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Child, Caregiver, Family, and Social-Contextual Factors to Consider When Implementing Parent-Focused Child Feeding Interventions

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Abstract

Purpose of Review: Interventions that aim to alter child eating behaviors often focus on parents as a proximal influence. Yet, parents can be difficult to engage. Therefore, intervention recommendations are often not implemented as designed. The goal of this review is to highlight factors at multiple contextual levels that are important to consider when developing interventions to address child eating, due to their implications for overcoming parent engagement challenges.

Recent Findings: Intervention studies suggest that parents are often the key to successfully changing child eating behaviors, and many interventions focus on feeding. Factors such as child eating phenotypes; parent stress; family system dynamics; and sociodemographic constraints have also been identified as shaping food parenting.

Summary—Challenges at multiple contextual levels can affect the likelihood of parent engagement. Addressing factors at the child-, parent-, family- and broader social-contextual levels of influence is essential in order to promote best practices for parent-focused feeding interventions.

Keywords

Parenting; eating behavior; feeding; stress; intervention; implementation; engagement

Introduction

Behavioral interventions that seek to promote healthy child eating, diet, and weight outcomes often seek to engage parents, as they are a key agent of change particularly for young children [1, 2]. The nature of such interventions can vary, but usually include programs that seek to increase parent knowledge about healthy nutrition [3] and/or cooking

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Conflict of Interest

Alison L. Miller, Sara E. Miller, and Katy M. Clark declare they have no conflict of interest.

Human and Animal Rights and Informed Consent

All reported studies/experiments with human or animal subjects performed by the authors have been previously published and complied with all applicable ethical standards (including the Helsinki declaration and its amendments, institutional/national research committee standards, and international/national/institutional guidelines).

skills [4] and work with parents (primarily mothers) to change their feeding practices. For example, approaches include promoting breastfeeding [5], delaying the start of solid foods [6], or using responsive feeding practices [7, 8] as well as encouraging regular family routines around mealtimes, sleep, and/or media use [9]. Some intervention approaches focus more directly on parents' own weight management and nutrition [10] or use family-based obesity prevention strategies that seek to engage the whole family unit [11]. Common to most of these approaches are difficulties with parent engagement and intervention sustainability [12]; yet, the reasons for this are often poorly understood.

The goal of the current report is to highlight factors at the child, caregiver, family, and broader social-contextual levels (see Figure 1) that can shape parenting behaviors related to child feeding, or food parenting, and thus may be particularly important to the effects of behavioral interventions for families. We reviewed multiple databases (e.g., MEDLINE/PubMed, PSYCinfo) to identify relevant studies, prioritizing works published in the last five years (since 2013). We used a combination of search terms [e.g., (“intervention” OR “program”) AND (“child feeding” OR “child feeding practices” OR “parent feeding practices”) AND (“challenges” OR child temperament” OR “coparenting” OR “timing” OR “food insecurity” OR “maternal mental health” OR “maternal depression” OR “stress” OR “perfect parent pressure” OR “pressure” OR “cultural differences” OR “culture” OR “ethnicity”)]. Results were limited to studies with human subjects in the English language. Studies covered developmental periods from infancy to adolescence (ages 0-18 years), with the focus of this review on the infancy and early childhood (i.e., ages 0-5 years) to pre-adolescent periods (ages 6-13 years) as these ages are often targeted in parent-focused interventions. Additional studies were identified using a snowball approach by searching the reference lists of relevant review articles and research studies.

Child Factors

Individual differences between children can present different barriers and opportunities for food parenting, and informing parents on the nature of these differences may reduce any feeling of “blame” and empower parents to implement intervention recommendations. Caregiver feeding practices during infancy have been found to differ as a function of child temperament, for example studies have found that caregivers (mothers) endorsed using food to soothe distress when their infants were rated as having a “difficult” temperament [13, 14]. Similar associations between difficult child temperament and maternal feeding practices, such as using restrictive feeding practices or feeding obesogenic foods and drinks, have also been identified during the preschool years [15].

As well, child factors directly related to child eating are important to consider. For instance, children are known to differ in their appetitive drive, including both food “approach” behavior, such as enjoyment of food, and also their level of responsiveness to satiety, or fullness cues [16, 17] and “food avoidant” behavior, such as refusal to eat or “picky” eating behavior. Such eating behavior phenotypes [17] can drive how engaged children are with food and eating, and individual differences in these child behaviors may in turn shape caregivers' feeding behavior. For example, children who enjoy eating and rarely show signs of satiation may be easier for a caregiver to feed, but may become distressed if they need to

wait to eat, which could be challenging for a busy parent. In contrast, children who are reluctant eaters pose different caregiving demands. Caregivers may feel pressure to expend additional effort in these cases, such as preparing special foods so that the child will eat.

Children also differ in their taste preferences, with some showing more of a preference for sweet tastes during the early childhood years, than others [18]. Furthermore, and possibly shaped by such preferences, certain developmental periods are characterized by changes in what children choose (or demand) to eat or not eat. Specifically, toddlerhood is a period when “picky” eating behavior often emerges [19], and picky eating in young children is often reported as a source of stress by parents [20]. Picky eating at mealtimes may present barriers to parents who are seeking to have family dinners, for example, and result in family-level conflict. Recent work suggests that parent behavior may not be as strong of an influence on children’s picky eating behavior as previously believed [21], however, so this may be an area in which to work with parents to reassure them that some picky eating is developmentally normative and may be outgrown over time.

Finally, some children may have conditions such as developmental delays (e.g., autism spectrum disorders) that may make feeding difficult or chronic illnesses that require close management of food and eating (e.g., Type 1 Diabetes). Children who experience delays in growth (e.g., premature infants) may also require specialized feeding approaches, and feeding can be a source of anxiety for parents in such cases. Parents of children with developmental delays have been found to use more controlling feeding practices [22] and may also experience more mealtime challenges [23].

Thus, in the context of parent-focused interventions to address feeding practices and child eating behavior, it may be important to inform parents about individual child differences that may drive behavior in order to reinforce the perspective that children differ in their eating and other behaviors. Simply acknowledging and validating the perspectives that such differences exist (even between siblings in the same family) may be reassuring to parents. Individual differences (e.g., in genetic makeup, [24] or the drive to eat, [25, 26]) can also play a role in what intervention approaches may work best for which families. Empowering parents to work with these differences may be helpful in designing implementing optimal feeding strategies for families.

Caregiver Factors

Parents may not easily engage in intervention programming for additional reasons such as capacity for time management, stress, and individual factors. Parents often have limited time and may have difficulties managing household routines related to feeding and mealtimes, particularly if they lack organizational skills [27]. Caregivers who are under stress have been found to engage in more restrictive feeding practices with their preschool-aged children [28]. Moreover, greater work-life stress has been associated with provision of less healthful meals among parents of older children and adolescents [29]. In addition to general stressors, mental health issues such as depression can present challenges in child feeding. Mothers with depression, who have school-aged children, report less responsive feeding practices and less authority in feeding [30]. Maternal depression has also been associated with greater risk

for poor infant feeding outcomes including shorter breastfeeding duration, more difficulties, and decreased self-efficacy [31].

An additional stressor that may influence caregiver feeding practices is the pressure to be a “perfect parent” [32, 33]. Although this has not yet been examined explicitly with regard to feeding, online social comparisons can negatively affect parenting and relationship outcomes, such as parental competence, coparenting relationship quality, and perceived social support [32]. Parents are often blamed for their child’s eating behavior or weight status [34], and many parents with children who have overweight have overweight themselves [35] and may feel stigmatized about their weight as well as their parenting [36]. Parents may also struggle with how to discuss weight with their child [37]. If parents do not feel heard by providers, or feel talked down to, this will likely create challenges in implementing feeding recommendations. Therefore, in the context of interventions focused on feeding and eating, it is important to consider parents’ beliefs and attitudes as well as goals regarding child feeding, weight stigma, and their own weight management and family history.

Family System Factors

Beyond the caregiver, challenges in the family system, meaning the members of the family who are directly or indirectly involved in the child’s care and/or who have a relationship with the caregiver (e.g., spouses; siblings; grandparents), may interfere with effective implementation of feeding recommendations. The timing of meals often depends on daily routines and is influenced by conflicts between work and school schedules and other activities of different family members [38, 39]. For example, shift work has been associated with poorer meal quality [40], and early school start times and/or afterschool activities for children (e.g., sports practices) can interfere with mealtimes [41, 42]. Management challenges and scheduling constraints make it difficult for parents to implement recommended changes.

Family challenges may also arise due to differences of opinion on feeding practices between caregiver and partner, which have been associated with conflict around feeding strategies during early childhood [43, 44]. Given that young children are often in the care of multiple adults who may endorse different feeding practices (e.g., daycare providers; relatives [39]), it is important to acknowledge that a single caregiver does not control the child’s entire feeding environment. Even if a child is not in the care of relatives, intergenerational influences are often present (for example, when a grandparent gives feeding advice to a new mother). Each of these family-level factors may challenge to a caregiver’s capacity to follow recommendations.

Given that many children are cared for by multiple caregivers; it may be helpful when possible to include co-parents and other family members in the intervention, as disagreements among family members can cause challenges. Of note, most interventions still focus on mothers [45] as they often remain responsible for child feeding [39, 46]. Yet, fathers are increasingly recognized as playing a key role [46, 44, 43] and are more involved in child care and household routines than ever before. Thus, interventions that focus only on

mothers may be limited in their scope; interventions that address the broader family system, though complicated, will likely be more sustainable. Indeed, obesity prevention efforts targeting the family system and setting have shown promise [9, 47] and may be more cost-effective than other approaches [48].

Social-Contextual Factors

Social-contextual factors shape feeding practices at multiple levels and are critical to consider in any parent-focused behavioral intervention around feeding and eating. Socioeconomic conditions can drive many parenting decisions, including those around food and diet. Caregivers who are living in poverty or in under-resourced circumstances may face unique challenges to implementing recommended feeding practices. Food insecurity has been associated with unhealthier eating patterns and maternal feeding practices, such as restriction [49] or compensatory feeding [50]. A caregiver's prior food insecurity may also influence feeding practices (i.e. less monitoring of sweets and snack foods) and make it difficult for caregivers to refuse children's unhealthy food requests [51]. Food insecurity can also result in parents restricting their own intake in order to ensure their children have enough [52], which can lead to stress and health concerns for parents.

It is also vital to recognize that cultural and socio-demographic factors shape feeding practices. For example, cultural differences can drive parents' views of foods that are considered healthful, harmful, or culturally preferred [53]. Cultural differences also influence what feeding practices are used across diverse cultural groups (e.g., food selection, portion size) and where advice is sought regarding child feeding [54, 55]. Furthermore, social-environmental factors that align with cultural differences can introduce barriers to following feeding recommendations. Parents living in under-resourced communities, which is often the experience of ethnic minority families within the United States (US), may experience difficulty accessing and preparing healthy foods, and instead rely on more easily-available convenience foods that tend to be higher in energy density and less healthy [53]. To promote intervention uptake, therefore, it may be helpful to reach out to key stakeholders figures from a parent's community and even involve parents in the development of the intervention, if possible, in order to increase engagement [56]. Recent approaches that have used online social support networks (e.g., Facebook groups) [57, 58] or web-based, community-focused outreach efforts [59] have also shown promise in engaging low-income, under-resourced parents around feeding practices and other obesity prevention activities.

Finally, immigrant families represent a special population of interest that deserves attention. Given the immigrant "paradox" in many health domains [60], including feeding, diet and weight, such that longer residence in the US associates with higher risk for obesity [61] (although some studies in young children have had mixed findings [62, 63]), it is vital to understand how best to intervene with immigrant families. Feeding styles have been shown to differ between low-income Hispanic mothers born in the US vs. outside the US, for example [64], suggesting one possible pathway of influence. As well, families who have emigrated often face extreme levels of stress (e.g., deportation fears [65]) and isolation [62, 60] that can interfere with connecting to resources and/or implementing recommendations. Beyond addressing basic language barriers, therefore, when working with immigrant

families it is essential to consider families' views of food, eating, and roles in child feeding, and help address challenges to finding familiar, comforting foods and establishing feeding routines in a new country [66].

Conclusion

In summary, when advising caregivers around feeding, it is critical to keep in mind individual child differences such as temperament and eating behavior; the personal resources of the caregiver; the family system; and the larger social context in which the caregiver and child reside. Placing blame on the caregiver for not following recommendations in feeding interventions is likely to be counterproductive. Rather, considering the multiple levels of context in which caregivers operate when feeding children, and helping parents articulate and address potential barriers to following recommendations, may be a helpful strategy for implementation.

To be most effective, feeding interventions may first need to consider how to engage the under-resourced parents whose children are most at risk due to social-contextual challenges such as poverty. Furthermore, it is likely important for interventions to assess individual parent capacity to implement recommendations, and to work with the parent to reduce barriers to engagement. One way to engage parents may be through tailoring intervention strategies that address individual child or developmental factors that create feeding challenges. Ultimately, such strategies could result in intervention and prevention approaches that are effective, sustainable, and welcomed by families.

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Figure 1.
Child, caregiver, family, and social-contextual factors to consider in feeding interventions