questions will ask about your typical lunchtime currently for children age 3-5 years, eating normal “table food” currently. “Currently” means your typical daily practice during the past week.

(11) What is the source of meals and snacks for the children in your school currently? (please select all that apply)

(a) We provide all meals and snacks prepared in a kitchen on-site

(b) We provide some meals and snacks prepared in a kitchen on-site

(c) Parents send in all meals and snacks
(d) Parents send in **some** meals and snacks

(e) A catering company provides **all** meals and snacks

(f) A catering company provides **some** meals and snacks

[If (a) and/or (b) selected]:

11(a) Who is responsible for food shopping, meal planning and preparation?

- Dedicated cook/kitchen staff ____
- Director/assistant director ____
- Teachers/other staff ____
- Other, please specify ________________________________

(12) Where do most or all children age 3-5 eat lunch?

- Indoor Classroom ______
- Indoor Cafeteria ______
- Outdoors ______
- Other __________________________________________________________

**SECTION THREE: TYPICAL LUNCHTIME ROUTINES**

*This set of questions will ask about your typical lunchtime routines currently for children age 3-5 years, eating normal “table food.”*

(13) About how much time does it take for children to eat lunch? (Think about when the first child in a group starts eating and the last child finished eating.)

[Drop down menu with minutes]

(14) Do children eat lunch at the same time each day?  Yes _____ No _____

(15) Do children eat lunch in the same location each day?  Yes _____  No _____
(16) Which best describes the mealtime routine now (please select only one):

- Children serve themselves most foods, and children decide how much to take _____
- Children serve themselves most foods, and teachers decide how much children may take _____
- Teachers serve most foods, and children decide how much to take _____
- Teachers serve most foods, and teachers decide how much to give to children _____
- Food arrives at the school already portioned on each child’s plate _____
- Children bring food from home _____

(17) Do teachers wear a mask (i.e., cloth or disposable face covering that covers your mouth and nose) during the mealtime?

- Yes, during the entire mealtime (i.e., teachers mostly supervise but do not eat) _____
- Yes, during part of the mealtime (i.e., teachers wear a mask to serve food and then remove it to eat) _____
- No _____
- Other (please describe): _________________________________

SECTION FOUR: ANY CHANGES IN LUNCHTIME ROUTINES

This set of questions will ask if and how your typical lunchtime routines have changed for children age 3-5 years, eating normal “table food.”

(18) Have your lunchtime routines changed due to COVID-19? (please select all that apply)

(a) Yes, now teachers help children with their masks before and after eating. _____
(b) Yes, we changed where children sit (e.g., putting more space between children) ____
(c) Yes, we changed where children eat (e.g., changed from cafeteria to classroom) ____
(d) Yes, we changed the **source of our meals** (e.g., changed from kitchen-on-site to parent bring) _____

(e) Yes, we changed the **types of foods** that are served (e.g., serving more healthy foods, or serving less expensive food) _____

(f) Yes, we implemented **more cleaning** activities (e.g., increased handwashing and/or sanitizing surfaces) _____

(g) Yes, we changed **groups sizes** of mealtimes (e.g., now we eat at staggered times rather than all at the same time) _____

(h) No, lunchtime routines are basically the same _____

(i) Other, please describe: ______________________________________________________

____________________________________________________________________________

(19) How did you make decisions about the majority of any changes selected above? (please select all that apply)

(a) I decided as director of the facility, following health and safety guidelines. _____

(b) I discussed with teachers and staff, and decided based on everyone’s opinions. _____

(c) I discussed with parents, and decided based on their opinions. _____

(d) Lunchtime did not change. _____

(e) Other: _______________________

(20) Is there anything else you want to share about **how** COVID-19 has influenced mealtimes at your school? ________________________________________________________________
(21) Is there anything you want to share about your opinion about any changes to mealtimes due to COVID-19?

SECTION FIVE: DEMOGRAPHICS

In order to make sure that we hear from a variety of people, this section will ask some questions about your demographic information.

(D1) Do you currently work Full Time or Part Time?

Full Time (30 hours or more per week) _____

Part Time (less than 30 hours per week) _____

(D2a) Have your hours changed due to COVID-19?

Yes, my hours have increased _____

Yes, my hours have decreased _____

No _____

(D2b) Has your employment status changed due to COVID-19?:

Yes, my employment status has changed from Full time to Part time _____

Yes, my employment status has changed from Part time to Full time _____

No _____

(D3) In what year were you born? (please use 4 digits, e.g., 1985, 1970, etc.) ____________
(D4) What is your gender?
   o Female _____
   o Male _____
   o Other _____

(D5) Are you Hispanic or Latinx?   Yes _____   No _____

(D6) What is your race? (These categories are from the US Census. Please select all that apply.)
   o American Indian or Alaska Native _____
   o Asian _____
   o Native Hawaiian or Pacific Islander
   o Black or African American _____
   o Caucasian/White _____
   o Other (please specify): ____________________________________________

(D7) How many years of experience do you have working in Early Care and Education? ______

(D8) What is your educational background? (please select all that apply)
   o Florida ECE Staff Credential _____
   o Florida ECE Director’s Credential _____
   o National Child Development Associate (CDA) _____
   o Tier 1-5 Certification __________
   o High school diploma or GED _____
   o Some college education _____
   o Associate’s Degree _____
   o Bachelor’s Degree _____
   o Master’s degree or higher _____
   o Other: ____________________________________________________________________

Thank you for filling out this survey!
Appendix G: Survey for Directors (Spanish)

https://usf.az1.qualtrics.com/jfe/form/SV_bwQejtEevqIuKkl

Consentimiento Informado para Participar en la Investigación
Información a considerar antes de participar en este estudio de investigación

Título: Los tiempos de comida en el cuidado y la educación temprana durante el COVID-19
Estudio # Pro001199

Resumen: Se le solicita que participe en un estudio de investigación. La información de este pagina debería ayudarle a decidir si le gustaría participar. Las secciones de este Resumen proporcionan la información básica sobre el estudio. Este estudio está dirigido por la Investigadora Principal, Joanna Mackie, candidata a doctorado en la Facultad de Salud Pública de la Universidad del Sur de Florida. Ella está siendo guiada en esta investigación por su consejero de la facultad, el Dr. Russell Kirby. Otro personal de investigación aprobado puede actuar en nombre de la investigadora principal.

Detalles del Estudio: El propósito del estudio es comprender las rutinas y responsabilidades a la hora de comer en los entornos de education preescolar ("education preescolar" es lo mismo que "early care and education" en ingles, or ECE), y cómo estas pueden haber cambiado debido al COVID-19. La investigación incluye una encuesta para el director de un centro ECE, una encuesta de un maestro del centro ECE y una entrevista con un maestro del centro ECE. La encuesta debería durar entre 5 y 15 minutos y la entrevista entre 30 y 40 minutos.

Participación: Se le pide que participe porque es director o maestro en un centro de ECE en Florida. Su participación es voluntaria. No tiene que participar y puede detener su participación en cualquier momento. No sabemos si recibirá algún beneficio de su participación. No hay compensación por completar esta encuesta. Incluso si publicamos los resultados de este estudio, mantendremos la información de su estudio privada y confidencial. Cualquier persona con autoridad para ver sus registros debe mantenerlos confidenciales. Esta investigación se considera de riesgo mínimo. Si participa en este estudio, se le pedirá que complete una encuesta en línea.

Los datos se recopilan de forma anónima y no estarán vinculados a su identidad de ninguna manera.

Participación Voluntaria: Solo debe participar en este estudio si desea ser voluntario. No debe sentir ninguna presión para participar en el estudio. Puede participar en esta investigación o retirarse en cualquier momento. Si decide retirarse después de enviar su encuesta, es posible que no podamos eliminarla del análisis porque no estamos recopilando identificadores de nivel individual.

Privacidad y Confidencialidad: Haremos todo lo posible para mantener la privacidad y la confidencialidad de sus registros. Las únicas personas a las que se les permitirá ver estos registros son: la investigadora principal, su consejero de la facultad y cualquier asistente de investigación. Es posible, aunque poco probable, que personas no autorizadas puedan acceder a
sus respuestas porque está respondiendo en línea. La confidencialidad se mantendrá en la medida en que lo permita la tecnología utilizada. No se pueden ofrecer garantías con respecto a la interceptación de datos enviados a través de Internet. Sin embargo, su participación en esta encuesta en línea implica riesgos similares al uso diario de Internet por parte de una persona.

**Información de Contacto:** Si tiene preguntas, inquietudes o quejas sobre este estudio, llame a Joanna Mackie al 310-592-0564. Si tiene preguntas sobre sus derechos, quejas o problemas como persona que participa en este estudio, llame al IRB de la USF al (813) 974-5638 o comuníquese con el IRB por correo electrónico a RSCH-IRB@usf.edu. Podemos publicar lo que aprendamos de este estudio. No publicaremos nada más que permita que la gente sepa quién es usted. Puede imprimir una copia de este formulario de consentimiento para sus registros.

**Consentimiento Informado:** Doy libremente mi consentimiento para participar en este estudio. Entiendo que al continuar con esta encuesta, acepto participar en la investigación y tengo 18 años de edad o más.

Si _____

No _____
Gracias por participar en este estudio. Estoy tomando una encuesta de profesionales de educación preescolar en Florida para comprender cómo la pandemia de COVID-19 ha influenciado tiempos de comida incluyendo, cómo son las comidas ahora y cómo pueden haber cambiado para niños de 3 a 5 años. Para todas las preguntas, piense en los niños en su escuela de 3 a 5 años que están comiendo “comida de mesa” normales.

Para los propósitos de esta encuesta, la palabra “maestro” significará cualquier adulto a quien normalmente se le refiera como maestro, proveedor de cuidado infantil, asistente del maestro, asistente de clase, asistente de estudiante, voluntario, u otro adulto con interacción directa y responsabilidad de los niños. La palabra “escuela” significará su centro de cuidado infantil, programa de cuidado infantil, preescolar, centro de cuidado, o otra frase que se refiera a todo su programa de educación preescolar.
Fecha ______________ Número de Identificación de la Escuela ______________

PRIMERA SECCIÓN: INFORMACIÓN GENERAL

Este conjunto de preguntas serán acerca de las características generales de su programa.

(1) ¿Cuál es su condado? ______________
(2) Código postal ______________
(3) ¿En qué tipo de programa trabajas? (Por favor seleccione todas las respuestas válidas):
   (a) Privado sin fines de lucro _______
   (b) Privado con fines de lucro _______
   (c) Basado en la fe _____
   (d) Head Start o Early Head Start _______
   (e) Participante del Programa de Alimentos (CACFP) _______
   (f) Participante de cuidado infantil subsidiado (preparación escolar) _______
   (g) Participante voluntario de preescolar (VPK) _____
   (g) Exento de licencia ____
   (h) Hogar de cuidado infantil familiar __________
   (i) Otro (por favor describa) _________________________________

(4) ¿En qué año abrió su escuela originalmente? (por favor utilice 4 dígitos, por ejemplo, 2017, 1995, etc.) _______
(5) ¿Su escuela está abierta actualmente?
   Sí _____ No _____
   [Si no, salte al final]
(6) ¿Cuántos niños en total están matriculados en su escuela? (por favor sea lo más preciso posible) ______

(6a) ¿Cuántos niños de 0 a 5 años están matriculados en su escuela? ______

(6b) ¿Cuántos niños en edad escolar están matriculados en su escuela (preescolares y mayores)? ______

(7) ¿Ha cambiado la cantidad de niños en su escuela debido a la pandemia COVID-19?

   Sí, el número de niños ha **aumentado** ______
   Sí, el número de niños ha **disminuido** ______
   No, el número de niños es aproximadamente el mismo ______

(8) ¿Ha cambiado la cantidad de maestros empleados en su escuela debido a la pandemia de COVID-19?

   Sí, el número de maestros ha aumentado ______
   Sí, la cantidad de maestros ha disminuido ______
   No, el número de maestros es aproximadamente el mismo ______

(9) ¿Cuántos maestros están empleados ahora? ______

(10) ¿Tu escuela estuvo cerrada por algún tiempo debido a COVID-19? Sí _____ No ____
[En caso afirmativo], (10a) Que día cerraron: ______________
[En caso afirmativo], (10b) Que día volvieron a abrir: ______________

**SEGUNDA SECCIÓN: CONFIGURACIÓN TÍPICA DE LA HORA DEL ALMUERZO**

Este conjunto de preguntas serán acerca de sus rutinas típicas para la hora del almuerzo

*actualmente* para niños de 3 a 5 años que comen “comida de mesa” normal.
(11) ¿Cuál es el origen de comidas y meriendas para los niños en su escuela actualmente? (Por favor seleccione todas las respuestas válidas)

(a) Proporcionamos todas las comidas y meriendas preparadas en una cocina en el lugar_
(b) Proporcionamos algunas comidas y meriendas preparados en una cocina en el lugar_
(c) Los padres envían todas las comidas y meriendas____
(d) Los padres envían algunas comidas y meriendas____
(e) Una compañía de abastecimiento proporciona todas las comidas y meriendas____
(f) Una compañía de abastecimiento proporciona algunas comidas y meriendas____

[Si (a) y/o (b) seleccionados]:

11 (a) ¿Quién es responsable de la compra de alimentos, la planificación, y preparación de comidas?

Cocinero dedicado / personal de cocina _____
Director / director asistente _____
Maestros / otro personal _____
Otros, especificar ________________________________________________

(12) ¿Dónde almuerzan los niños de tu clase actualmente?

- Dentro de un salón de clases ______
- Dentro de una cafetería_______
- Afuera ______
- Otro _______________________________________________________

| TERCERA SECCIÓN: RUTINAS TÍPICAS DE MEDIODÍA |

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Este conjunto de preguntas serán acerca de sus rutinas típicas en la hora del almuerzo actualmente para niños de 3 a 5 años que comen “comida de mesa” normal.

(13) Actualmente, ¿cuánto tiempo tienen los niños para almorzar? (Por favor piense en el tiempo entre que comienza el primer niño de un grupo a comer y el último niño del mismo grupo termina de comer).

[Menú desplegable con minutos]

(14) ¿Los niños almuerzan a la misma hora todos los días? Sí ______  No ______

(15) ¿Los niños almuerzan en el mismo lugar todos los días? Sí ______  No ______

(16) ¿Cuál describe mejor la rutina del almuerzo en su salón de clases actualmente? (Por favor seleccione solamente una respuesta):

- Los niños se sirven la mayoría de los alimentos, y los niños deciden cuánto servirse ______
- Los niños se sirven la mayoría de los alimentos, y los adultos deciden cuánto los niños se pueden servir ______
- Los adultos sirven la mayoría de los alimentos, y los niños deciden cuánto quieren que se les sirva ______
- Los adultos sirven la mayoría de los alimentos y deciden cuánto darles a los niños ______
- La comida llega a la escuela ya dividida en el plato de cada niño ______
- Los niños traen comida de casa ______

(17) ¿Usa una máscara (es decir, un paño o una cubierta facial desechable que cubra su boca y nariz) durante la hora de la comida?

- Sí, durante toda la comida (es decir, los maestros supervisan principalmente pero no comen) ______
- Sí, durante parte de la hora de comer (es decir, los maestros usan una máscara para servir la comida y luego se la quitan para comer) 
- No, los maestros no usan mascaras durante la hora de la comida 
- Otro (por favor describa) 

CUARTA SECCIÓN: CAMBIOS EN LOS ALMUERZOS

Este conjunto de preguntas serán acerca de si han y cómo han cambiado sus típicas rutinas a la hora del almuerzo para niños de 3 a 5 años que comen “comida de mesa” normal.

(18) ¿Han cambiado sus rutinas a la hora del almuerzo debido a COVID-19? (Por favor seleccione todas las respuestas válidas)

(a) Sí, ahora los maestros ayudan a los niños con sus máscaras antes y después de comer. 
(b) Sí, cambiamos dónde se sientan los niños (por ejemplo, poniendo más espacio entre los niños) 
(c) Sí, cambiamos el lugar donde comen los niños (por ejemplo, cambiamos de la cafetería a un salón de clase) 
(d) Sí, cambiamos el origen de nuestras comidas (por ejemplo, cambiamos de cocinar en el lugar a que los padres manden comida a sus hijos) 
(e) Sí, cambiamos los tipos de alimentos que se sirven (por ejemplo, servimos alimentos más saludables y menos costosos) 
(f) Sí, estamos realizando más actividades de limpieza durante las comidas (por ejemplo, aumentamos del lavado de manos y/o la frecuencia en la que desinfectamos las superficies) 
(g) Sí, cambié los tamaños de grupos de las comidas (por ejemplo, ahora comemos en horarios diferentes en lugar de todos al mismo tiempo) 
(h) No, las rutinas del almuerzo son básicamente las mismas 
(i) Otro, por favor describa:
(19) ¿Cómo tomó decisiones sobre la mayoría de los cambios seleccionados anteriormente? (Por favor seleccione todas las respuestas válidas)

    (a) Decidí como director(a) de la instalación, siguiendo las pautas de salud y seguridad. _____

    (b) Discutí con los maestros y el personal, y decidí basándome en las opiniones de todos. _____

    (c) Discutí con los padres y decidí basándome en sus opiniones. _____

    (d) La hora del almuerzo no cambió. _____

    (e) Otro: ___________________________

(20) ¿Hay algo más que quieras compartir sobre cómo COVID-19 ha influenciado las comidas de tu escuela?

______________________________________________________________________________

(21) ¿Quiere compartir según su criterio sobre cualquier cambio actualizado en las comidas debido a COVID-19? ______________________________________________________________

______________________________________________________________________________

QUINTA SECCIÓN: DEMOGRAFÍA

Para asegurarnos de que tengamos respuestas de una variedad de personas, esta sección le hará algunas preguntas sobre su información demográfica:

(D1) ¿Actualmente trabaja tiempo completo o tiempo parcial?

    Tiempo completo (30 horas o más por semana) _____

    Tiempo parcial (menos de 30 horas por semana) _____
(D2a) ¿Han cambiado sus horas debido a COVID-19?
   Sí, mis horas han aumentado _____
   Sí, mis horas han disminuido _____
   No _____

(D2b) ¿Ha cambiado su situación laboral debido a COVID-19?
   Sí, mi estado laboral ha cambiado de tiempo completo a tiempo parcial _____
   Sí, mi estado laboral ha cambiado de tiempo parcial a tiempo completo _____
   No _____

(D3) ¿En qué año naciste? (utilice 4 dígitos, por ejemplo, 1985, 1970, etc.) ____________

(D4) ¿Cuál es tu género? Mujer_____      Hombre _____         Otro _____

(D5) ¿Eres hispano o latino? Sí _____      No _____

(D6) ¿Cuál es tu raza? (Estas categorías son del censo de los Estados Unidos. Seleccione todas las que correspondan).
   o Indio americano o nativo de Alaska _____
   o Asiático _____
   o Nativo de Hawái o de las islas del Pacífico _____
   o Negro o afroamericano _____
   o Caucásico / blanco _____
   o Otro (especifique): __________________________________________________________

(D7) ¿Cuántos años de experiencia tiene trabajando en Cuidado y Educación preescolar? ______

(D8) ¿Cuál es su formación académica? (Por favor seleccione todas las respuestas válidas)
   o Credencial del personal de Florida educación preescolar _____
   o Credencial del director de educación preescolar de Florida _____
   o Asociado Nacional de Desarrollo Infantil (CDA) _____
   o Certificación de Nivel 1-5 __________
   o Diploma de escuela secundaria o GED _____
   o Un poco de educación universitaria _____
   o Grado asociado _____
   o Licenciatura _____
   o Maestría o superior _____
   o Otro: __________________________________________________________

¡Gracias por completar esta encuesta!
Appendix H: Survey for Teachers (English)

https://usf.az1.qualtrics.com/jfe/form/SV_2hiWnKzNSplYNRb

Informed Consent to Participate in Research
Information to Consider Before Taking Part in this Research Study
Title: Mealtimes in Early Care and Education during COVID-19
Study # Pro001199

Overview: You are being asked to take part in a research study. The information on this page should help you to decide if you would like to participate. This study is being led by the Principal Investigator, Joanna Mackie, who is a Doctoral Candidate at the University of South Florida (USF), College of Public Health. She is being guided in this research by her faculty advisor, Dr. Russell Kirby. Other approved research staff may act on behalf of the Principal Investigator.

Study Details: The purpose of the study is to understand mealtime routines and responsibilities in early care and education settings (ECE), and how these may have changed due to COVID-19. The research includes one survey for an ECE center director, one survey from an ECE center teacher, and one interview with an ECE center teacher. The survey should take 10-15 minutes, and the interview should take 30-40 minutes.

Participation: You are being asked to take part because you are a director or teacher in an ECE center in Florida. Your participation is voluntary. You do not have to participate and may stop your participation at any time. We do not know if you will receive any benefit from your participation. There is no compensation for completing this survey. Even if we publish the findings from this study, we will keep your study information private and confidential. Anyone with the authority to look at your records must keep them confidential. This research is considered to be minimal risk. If you take part in this study, you will be asked to complete an online survey. Data are collected anonymously and will not be linked to your identity in any way.

Voluntary Participation: You should only take part in this study if you want to volunteer. You should not feel that there is any pressure to take part in the study. You are free to participate in this research or withdraw at any time. If you decide to withdraw after submitting your survey, we may not be able to remove it from analysis because we are not collecting individual-level identifiers.

Privacy and Confidentiality: We will do our best to keep your records private and confidential. The only people who will be allowed to see these records are: the Principal Investigator, her faculty advisor, and any research assistants. It is possible, although unlikely, that unauthorized individuals could gain access to your responses because you are responding online. Confidentiality will be maintained to the degree permitted by the technology used. No guarantees can be made regarding the interception of data sent via the Internet. However, your participation in this online survey involves risks similar to a person’s everyday use of the Internet.
**Contact Information:** If you have any questions, concerns or complaints about this study, call Joanna Mackie at 310-592-0564. If you have questions about your rights, complaints, or issues as a person taking part in this study, call the USF IRB at (813) 974-5638 or contact the IRB by email at RSCH-IRB@usf.edu. We may publish what we learn from this study. We will not publish anything else that would let people know who you are. You can print a copy of this consent form for your records.

**Informed Consent:** I freely give my consent to take part in this study. I understand that by proceeding with this survey, I am agreeing to take part in research and I am 18 years of age or older.

Yes __________

No __________
Instructions:

Thank you for participating in this study. I’m conducting a survey of early care and education (ECE) professionals in Florida to understand how the COVID-19 pandemic has influenced mealtimes in ECE settings, including what mealtimes are like now and how they may have changed for children age 3-5 years. For all questions, please think about children in your school age 3-5 years who are eating normal “table foods.”

For the purposes of this survey, the word “teacher” will mean any adult who would typically be called a teacher, child care provider, teaching assistant, classroom assistant, student assistant, volunteer, or other adult with direct interaction with and responsibility for children in care. The word “school” will mean your child care center, child care program, preschool, day care center, or other phrase referring to your entire ECE program.

At the end of this survey for teachers, there is an opportunity to complete a follow-up interview, for which I can provide a $25 e-gift card to Amazon. If you are interested in participating in the interview, please provide contact information and I will contact you to schedule a time.
SECTION ONE: GENERAL INFORMATION

This set of questions will ask about some general information.

(1) What is your county? ______________

(2) What is your 5-digit zip code? ______________

(3) Do you regularly participate in lunchtimes at your school?
   Yes _____
   No _____ [if No, skip to end]

SECTION TWO: TYPICAL LUNCHTIME SETTING

This set of questions will ask about your typical lunchtime setting currently for children age 3-5 years, eating normal “table food.” “Currently” means your typical daily practice during the past week.

(4) Where do the children in your class usually eat lunch currently?
   • Indoor Classroom ______
   • Indoor Cafeteria ______
   • Outdoors ______
   • Other ________________________________

(5) During lunchtime with your class currently, about how many children eat together at the same time?   1-10 _____ 11-20 _____ 21-30 _____ 31-40 _____ 40+ _____
(6) About how many tables are in the eating area currently?

1 ___ 2 ___ 3 ___ 4 ___ 5+ ___

(7) About how many children sit at each table currently?

1-5 ___ 6-10 ___ 11-15 ___ 15+ ___

(8) About how many teachers participate during lunch with your class currently?

1 ___ 2 ___ 3 ___ 4 ___ 5+ ___

SECTION THREE: TYPICAL LUNCHTIME ROUTINES

This set of questions will ask about your typical lunchtime routines currently for children age 3-5 years, eating normal “table food.”

(9) **Currently**, how much time do children have to eat lunch? (Please think about when the first child in a group begins and the last child in the same group ends.) [drop down menu]

(10) Do children eat lunch at the same time each day?   Yes _____        No _____

(11) Do children eat lunch in the same location each day?   Yes _____        No _____

(12) Which best describes the lunchtime routine in your classroom currently (please select only one):

- Children serve themselves most foods, and children decide how much to take ______
- Children serve themselves most foods, and adults decide how much children may take ______
- Adults serve most foods, and children decide how much to take ______
- Adults serve most foods, and adults decide how much to give to children ______
- Food arrives at the school already portioned on each child’s plate ______
- Children bring food from home ______
SECTION FOUR: ANY CHANGES IN LUNCHTIMES

This set of questions will ask whether and how your typical lunchtime routines have changed since February 2020 (before COVID-19) for children age 3-5 years, eating normal “table food.”

(13) Have your lunchtime routines changed due to COVID-19? (please select all that apply)
   (a) Yes, we changed where children sit (e.g., putting more space between children) ____
   (b) Yes, we changed where children eat (e.g., changed from cafeteria to classroom) ___
   (c) Yes, we changed the source of our meals (e.g., changed from kitchen-onsite to parent bring) ____
   (d) Yes, we changed the types of foods that are served (e.g., serving more healthy foods, serving less expensive food) _____
   (e) Yes, we are doing more cleaning activities during mealtimes (e.g., increased handwashing and/or sanitizing surfaces) ____
   (f) No, mealtime routines are basically the same _____
   (g) Other, please describe: __________________________________________________
       _______________________________________________________________________

SECTION FIVE: TEACHERS’ MEALTIME RESPONSIBILITIES

This set of questions will ask about your responsibilities as a teacher during a typical lunchtime currently.

(14) Do you sit with the children during lunch?
   o Yes, during the entire mealtime _____
   o Yes, during part of the mealtime _____
(15) Do you eat the same foods as the children during lunch?

Yes _____

No, I eat different foods _____

No, I do not eat while the children are eating _____

(16) Are all lunch items served at the same time? Yes _____ No _____

[If no] (16a) Which items are served first? _________________

[If no] (16b) Which items are served later? _________________

(17) For meals currently, do parents ever ask you to feed their child in a specific way (e.g., please make sure my child finishes his/her lunch?)

Yes, often _____ Sometimes _____ Rarely _____ Never _____

(18) For meals currently, do parents ever ask you to feed their child certain foods (e.g., please make sure my child eats his/her vegetables?)

Yes, often _____ Sometimes _____ Rarely _____ Never _____

(19) Are additional servings of food available during lunch?

Yes, additional servings of food are available for all items _____

Yes, additional servings of food are available for some items _____

No, additional servings are not available _____

(20) Is milk served during lunch? Yes _____ No _____

[If Yes] (20a) Is additional milk available during lunch? Yes _____ No _____

(21) Is water served during lunch? Yes _____ No _____

(22) Do you have additional responsibilities during lunchtime? (e.g., paperwork, planning, preparing nap mats, etc.) Yes _____ No _____
(23) Do you wear a mask (i.e., cloth or disposable face covering that covers your mouth and nose) during any of the following times before lunch? (please select all that apply)

- When you are getting ready for lunch (e.g., setting the table, preparing plates of food) __
- When you are helping the children wash their hands before lunch _____
- When you are serving any food to the children _____
- When you are helping children get out any food brought from home _____
- When you are helping the children remove and store their masks _____
- No, you do not wear a mask during any of these times before lunch _____
- Other (please describe): ______________________________________________________

(24) Do you wear a mask during any of the following times after lunch? (please select all that apply)

- When you are helping children clean up the lunch table _____
- When you are helping children wash their hands _____
- When you are helping children get ready for their nap _____
- No, you do not wear a mask during any of these times after lunch _____
- Other (please describe): ______________________________________________________

SECTION SIX: CHILDREN’S MEALTIME RESPONSIBILITIES

This set of questions will ask about the children’s responsibilities during a typical lunchtime currently.

(25) How often do children decide:

<table>
<thead>
<tr>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Very Often</th>
<th>Always</th>
</tr>
</thead>
</table>


(a) whether to eat?  
(b) what to eat?  
(c) how much to eat?  
(d) what not to eat?

(26) How often do children decide:

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Very Often</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) whether to drink?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) what to drink?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(c) how much to drink?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(d) what not to drink?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(27) How often do children tell you:

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Very Often</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) when they feel hungry?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) when they feel full?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(28) Do the children wear a mask during any of the following times before lunch? (please select all that apply)

When they are getting ready for lunch (e.g., setting the table, getting lunch boxes) _____
When they are washing their hands _____
When they receive their food _____
No, the children do not wear masks during any of these times before lunch _____
Other (please describe): ____________________________________________________

(29) Do the children wear a mask during any of the following times after lunch? (please select all that apply)

   When they are cleaning up (e.g., throwing away trash, putting away lunchbox) _____
   When they are washing their hands _____
   When they are getting ready for nap _____
   No, the children do not wear masks during any of these times after lunch _____
   Other (please describe): ____________________________________________________

SECTION SEVEN: MEALTIME SOCIAL INTERACTIONS

This set of questions will ask about your social interactions with the children a typical lunchtime currently.

(30) How often do you do the following with the children during lunchtime?

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Very Often</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) I praise children for cleaning their plates.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) I require children to try one bite of each food.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(c) I ask children if they feel hungry.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(d) I ask children if they feel full.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(e) I stop children from eating too much of any one food so there will be enough for everyone.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(f) I encourage children to eat more food when I worry they are not getting enough at home.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(g) I let children eat until they are finished.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(h) I encourage children to try a new food by trying it together with them.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
(i) I encourage children to try a new food by pointing out other children eating the food.

(j) I encourage children to eat quickly so we have time to transition to the next activity.

(k) I talk with the children about food.

(l) I talk with the children about non-food topics.

(m) If a child is not hungry, I let them sit through the entire meal without eating.

SECTION EIGHT: CHANGES IN MEALTIME SOCIAL INTERACTIONS

This set of questions will ask about how your social interactions with the children during lunchtime may have changed due to COVID-19.

(31) Has COVID-19 changed the way you interact with the children during a typical lunchtime? (please select all that apply)

(a) Yes, now I spend time helping children with their masks before and after eating. _____

(b) Yes, now I encourage the children to clean their plates more often so that we do not waste food. _____

(c) Yes, now I encourage the children to eat more healthy foods so that we will all stay healthy. _____

(d) Yes, now I bring additional food for children I know are not getting enough to eat at home (e.g., crackers to add to a child’s lunch). _____

(e) Yes, now I do not get as close to the children to avoid sharing germs. _____
(f) Yes, we used to eat together “family style,” but now I do not eat together with the children. _____

(g) Yes, parents have more concerns about their children eating healthy foods at school. _____

(h) Yes, parents have more concerns about their children eating enough food at school. _____

(i) No, my interactions with the children during the meal are basically the same. _____

(j) Other, please describe: __________________________________________________

(32) Is there anything else you want to share about how COVID-19 has influenced mealtimes at your school? __________________________________________________

______________________________________________________________________________

______________________________________________________________________________

SECTION NINE: DEMOGRAPHICS

In order to make sure that we hear from a variety of people, this section will ask some questions about your demographic information:

(D1) Do you currently work Full Time or Part Time?

Full Time (30 hours or more per week) _____

Part Time (less than 30 hours per week) _____

(D2a) Have your hours changed due to COVID-19?

Yes, my hours have increased _____

Yes, my hours have decreased _____

No _____

(D2b) Has your employment status changed due to COVID-19?

Yes, my employment status has changed from Full time to Part time _____
Yes, my employment status has changed from Part time to Full time _____

No _____

(D3) In what year were you born? (please use 4 digits, e.g., 1985, 1970, etc.) ____________

(D4) What is your gender?  Female _____  Male _____  Other _____

(D5) Are you Hispanic or Latinx?  Yes _____  No _____

(D6) What is your race? (These categories are from the US Census. Please select all that apply.)

  o  American Indian or Alaska Native _____
  o  Asian _____
  o  Native Hawaiian or Pacific Islander
  o  Black or African American _____
  o  Caucasian/White _____
  o  Other (please specify): __________________________________________

(D7) How many years of experience do you have working in Early Care and Education? ______

(D8) What is your educational background? (please select all that apply)

  o  Florida ECE Staff Credential _____
  o  Florida ECE Director’s Credential _____
  o  National Child Development Associate (CDA) _____
  o  Tier 1-5 Certification __________
  o  High school diploma or GED _____
  o  Some college education _____
  o  Associate’s Degree _____
  o  Bachelor’s Degree _____
  o  Master’s degree or higher _____
  o  Other: _________________________________________________________

Thank you for filling out this survey! I know that ECE programs can be very different and each individual’s experience is unique. To help me understand your point of view, would you be
willing to participate in a follow-up phone interview? I can provide a $25 e-gift card to Amazon for your participation. Yes _____ No _____

If Yes, please provide your email and/or phone number and I will get in touch to schedule an interview: __________________________________________________________
Appendix I: Survey for Teachers (Spanish)

https://usf.az1.qualtrics.com/jfe/form/SV_bwQejtEevqIuKkl

Consentimiento Informado para Participar en la Investigación
Información a considerar antes de participar en este estudio de investigación

Título: Los tiempos de comida en el cuidado y la educación temprana durante el COVID-19
Estudio # Pro001199

Resumen: Se le solicita que participe en un estudio de investigación. La información de este
pagina debería ayudarle a decidir si le gustaría participar. Las secciones de este Resumen
proporcionan la información básica sobre el estudio. Este estudio está dirigido por la
Investigadora Principal, Joanna Mackie, candidata a doctorado en la Facultad de Salud Pública
de la Universidad del Sur de Florida. Ella está siendo guiada en esta investigación por su
consejero de la facultad, el Dr. Russell Kirby. Otro personal de investigación aprobado puede
actuar en nombre de la investigadora principal.

Detalles del Estudio: El propósito del estudio es comprender las rutinas y responsabilidades a la
hora de comer en los entornos de education preescolar ("education preescolar" es lo mismo
que "early care and education" en engles, or ECE), y cómo estas pueden haber cambiado debido
al COVID-19. La investigación incluye una encuesta para el director de un centro ECE, una
encuesta de un maestro del centro ECE y una entrevista con un maestro del centro ECE. La
encuesta debería durar entre 5 y 15 minutos y la entrevista entre 30 y 40 minutos.

Participación: Se le pide que participe porque es director o maestro en un centro de ECE en
Florida. Su participación es voluntaria. No tiene que participar y puede detener su participación
en cualquier momento. No sabemos si recibirá algún beneficio de su participación. No hay
compensación por completar esta encuesta. Incluso si publicamos los resultados de este estudio,
mantendremos la información de su estudio privada y confidencial. Cualquier persona con
autoridad para ver sus registros debe mantenerlos confidenciales. Esta investigación se considera
de riesgo mínimo. Si participa en este estudio, se le pedirá que complete una encuesta en línea.
Los datos se recopilan de forma anónima y no estarán vinculados a su identidad de
ninguna manera.

Participación Voluntaria: Solo debe participar en este estudio si desea ser voluntario. No debe
sentir ninguna presión para participar en el estudio. Puede participar en esta investigación o
retirarse en cualquier momento. Si decide retirarse después de enviar su encuesta, es posible que
no podamos eliminarla del análisis porque no estamos recopilando identificadores de nivel
individual.

Privacidad y Confidencialidad: Haremos todo lo posible para mantener la privacidad y la
confidencialidad de sus registros. Las únicas personas a las que se les permitirá ver estos
registros son: la investigadora principal, su consejero de la facultad y cualquier asistente de
investigación. Es posible, aunque poco probable, que personas no autorizadas puedan acceder a
sus respuestas porque está respondiendo en línea. La confidencialidad se mantendrá en la medida en que lo permita la tecnología utilizada. No se pueden ofrecer garantías con respecto a la interceptación de datos enviados a través de Internet. Sin embargo, su participación en esta encuesta en línea implica riesgos similares al uso diario de Internet por parte de una persona.

**Información de Contacto:** Si tiene preguntas, inquietudes o quejas sobre este estudio, llame a Joanna Mackie al 310-592-0564. Si tiene preguntas sobre sus derechos, quejas o problemas como persona que participa en este estudio, llame al IRB de la USF al (813) 974-5638 o comuníquese con el IRB por correo electrónico a RSCH-IRB@usf.edu. Podemos publicar lo que aprendamos de este estudio. No publicaremos nada más que permita que la gente sepa quién es usted. Puede imprimir una copia de este formulario de consentimiento para sus registros.

**Consentimiento Informado:** Doy libremente mi consentimiento para participar en este estudio. Entiendo que al continuar con esta encuesta, acepto participar en la investigación y tengo 18 años de edad o más.

Si _____

No _____
Gracias por participar en este estudio. Estoy tomando una encuesta de profesionales de educación preescolar en Florida para comprender cómo la pandemia de COVID-19 ha influenciado tiempos de comida incluyendo, cómo son las comidas ahora y cómo han cambiado para niños de 3 a 5 años. Para todas las preguntas, piense en los niños en su escuela de 3 a 5 años que están comiendo “comida de mesa” normales.

Para los propósitos de esta encuesta, la palabra “maestro” significará cualquier adulto a quien normalmente se le refiera como maestro, proveedor de cuidado infantil, asistente del maestro, asistente de clase, asistente de estudiante, voluntario, u otro adulto con interacción directa y responsabilidad de los niños. La palabra “escuela” significará su centro de cuidado infantil, programa de cuidado infantil, preescolar, centro de cuidado, o otra frase que se refiera a todo su programa de educación preescolar.

Al final de esta encuesta para maestros, tendrá la oportunidad de completar una entrevista de seguimiento, por la cual le puedo dar una tarjeta de regalo electrónica de $25 de Amazon. Si está interesado en participar en esta entrevista, por favor proporcione información de contacto, y me pondré en contacto con usted para hacer una cita.
Fecha ___________ Número de Identificación de la Escuela ___________

PRIMERA SECCIÓN: INFORMACIÓN GENERAL

Este conjunto de preguntas serán acerca de información general.

(1) Cual es su condado _____________

(2) Cual es su código postal _____________

(3) ¿Participas regularmente en el almuerzo en tu escuela?  
    Sí _____  
    No _____ [si no, salte al final]

SEGUNDA SECCIÓN: CONFIGURACIÓN TÍPICA DE LA HORA DEL ALMUERZO

Este conjunto de preguntas serán acerca del plan típico para la hora del almuerzo actualmente para niños de 3 a 5 años que comen “comida de mesa” normal. “Actualmente” significa su práctica diaria típica durante la semana pasada.

(4) ¿Dónde almuerzan los niños de tu clase actualmente?
    o Dentro de un salón de clases ______
    o Dentro de una cafetería ________
    o Afuera ________
    o Otro ______________________________________________________

(5) Durante la hora del almuerzo actualmente con su clase, ¿cuántos niños comen juntos al mismo tiempo?

    1-10 _____ 11-20 _____ 21-30 _____ 31-40 _____ 40+ _____

(6) ¿Aproximadamente cuántas mesas hay actualmente en el área para comer?

    1 ____ 2 ____ 3 ____ 4 ____ 5+ ____

(7) ¿Aproximadamente cuántos niños se sientan en cada mesa actualmente?

    1-5 _____ 6-10 _____ 11-15 ____ 15+ ____
(8) ¿Aproximadamente cuántos maestros participan durante el almuerzo con su clase **actualmente**?

1 ___ 2 ___ 3 ___ 4 ___ 5+ ___

**TERCERA SECCIÓN: RUTINAS TÍPICAS DE MEDIODÍA**

Este conjunto de preguntas serán acerca de sus rutinas típicas en la hora del almuerzo **actualmente** para niños de 3 a 5 años que comen “comida de mesa” normal.

(9) ¿**Actualmente**, cuánto tiempo tienen los niños para almorzar? (Por favor piense en el tiempo entre que comienza el primer niño de un grupo a comer y el último niño del mismo grupo termina de comer). [Menú desplegable]

(10) ¿Los niños almuerzan a la misma hora todos los días? Sí _____ No _____

(11) ¿Los niños almuerzan en el mismo lugar todos los días? Sí _____ No _____

(12) ¿Cuál describe mejor la rutina del almuerzo en su salón de clases **actualmente**? (Por favor seleccione solamente una respuesta):

- Los niños se sirven la mayoría de los alimentos, y los niños deciden cuánto servirse_____
- Los niños se sirven la mayoría de los alimentos, y los adultos deciden cuánto los niños se pueden servir ___
- Los adultos sirven la mayoría de los alimentos, y los niños deciden cuánto quieren que se les sirva _____
- Los adultos sirven la mayoría de los alimentos y deciden cuánto darle a los niños _____
- La comida llega a la escuela ya dividida en el plato de cada niño _____
- Los niños traen comida de casa _____
CUARTA SECCIÓN: CAMBIOS EN LA HORA DEL ALMUERZO

Este conjunto de preguntas serán acerca de si han y cómo han cambiado sus rutinas típicas a la hora del almuerzo desde febrero del 2020 (antes de COVID-19) para los niños de 3 a 5 años que comen “comida de mesa” normal.

(13) ¿Han cambiado sus rutinas a la hora del almuerzo debido a COVID-19? (Por favor seleccione todas las respuestas válidas)

(a) Sí, cambiamos dónde se sientan los niños (por ejemplo, poniendo más espacio entre los niños) 
(b) Sí, cambiamos el lugar donde comen los niños (por ejemplo, cambiamos de cafetería a un salón de clases) 
(c) Sí, cambiamos el origen de nuestras comidas (por ejemplo, cambiamos de cocinar en el lugar a que los padres manden comida a sus hijos) 
(d) Sí, cambiamos los tipos de alimentos que se sirven (por ejemplo, servimos alimentos más saludables y menos costosos) 
(e) Sí, estamos realizando más actividades de limpieza durante las comidas (por ejemplo, aumentamos el lavado de manos y/o la frecuencia en la que desinfectamos las superficies) 
(f) No, las rutinas de las comidas son básicamente las mismas 
(g) Otro, por favor describa:

QUINTA SECCIÓN: RESPONSABILIDADES DE LOS MAESTROS DURANTE LA HORA DE COMIDA

Este conjunto de preguntas serán acerca de sus responsabilidades como maestro durante una hora típica del almuerzo actualmente.
(14) ¿Te sientas con los niños durante el almuerzo?
   o Sí, durante toda la comida _____
   o Sí, durante parte de la hora de comer _____
   o No uso una mascarilla durante la hora de la comida _____

(15) ¿Comes los mismos alimentos que los niños durante el almuerzo?
   o Sí _____
   o No, yo como diferentes alimentos _____
   o No, yo no como mientras los niños comen _____

(16) ¿Se sirven todos los artículos del almuerzo al mismo tiempo? Sí___ No _____
   [Si dijo que no] (16a) ¿Qué artículos se sirven primero? _________________
   [Si dijo que no] (16b) ¿Qué artículos se sirven después? _________________

(17) Para las comidas actualmente, ¿alguna vez le ha pedido un padre que alimente a sus hijos de una manera específica? (Por ejemplo, “por favor asegúrese de que mi hijo termine su almuerzo”)
   Sí, a menudo ____ A veces _____ Raramente _____ Nunca _____

(18) Para las comidas actualmente, ¿alguna vez le ha pedido un padre que alimente a su hijo con ciertos alimentos? (Por ejemplo, “asegúrese de que mi hijo se coma sus verduras”)
   Sí _____ A veces ____ Raramente _____ Nunca _____

(19) ¿Hay porciones adicionales de comida disponibles durante el almuerzo?
   o Sí, hay porciones adicionales de alimentos disponibles de todos los artículos _____
   o Sí, hay porciones adicionales de alimentos disponibles de algunos artículos _____
   o No, porciones adicionales no están disponibles _____

(20) ¿Se sirve leche durante el almuerzo?  Sí _____  No _____
   [En caso afirmativo] (20a) ¿Hay leche adicional disponible durante el almuerzo? Sí ___ No ___

(21) ¿Se sirve agua con el almuerzo?  Sí _____  No _____
(22) ¿Tiene responsabilidades adicionales durante la hora del almuerzo? (por ejemplo, papeleo, planificación, preparación de colchonetas, etc.) Sí _____   No _____

(23) ¿Usa una máscara (es decir, un paño o una cubierta facial desechable que cubra su boca y nariz) en cualquiera de los siguientes momentos antes del almuerzo? (Por favor seleccione todas las respuestas válidas)
- Cuando se está preparando para el almuerzo (por ejemplo, poniendo la mesa, preparando los platos de comida) __
- Cuando está ayudando a los niños a lavarse las manos antes del almuerzo _____
- Cuando está sirviendo comida a los niños _____
- Cuando está ayudando a los niños a sacar comida traída de casa _____
- Cuando está ayudando a los niños a quitarse y guardar sus máscaras _____
- No, no usa una máscara durante ninguno de estos momentos antes del almuerzo _____
- Otro (por favor describa): __________________________________________________

(24) ¿Usa una máscara durante alguno de los siguientes momentos después del almuerzo? (Por favor seleccione todas las respuestas válidas)
- Cuando está ayudando a los niños a limpiar la mesa del almuerzo _____
- Cuando está ayudando a los niños a lavarse las manos _____
- Cuando está ayudando a los niños a prepararse para su siesta _____
- No, no usa una mascarilla durante ninguno de estos momentos después del almuerzo _____
- Otro (por favor describa): __________________________________________________

SEXTA SECCIÓN: RESPONSABILIDADES DE LOS NIÑOS DURANTE LA HORA DE COMIDA

Este conjunto de preguntas serán acerca de las responsabilidades de los niños durante una hora típica del almuerzo actualmente.

(25) Con qué frecuencia deciden los niños:

<table>
<thead>
<tr>
<th>Nunca</th>
<th>Raramente</th>
<th>A veces</th>
<th>Frecuentemente</th>
<th>Muy Frecuentemente</th>
<th>Siempre</th>
</tr>
</thead>
</table>

(a) ¿si comer o no comer?

(b) ¿qué comer?

(c) ¿cuánto comer?

(d) ¿qué cosas no comer?

(26) Con qué frecuencia deciden los niños:

<table>
<thead>
<tr>
<th></th>
<th>Nunca</th>
<th>Raramente</th>
<th>A veces</th>
<th>Frecuentemente</th>
<th>Muy Frecuentemente</th>
<th>Siempre</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) ¿si beber o no beber?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) ¿qué beber?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(c) ¿cuánto beber?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(d) ¿qué líquidos no beber?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(27) Con qué frecuencia te dicen los niños:

<table>
<thead>
<tr>
<th></th>
<th>Nunca</th>
<th>Raramente</th>
<th>A veces</th>
<th>Frecuentemente</th>
<th>Muy Frecuentemente</th>
<th>Siempre</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) ¿cuándo sienten hambre?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) ¿cuándo se sienten llenos?</td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

(28) ¿Los niños usan una máscara durante alguno de los siguientes momentos antes del almuerzo? (Por favor seleccione todas las respuestas válidas)

- Cuando se están preparando para el almuerzo (por ejemplo, poniendo la mesa, agarrando sus loncheras) ____
Cuando se lavan las manos _____
Cuando reciben su comida _____
No, los niños no usan máscaras durante ninguno de estos momentos antes del almuerzo ______
Otro (por favor describa): ______________________________________________________________

(29) ¿Los niños usan una máscara durante alguno de los siguientes momentos después del almuerzo? (Por favor seleccione todas las respuestas válidas)

- Cuando están limpiando (por ejemplo, botando la basura, guardando sus loncheras) _____
- Cuando se lavan las manos ______
- Cuando se están preparando para la siesta ______
- No, los niños no usan máscaras durante ninguno de estos momentos después del almuerzo ______
- Otro (por favor describa): __________________________________________________________

### SÉPTIMA SECCIÓN: INTERACCIONES SOCIALES DURANTE EL ALMUERZO

Este conjunto de preguntas serán acerca de sus interacciones sociales con los niños a la hora del almuerzo típico actualmente.

(30) ¿Con qué frecuencia hace lo siguiente con los niños durante el almuerzo?

<table>
<thead>
<tr>
<th></th>
<th>Nunca</th>
<th>Raramente</th>
<th>A veces</th>
<th>Frecuentemente</th>
<th>Muy Frecuentemente</th>
<th>Siempre</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Le doy elogios a los niños por limpiar sus platos.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) Exijo que los niños prueben una mordida de cada comida.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(c) Les pregunto a los niños si sienten hambre.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(d) Les pregunto a los niños si se sienten llenos.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
(e) Evito que los niños coman demasiado de cualquier alimento para que haya suficiente para todos.

(f) Animo a los niños a que coman más alimentos cuando me preocupa que no estén comiendo suficiente en casa.

(g) Dejo que los niños coman hasta que terminen.

(h) Animo a los niños a probar un nuevo alimento probándolo junto con ellos.

(i) Animo a los niños a probar una nueva comida señalando a otros niños que comen esa comida.

(j) Animo a los niños a comer rápido para que tengamos tiempo de pasar a la siguiente actividad.

(k) Hablo con los niños sobre la comida.

(l) Hablo con los niños sobre temas no alimentarios.

(m) Si un niño no tiene hambre, lo dejo sentarse durante toda la comida sin comer.

**OCTAVA SECCIÓN: CAMBIOS EN LAS INTERACCIONES SOCIALES DURANTE LA HORA DE LA COMIDA**

Este conjunto de preguntas serán acerca de cómo sus interacciones sociales con los niños durante la hora del almuerzo han cambiado debido a COVID-19.
(31) ¿COVID-19 ha cambiado la forma en que interactúa con los niños durante un almuerzo típico? (Por favor seleccione todas las respuestas válidas)

(a) Sí, ahora paso tiempo ayudando a los niños con sus máscaras antes y después de comer. ____
(b) Sí, ahora animo a los niños a que limpien sus platos con más frecuencia para que no desperdiciemos alimentos. ____
(c) Sí, ahora animo a los niños a comer más alimentos saludables para que todos podamos mantenernos sanos. ______
(d) Sí, ahora llevo comida adicional para niños que sé que no están comiendo lo suficiente en casa (por ejemplo, galletas para agregar al almuerzo de un niño). ____
(e) Sí, ahora no me acerco tanto a los niños para evitar compartir gérmenes. ____
(f) Sí, comíamos juntos “al estilo familiar”, pero ahora no como junto con los niños. _____
(g) Sí, los padres tienen más preocupaciones acerca de que sus hijos coman **alimentos saludables** en la escuela. ______
(h) Sí, los padres tienen más preocupaciones acerca de que sus hijos **coman suficiente** comida en la escuela. _____
(i) No, mis interacciones con los niños durante la comida son básicamente las mismas. _____
(j) Otro, por favor describa: _________________________________________________

(32) ¿Hay algo más que quieras compartir sobre cómo COVID-19 ha influenciado las comidas en tu escuela?
______________________________________________________________________________

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**NOVENA SECCIÓN: DEMOGRAFÍA**

*Para asegurarnos de que tengamos respuestas de una variedad de personas, esta sección le hará algunas preguntas sobre su información demográfica:*

(D1) ¿Actualmente trabaja tiempo completo o tiempo parcial?

Tiempo completo (30 horas o más por semana) _____
Tiempo parcial (menos de 30 horas por semana) _____

(D2a) ¿Han cambiado sus horas debido a COVID-19?
   Sí, mis horas han aumentado _____
   Sí, mis horas han disminuido _____
   No _____

(D2b) ¿Ha cambiado su situación laboral debido a COVID-19?
   Sí, mi estado laboral ha cambiado de tiempo completo a tiempo parcial _____
   Sí, mi estado laboral ha cambiado de tiempo parcial a tiempo completo _____
   No _____

(D3) ¿En qué año naciste? (utilice 4 dígitos, por ejemplo, 1985, 1970, etc.) ____________

(D4) ¿Cuál es tu género? Mujer_____      Hombre _____         Otro _____

(D5) ¿Eres hispano o latino? Sí _____

(D6) ¿Cuál es tu raza? (Estas categorías son del censo de los Estados Unidos. Seleccione todas las que correspondan).
   o Indio americano o nativo de Alaska _____
   o Asiático ______
   o Nativo de Hawái o de las islas del Pacífico _____
   o Negro o afroamericano _____
   o Caucásico / blanco _____
   o Otro (especifique): _________________________________________________________

(D7) ¿Cuántos años de experiencia tiene trabajando en Cuidado y Educación preescolar? ______

(D8) ¿Cuál es su formación académica? (Por favor seleccione todas las respuestas válidas)
   o Credencial del personal de Florida educación preescolar ______
   o Credencial del director de educación preescolar de Florida ______
   o Asociado Nacional de Desarrollo Infantil (CDA) ______
   o Certificación de Nivel 1-5 _________

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- Diploma de escuela secundaria o GED
- Un poco de educación universitaria
- Grado asociado
- Licenciatura
- Maestría o superior
- Otro: ____________________________________________________________

¡Gracias por completar esta encuesta! Sé que los programas de Educación Preescolar pueden ser muy diferentes, y la experiencia de cada individuo es única. Para ayudarme a comprender su punto de vista, ¿estaría dispuesto a participar en una entrevista telefónica de seguimiento? Puedo proporcionarle una tarjeta de regalo electrónica de $25 a Amazon por su participación.

Sí ____ No ______

En caso afirmativo, proporcione su correo electrónico y/o número de teléfono y me pondré en contacto para programar una entrevista: ________________
Appendix J: Interview Guide (English only)

Script for Obtaining Verbal Informed Consent
Information to Consider Before Taking Part in this Research Study
Title: Mealtimes in Early Care and Education during COVID-19
Study # Pro001199

Overview: You are being asked to take part in a research study. The information in this document should help you to decide if you would like to participate. The sections in this Overview provide the basic information about the study. More detailed information is provided in the remainder of the document.

Study Staff: This study is being led by Joanna Mackie, who is a Doctoral Candidate at the University of South Florida, College of Public Health. This person is called the Principal Investigator. She is being guided in this research by her faculty advisor, Russ Kirby. Other approved research staff may act on behalf of the Principal Investigator.

Study Details: This study is being conducted at the University of South Florida, College of Public Health. The purpose of the study is to understand mealtime routines and responsibilities in early care and education settings, and how these may have changed due to COVID-19. The research includes one survey for an ECE center director, one survey from an ECE center teacher, and one interview with an ECE center teacher. The survey should take 5-15 minutes, and the interview should take 30-40 minutes.

Participants: You are being asked to take part because you are a director or teacher in an ECE center in Florida.

Voluntary Participation: Your participation is voluntary. You do not have to participate and may stop your participation at any time.

Benefits, Compensation, and Risk: We do not know if you will receive any benefit from your participation. The teacher will be compensated with a $25 giftcard to Publix upon completion of the interview. There is no compensation for completing the survey.

Confidentiality: Even if we publish the findings from this study, we will keep your study information private and confidential. Anyone with the authority to look at your records must keep them confidential.

If you have any questions, concerns or complaints about this study, call Joanna Mackie at 310-592-0564. If you have questions about your rights, complaints, or issues as a person taking part in this study, call the USF IRB at (813) 974-5638 or contact the IRB by email at RSCH-IRB@usf.edu.

Would you like to participate in this study? [PI will record if verbal consent is given]
To help me listen better, I would like to record our conversation today. I will not record your name, your school’s name, or anything identifying. All recordings are kept confidential. Is this OK? [turn on recorder and confirm again that recording is OK]

Confirm participant is a classroom teacher

Confirm age of children is 2-5 years old.

So as you know from completing the survey, I’m really interest in mealtime routines in early care and education settings. I know that mealtimes can be a very busy time of the day. Especially now with the COVID-19 pandemic, things may have changed. However, each program and each person is unique so I really want to know what it is like for you. There are no right or wrong answers my goal is to learn from you about what it’s like.

(1a) Tell me about the mealtimes at your school, specifically thinking about lunchtimes. What is it like right now? (Context)

I want to re-iterate that there are no right or wrong answers. Can you tell me about wearing masks at your school?

Kitchen on-site, parent bring, catering
Family style, individual plates, who serves, which items, common bowls, beverages
Tell me about a typical lunchtime at your school. Walk me through what happens.
What are lunchtimes like for you as a teacher?
Do you sit with the children? Do you eat the same food with them? Why or why not?
How do you feel during lunchtimes? (relaxing, stressful, etc.)

(1b) How have mealtimes changed at your school since COVID-19?

What are the primary changes?
What things are most different?
What does it feel like for you?

(2a) Tell me about your responsibilities as a teacher during the lunchtime. What do you feel responsible for during the lunchtime? (Adult Responsibilities)

Prep, during mealtime, and clean-up
Food-related responsibilities, health and safety, behavior management?
Managing seconds
Any monitoring of children’s eating
Do parents ever talk with you about their child’s eating?
Managing seconds—any rules for getting seconds, availability of all items
What happens right after lunchtime?

(2b) Do you feel that your responsibilities as a teacher during lunchtime have changed since COVID-19? If so, how?

Increases or decreases in mealt ime responsibilities
Increases or decreases in other responsibilities during the meal
More or less help from other adults during the meal

(3a) Tell me about what the children are doing during lunchtimes at your school. What are children responsible for during the meal? (Child Responsibilities)

Do they serve themselves any parts of the meal? 
Do you think the children generally eat well?
Do children help with set up, clean up
Do children cooperate with adults and peers?
Do children tell you when they are hungry or full? How do they communicate or indicate this?
Do children generally behave during the meal, follow rules?

(3b) Do you feel that the children’s responsibilities during lunchtime have changed since COVID-19? If so, how?

Increases or decreases in mealtime responsibilities
Any increases in food insecurity among children

(4a) All of the social distancing for COVID has had a really broad influence on young children, not just at school, but out in the world, at home, a lot of things have changed. [As a parent, my 2 young children have definitely experienced some stress, it was an adjustment, although now things are better] How would you describe the social experiences for the children right now? (Caregiver-Child Feeding Dynamic)

Try to steer it toward mealtimes
Positive, negative, friendly, respectful, hectic, calm, minimal, engaged
Do you feel like the children listen and respond to you during lunchtime?
Example of positive interaction, negative interaction

(4b) Have your interactions with the children changed? If so, how?

Same or different?
Fear, stress, happy, relaxed?

(5) COVID has brought a lot of changes for young children and for everyone, not just in early educational settings but really broadly in our society. How do you think the children have adjusted to any changes?

*Any concerns about food or economic insecurity for children at home?*
*Increase or decrease in communication with parents?*
*Did the children have to adjust to changes at home or school?*
*If the school was closed, did the children have to adjust to coming back?*

(6) How do you think the other teachers, staff have adjusted to any changes?

*Food insecurity among teachers and staff*
*More stressed*

(7) Thank you for participating in this interview. Is there anything you want to share about mealtimes in your center and COVID-19 that I did not ask?

To thank you for your time and participation, I’d like to send a $25 giftcard to Amazon, and it will have to be electronic. Can you please provide a valid email address?

_______________________________________________

Thanks again for your participation.
Appendix K: Mask-Wearing Manuscript

“I Wear a Mask. I Wear it All the Time. The Kids Don’t Wear Masks”:
Early Childhood Education Mask-wearing during COVID-19 in Florida

Abstract

Background: New federal health guidance was issued for early childhood education (ECE) programs to reduce the risk of COVID-19 in March 2020. The CDC recommended mask-wearing for adults and children age two years and older. Wearing masks was a new practice for teachers and children, and this study investigated when and how masks were worn in ECE centers in Florida.

Methods: This study was part of a larger assessment of the impact of COVID-19 on mealtime routines in ECE centers. Two statewide surveys based on the Trust Model were sent to directors and teachers via Florida Department of Children and Families. Only teachers were interviewed. Data were collected from August to October 2020. Survey results and interview responses related to mask-wearing were included in the analysis.

Results: Surveys were completed by 759 directors and 431 teachers, 29 teachers were interviewed. Survey results indicated that more teachers than children wore masks during pre- and post-meal activities. Interviews revealed three models that explain mask-wearing: (1) Teachers only, in which teachers were required to wear a mask, but children were not, (2) Teachers and children, in which teachers and children were required to wear a mask (3) Masks optional, in which teachers and children could choose to wear a mask.

Conclusion: Understanding different ways that decision-makers in ECE centers implement center-level mask-wearing rules can inform training and support health and safety in ECE. Use
of personal protective equipment (such as masks) is an effective strategy for reducing risk of pathogen transmission for children and adults in ECE settings.

**Background**

The novel coronavirus (COVID-19) was declared a world-wide pandemic by the World Health Organization (WHO, 2020) in March 2020. At the time, without a vaccine, behavior changes were the only way to prevent the spread of COVID-19. Individual behavior changes included frequent handwashing, physical distancing, and wearing a face mask. Evidence quickly showed that universal mask-wearing effectively reduced the rate of transmission (Brooks & Butler, 2021). The Centers for Disease Control and Prevention (CDC) released guidelines for early childhood education (ECE) settings that remained open during COVID, and included mask-wearing for all adults and children age 2 and older (CDC, 2020).

Wearing a mask was a new and unusual health behavior for the majority of Americans. The United States (U.S.) does not have a cultural norm around mask-wearing as a preventive health behavior, and much public discussion was devoted to types of masks, when and how to wear them, and who should wear them (Clapp et al., 2020). Additionally, mask-wearing quickly became politicized (Kahane, 2021), creating a socio-political-cultural divide around mask-wearing behavior.

The CDC’s recommendation to wear masks was applicable for settings in which people congregate, such as schools and ECE settings. Questions arose as to how children younger than age 6 would wear masks, and how to encouraging mask-wearing without creating a battle with the child (Esposito & Principi, 2020a, 2020b; Jin et al., 2020). Developmentally, young children could have a hard time keeping a mask on and wearing it correctly (Saltali, 2021). Also, young
children are learning to speak, listen and communicate. Without visual facial cues typical during a conversation, children could miss out on important developmental learning (Stajduhar et al., 2021). Similarly, children with developmental delays or atypical developmental trajectories could struggle with mask-wearing expectations (Paulauskaite et al., 2021). This paper asked: (1) When do teachers and children in ECE wear masks during the COVID-19 pandemic? and (2) How is mask-wearing implemented in ECE centers?

**Methods**

**Study Design and Participants**

This paper is part of a larger study that used a concurrent mixed-methods design to describe and understand changes in mealtime routines, responsibilities, and best practices in ECE centers during COVID-19. Participants were recruited through the Florida Department of Children and Families (DCF), which administers all licensed and license-exempt centers and family child care homes in Florida. Inclusion criteria were (1) having an email address listed with DCF, (2) being a center, (3) being licensed, (4) being license-exempt, and (5) being open during the study period. Exclusion criteria were (1) being a family child care home and (2) being closed during the study period. All research activities were conducted virtually. The cross-sectional survey was distributed to more than 7000 ECE centers in Florida, using publicly available email contacts from DCF. Director surveys were completed by 759 respondents (735 in English and 24 in Spanish). Teacher surveys were completed by 431 respondents (411 in English, 20 in Spanish), and 29 participated in a follow-up interview (only English). The response rate was \( \frac{759 + 431}{7000} = 17\% \). (Surveys were sent via Qualtrics to publicly available director emails. Directors were asked to forward the email to one teacher in their program with responsibility for lunchtime.)
Theories Guiding this Inquiry

The conceptual framework guiding the overall inquiry was based on the Trust Model (Eneli et al., 2008) and Social Cognitive Theory (Bandura, 1991). Survey and interview questions were designed to ask directors and teachers about adult and child responsibilities before, during and after mealtimes. Mask-wearing was one responsibility for both children and adults during COVID-19 that could have influenced mealtime routines. For example, taking masks on and off for both children and adults, storing them, wearing them at appropriate times (e.g., adults wearing masks while serving food) would all have to be considered when designing mealtime routines during COVID-19.

Measures

Survey (Directors and Teachers)

The director and teacher survey questions were developed based on the conceptual framework (described above) and reviewed by three national experts on healthy eating in ECE. The survey was pilot tested by 10 teachers and directors in the [author’s] local community.

Directors and teachers had separate survey questions. There was one mask-wearing question for directors and four mask-wearing questions for teachers (Table 1). Since the focus of the larger study was mealtime routines, the directors were asked whether teachers at their school wore a mask during mealtimes but not other times of the day. Teachers were asked whether children and teachers wore masks before and/or after lunchtime. Respondents could select from multiple choice options or “other” (Table 1).

[Insert Table 1 here]
Interview (Teachers only)

Interview questions were developed by the researcher based on the Trust Model and division of responsibility, and pilot tested in one center and revised based on feedback. There were five main question categories in the larger study, and mask wearing was discussed across all questions (Table 2).

[Insert Table 2 here]

Data Collection Procedures

The survey was sent to all publicly-available director email addresses obtained in cooperation with the Florida Department of Children and Families. Directors were expected to answer their survey and then forward the email to one teacher in their school who was present in the classroom during lunchtimes. The survey was open from August 10 to October 11th, 2020. Surveys were distributed via Qualtrics (Qualtrics, 2020). At the end of the teacher survey, respondents were invited to share their contact information and participate in a follow-up interview. All interviews were conducted via phone or Zoom and recorded and transcribed verbatim. Interviews were completed from August 16, 2020 to October 16, 2020. Participants who completed the interview were compensated with a $25 e-gift card. The Institutional Review Board at the [University] designated this study as exempt.

Data Analysis

Quantitative data were analyzed in SPSS version 27.0 (IBM Corp., 2020). Descriptive statistics were used to understand when teachers and children were wearing masks. Interview transcripts were uploaded into MAX QDA (VERBI Software, 2020). Grounded theory and thematic analysis were used to identify emergent themes around mask wearing for children and
adults. Out of the 29 interviews, six were double coded by a second coder and Kappa of more than .80 was achieved.

Results

Characteristics of Participating Centers

The ECE center characteristics represented a broad variety of centers in Florida. More than half of the centers participated in Voluntary Pre-Kindergarten (VPK), a voucher program for all 4 year old children in the state. About half were for-profit private schools, close to half accepted school readiness (subsidy) funding, and about one third accepted the Child and Adult Care Food Program (CACFP). Head Start participants were 7.6%, which is consistent with the general participation in Head Start nationally (US Department of Education, 2015) (Table 3).

Characteristics of Survey Respondents

More than 95% of directors and teachers were women, about 20% of both directors and teachers were Hispanic. About 60% identified as White, about 20% Black, and less than 5% selected each of the following: Asian, Native Hawaiian, American Indian, or Other (Table 3).

[Insert Table 3 here]

Survey

Director Survey

The majority of the directors (71.3%) reported that the teachers wore a mask for at least part or all of the mealtime. Only 20% responded that the teachers did not wear masks during the
mealtimes (Table 4). Teachers might wear a mask before a mealtime while serving; they might wear a mask throughout a mealtime if they are not eating and serving in a supervisory role.

[Insert Table 4 here]

**Teacher Survey**

When teachers were asked questions related to their own and the children’s mask wearing before and after mealtimes, more than half reported wearing a mask when getting ready for lunch, helping children wash their hands before lunch, and serving food. Close to half reported wearing a mask when helping children with food brought from home and when helping children with their masks. Only 12% reported not wearing a mask during any of the suggested responses before lunch. Similarly, the majority reported wearing a mask after lunch when helping children clean up, wash their hands, and get ready for nap. Only 16% responded that they did not wear a mask during these times after lunch (Table 5).

Teachers were also asked about if and when children wore masks before and after the mealtime. More than half reported that the children did not wear masks during any of the suggested times both before and after lunch (Table 5).

[Insert Table 5 here]

In general, the survey results showed that more adults wore masks during more times before and after lunch, but fewer children wore masks during similar times.

**Interview**

Although interview responses varied considerably, several distinct approaches emerged from the interview data that are consistent with the survey and explain the different ways that
ECE centers implemented mask-wearing routines: (1) Teachers were required to wear masks, but they were optional for children (2) Teachers and children were both required to wear a mask, and (3) Masks were optional for both teachers and children.

**Model 1: Teachers Required to Wear Masks, Children not Required to Wear Masks**

Interview responses generally supported survey results. For example, the most common situation described in the interviews was that teachers were required by their center’s policy to wear a mask, but children were not. Some respondents verbally reasoned that this was related to the challenges of the children’s young age:

> Sometimes when they come in in the morning, they, they have it on. And then as soon as they come in and if they see that the other kids are not having on, they take it off. They don't take it—this age is three years old. You know, like, it’s hard for them to keep it on. (Teacher 010)

Similarly, another teacher described the lack of masks for children as a result of both their inability to keep it on and center-level policy:

> [pause] Oh, well, the adults are required to wear a mask on the campus at all times... The kids are not required to wear a mask at our school, because of their age. And because some of them have disabilities. They're not required to wear them. (Teacher 029)

Others implied that imposing a mask rule for the children could be a burden for the children: “Our children are not masked at all... our director does not believe [pause] we should do that to the children” (Teacher 002). Similarly, another commented: “I suggest and encourage them to wear their masks. But I have some children who are, like, severely asthmatic, so it's not really good for them to be in a mask that long” (Teacher 028). Finally, one respondent summed up the situation: “I wear a mask. I wear it all the time. The kids don't wear masks.” (Teacher 013).
Within this model, while some comments focused on the children not wearing the mask due to age or ability to keep it on, teachers were described as being required to wear the mask due to a rule or requirement. These comments were not necessarily positive or negative in tone, simply matter-of-fact: “The teachers are required to wear a mask, but not the children.” (Teacher 020) “Yeah, we have to come, you know, with the mask, we can’t even be in the building without one.” (Teacher 015)

While the teacher mask wearing was framed in terms of a rule or requirement, the child’s mask wearing was framed in terms of a parent or child choice:

We are, teachers are required to wear it, we do wear it, the children, some of them do bring the mask and keep them on, but most of them don’t. And we don’t, we don’t force them to, like, they can... if the parents or the children choose. (Teacher 006).

Similarly, “So the teachers wear a mask, the kids are able to wear it if their parents want them to. We don’t require them to wear them. But the teachers, we are required.” (Teacher 005)

**Model 2: Teachers and Children Both Required to Wear Masks**

Respondents in schools that required masks for adults and children both described modified routines for taking masks on and off, storing them, and teaching children to wear them appropriately. In spite of changes, some respondents indicated that children are capable of wearing a mask appropriately:

Yes, we are wearing the mask all day... they just take it off for, to eat and then go outside because we have space outside so they can have, they can be without the mask... They understand very well... in some way they are so little but they understand that something is going on and, they do it so they have been learning to keep the mask all day. And [I] imagine because they see us [teachers] with the mask all day so they do it too. (Teacher 003)

Another described some challenges but the value of getting the children into a consistent routine around the masks:
It’s challenging sometimes, like the first week with the new group there was a lot of ‘no wait, wait, let’s sit back down, what are you missing?’ and they’ll stop and they’ll look at me and once they see that I’m wearing my mask, fix it. But that was only in the first two or three days and ever since then they’ve just said ‘[OK] I’m ready to wear my mask.’ (Teacher 007)

However, others had a harder time managing the children’s mask wearing. One described her belief that the children simply don’t want to keep them on:

Throughout the day, while they’re moving around, learning times, yes they’re wearing masks. It’s hard, though, because they don’t want to keep masks on. And... my class is the older preschoolers, and they still don’t want to keep the mask on. You have to remind them. A lot. (Teacher 001)

Another teacher described the challenge of children playing with their masks rather than wearing them:

Right, they’re still, they're pretty independent, but I'm running into a lot of issues with the mask as to where they're becoming a game and a toy to play with. They don't want to, they don't want to put them on. You know, and things like that. (Teacher 022)

Another teacher described incorporating a storage system into the daily routine to keep masks clean:

So we have a special mask area that has like hanging spots for every kid, it’s designated, each kid has their own hanger... And then when we get to my classroom door, they're taking their masks off, and hanging them up on a hook that is designated for them as well. And then they walk to their designated lunch area. (Teacher 014)

Model 3: Mask-Wearing is Optional for Teachers and Children Both

The third model that emerged from the interviews involved masks as optional for both teachers and children. Similar to Model 1, these situations were often framed in terms of rules and regulations, sometimes from the center director and other times from the county or state licensing or CDC. For example, one respondent describes:
We do not wear them... I feel like I can't breathe with it, working all day with the kids. But our county said it was up to the preschool teachers, so they didn't like, make it mandatory, so my boss, our boss, you know, let us decide if we want to or not. (Teacher 016)

Another teacher shared:

Our boss is not requiring it. I have heard at other facilities, you know, daycares require that. She has left it up to us. If we want to wear a mask. Our director herself, she does wear a mask... but she is not required any of the staff to do so. (Teacher 021)

Others articulated a concern for the well-being of the children, and making decisions at the center level based on what they viewed as best for the children: “I guess, as a facility as a whole, we decided not to do the mask thing, because it wasn't in the best interest of the kids. We have kids who don't respond well to not being able to see our face... none of our students wear masks.” (Teacher 024)

Also similar to some comments in Model 1, some respondents expressed concern about whether young children are capable of keeping a mask on all day:

No, we don't do masks at all, in our school. You can, the option is there. We have some parents try to send them. But the kids again at that age, they don't understand that they need to keep it on. You know, that it can't come off, to put blocks in it to play, you know?” (Teacher 026)

**Discussion**

These findings show that decision-makers (i.e., directors and/or owners) in ECE centers in Florida have implemented mask wearing behaviors in a variety of ways. Although the CDC recommends masks for children ages 2 and older in ECE, it is not required by any regulatory entity, such as state licensing agencies. Therefore, decision makers within individual centers have to determine when and how masks are worn by adults and children. Additionally, mask-wearing is only one of several prevention strategies recommended by the CDC for ECE settings.
Other strategies include “staying home when sick” (in practice this means excluding children and adults for illness), physical distancing, cohorting (i.e., keeping children in fixed groups throughout the day), utilizing adequate ventilation, and cleaning and disinfecting appropriately. However, guidelines are clear that “a mask is NOT a substitute for physical distancing. Masks should still be worn in addition to physical distancing.” (CDC, 2021)

The belief that children could manage wearing a mask was a reason articulated both for why children did and did not wear them. Additionally, some respondents noted that when children saw other children without their mask, they would take it off. Other studies have looked at cultural norms and expectations around mask-wearing in general populations. Wearing masks is an effective strategy for preventing the spread of respiratory infections (Fischer et al., 2021) and a socially accepted practice in some countries. For example, one study that used a survey to assess cultural norms in Spain (which, like the U.S., does not have an existing cultural norm for mask-wearing) found that social norms were more predictive of mask-wearing than the current number of COVID-19 cases in the community (Barceló & Sheen, 2020). Similarly, an analysis of mask-wearing in Japan from before COVID-19 found that although Japan has a strong history of mask-wearing based on health protection (e.g., Spanish flu 1919, swine flu 2009) most individuals could not identify a health reason for wearing one in 2012. Respondents stated that they wore a mask because of family, friends, co-workers and school. In other words, to meet social expectations (Burgess & Horii, 2012). Both studies indicate that implementing a new health behavior such as mask-wearing requires at least some amount of social and cultural “buy-in,” in addition to information about health protection.

Finally, the developmental appropriateness of mask-wearing among young children was articulated by some respondents as a reason for not requiring them. Similar ideas have been
expressed in a review of mask-wearing best practice guidelines: “Therefore, the benefits of wearing masks in children for COVID-19 control should be weighed against potential harm associated with wearing masks, including feasibility and discomfort, as well as social and communication concerns” (Scerri & Grech, 2020, p. 2). In fact, the authors go on to note that the World Health Organization (WHO) recommends that children younger than five years old should not be required to wear a mask. Part of the rationale is “the capacity [of young children] to appropriately use a mask with minimal assistance” (WHO, 2021). Similar concerns about children wearing masks with limited adult supervision—especially as staffing numbers have been reduced in some ECEs—could certainly be a concern in ECE environments as well. In Florida, COVID-19 guidelines for child care providers published in May 2020 included social distancing, cleaning & disinfecting, ratios and maintaining fixed groups, but not mask-wearing. It did include a link to CDC guidelines, which do include mask-wearing (Florida Department of Children and Families, 2020a). All restrictions on group sizes due to COVID-19 were lifted in May 2020 (Florida Department of Children and Families, 2020b). As of May 3, 2021, masks are not required in public per executive order. It is not yet clear how this executive order will influence school and ECE environments. It does supersede local ordinances (State of Florida Office of the Governor, 2021).

**Strengths and Limitations**

Although this study is novel and has some strengths there are limitations in the generalizability of these findings to the state of Florida. Also, because this was part of a larger study, survey questions about mask-wearing were specific to activities around mealtimes, and did not include other times of the day. This study included self-reports and did not verify mask-wearing policies or practices in the centers. However, this study had a large and diverse sample
of ECE centers within the state. It also used two modalities, surveys and interviews, to understand the phenomenon of mask-wearing. Selecting a specific time of day that is generally routinized in ECE to ask all respondents about this specific behavior may improve reliability.

These results are timely because the one-year mark of school closures in most states passed in March 2021. Most typically developing children younger than 5 years old do not remember a time before COVID-19. Public schools (K-12) in Florida have been open, full time, to all students, since August 2020 per executive order from Richard Corcoran, Commissioner of Education (State of Florida, Department of Education, 2020). However, other states that are still closed may benefit from understanding when and how teachers and children wear masks in order to optimize mask wearing in ECE settings. While social desirability bias may impact participant responses, respondents to the survey and interview participants were open in voicing their experiences and concerns.

Implications for Policy, Practice and Future Research

These findings have implications for training and health & safety support for ECE settings during COVID-19 and in the future. Social expectations can be adjusted via cooperation with parents and family members to normalize mask-wearing for young children in ECEs. Additionally, teachers and other adults in ECEs must have appropriate support in managing mask-wearing among young children, which adds to their workload. Future studies could interview parents to understand their point of view, and include direct observation when it becomes possible. There is no vaccine currently for children younger than age 6. Although several vaccines are available to youth and adults older than 16 in Florida, supply is limited and mask wearing is a very important and effective behavioral strategy to reduce the risk of transmission of COVID19.
Appendix L: Data Integration Table

Table L.1: Data Integration

<table>
<thead>
<tr>
<th>Theoretical Construct</th>
<th>Quantitative Measure</th>
<th>Concept</th>
<th>Qualitative Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>(adult responsibility)</td>
<td>Teacher Survey</td>
<td>Adult Responsibilities</td>
<td>Q2a - Tell me about your responsibilities as a teacher during the lunchtime. What do you feel responsible for?</td>
</tr>
<tr>
<td>(adult responsibility)</td>
<td>Q10 - Do children eat lunch at the same time each day?</td>
<td>Child Responsibilities</td>
<td>Q3a - Tell me about what the children are doing during lunchtimes at your school. What are they responsible for during the meal?</td>
</tr>
<tr>
<td>(adult responsibility)</td>
<td>Q11 - Do children eat lunch in the same location each day?</td>
<td>Changes in Responsibilities</td>
<td>Q2b - Have adult responsibilities during the mealtime changed? If so, how?</td>
</tr>
<tr>
<td>(adult responsibility)</td>
<td>Q12 - Are all lunch items served at the same time?</td>
<td></td>
<td>Q2b - Have child responsibilities during the mealtime changed? If so, how?</td>
</tr>
<tr>
<td>(adult responsibility)</td>
<td>Q13 - Is milk served during lunch?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(adult responsibility)</td>
<td>Q14 - Is water served during lunch?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(adult responsibility)</td>
<td>Q15 - Do you sit with the children during lunch?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(adult responsibility)</td>
<td>Q16 - Are additional servings of food available during lunch?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(adult responsibility)</td>
<td>Q20 - Do you have additional responsibilities during lunchtime? (e.g., paperwork, nap mats)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(child responsibility)</td>
<td>Teacher Survey</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(child responsibility)</td>
<td>Q25a,b,c,d - How often do children decide whether, what, how much, and what not to eat?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(child responsibility)</td>
<td>Q26a,b,c,d - How often do children decide whether, what, how much, and what not to drink?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(child responsibility)</td>
<td>Q27a,b - How often do children tell you they feel hungry/full?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(adult &amp; child responsibilities, context)</td>
<td>Q13 - Have your lunchtime routines changed due to COVID-19? (please select all that apply)</td>
<td></td>
<td>Q2b - Have adult responsibilities during the mealtime changed? If so, how?</td>
</tr>
<tr>
<td>(adult &amp; child responsibilities, context)</td>
<td>Q13 - Have your lunchtime routines changed due to COVID-19? (please select all that apply)</td>
<td></td>
<td>Q2b - Have child responsibilities during the mealtime changed? If so, how?</td>
</tr>
</tbody>
</table>
**Table L.1: Data Integration (Continued)**

**Paper Two: Research Question 2—What are caregiver-child feeding practices during COVID and have they changed?**

<table>
<thead>
<tr>
<th>Theoretical Construct</th>
<th>Quantitative Measure</th>
<th>Concept</th>
<th>Qualitative Measure</th>
<th>Teacher Interview</th>
</tr>
</thead>
<tbody>
<tr>
<td>(mealtime interactions)</td>
<td>Q30a-I praise children for cleaning their plates.</td>
<td>Controlling Feeding Practices</td>
<td>Q1a-What are mealtimes like right now at your school? Q2a-Tell me about your responsibilities as a teacher during the lunchtime. What do you feel responsible for?</td>
<td></td>
</tr>
<tr>
<td>(mealtime interactions)</td>
<td>Q30b-I require children to try one bite of each food.</td>
<td></td>
<td>Q3a-Tell me about what the children are doing during mealtimes at your school. What are they responsible for during the meal?</td>
<td></td>
</tr>
<tr>
<td>(mealtime interactions)</td>
<td>Q30f-I encourage children to eat more food when I worry they are not getting enough at home.</td>
<td></td>
<td>Q4a-How are the children doing right now with the changes from COVID-19?</td>
<td></td>
</tr>
<tr>
<td>(mealtime interactions)</td>
<td>Q30e-I stop children from eating too much of any one food so there will be enough for everyone.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(adult responsibility)</td>
<td>Q30g-I let children eat until they are finished.</td>
<td>Autonomy-Supportive Feeding Practices</td>
<td>Q1a-What are mealtimes like right now at your school? Q2a-Tell me about your responsibilities as a teacher during the lunchtime. What do you feel responsible for?</td>
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</tr>
<tr>
<td>(adult responsibility)</td>
<td>Q30i-I talk with the children about the food.</td>
<td></td>
<td>Q3a-Tell me about what the children are doing during mealtimes at your school. What are they responsible for during the meal?</td>
<td></td>
</tr>
<tr>
<td>(adult responsibility)</td>
<td>Q30l-I talk with the children about non-food topics.</td>
<td></td>
<td>Q4a-How are the children doing right now with the changes from COVID-19?</td>
<td></td>
</tr>
<tr>
<td>(adult &amp; child responsibilities)</td>
<td>Q30c-I ask children if they feel hungry.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(adult &amp; child responsibilities)</td>
<td>Q30d-I ask children if they feel full.</td>
<td></td>
<td></td>
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<tr>
<td>(role modeling)</td>
<td>Q30h-I encourage children to try a new food by trying it together with them.</td>
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<tr>
<td>(peer modeling)</td>
<td>Q30l-I encourage children to try a new food by pointing out other children eating the food.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(child responsibility)</td>
<td>Q30m-If a child is not hungry, I will let them sit through the entire meal without eating.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher Survey</td>
<td></td>
<td></td>
<td>Teacher Interview</td>
<td></td>
</tr>
<tr>
<td>(mealtime interactions)</td>
<td>Q31-Has COVID-19 changed the way you interact with the children during a typical mealtime?</td>
<td>Changes in Caregiver-Child Feeding Practices</td>
<td>Q1b-How have mealtimes changed at your school since COVID-19?</td>
<td></td>
</tr>
<tr>
<td>(mealtime interactions)</td>
<td></td>
<td></td>
<td>Q2b-Have adult responsibilities during the mealtime changed? If so, how?</td>
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<tr>
<td>(mealtime interactions)</td>
<td></td>
<td></td>
<td>Q3b-Have child responsibilities during the mealtime changed? If so, how?</td>
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</tr>
<tr>
<td>(mealtime interactions)</td>
<td></td>
<td></td>
<td>Q4b-Have your interactions with the children during the mealtime changed since COVID-19? If so, how?</td>
<td></td>
</tr>
</tbody>
</table>
### Table L.1: Data Integration (Continued)

**Paper Three: Research Question 3-How are teachers combining best practices and new guidelines due to COVID?**

<table>
<thead>
<tr>
<th>Theoretical Construct</th>
<th>Quantitative Measure</th>
<th>Concept</th>
<th>Qualitative Measure</th>
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</thead>
<tbody>
<tr>
<td><strong>Teacher Survey</strong></td>
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<td><strong>Division of Responsibility</strong></td>
<td><strong>Teacher Interview</strong></td>
</tr>
<tr>
<td>(adult &amp; child responsibilities, DoR)</td>
<td>Q12-Which of the following best describes mealtime routines now?</td>
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<td>Q2a-Tell me about your responsibilities as a teacher during the lunchtime. What do you feel responsible for?</td>
</tr>
<tr>
<td>(adult &amp; child responsibilities, DoR)</td>
<td><strong>Director Survey</strong></td>
<td>Q16-Which of the following best describes mealtime routines now?</td>
<td>Q3a-Tell me about what the children are doing during lunchtimes at your school. What are they responsible for during the meal?</td>
</tr>
<tr>
<td>(adult responsibility)</td>
<td>Q14-Do you sit with the children during lunch?*</td>
<td></td>
<td>Q1a-What are mealtimes like right now at your school?</td>
</tr>
<tr>
<td>(adult responsibility)</td>
<td>Q15-Do you eat the same foods as the children during lunch?*</td>
<td></td>
<td>Q2a-Tell me about your responsibilities as a teacher during the lunchtime. What do you feel responsible for?</td>
</tr>
<tr>
<td>(context)</td>
<td>Q16-Are all lunch items served at the same time?*</td>
<td>Q22-Do you have additional responsibilities during lunchtime? (e.g., paperwork, nap mats)</td>
<td>Q3a-Tell me about what the children are doing during lunchtimes at your school. What are they responsible for during the meal?</td>
</tr>
<tr>
<td>(adult responsibilities, context)</td>
<td>Teacher Survey</td>
<td><strong>Best Practices</strong></td>
<td><strong>Teacher Interview</strong></td>
</tr>
<tr>
<td>(adult &amp; child responsibilities, context)</td>
<td>Q13-How have your lunchtime routines changed due to COVID-19? (please select all that apply)</td>
<td></td>
<td>Q2b-Have adult responsibilities during the mealtime changed? If so, how?</td>
</tr>
<tr>
<td>(adult &amp; child responsibilities, context)</td>
<td><strong>Director Survey</strong></td>
<td>Q18-How have your lunchtime routines changed due to COVID-19? (please select all that apply)</td>
<td>Q3b- Have child responsibilities during the mealtime changed? If so, how?</td>
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<tr>
<td>(adult &amp; child responsibilities, context)</td>
<td>Teacher Survey</td>
<td><strong>Changes in Routines &amp; Responsibilities due to COVID-19</strong></td>
<td><strong>Teacher Interview</strong></td>
</tr>
</tbody>
</table>
Appendix M: IRB Exemption Letter

EXEMPT DETERMINATION

July 17, 2020

Joanna Mackie
1553 Maidencane Loop
Oviedo, FL 32765

Dear Joanna Mackie:

On 7/16/2020, the IRB reviewed and approved the following protocol:

<table>
<thead>
<tr>
<th>Application Type:</th>
<th>Initial Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>IRB ID:</td>
<td>STUDY001199</td>
</tr>
<tr>
<td>Review Type:</td>
<td>Exempt (2)</td>
</tr>
<tr>
<td>Title:</td>
<td>A Mixed-Methods Assessment of Mealtime Best Practices in Early Care and Education Settings During COVID-19</td>
</tr>
<tr>
<td>Funding:</td>
<td>None</td>
</tr>
<tr>
<td>Protocol:</td>
<td>• Protocol-clean;</td>
</tr>
</tbody>
</table>

The IRB determined that this protocol meets the criteria for exemption from IRB review.

In conducting this protocol, you are required to follow the requirements listed in the INVESTIGATOR MANUAL (HRP-103).

Please note, as per USF policy, once the exempt determination is made, the application is closed in BullsIRB. This does not limit your ability to conduct the research. Any proposed or anticipated change to the study design that was previously declared exempt from IRB oversight must be submitted to the IRB as a new study prior to initiation of the change. However, administrative changes, including changes in research personnel, do not warrant a modification or new application.

Ongoing IRB review and approval by this organization is not required. This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these activities impact the exempt determination, please submit a new request to the IRB for a determination.

Sincerely,

Katrina Johnson