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Research Article

Concern Explaining Nonresponsive Feeding: A Study of Mothers' and Fathers' Response to Their Child's Fussy Eating

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ABSTRACT

Objective: To examine the role of parent concern in explaining nonresponsive feeding practices in response to child fussy eating in socioeconomically disadvantaged families.

Design: Mediation analysis of cross-sectional survey data.

Setting: Socioeconomically disadvantaged urban community in Queensland, Australia.

Participants: Cohabiting mother–father pairs (n = 208) with children aged 2–5 years.

Main Outcome Measure(s): Two validated measures of nonresponsive feeding: persuasive feeding and reward for eating.

Analysis: Mediation analysis tested concern as a mediator of the relationship between child food fussiness (independent variable) and parent nonresponsive feeding practices (dependent variables), adjusted for significant covariates and modeled separately for mothers and fathers.

Results: Maternal concern fully mediated the relationship between child food fussiness and persuasive feeding (indirect effect: B [SE] = 0.10 [0.05]; 95% confidence interval [CI], 0.01–0.20). Concern also fully mediated the relationship between child food fussiness and reward for eating for mothers (indirect effect: B [SE] = 0.17 [0.07]; CI, 0.04–0.31) and fathers (indirect effect: B [SE] = 0.14 [0.05]; CI, 0.04–0.24)

Conclusions and Implications: Concern for fussy eating behaviors may explain mothers' and fathers' nonresponsive feeding practices. In addition to providing education and behavioral support, health professionals working with socioeconomically disadvantaged families can incorporate strategies that aim to alleviate parents' concerns about fussy eating.

Key Words: concern, fathers, feeding practices, fussy eating, mothers (*J Nutr Educ Behav.* 2018; 50:757–764.)

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INTRODUCTION

Almost half of all parents perceive their child to be a fussy eater at some point in the first 6 years of life.[1] Although this is a developmentally normal and transient phase for most children,[1] the stress associated with fussy eating can negatively affect the child, parent, or child–parent relationship[2] regardless of duration. Fussy eating is an umbrella term describing the chronic rejection of novel and/or familiar foods[3] and is associated with poor variety[4] and quantity of food intake.[5] The rejection of novel foods may reflect a fear of trying new foods (food neophobia) but refusal of familiar foods (ie, foods already accepted in the child's diet) may reflect a child's satiety.[6] Parents may interpret refusal of familiar food to be fussiness or perceive the behavior as problematic and (with good intention) use feeding practices that may not appropriately respond to the child's appetite. These nonresponsive feeding practices can perpetuate fussy eating,[7] increase poor food preferences,[8] and lead to unhealthy weight gain.[9]

Parents may attempt to manage their child's fussy eating by using nonresponsive feeding practices such

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as pressuring or offering food rewards to incentivize food intake.[10,11] However, these practices are likely to be counterproductive. Pressuring a child to eat has been associated with increased food rejection[12] and exacerbation of fussy eating.[7] Offering foods the child prefers (often energy dense and nutrient poor) as a reward for eating disliked foods is thought to reinforce preference for the rewarded food and reduce preference for the disliked (typically nutrient-dense) food.[13] Although the feeding relationship is likely to be bidirectional,[14] recent evidence suggested that parents respond to fussy eating by pressuring[7] and using food as a reward for eating.[10] Because nonresponsive feeding practices are modifiable,[6] they are an appropriate target for early feeding interventions. However, it is important first to understand why parents respond to fussy eating by pressuring a child to eat and using food as a reward.

Contanzo and Woody's[15] domain-specific model of parenting guided much of the child feeding literature to date, suggesting that parents' feeding practices are based on their perceptions, beliefs, goals, and concerns. Within this model, regardless of the presence of a problem, heightened concern or sensitivity[16] is hypothesized to motivate parents' nonresponsive feeding practices.[15] Parents' concern for child weight has mainly been investigated in the fussy eating space. For example, maternal concern about her child being underweight partially explains the relationship between perception of fussy eating and pressuring a child to eat.[17] However, a recent study of phone calls made to a parenting help line showed that parents' concern for fussy eating encompassed broader elements of the child's diet, such as variety and quantity of food intake, as opposed to concern for the child's weight.[18] The authors further described that parents' heightened concern motivated feeding strategies of forced feeding and rewarding.[18] Owing to the qualitative nature of the study,[18] it was unclear whether additional parent and child factors may have confounded parents' perceptions, concerns, and responses to fussy eating, such as child temperament[19,20] and parent psychological distress.[21] Research methods that control for these potential confounders would further support the domain-specific model of parenting[15] in the fussy eating context.

The role of parent concern has been derived from studies with samples of highly educated mothers and has rarely been considered in fathers or in the context of socioeconomic disadvantage. Socioeconomic disadvantage is correlated with higher levels of fussy eating[1] and greater use of nonresponsive feeding practices in mothers[22] and fathers.[23] Therefore, understanding mechanisms driving fathers' and mothers' nonresponsive feeding practices may be particularly pertinent in the context of economic constraint to intervene in the cycle of fussy eating.[7] This was the aim of the current study, which examined mothers' and fathers' concern for their child's fussy eating as a potential mechanism driving pressure and using food as a reward in a sample of 2-parent families from a socioeconomically disadvantaged community.

METHODS

Participants and Recruitment

Setting. Participants were from *Mums and Dads for Mealtimes*, a study of 2-parent families from a socioeconomically disadvantaged community in Queensland, Australia.[24] This community was identified as having a high proportion of children with developmental vulnerability by the Australian Early Development Census.[25] Developmental vulnerability is a population-based measure of children's development, health, well-being, and skills at the time of commencing their first year of school (at age 5 years). Children's development is assessed in 5 domains, including physical health, social competence, emotional maturity, language and cognition, and communication and general knowledge. In the selected community, 1 in 3 children (33%) were identified as developmentally vulnerable compared with the national average (22%).[25] Queensland-based data showed a strong inverse correlation between a child's likelihood of being developmentally vulnerable and the socioeconomic status of the area in which the child resides.[26] Ethical approval was obtained from the Queensland University of Technology Human Research Ethics Committee (1600000045).

Recruitment. Recruitment was through face-to-face approaches to child care centers, playgroups, a local family fun day, and an immunization clinic, from February to September, 2016. Cohabiting mother–father pairs of children aged 2–5 years were invited to participate. Participants completed a hard-copy or online "Mother" or "Father" survey and were offered a gift voucher (valued at $15 AU) for participation. Mothers and fathers were defined as biological/adoptive/step-parents, partner of child's father/mother, or grandparent. Participants were included in the study if they were parents aged ≥18 years; 2 parents of the same child returned surveys; the child's gestational age was >32 weeks and the birth weight was >2,500 g; the birth was singleton; and the child had no serious medical diagnoses including food-related allergy or sensitivity. A small number of children (n = 8) were aged <2 years at the time of returning the survey (minimum age 1 year 8 months). These children remained in the analyses to maximize the sample size. A total of 208 mother–father pairs were included in the analysis.

Measures

Sociodemographic characteristics. Mothers and fathers reported their own sociodemographic data, height, weight, and number of meals (ie, breakfast, lunch, and dinner) eaten per week with the child (out of 21). Parents scored their perceived responsibility in feeding (3 items) using the Child Feeding Questionnaire[27] on a 5-point Likert scale from never (1) to always (5), with higher mean scores indicating greater responsibility (α=.86 for mothers, α=.92 for fathers).[27] Parental distress was assessed using the Kessler-10,[28] a 10-item scale that screens for symptoms of depression, anxiety, and stress on a 5-point Likert scale from never (1) to always (5). Scores were summed to give an individual distress score for each parent (α = .92 for both mothers and fathers). Both parents also reported on child height, weight,