### Research Brief

# An Exploration of How Family Dinners Are Served and How Service Style Is Associated With Dietary and Weight Outcomes in Children

Katie A. Loth, PhD, MPH, RD, LD<sup>1</sup>; Melissa Horning, PhD, PhN, RN<sup>2</sup>; Sarah Friend, MPH, RD<sup>2</sup>; Dianne Neumark-Sztainer, PhD, MPH, RD<sup>3</sup>; Jayne Fulkerson, PhD<sup>2</sup>

#### **ABSTRACT**

**Objective:** To explore how families serve meals and how different service styles are associated with responsive feeding and child dietary and weight outcomes.

**Methods:** Baseline data from a subset (n = 75) of randomized controlled trial participants (Healthy Home Offerings via the Mealtime Environment (HOME) Plus study, aged 8–12 years) were analyzed using a series of linear regression models. Adjusted means (95% confidence intervals) and beta coefficients (SEs) are presented.

**Results:** Families were most likely to report plated meal service (36% of families), followed by family-style (29%). Family-style was significantly associated with a lower mean level of food restriction (P = .01). No significant associations were observed between style of meal service and child outcomes (all P > .05). **Conclusions and Implications:** Although plated meal service may seem like a desirable strategy for ensuring that children eat a healthier diet, the current results did not provide support for this association. Evidence was found to support the use of family-style meal service to promote the use of responsive feeding. **Key Words:** weight status, child, family meals, meal service style, family-style (J Nutr Educ Behav. 2017;  $\blacksquare$ :1-6.)

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It is important to identify factors within the home that are relevant to dietary and weight-related outcomes in children. Research examining family meals found that more frequent family meals are associated with positive outcomes in youth, including improved dietary intake and lower prevalence of overweight/obesity. However, although health professionals strongly recommended parents pri oritize regular family meals, evidence-based recommendations were sparse regarding how best to serve food

during family meals for optimal child benefit. Learning more about how families serve food during family meals and how style of food service is associated with child dietary and weight-related outcomes can help guide interventions to improve home food environments.

It is difficult to develop testable hypotheses given the dearth of research addressing meal service style at home. Yet, a related body of literature exists that explored the use and impact of food-related parenting practices such

as pressure to eat and food restriction.<sup>2,4</sup> Research showed that pressuring children to eat and restricting intake of palatable food items can lead to emotional eating, higher levels of picky eating, a greater resistance to eating, and a dislike of certain foods that can persist throughout life.<sup>2,4</sup> Instead, parents were typically advised to engage in responsive feeding techniques. Responsive feeding is when parents provide their child with healthy food choices and consistent mealtimes but allow the child to decide how much food is consumed at meals.5 Serving foods and beverages familystyle, in which children select their own portions and serve themselves, is a way for parents to engage in responsive feeding and may encourage better self-regulation of children's intake<sup>3,6,7</sup> and yield positive child weight-related outcomes.<sup>8-12</sup> Given these potential benefits of family-style meal service and the known health benefits of eating frequent family meals, it is worthwhile to deepen understanding of how family meals are being served at home.

Thus, the current study addressed gaps in the extant literature on family

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Address for correspondence: Katie A. Loth, PhD, MPH, RD, LD, Department of Family Medicine and Community Health, Medical School, University of Minnesota, 717 Delaware St, Ste 400, Minneapolis, MN 55414; Phone: (612) 525-4500; Fax: (612) 624-2622; E-mail: kloth@umn.edu

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<sup>&</sup>lt;sup>1</sup>Department of Family Medicine and Community Health, Medical School, University of Minnesota, Minneapolis, MN

<sup>&</sup>lt;sup>2</sup>School of Nursing, University of Minnesota, Minneapolis, MN

<sup>&</sup>lt;sup>3</sup>Division of Epidemiology and Community Health, School of Public Health, University of Minnesota, Minneapolis, MN

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meals by addressing 3 exploratory aims. First, the researchers aimed to understand what meal service looked like at home during family meals across family demographic characteristics. Second, they explored whether meal service style was associated with markers of responsive feeding. Finally, they examined associations between the style of meal service and child dietary and weight-related outcomes.

#### **METHODS**

#### Study Design

Baseline data were drawn from The Healthy Home Offerings via the Mealtime Environment (HOME) Plus randomized study's controlled trial. 13-15 The main meal-preparing parent and 1 8-to 12-year-old child per household were recruited to participate through events and flyers at Twin Cities (Minneapolis and St. Paul, MN) Park and Recreation centers. 14 Additional HOME Plus study methodological details were previously published elsewhere. 15 Parents and children provided written consent and assent, respectively. The study was approved by the University of Minnesota Institutional Review Board.

#### Measures

Parents provided demographic information (Table 1) and completed surveys; trained study staff measured parents' and children's height and weight. Children completed multiple 24-hour dietary recall interviews.

Family meal food service was assessed using the validated Evening Meal Screener (EMS) for up to 7 evenings.<sup>16</sup> If the family meal was prepared and eaten at home, food service was assessed with the question, How were the foods served? Participants were allowed to select 1 response from the following options: (1) all foods were put on family members' plates or bowls by a parent and then served (plated); (2) all of the dinner food was served family-style, in which everyone helped themselves from food on the table (family-style); (3) family members served themselves all of the dinner foods from the counter or stovetop (family-style); or (4) only fruits and vegetables (FV) were served family-style and the rest of the food was put on plates by a parent (hybrid).

Participants were included in the analysis if they completed at least 4 EMS and reported preparing and eating a family meal at home on at least 4 evenings (n = 75), which al-

lowed them to report the style of food service for 4 separate family dinners. For participants who completed >4 EMS forms, the first 4 were analyzed to allow for an equal representation of family meals across participants. To summarize meal service style across 4 meals, categories were created as follows: plated if they reported plated meal service 3-4 times, family-style if they reported familystyle meal service 3-4 times, half and half if they reported plated meal service twice and family-style meal service twice, and other if they reported some other meal service combination. These collapsed categories were created after a thorough review of the full range of participant responses (data not shown).

Responsive feeding was measured by examining parental pressure to eat, food restriction, and emotional feeding. Pressure to eat was assessed with the 4-item Child Feeding Questionnaire pressure to eat subscale, <sup>17</sup> measuring the degree of encouragement for their child to eat more food ( $\alpha = .72$ ). Parents rated agreement with statements (such as: My child should always eat all of the food on his or her plate), using a 5-point Likert scale (range, 4–16). Food restriction was measured using the 8-item Child

**Table 1.** Meal Service Style During Family Dinners, by Demographic and Weight-Related Characteristics (n = 75)

#### **Meal Service Style Plated** Family-Style Half and Half Other **Participant Characteristics** n (n = 27)(n = 22)(n = 8)(n = 18)Child's age, y (mean [95% 9.9 (9.4-10.5) 10.6 (10.0-11.1) 10.5 (9.6-11.5) 10.4 (9.7-11.0) confidence interval]) Parent education (% [n]) Associate's degree or less 24 37.5 (9) 33.3 (8) 8.3(2)20.8 (5) Bachelor's degree or more 51 35.3 (18) 27.5 (14) 11.8 (6) 25.5 (13) Receives economic assistance (% [n]) No 59 39.0 (23) 27.1 (16) 8.5 (5) 25.4 (15) Yes 16 25.0 (4) 37.5 (6) 18.8 (3) 18.8 (3) Parent race (% [n]) White 67 27.3 (25) 26.9 (18) 10.5 (7) 25.4 (17) Any other race 8 25.0 (27) 29.3 (22) 10.7 (8) 24.0 (18) Parent weight (% [n]) Underweight/average weight 38 36.8 (14) 23.7 (9) 37.5 (3) 31.6 (12) Overweight 37 35.1 (13) 13.5 (5) 16.2 (6) 35.1 (13) Child weight (% [n]) Average weight 48 35.4 (17) 25.0 (12) 12.5 (6) 27.1 (13) Overweight 7 37.0 (10) 37.0 (10) 7.4(2)18.5 (5)

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