Journal of Adolescent Health xxx (2014) 1–6

ELSEVIER

JOURNAL OF ADOLESCENT HEALTH

www.jahonline.org

Original article

Family Meal Frequency Among Children and Adolescents With Eating Disorders

Roni Elran-Barak, Ph.D., Maya Sztainer, Andrea B. Goldschmidt, Ph.D., and Daniel Le Grange, Ph.D. *

Department of Psychiatry and Behavioral Neuroscience, The University of Chicago, Chicago, Illinois

Article history: Received September 19, 2013; Accepted December 18, 2013
Keywords: Family meal frequency; Anorexia nervosa; Bulimia nervosa; Youth

A B S T R A C T

Purpose: Previous studies on family meals and disordered eating have mainly drawn their samples from the general population. The goal of the current study is to determine family meal frequency among children and adolescents with anorexia nervosa (AN), bulimia nervosa (BN), and feeding or eating disorder not elsewhere classified (FED-NEC) and to examine whether family meal frequency is associated with eating disorder psychopathology.
Methods: Participants included 154 children and adolescents ($M = 14.92 \pm 2.62$), who met criteria for AN (n = 60), BN (n = 32), or FED-NEC (n = 62). All participants completed the Eating Disorder Examination and the Family Meal Questionnaire prior to treatment at the University of Chicago Eating Disorders Program.
Results: AN and BN participants significantly differed in terms of family meal frequency. A majority of participants with AN (71.7%), compared with less than half (43.7%) of participants with BN, reported eating dinner with their family frequently (five or more times per week). Family meal frequency during dinner was significantly and negatively correlated with dietary restraints and eating concerns among participants with BN ($r = -.381$, $r = -.366$, $p < .05$) and FED-NEC ($r = -.340$, $r = -.276$, $p < .05$).
Conclusions: AN patients' higher family meal frequency may be explained by their parents' relatively greater vigilance over eating, whereas families of BN patients may be less aware of eating disorder behaviors and hence less insistent upon family meals. Additionally, children and adolescents with AN may be more inhibited and withdrawn and therefore are perhaps more likely to stay at home and eat together with their families.

IMPLICATIONS AND CONTRIBUTION

This study is the first to examine family meal frequency among clinical samples of youth with eating disorders. Findings suggest that patients with AN have higher rates of family meal frequency compared with patients with BN, and that family meal frequency is negatively associated with several eating disorder psychopathology scores.

In recent years, there has been increasing interest in family meal patterns and the important role that family meals play in the emotional and behavioral developments of adolescents [1–3]. Regular family meals may contribute to the prevention, early detection, and treatment of unhealthy eating patterns [4,5]. Family meals provide an opportunity for role modeling healthy eating patterns, which may serve to reinforce adolescents' healthy eating habits and prevent disordered eating behaviors [6]. Participating in meals together as a family gives parents the opportunity to gather information on teens' current functioning and furthermore gives parents the chance to observe eating habits and detect concerns early on. The implementation of consistent family meal patterns also plays a role in the treatment of adolescent eating disorders [7]. For example, in a family-based treatment, an essential aspect of the treatment is to encourage

Disclaimer: This manuscript is original, not previously published, and not under consideration elsewhere, and will not be submitted to any other journal while under consideration at *The Journal of Adolescent Health*.
Conflicts of Interest: None of the listed authors have a conflict of interest in the conduct or reporting of this research.

* Address correspondence to: Daniel Le Grange, Ph.D., Department of Psychiatry and Behavioral Neuroscience, The University of Chicago, 5841 S. Maryland Ave., MC3077, Chicago, IL.
E-mail address: legrange@uchicago.edu (D. Le Grange).

1054-139X/$ – see front matter
http://dx.doi.org/10.1016/j.jadohealth.2013.12.018

parents to establish a regular meal schedule [8,9]. Following a regular meal schedule, which increases accountability, may help patients with anorexia nervosa (AN) to achieve weight gain and may reduce binging and purging in patients with bulimia nervosa (BN) [8,9]. Despite the understanding of the psychological and physical values of family mealtime [1], there has been a lack of research done specifically on family meal frequency among youth with current diagnoses of an eating disorder.

Several studies have examined the association between family meal patterns and disordered eating in the general population [2,4,6]. These studies have suggested that infrequent family meals may lead to a higher risk of disordered eating [10,11]. Longitudinal findings from the Project Eating Among Teens study showed that regular family meals were associated with a lower prevalence of extreme weight control behaviors, including self-induced vomiting, and the use of diet pills, laxatives, and diuretics [6]. Ackard and Neumark–Sztainer's retrospective study asking female college students to recall their family meal patterns while growing up found that those who reported higher family meal frequency were less likely to engage in bulimic behaviors [10]. Additionally, Haines and colleagues' prospective study of over 13,000 preadolescents and adolescents found that females who reported eating with their family most days or everyday of the week were less likely to engage in disordered eating behaviors such as purging, binge eating, and dieting [4]. Despite the growing literature that suggests a potential role of family meals in preventing disordered eating behaviors among the general population, the literature exploring associations between family meal patterns and eating disorders in adolescent clinical samples is scarce [12].

A better understanding of family meal patterns in youth with eating disorders is needed, so that treatment plans can be tailored to their specific strengths and weaknesses. For example, for families that are already participating in regular family meals, the focus may be on enhancing parents' ability to help their children improve and/or modify eating patterns and behaviors, while for patients who are not eating with their families frequently, implementing a regular family meal schedule may be a viable initial intervention.

The current study expands upon the existing literature and focuses specifically on family meal frequency and eating disorder psychopathology among clinical samples of adolescents with eating disorders. The study aims to answer two questions: (1) What is the frequency of family meals among children and adolescents with AN, BN, and feeding or eating disorder not elsewhere classified (FED-NEC)? and (2) Is family meal frequency associated with eating disorder psychopathology among youth with eating disorders? Findings from this study may contribute to the understanding of the role that family meals play among youth with eating disorders and may have implications for adaptations and new developments for treatment.

Methods

Participants

Data were collected from children and adolescents presenting for an initial eating disorder evaluation at the University of Chicago Medicine's Eating Disorders Program between 2006 and 2012. Participants included 154 children and adolescents, aged 7–18 years ($M = 14.92 \pm 2.62$), with a mean body mass index (BMI) of 20.05 ± 6.56 (kg/m^2) and a mean percent of ideal body weight of 102.33 ± 36.76 (%). Percent of ideal body weight was defined as current BMI divided by 50th percentile BMI for age and gender using Centers for Disease Control and Prevention growth charts [13]. Participants met *DSM-5* [14] criteria for AN (39.0%; n = 60; minimum age = 11.5 years), BN (20.8%; n = 32; minimum age = 8.5 years), or FED-NEC (40.2%; n = 62; minimum age = 7.6 years) and were mostly female (87.7%; n = 135) and Caucasian (83.7%; n = 129). The clinical characteristics of the FED-NEC group were consistent with previous reports about children and adolescents with this classification [15]. Based on Eddy et al.'s work, our FED-NEC group was characterized into five subgroups: subthreshold AN (17.5%; n = 11), subthreshold BN (15.9%; n = 10), FED-NEC purging (34.9%; n = 22), FED-NEC bingeing (14.3%; n = 9), and other (17.5%; n = 11) [15]. Table 1 lists the characteristics of the participants by eating disorder subtype.

Procedure

Participants completed a structured interview and paper-and-pencil questionnaires during a 3-hour baseline assessment. All data were collected before the start of treatment. Written informed consent for patients 18 years of age or parental/guardian consent and adolescent assent for patients under 18 years of age were obtained. The University of Chicago's Institutional Review Board approved this study.

Measures

The eating disorder examination. Eating disorder examination (EDE) is a semistructured investigator-based interview measuring cognitive and behavioral symptoms related to eating disorders [16]. Cognitive symptoms of eating disorders are assessed using a seven-point Likert scale, with higher scores indicating more severe eating-related psychopathology. The EDE provides a global score reflecting the overall severity of the eating disorder symptoms and four subscale scores. The subscales are restraint (e.g., food avoidance and dietary rules), eating concern (e.g., preoccupation with food, eating, or calories and guilt about eating), shape concern (e.g., dissatisfaction and preoccupation with shape and discomfort about body exposure), and weight concern (e.g., importance of weight and desire to lose weight). To obtain an overall or "global" score, the four subscales scores are added together, and the resulting total is divided by the number of subscales (i.e., four) [16].

Behavioral symptoms of eating disorders such as frequency of self-induced vomiting, laxative misuse, diuretic misuse, driven exercise, fasting, subjective, and objective binge eating are also assessed. The EDE has demonstrated good reliability and validity and has been utilized in multiple studies of youth with eating disorders [17,18]. The EDE was used to generate *DSM-5* diagnoses for an eating disorder.

The family meal questionnaire. Family Meal Questionnaire (FMQ child version) is a self-report three-item assessment of the frequency of each family mealtime (breakfast, lunch, and dinner) [10]. Specifically, the questions ask "How often do you eat (specify a meal) with your family?", and the five response choices are less than weekly; one to two times per week; three to four times per week; five to six times per week; or every day. The FMQ has previously been used in several studies [10,11].