An Overview of Problematic Eating and Food-related Behavior among Foster Children: Definitions, Etiology, and Intervention

Carolyn M. Casey

Catherine Cook-Cottone

Meredith Beck-Joslyn

University at Buffalo, The State University of New York

Acknowledgments: This work originated from a College Partnership Research Project made possible through a training and administrative services agreement between the New York State Office of Children and Family Services and the Research Foundation of SUNY Buffalo State College Center for Development of Human Services. Special thanks to Tom Needell, Child Welfare Trainer, and Vivian Figliotti, Child Welfare Trainer, for their assistance with this project.

Correspondence to: Catherine Cook-Cottone, Ph.D., Department of Counseling, School, and Educational Psychology, 424 Baldy Hall, SUNY at Buffalo, Buffalo, NY 14260. E-mail: cpcook@buffalo.edu

Abstract

Although several studies have identified problematic eating and food-related behaviors (e.g., Bulimia Nervosa, hoarding, obesity) as significant concerns among children in foster care, there is little evidence-based guidance on how practitioners may appropriately identify and treat children with these concerns. The current review describes the scope of eating and food-related difficulties among foster children, discusses potential etiological factors associated with these behaviors, reviews prevention and intervention strategies, and highlights implications for future research. All of these topics are aimed toward child welfare workers who are likely to encounter these eating patterns in practice. In addition to addressing problematic behaviors, this review also incorporates strategies for the promotion of healthy nutrition among families in the welfare system.

Key Words: Foster Care, Eating, Nutrition

An Overview of Problematic Eating and Food-related Behavior among Foster Children: Definitions, Etiology, and Intervention

Introduction

It is well established that children in foster care are at increased risk for both physical and mental health difficulties (Hansen, Mawjee, Barton, Metcalf, & Joye, 2004; Steele and Buchi, 2008). Within the context of family separation, loss, and trauma, and the many other pressing issues presenting when children are placed in foster care, eating and food-related behaviors are often ignored. Accordingly, these often problematic behaviors associated with food and meal-time have not been systematically addressed in practitioner training curricula or in many parenting programs. Despite this lack of attention, recent evidence suggests that problem eating and food-related behavior is prevalent among children in foster care (Tarren-Sweeney, 2006), and, in some cases, reaches clinical levels. For example, results of a large, national survey on mental health outcomes of youth who had once been in foster care (Pecora et al., 2005) found rates of Bulimia Nervosa (BN) to be 2.9%, which is an alarming seven times higher than the 0.4% rate found in the general population.

Given the evidence that foster care children may be at an increased risk for a range of problematic eating, greater attention to nutrition and eating behaviors may be warranted on the part of those who participate in the care of these children (DuRousseau, Moquette-Magee, & Disbrow, 1991; Tarren-Sweeney, 2006). Child welfare workers are in a unique position to provide both preventive services and appropriate interventions in this area. However, current legal mandates that guide child welfare workers lack definitional specificity in relation to food and nutrition practices. That is, according to article 1012(f) of the Family Court Act, child

neglect is partially defined as failing to "exercise a minimum degree of care in supplying the child with adequate food, clothing, shelter, or education…" (Legal References, 2010, p. 3). Given that there is no further explanation in regard to what it means to provide "adequate food," caseworkers may not have the necessary knowledge and guidance for assessing feeding, nutrition practices, and associated eating and food-related behavior within families and determining when a situation can be considered out of the bounds of minimum care. Given this, evidence of nutritional concerns or inadequate provision of food in the home may only be manifested through problem eating and food-related behaviors that emerge among children in the child welfare system.

Although there has been rising concern among practitioners, and an increasing number of research articles identifying food and eating-related behaviors as problematic among children in foster care, there have been no reviews detailing the breadth of the problem and the current state of prevention and intervention practices. To address this need, the current review describes the scope of eating and food-related difficulties among foster children, defines terms and etiological factors, reviews prevention and intervention strategies, and discusses future directions. Specifically, in order to help child welfare workers feel better prepared to identify and address feeding or nutrition concerns that may arise, it is important that they have a basic understanding of the following areas: (a) nutritional guidelines and expectations that can be used to promote well-being among children in foster families, (b) how to assess and handle problematic eating and food-related behaviors, and (c) the point at which children should be referred to a mental health or medical professional for more intensive interventions. Notably, the three child welfare outcomes (i.e., safety, permanency, and well-being; Administration for Children & Families, 2010) should always guide workers' practice. Accordingly, problem eating and food-related

behaviors, especially at clinical levels, can be considered a potential risk to children's safety; therefore, providing appropriate prevention and intervention in this area would be consistent with the primary objectives in this field.

Scope of the Problem and Definitions

Those working within the foster care systems should have an understanding of the different eating and food-related behaviors they may encounter, as well as knowledge associated with etiology and risk.

Problem Eating and Food-related Behaviors

Within the past 20 years empirical evidence has emerged suggesting that problematic eating behaviors are elevated among children in foster care (e.g., DuRousseau et al., 1991; Pecora et al., 2005; Thompson, Authier, & Ruma, 1994). Although much more research is needed to determine more specific prevalence rates, exploratory research suggests that the scope of the problem is substantial. For example, Thompson et al. (1994) conducted a two-part exploratory study to examine concerns among children in foster care with a history of sexual abuse (N = 300). Among the other behavioral difficulties identified, 77% of foster parents reported that their children exhibited eating problems either sometimes or frequently, with 23% of foster parents finding these behaviors bothersome. When broken down by age group, foster parents reported eating problems among 61% of children 0-5 years of age, 96% of children 6-10 years of age, 79% of children 11-13 years of age, and 65% of adolescents 14 years of age and older (Thompson et al., 1994).

Various food and eating behavior problems have been identified among children in the foster care system (DuRousseau et al., 1991). These include clinical eating disorders such as Bulimia Nervosa (Pecora et al., 2005), as well as sub-clinical eating behaviors (e.g., binge-

eating) and food-related problem behaviors (e.g., hoarding food and stealing food). Studies conducted by Demb (1991) and Ayoob, Kaminer, and Zawel (1994) have also brought attention to a phenomenon characterized by a voracious appetite and over-eating among foster care children without obesity; this pattern of behavior has been termed "hyperphagia," and highlighted as a concern that calls for more detailed research and explanation. Tarren-Sweeney (2006) also identified two distinct patterns of problematic eating behaviors among a large sample of children in care: "food maintenance syndrome," characterized by behaviors such as overeating, hoarding, or stealing food, and "pica-type cluster," characterized by eating things that are not food, or eating from unhealthy sources (e.g., the garbage). Eating non-food items can be observed among infants before ages 18-24 months (American Psychiatric Association [APA], 2000). However, pica describes the phenomenon of eating "nonnutritive substances" at an age when it is developmentally inappropriate (APA, 2000). In addition to these reports, Steele and Buchi (2008) found overweight and obesity to be a significant concern among a large sample of children who were assessed at their time of entry into the foster care system. That is, among a total sample of 6,177 foster children, 35% of children over age three were found to have a Body Mass Index (BMI) at or above the 85th percentile (Steele & Buchi, 2008).

In one of the few comprehensive studies intended to specifically target issues of problematic eating and food-related behaviors among this population, Tarren-Sweeney (2006) sampled 347 four to eleven year old foster care children in Australia to examine the prevalence of food maintenance syndrome and pica-type behaviors. Overall results demonstrated that 24% of the children in the sample fell within the "nominal borderline or clinical ranges" for eating problems (p. 628). Among the findings discussed by Tarren-Sweeney (2006) was the fact that maltreatment in the children's current placement was found to be a significant predictor of food

maintenance syndrome, and that this pattern of eating problems appeared to be prompted by "acute stress" (p. 632). Interestingly, Tarren-Sweeney (2006) reported that the majority of children with identified eating problems were not overweight, suggesting that these children may not receive appropriate assessment if they appear to be of a healthy weight at the time of the evaluation. Although the focus of the Tarren-Sweeney (2006) study was on eating behaviors, it is important to note that results from the behavior rating scales suggested that the majority of children with eating concerns also met criteria for a "global psychiatric disturbance" (p. 629). This suggests that these children may be facing a range of challenges that places them at risk for more than just difficulties with eating.

Consistent with the objectives of the Tarren-Sweeney (2006) study, DuRousseau and colleagues (1991) examined nutritional risk factors among 27 foster care children who ranged in age from one to ten years. Authors used a combination of a review of medical records and a 24-hour dietary recall to assess levels of nutritional risk. Overall, nearly 30% of children demonstrated problematic eating and food-related behaviors (e.g., through gorging food, stealing and hiding food, purging, or refusing food). According to DuRousseau et al. (1991), "delayed physical and emotional development coupled with behavioral problems provide the environment for the appearance of distorted feeding patterns" (p. 84).

Risk and Etiology of Problematic Eating and Food-related Behavior Among Children in Foster Care

There are several factors associated with being a child placed in foster care that are also associated with risk for problem eating and food-related behaviors. For example, one potential reason for the discrepancy in the prevalence of Bulimia may be the fact that some researchers have identified an association between childhood maltreatment or trauma and disordered eating

(Grilo, & Masheb, 2002; Smyth, Heron, Wonderlich, Crosby, & Thompson, 2008; Wonderlich et al., 2001). A review of the prevalence of trauma history among foster care alumni suggests that these alumni suffer from Post-Traumatic Stress Disorder (PTSD) at far greater rates (21.5%) than those in the general population (4.5%; Pecora et al., 2005), which may leave them vulnerable to the development of eating disorders. Among the more general risk factors for classic eating disorders are being overweight, having co-morbid mental health concerns (e.g., anxiety or depression), feeling cultural pressures to be thin, and having co-morbid personality disorders (Simon & Zieve, 2010).

Similarly, a review of the literature suggests that problem behaviors associated with food (e.g., pica behaviors, hoarding/stealing food) have a range of potential causes. For example, pica has been identified as more prevalent among children with developmental delays (e.g., autism spectrum disorders or intellectual disability; APA, 2000; Barrett, 2008). According to Barrett (2008), children may engage in this behavior for a variety of reasons that include the need to satisfy sensory sensitivities (i.e., they likely enjoy the taste of these items in their mouths), imitate pets or animals, or receive attention from adults. Of note, children may also engage in this behavior because they are predisposed to pica as a result of genetic or neurobiological predisposition.

In contrast to pica, there is little available research on the etiology of hoarding or stealing food among children. However, a search of more informal literature has identified some potential insight into these behaviors. For example, Perry (2001) describes problematic food behaviors (e.g., hoarding, excessive eating, throwing up) as a potential consequence of childhood maltreatment and early attachment difficulties, and Becker-Weidman (2010) adds that these behaviors may have actually been adaptive for many children at one point if they did not have

reliable or consistent access to food. Given the lack of academic research articles on the causes of and interventions for these behaviors, hoarding and food stealing appear to be concerns that have been observed in the field, but not yet fully detailed in research.

Challenges to Eating Well

Beyond developmental and familial/interpersonal influences, there are often broader societal challenges that affect a family's ability to feed children healthy, nutritious food. Barriers include sociocultural influences, food costs, and access to healthy foods.

Sociocultural influences. First, research has identified food practices that are ultimately connected to sociocultural values (Kaufman & Karpati, 2007). In a qualitative study of 12 families from a primarily Latino, low-income area in Brooklyn, Kaufman and Karpati (2007) found that being overweight can be normalized across family generations. In fact, some mothers in this study associated overweight with safety (i.e., they viewed heavier children as less physically vulnerable). Consistent with this, Pak-Gorstein, Haq, and Graham (2009) found that some Somali immigrant women may have past experiences that drive them to overfeed their infants to ensure that they do not go underfed, and instead appear "chubby" (p. 16). In addition to these views on weight, Kaufman and Karpati (2007) also highlighted that family visits are often connected with food sharing, or eating meals together. More specifically, their study participants note that children's visits with absent fathers are often connected with meal sharing, including the provision of high fat/sugary foods (Kaufman & Karpati, 2007). It is possible that this is intended to please or placate the child, and that there is a failure to balance food-oriented visitations with more active interactions.

Food costs. Aside from the importance of sociocultural factors, the role of food costs has also been the focus of much research; that is, given the identified sociocultural barriers to

nutrition, some have questioned whether lower income families can realistically practice healthy eating behaviors. A review of the literature in this area suggests mixed support for the impact of food costs on eating well. In a qualitative study on factors influencing different health behaviors among Latina mothers and their children, Lindsay, Sussner, Greaney, and Peterson (2009) found that socioeconomic status presented a challenge to the study participants (i.e., these families identified economic constraints as a impediment to healthy eating). Consistent with this, Darmon, Briend, and Drewnowski (2004) found that more energy dense diets (i.e., those that consist of a high number of fats and sweets) were associated with lower costs, which lends support to the notion that unhealthy eating may be more cost-effective for lower income families. The purchase of fruits and vegetables in particular appears to contribute most significantly to higher expenses (Cade, Upmeier, Calvert, & Greenwood, 1999). In contrast, Horowitz, Colson, Hebert, and Lancaster (2004) compared supermarket access and food costs between two communities with different socioeconomic profiles, and unexpectedly found that food prices in East Harlem (a lower income neighborhood) were in fact *lower* than prices in the Upper East Side (a higher income neighborhood). However, the authors pointed to a four-fold difference in salary between the two communities, suggesting that East Harlem residents may be spending a larger proportion of income on food.

Access to healthy foods. In addition to examining the sheer costs of different foods, access to food markets and stores has also been studied in lower income neighborhoods. In a qualitative study of nutrition and feeding practices among Latina families living in Boston, Massachusetts, participants reported that families in lower income neighborhoods often lack access to supermarkets where healthy food can be purchased at a reasonable price (Lindsay et al., 2009). To address this question, Horowitz and colleagues (2004) compared factors associated

with supermarket access in East Harlem and the Upper East Side in New York City. Results of their study indicated that there were, in fact, many supermarket options in a low income East Harlem neighborhood; however, when compared to a higher income area, East Harlem had fewer large supermarkets, and more “undesirable stores” (Horowitz et al., 2004, p. 1553). In a study examining how access to supermarkets was related to fruit and vegetable consumption among a sample of US Food Stamp Program participants, Rose and Richards (2004) found that 76% of participants had what the authors identified as “easy access” to a supermarket, which was based on car ownership and travel time to the store (i.e., less than 30 minutes). Nearly three-quarters of study participants lived within five miles of their principal store (i.e., the store in which they completed the majority of their shopping; Rose & Richards, 2004, p. 1085). Although Rose and Richards (2004) found that the majority of their participants had easy access to supermarkets, supermarket access did significantly influence fruit consumption; participants who lived more than five miles from their principal store consumed fewer fruits compared to those within one mile of their principal store. Further, participants who had “easy access” to supermarkets consumed significantly more fruits when compared to participants who had no access (Rose & Richards, 2004). Of note, there were no significant differences between access variables and vegetable consumption. Although the research is somewhat mixed, food costs and supermarket access may present as additional barriers for lower-income families. Given these and other sociocultural barriers, lower income families may require additional attention and thorough assessment in this area.

Assessment

In order to identify children with eating and nutritional difficulties, and provide them with the most appropriate care, researchers emphasize the importance of proper assessment in

this area. According to Ayoob and Barresi (2007), who reviewed strategies for intervening with younger children presenting with feeding disorders, growth may not be a reliable indicator of feeding skills. Specifically, normal growth indicates only that reasonably adequate nutrition is probably being provided. It does not indicate how children are being fed, nor what feeding skills they are using. Because of this, Ayoob and Barresi (2007) report that a comprehensive assessment for eating problems should include a medical and psychosocial history with a focus on eating-related difficulties. Among the current issues to be addressed are details about the feeding environment, observations of feeding skills, schedules, and the manner in which the child is fed (Ayoob & Barresi, 2007). Finally, it is important to reiterate that Tarren-Sweeney (2006) found that the majority of foster care children with identified eating problems were not overweight. Given this finding, a comprehensive assessment for all children, regardless of their physical presentations, should be considered.

In order to inform practice in the field of child welfare, three unique assessment methods will be briefly outlined here. Although there are many assessment tools to address classic eating disorders, the three outlined below pay particular attention to issues of the parent-child relationship and environment, the foster care system, and the less researched behaviors such as hoarding and excessive eating; each of these has particular relevance to the child welfare field. First, Davies et al. (2006) presented a new method for diagnosing feeding problems in childhood, which they have termed "Feeding Disorder Between Parent and Child." This diagnosis consists of multiple axes with different criteria on each axis, and addresses characteristics of the parent, child, parent-child relationship, and the environment. This model assumes that feeding difficulties may have more than just physiological origins. Instead, this model focuses on the

importance of the complexities of the relationship between children and their caregivers (see Davies et al., 2006, to access the specific diagnostic criteria included in this assessment).

In a second assessment method, Beck-Joslyn (2009) created a tool in the form of a workbook (called the Comprehensive Assessment for Disordered Eating Behaviors in Foster Care) specifically intended for caseworker use. Because health problems, including diabetes, decreased neurological function, delayed speech, behavioral problems, depression, attachment concerns, and obesity have been observed as persistent issues resulting from maltreatment or neglect, including poor nutrition (DuRousseau, et al., 1991; Hadfield & Preece, 2008), Beck-Joslyn's (2009) assessment is particularly relevant. This workbook is also consistent with The American Academy of Pediatrics Committee on Early Childhood, Adoption, and Dependent Care (2000) recommendation to employ comprehensive assessment for children during and after foster care placement based on issues significant to development, such as attachment, brain development, and abuse and neglect. Leslie et al. (2003) concluded that, while assessments are administered for physical health, accessible and applied mental health and developmental assessments for children and adolescents entering foster care are limited.

Beck-Joslyn's (2009) workbook includes observational guidelines, eating-based questions to include in conversation with children and adolescents, and different worksheets/activities that can be used with foster care youth to invite conversations about eating behaviors. The workbook informally assesses body mass index with narrative questions, per recommendation from The American Academy of Pediatrics' (2003) policy statement on identifying and treating eating disorders. Littleton & Ollendick (2003) established the importance of assessing body image and disordered eating behaviors in children and adolescents who come from homes with low levels of parental caring, low parental expectations, and unhealthy

communication patterns, as these children and adolescents are at higher risk for developing disordered eating patterns. Awareness and assessment of body mass index scores, nutrition, and wellness from foster care workers is also necessary for appropriate prevention, and referral for persistent medical and developmental problems (DuRousseau et al., 1991; Hadfield & Preece, 2008). Overall, it is recommended that child welfare workers become familiar with different assessments that could help them to identify potential difficulties early, in order to facilitate the allocation of appropriate services.

Finally, for caseworkers who suspect problematic eating and food-related behaviors that have been outlined in the current review, the Assessment Checklist for Children (ACC; Tarren-Sweeney, 2007) can be an appropriate tool to utilize. The ACC was specifically created for children in foster care, and contains several items that directly address food-related behaviors. For example, Clinical Scale VIII (Food Maintenance) includes questions about excessive eating, hoarding, and stealing food. Further, Clinical Scale IX (Self-Injury) targets questions about self-induced vomiting, and pica-type behaviors (e.g., drinking from unhealthy sources and eating non-food items; Tarren-Sweeney, 2007).

Prevention and Intervention

In order to support general well-being among foster care children and prevent the onset of problem eating and food-related behaviors, families may benefit from psychoeducation around healthy nutrition, targeted nutrition, family meals, physical exercise, and target behavioral interventions. It is important to note that many of these nutrition and health promotion guidelines have been elicited from broad recommendations aimed at the general public, and may not fully appreciate the challenges that lower-income families face when it comes to obtaining appropriate nutrition. Given this, child welfare workers may need to adapt some of the information to suit

their families' specific needs. If health promotion efforts are insufficient, and for those children and adolescents who develop problematic eating and food-related behaviors, a referral to the appropriate team of professionals is recommended for a comprehensive assessment and treatment.

Psychoeducation on Nutrition

Some psychoeducational programs have proven effective. For example, Gamache, Mirabell, and Avery (2006) demonstrated positive effects on foster parent confidence and knowledge using a one-hour Women, Infants and Children (WIC) infant care training that focused on nutrition instruction (i.e., early brain development, nutrition, community resources, and communication). Given potential benefits to children and families, child welfare workers should be prepared to provide families with the appropriate food and nutrition resources (e.g., information from the American Dietetic Association [ADA] website eatright.org, or the United States Department of Agriculture [USDA] website mypyramid.gov). These two comprehensive nutrition organizations provide information on a range of nutrition topics, from breastfeeding to healthy eating behaviors among teenagers.

Targeted Nutritional Resources

For families who may be struggling to provide adequate nutrition for their children, case workers should also be prepared with more targeted nutritional resources. Among these, WIC provides food benefits for child-bearing women, infants, and children through age five (US Department of Agriculture, 2009b). Further, families should also be encouraged to take advantage of free or reduced lunches through their children's school districts (Hunger Action Network, n.d.). If these prevention efforts are not sufficient, and children are observed to be exhibiting problematic eating and food-related behavior, immediate and early intervention

should be provided. In the effort to address this, foster care workers can act as consultants to help families identify and cope with their children's behavioral eating concerns.

For those families for whom cost is a barrier to healthy eating, the United States Department of Agriculture (USDA) utilizes what it calls the Thrifty Food Plan (TFP), which is considered to be a "nutritious, minimal-cost diet," and the "basis for the maximum food stamp allotment" (Carlson, Lino, Juan, Hanson, & Basiotis, 2007, p. 35). According to Carlson and colleagues (2007), the TFP makes it possible for lower income families to eat a diet that meets nutritional standards. Although the Thrifty Food Plan represents one option for lower income families receiving a maximum food stamp allotment, other researchers examining the economic costs of healthy eating suggest that public policy should target the costs of healthy foods (e.g., specifically in regard to the cost of fruits and vegetables; Cassady, Jetter, & Culp, 2007), and that health promotion efforts should focus on understanding and appreciating the importance of healthy eating (Cade et al., 1999). Further, according to Cassady et al. (2007), families may also benefit from information on budgeting to help them incorporate healthier foods into their diets.

Family Mealtimes

Although there is not specific academic research publications on the benefits of meal times for children in foster care or families at risk, those working in foster care can inform their practice with guidelines from national organizations, as well as research on reducing the risk for problematic eating and food-related behavior among those in the general population.

Both the ADA and the USDA address the association between eating and relationships; for example, they emphasize that eating and mealtimes should be enjoyable experiences for families, and that mealtime discussions should be positive, and include children (US Department of Agriculture, 2009a). Consistent with these recommendations, a review of research on family

mealtime behaviors suggests that eating together as a family may be protective against several problematic eating behaviors. In a 5-year longitudinal study examining the relationship between family meals and unhealthy eating behaviors, the authors found a lower prevalence of extreme weight control behaviors (e.g., self-induced vomiting, using medications to control weight) among adolescent girls who regularly ate meals with their families (Neumark-Sztainer, Eisenberg, Fulkerson, Story, & Larson, 2008). It is important to note that this significant finding was not replicated among male participants (Neumark-Sztainer et al., 2008).

Additional research on the impact of family meals on problematic eating behaviors was conducted by Ackard and Neumark-Sztainer (2001). Primary findings from this study indicated that female college students who ate dinner with their families five or more times per week growing up had significantly lower scores on measures of bulimic behavior. The authors suggest that family meals may increase the opportunity for problem-solving among family members, and provide appropriate modeling for good nutrition, eating behaviors, and interactions. Despite the apparent importance of eating together as families, Ackard and Neumark-Sztainer (2001) do caution that eating together may be problematic in some situations (e.g., if family members engage in unhealthy eating behaviors during mealtimes).

Finally, recent efforts have been aimed at promoting family mealtimes among families from lower socioeconomic backgrounds. Specifically, Johnson, Birkett, Evens, and Pickering (2006) conducted preliminary evaluations of a “Promoting Family Meals” module intended for use by Women, Infants, and Children (WIC) employees and clients. Preliminary self-report survey results indicated that participating families increased their frequency of engaging in family meals following these promotional efforts. Although the focus of this study was not on

foster care families specifically, it is possible that this intervention could be evaluated among the foster care population as a part of future research efforts.

Regular Physical Activity

In addition to promoting healthy mealtime behaviors, it is also important for child welfare workers to encourage families to engage in regular physical activity as a part of a healthy lifestyle. In this effort, the American Academy of Pediatrics Committee on Public Education (2001) recommends no more than 1-2 hours of media time for children, and cautions against the use of *any* television exposure for children younger than two years of age. Research conducted by Robinson (1999) has demonstrated that an intervention intended to reduce sedentary behaviors alone can have a positive impact on children's weight. For families who may be concerned about accessing safe areas for children to play in the neighborhood, child welfare workers should become familiar with local community resources that may offer alternative areas for play (e.g., Boys and Girls Club, or school buildings).

Targeted Behavioral Interventions

Despite the research linking foster care children with higher rates of problematic eating and food-related behavior, information on evidence-based interventions for these children is sparse. Current research suggests that behavior management strategies appear to be a common method of treating some of these concerns. Although not directly addressing issues of problematic eating and food-related behaviors, Linscheid (2006) offers some guidance in behavioral management of pediatric feeding disorders that may be relevant to the current review. Linscheid (2006) argues that it would be difficult to develop a manualized treatment for children with feeding problems due to the variability in presentation, and the fact that individual goals may change throughout treatment. Given this, interventions may need to be tailored for each

family. Among the general intervention recommendations made by Linscheid (2006) is to keep mealtimes brief (i.e., no longer than 25 minutes) to avoid prolonging a negative experience for children. He suggests using positive reinforcement that includes praise and earning the opportunity to play with preferred toys. To deal with negative mealtime behaviors that may arise, Linscheid (2006) suggests using brief time-out periods. To help families in this intervention effort, interventionists can engage in supportive activities such as observing parent-child interactions, or viewing videotapes of eating behaviors (Linscheid, 2006). Further, guiding parents and helping them set goals around feeding development may be warranted (Burklow, McGrath, & Kaul, 2002). With these general guidelines and behavioral strategies in mind, the following section will review the limited available literature on interventions for some of the problematic eating and food-related behaviors.

Pica-related behaviors. According to Mansbacher (2009), there are several strategies for reducing children's ingestion of non-food items. The first strategy utilizes behavioral techniques, with a focus on positive reinforcement. Mansbacher (2009) suggests rewarding children for periods of time that have elapsed without engaging in pica-type behaviors (e.g., through the use of stickers or other desired items). The second strategy to consider is based on pairing pica behaviors with negative feelings or tastes. That is, caregivers can use unpleasant smells (e.g., ammonia) or tastes (e.g., lemon juice on the tongue) whenever children attempt to ingest a non-food item, with the goal of decreasing their desire to engage in such behavior over time. Finally, Mansbacher (2009) recommends a focus on helping children recognize when they are feeling hungry. Barrett (2008) adds that supervision is especially important in preventing pica-related behaviors and any subsequent injury or illness that may result.

Food stealing/hoarding. Available research on interventions for this subset of behaviors is sparse, and generally absent among academic journals. Given this, a review of more informal sources may be required to provide preliminary guidance for families who are struggling with these problems. According to Perry (2001), caregivers can benefit from a more sensitive approach/understanding of their children's behaviors. For example, Perry (2001) suggests that hoarding or stealing food may be conceptualized as logical behaviors for a child who grew up without reliable access to food, and cautions against the use of harsh punishment for such behaviors. Consistent with this, Purvis and Cross (2007) encourage parents to be compassionate when dealing with children who have suffered early maltreatment. If stealing or hoarding behaviors emerge, they emphasize the importance of reassuring children that they will never have to go hungry anymore, and that they are safe in their current home. Coupled with compassion, Purvis and Cross (2007) do point to the importance of setting limits; for example, children should still be told that stealing and hoarding are not acceptable behaviors.

Eating disordered behavior. When a foster child presents with symptoms consistent with eating disordered behaviors such as Bulimia Nervosa, Anorexia Nervosa, or Binge Eating Disorder, a consultation with a pediatrician is recommended. For those needing treatment, the treatment team approach has been proven most effective (Cook-Cottone, 2009). This team includes a mental health professional specializing in eating disordered behavior (e.g., social worker, psychologist, or counselor), a nutritionist with eating disorder experience, and a medical doctor with a specialization in pediatric and adolescent medicine and eating disordered behavior (Cook-Cottone, 2009). Typically, children and adolescents suffering with clinical level eating disordered behaviors are placed on a meal plan, monitored for physiological data, and provided family therapy (for those with Anorexia Nervosa) and individual therapy (e.g., cognitive

behavioral and/or dialectic behavioral therapies), utilized to address behavior on an outpatient basis. For those who are unable to maintain physiological status (e.g., healthy electrolyte levels, hydration, and weight), inpatient treatment at a center specializing in eating disorder work is recommended (Cook-Cottone, 2009).

General treatment guidelines. Regardless of the type of problematic eating and food-related behaviors that are encountered, child welfare workers should always encourage families to contact their children's pediatricians to address any eating concerns, and to practice collaboration among professional disciplines. Specific signs that would indicate the need to see a pediatrician as soon as possible include the observation of a major change in appetite, or significant weight loss or weight gain (Healthy Eating for Children, 2009). Children whose eating behaviors are significantly impacting their daily functioning should also be referred to a mental health professional who can aid in assessment and appropriate intervention.

Implications for Future Research

The current review has focused on the role of child welfare workers in the effort to prevent and intervene with eating difficulties among the foster care population. Although the literature suggests that problematic eating and food-related behaviors are significant concerns for children in foster care, the research on this topic is limited, and there is little guidance on evidence-based methods of intervention, especially for behaviors such as hoarding and stealing food. There is, however, a consensus among many authors who report on the prevalence of these eating patterns that comprehensive assessment in the area of nutrition and eating behaviors is critical for this population (DuRousseau et al., 1991; Tarren-Sweeney, 2006). Importantly, because children with identified eating problems may not present as overweight, there is a need for *all* children in care to undergo thorough evaluations in this area (Tarren-Sweeney, 2006).

Further, to the author's knowledge, there is no available data on child welfare workers' current levels of awareness related to this subject. Future research should address this specific topic, as results would aid in the identification of necessary components for training workers to responsibly address eating concerns with families. Consistent with this, the child welfare field may benefit from the creation of clear, operationally-defined objectives for intervening with problematic eating behaviors. Together, these recommendations will help welfare workers in the promotion of well-being for all children (i.e., ensuring that children have appropriate services to meet educational, physical and mental health needs; Administration for Children and Families, 2010).

Finally, a review of the literature has also identified that nutritional guidelines may not always accommodate the challenges of lower-income families. Additional research with a focus on how these families can practice healthy eating behaviors on a budget may improve nutritional well-being among this population.

Conclusion

Overall, the current review suggests that foster care children appear to be at increased risk for a range of problematic eating and food-related behaviors, from classic eating disorders such as Bulimia, to hoarding and excessive eating and obesity. Despite the reported prevalence of these behaviors, the available research on preventing and intervening with these children is limited. The present article argues that child welfare workers are in a unique position to assess and appropriately respond to these eating concerns, as well as to target healthy nutrition within families in order to promote well-being for all children. However, further research is needed to elucidate the best methods of assessment, along with evidence-based strategies for intervention.

References

Ackard, D. M., & Neumark-Sztainer, D. (2001). Family mealtime while growing up: Associations with symptoms of Bulimia Nervosa. *Eating Disorders, 9,* 239-249.

Administration for Children & Families. (2010). Children's bureau child and family services reviews fact sheet. Retrieved July 9, 2010, from http://www.acf.hhs.gov/programs/cb/cwmonitoring/recruit/cfsrfactsheet.htm

American Academy of Pediatrics, Committee on Early Childhood, Adoption, and Dependent Care. (2000). Developmental Issues for Young Children in Foster Care. *Pediatrics, 106*, 1145-1150.

American Academy of Pediatrics Committee on Public Education. (2001). Children, adolescents, and television. *Pediatrics, 107,* 423-426.

American Academy of Pediatrics. (2003). Identifying and treating eating disorders: Policy statement by the committee on adolescence. *Pediatrics, 111,* 204-211.

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental*

disorders (4th ed., text revision). Washington, DC: Author.

Ayoob, K. T., Kaminer, R. K., & Zawel, J. (1994). Chronic overeating without obesity in children with developmental disabilities: Description of a new syndrome. *Mental Retardation, 32,* 194-199.

Ayoob, K. T., & Barresi, I. (2007). Feeding disorders in children: Taking an interdisciplinary approach. *Pediatric Annals, 36,* 478-483.

Barrett, R. P. (2008). Pica: Toward understanding a complicated condition. *The Brown University Child & Adolescent Behavior Letter, 24,* 4-6.

Becker-Weidman, A. (2010). Attachment facilitating parenting: How to help adopted children overcome past traumas. Center for Family Development. Retrieved August 20, 2010, from http://www.dccrcc.com/2009/02/attachment-facilitating-parenting-how-to-help-adopted-children-overcome-past-traumas/

Beck-Joslyn, M. (2009). Comprehensive assessment for disordered eating behaviors in foster care: Workbook for caseworkers. A College Partnership Research Project made possible through a training and administrative services agreement between the New York State Office of Children and Family Services and the Research Foundation of SUNY Buffalo State College Center for Development of Human Services.

Burklow, K. A., McGrath, A. M., & Kaul, A. (2002). Management and prevention of feeding problems in young children with prematurity and very low birth weight. *Infants and Young Children, 14,* 19-30.

Cade, J., Upmeier, H., Calvert, C., & Greenwood, D. (1999). Costs of a healthy diet: Analysis from the UK Women's Cohort Study. *Public Health Nutrition, 2,* 505-512.

Carlson, A., Lino, M., Juan, W. Y., Hanson, K., & Basiotis, P. P. (2007). *Thrifty Food*

Plan, 2006. (CNPP-19). U.S. Department of Agriculture, Center for Nutrition Policy and Promotion. Retrieved August 8, 2010, from http://www.cnpp.usda.gov/Publications/FoodPlans/MiscPubs/TFP2006Report.pdf

Cassady, D., Jetter, K., & Culp, J. (2007). Is price a barrier to eating more fruits and vegetables for low-income families? *Journal of the American Dietetic Association, 107,* 1909-1915.

Cook-Cottone, C. P. (2009). Eating disorders in childhood: Prevention and treatment supports. *Childhood Education, 85,* 300-305.

Darmon, N., Briend, A., & Drewnowski, A. (2004). Energy-dense diets are associated with lower costs: A community study of French adults. *Public Health Nutrition, 7,* 21-27.

Davies, W. H., Satter, E., Berlin, K. S., Sato, A. F., Silverman, A. H., Fischer, E. A., et al. (2006). Reconceptualizing feeding and feeding disorders in interpersonal context: The case for a relational disorder. *Journal of Family Psychology, 20,* 409-417.

Demb, J. M. (1991). Reported hyperphagia in foster children. *Child Abuse & Neglect, 15,* 77-88.

DuRousseau, P. C., Moquette-Magee, E., & Disbrow, D. (1991). Children in foster care: Are they at nutritional risk? *Journal of the American Dietetic Association, 91,* 83-86.

Gamache, S., Mirabell, D., & Avery, L. (2006). Early childhood developmental and nutritional training for foster parents. *Child and Adolescent Social Work Journal, 23,* 501-511.

Grilo, C. M., & Masheb, R.M. (2002). Childhood maltreatment and personality disorders in adult patients with binge eating disorder. *Acta Psychiatrica Scandinavica, 106,* 183-188.

Hadfield, S. & Preece, P. (2008). Obesity in looked after children: Is foster care protective from the dangers of obesity? *Child: Care, Health and Development, 34,* 710-712.

Hansen, R. L., Mawjee, F. L., Barton, K., Metcalf, M.B., & Joye, M.R. (2004). Comparing the

health status of low-income children in and out of foster care. *Child Welfare, 83,* 367-380.

Healthy eating for children: Helping your child to eat well. (2009). *WebMD.* Retreived August 20, 2010, from http://www.webmd.com/parenting/tc/healthy-eating-for-children-helping-your-child-to-eat-well?page=2

Horowitz, C. R., Colson, K. A., Herbert, P. L., & Lancaster, K. (2004). Barriers to buying healthy foods for people with diabetes: Evidence of environmental disparities. *American Journal of Public Health, 94,* 1549-1554.

Hunger Action Network of New York State. (n.d.). Federal nutrition programs: School meals. Retrieved August 8, 2010, from http://www.hungeractionnys.org/fed_meals.htm

Johnson, D. B., Birkett, D., Evens, C., & Pickering, S. (2006). Promoting family meals in WIC: Lessons learned from a statewide initiative. *Journal of Nutrition Education & Behavior, 38,* 177-182.

Kaufman, L., & Karpati, A. (2007). Understanding the sociocultural roots of childhood obesity: Food practices among Latino families of Bushwick, Brooklyn. *Social Science & Medicine, 64,* 2177-2188.

Legal references for child protective service workers. (2010). Flushing, NY: Looseleaf Law Publications, Inc.

Leslie, L. K., Hurlburt, M., Landsverk, J., Rolls, J., Wood, P., & Kelleher, K. (2003). Comprehensive assessments for children entering foster care: A national perspective. *Pediatrics, 112,* 134-142.

Linscheid, T. R. (2006). Behavioral treatments for pediatric feeding disorders. *Behavior Modification, 30,* 6-23.

Lindsay, A. C., Sussner, K. M., Greaney, M. L., Peterson, K. E. (2009). Influence of social context on eating, physical activity, and sedentary behaviors of Latina mothers and their preschool-age children. *Health Education & Behavior, 36,* 81-96.

Littleton, H., & Ollendick, T. (2003). Negative body image and disordered eating behavior in children and adolescents: What places youth at risk and how can these problems be prevented? *Clinical Child and Family Psychology Review, 6,* 51-66.

Mansbacher, J. (2009). Pica: What it is, how you can recognize it, and how you can treat it. *Exceptional Parent Magazine. 39,* 32-34.

Neumark-Sztainer, D., Eisenberg, M. E., Fulkerson, J. A., Story, M., & Larson, N. I. (2008). Family meals and disordered eating in adolescents: Longitudinal findings from Project EAT. *Archives of Pediatrics and Adolescent Medicine, 162,* 17-22.

Pak-Gorstein, S., Haq, A., & Graham, E. A. (2009). Cultural influences on infant feeding practices. *Pediatrics in Review, 30,* e11-e21.

Pecora et al., (2005). Assessing the effects of foster care: Mental health outcomes from the Casey National Alumni Study. *Casey National Alumni Study.* Seattle Washington: The Casey Foundation.

Perry, B. D. (2001). Bonding and attachment in maltreated children: Consequences of emotional neglect in childhood. *The Child Trauma Academy.* Retrieved August 20, 2010, from http://centerforchildwelfare.fmhi.usf.edu/kb/ChronicNeglect/ConseqOfChNeglect.pdf

Purvis, K., & Cross, D. (2007). Six words for adoptive parents to live by. Retrieved August 20, 2010, from http://www.child.tcu.edu/Secondary%20Pages/Published%20article_Six%20Words.pdf

Robinson, T. N. (1999). Reducing children’s television viewing to prevent obesity: A

randomized controlled trial. *The Journal of the American Medical Association, 282*, 1561-1567.

Rose, D., & Richards, R. (2004). Food store access and household fruit and vegetable use among participants in the US Food Stamp Program. *Public Health Nutrition, 7,* 1081-1088.

Simon, H., & Zieve, D. (2010). Eating disorders. *Eating Disorders (A.D.A.M.), Report #49,* 1-8.

Smyth, J. M., Heron, K. E., Wonderlich, S. A., Crosby, R. D., & Thompson, K. M. (2008). The influence of reported trauma and adverse events on eating disturbance in young adults. *International Journal of Eating Disorders, 41,* 195-202.

Steele, J. S., & Buchi, K. F. (2008). Medical and mental health of children entering the Utah foster care system. *Pediatrics, 122,* e703-e709.

Tarren-Sweeney, M. (2006). Patterns of aberrant eating among pre-adolescent children in foster care. *Journal of Abnormal Child Psychology, 34,* 623-634.

Tarren-Sweeney, M. (2007). The Assessment Checklist for Children-ACC: A behavioral rating scale for children in foster, kinship and residential care. *Children & Youth Services Review, 29,* 672-691.

Thompson, R. W., Authier, K., & Ruma, P. (1994). Behavior problems of sexually abused children in foster care: A preliminary study. *Journal of Child Sexual Abuse, 3,* 79-91.

US Department of Agriculture [USDA]. (2009a). Make mealtime a family time. Retrieved August 8, 2010, from http://www.mypyramid.gov/preschoolers/HealthyHabits/familymealtime.html

US Department of Agriculture [USDA]. (2009b). WIC: The special supplemental nutrition program for women, infants and children. Retrieved August 8, 2010, from http://www.fns.usda.gov/wic/WIC-Fact-Sheet.pdf

Wonderlich, S., Crosby, R., Mitchell, J., Thompson, K., Redlin, J., Demuth, G., et al. (2001). Pathways mediating sexual abuse and eating disturbance in children. *International Journal of Eating Disorders, 29,* 270-279.

#