Appetite 90 (2015) 37–44

Contents lists available at ScienceDirect

Appetite

journal homepage: www.elsevier.com/locate/appet

Research report

An explanatory framework of teachers' perceptions of a positive mealtime environment in a preschool setting ☆

Satoko C. Mita [a], Samuel A. Gray [b], L. Suzanne Goodell [a,*]

[a] Department of Food, Bioprocessing, and Nutrition Sciences, North Carolina State University, Raleigh, NC, USA
[b] Department of Biological Sciences, North Carolina State University, Raleigh, NC, USA

ARTICLE INFO

Article history:
Received 27 June 2014
Received in revised form 20 February 2015
Accepted 21 February 2015
Available online 26 February 2015

Keywords:
Preschool teachers
Mealtime environment
Healthy eating
Grounded theory
Qualitative research

ABSTRACT

Attending a preschool center may help preschoolers with growth and development that encourage a healthy lifestyle, including sound eating behaviors. Providing a positive mealtime environment (PME) may be one of the keys to fostering a child's healthy eating habits in the classroom. However, a specific definition of a PME, the components of a PME, or directions on how to create one have not been established. The purpose of this study, therefore, was to explore Head Start teachers' perceptions related to a PME and create a conceptual framework representing these perceptions. To achieve this purpose, researchers conducted 65 in-depth phone interviews with Head Start teachers around the US. Applying principles of grounded theory, researchers developed a conceptual framework depicting teachers' perceptions of PME, consisting of five key components: (1) the people (i.e., teachers, kitchen staff, parent volunteers, and children), (2) positive emotional tone (e.g., relaxed and happy), (3) rules, expectations, and routines (e.g., family-style mealtime), (4) operations of a PME (i.e., eating, socialization, and learning), and (5) both short- and long-term outcomes of a PME. With this PME framework, researchers may be able to enhance the effectiveness of nutrition interventions related to a PME, focusing on the factors in the conceptual framework as well as barriers associated with achieving these factors.

Introduction

More than half of preschoolers, who are aged 3 to 6 years and not enrolled in kindergarten, receive some type of care at center-based programs (Federal Interagency Forum on Child and Family Statistics, 2013). Because early childhood programs, including Head Start (i.e., the federally-funded program for children from low-income families), have focused their services not only on education, but also on health and nutrition (Office of Head Start, n.d.), attending a preschool center may help preschoolers with growth and development that encourage a healthy lifestyle, including sound eating behaviors. To identify how preschool centers help preschoolers develop sound nutrition habits, researchers are focusing on many aspects of preschool life, such as the practices preschool teachers use to support their students' development of healthy eating habits (Freedman & Alvarez, 2010; Goodell, Goh, Hughes, & Nicklas, 2010; Mita, Li, & Goodell, 2013; Ramsay et al., 2010).

Of the many contributing factors included within preschool teachers' practices at mealtimes, providing a pleasant mealtime atmosphere throughout the meal may be one of the keys to developing a child's sound eating behaviors as reflected in the Dietary Guidelines for Americans (US Department of Agriculture and US Department of Health and Human Services, 2010). Theoretically, if children spend time in a positive mealtime environment, they will establish positive associations with foods served during the mealtime and will thus develop preferences for those foods. These positive eating experiences could be a predictor of healthy eating habits later in life. For example, adults who reported enjoying meals in childhood are more likely to consume a balanced diet and include vegetables in their meals (Ainuki, Akamatsu, Hayashi, & Takemi, 2013). In contrast, individuals who have memories of being forced to eat particular foods in childhood are more likely to avoid the foods in adulthood (Batsell, Brown, Ansfield, & Paschall, 2002).

In preschool mealtime studies, researchers have referred to what we (the authors) would call a positive mealtime environment in varying terms, including pleasant mealtime environments (Johnson, Ramsay, Shultz, Branen, & Fletcher, 2013), a supportive feeding environment (Sigman-Grant et al., 2011), and a positive mealtime environment (Benjamin Neelon & Briley, 2011). No matter the term used for this type of mealtime, its underlying components are similar. Examples of recommended mealtime practices include: a clean and safe mealtime environment (American Academy of Pediatrics, American Public Health Association, National Resource Center for Health and Safety in Child Care and Early Education, 2011; Benjamin Neelon & Briley, 2011; National Association for the Education of

☆ *Acknowledgements:* We would like to thank North Carolina State University Undergraduate Research Grant for financial support for the work. This manuscript will be included as a part of Satoko Mita's dissertation at North Carolina State University.

* Corresponding author.
E-mail address: suzie_goodell@ncsu.edu (L.S. Goodell).

http://dx.doi.org/10.1016/j.appet.2015.02.031
0195-6663/

Young Children, 2014; US Department of Agriculture. Child and Adult Care Food Program, n.d.; US Department of Health and Human Services, 2006), age-appropriate equipment (e.g., chairs) and utensils (Fletcher, Branen, Price, & Matthews, 2005; Hagan, Shaw, & Duncan, 2008), and allowing the child to serve him/herself (Benjamin Neelon & Briley, 2011; National Association for the Education of Young Children, 2014). Among effective practices to support children's development, adults are recommended to sit with children (National Association for the Education of Young Children, 2014; US Department of Health and Human Services, 2006), be a positive role model by eating the same food with children (American Academy of Pediatrics, American Public Health Association, National Resource Center for Health and Safety in Child Care and Early Education, 2011; Benjamin Neelon & Briley, 2011), and provide verbal encouragement ("*Mmm! I love mangos!*") (Hendy & Raudenbush, 2000) while helping recognize children's internal cues (Ramsay et al., 2010).

While the creation of a positive mealtime environment can positively influence healthy eating habits in children, of the existing childcare-related guidelines from different early childhood professionals (American Academy of Pediatrics, American Public Health Association, National Resource Center for Health and Safety in Child Care and Early Education, 2011; Benjamin Neelon & Briley, 2011; National Association for the Education of Young Children, 2014; US Department of Health and Human Services, 2006), only the Academy of Nutrition and Dietetics (the Academy) has acknowledged the importance of the preschool teachers' role in creating a positive mealtime environment (PME), stating: "*[c]hild-care providers should be knowledgeable about. . .strategies for creating a positive mealtime environment. . .*" (Benjamin Neelon & Briley, 2011). However, neither the Academy nor the existing literature provides a specific definition of a PME, the components of a PME, or directions on how to create it. Thus, the term "PME" remains ambiguous, and this lack of clear PME-related guidelines at many levels, as well as the lack of training opportunities that allow teachers to consistently contextualize mealtime-related guidelines/policy (Sigman-Grant et al., 2011), may be one of the factors that could lead to undesirable mealtime practices in the preschool setting. As a result, teachers may use unsupportive practices at mealtimes (Benjamin Neelon, Vaughn, Ball, McWilliams, & Ward, 2012; Sigman-Grant et al., 2011); for example, childcare staff may serve seconds without asking whether children were still hungry (Benjamin Neelon et al., 2012).

Furthermore, despite the existence of mealtime-related quantitative studies, the focus of those studies was more on teachers' practices, quality of food served at mealtimes (Benjamin Neelon et al., 2012), and mealtime routines (Sigman-Grant, Christiansen, Branen, Fletcher, & Johnson, 2008). Additionally, though in the quantitative work by Sigman-Grant et al. (2011) the authors defined key mealtime factors that should be emphasized to support a child's healthy eating habits, little is known about how each component is interrelated to create a PME and how preschool teachers perceive a PME.

The purpose of this study, therefore, was to qualitatively elucidate Head Start teachers' perceptions related to a PME and to create a conceptual framework representing these perceptions, thus conceptualizing the complexity of mealtimes at preschools and illustrating the factors that influence a PME. Because their perceptions of a PME can positively or negatively impact their mealtime practices and thus their students' eating, assessing teacher perceptions around creating a PME is important. To accomplish this goal, researchers interviewed Head Start teachers across the US, asking them to define a PME in a preschool setting and to identify the factors that influence the creation of a PME. In the future, researchers may be able to use our conceptual framework as a foundation to identify the gaps between what teachers perceive as important and what observational evidence suggests for promoting a PME. If such gaps exist, educators can then create educational curricula to assist preschool teachers in effectively establishing a classroom PME.

Materials and methods

Research design

Applying principles of grounded theory (Charmaz, 2006; Creswell, 2012) to explore Head Start teachers' perceptions of a PME, researchers conducted 65 in-depth phone interviews with Head Start teachers in the US between March 2012 and February 2013. While recognizing the importance of conducting the present study with all preschool teachers regardless of who they serve, researchers targeted teachers at Head Start (i.e., the federally-funded preschool program for children from low-income families) because these teachers work with low-income children who are at greater risk for obesity (Ogden, Lamb, Carroll, & Flegal, 2010) and low intake of some of the essential nutrients (Bucholz, Desai, & Rosenthal, 2011). North Carolina State University's Institutional Review Board approved the methods included in this study.

Sampling and recruitment

Head Start preschool teachers in the US were recruited from centers serving different proportions of ethnic groups (e.g., African American, Caucasian, Hispanic, Asian, and Native American). To be included in the study, participants were required to be either Head Start preschool teachers or teacher assistants, be over the age of 18, work with three- to five-year-olds, and be present with preschool children in a classroom (not in a cafeteria) during mealtimes. Investigators combined a nationwide sampling technique with snowball sampling (Marshall, 1996) for recruitment. First, using the guidance of Census Regions and Divisions of US (US Department of Commerce, n.d.), researchers aimed to recruit 20 study participants per region (i.e., West, Midwest, Northeast, and South). Researchers used the Head Start Locator tool (US Department of Health and Human Services, n.d.) to obtain contact information for Head Start center directors and administrators. Then, investigators asked administrators and center directors to forward a recruitment email to teachers and/or to aid in identification of teachers who might be willing to participate in the project. Additionally, to aid in recruitment, at the end of each interview researchers asked study participants to help recruit other teachers they knew might be interested in participating in the study. Interviewers and researchers had no established relationships with participants or their centers prior to data collection. Administrators and center directors were not told which of their teachers, if any, participated in the study; the research confidentiality plan, along with other parts of the consent form, was explained to participants before verbal consent was given. Per IRB protocol and as described to the participant, the interviewer then wrote a study participant's name and the date on the interviewer's copy of the consent form. This indicated that the teacher had given his/her verbal consent to participate. The interviewer also signed and dated the form. After the interview, researchers sent study participants a copy of the final consent form.

Measurement instruments

To insure consistency in data collection, interviewers used a standardized interview guide, which included open-ended major questions and probes, in all the interview sessions. The interview questions were preceded by a series of warm-up questions designed to help teachers feel more comfortable speaking with the interviewer. The questions then became more focused as the interview progressed, eliciting Head Start teachers' perceptions related