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Family meals and eating practices among mothers in Santos, Brazil: A population-based study

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ABSTRACT

This study investigates family meals among mothers and explores associations between eating with family and sociodemographic characteristics, body mass index, and eating practices. A population-based cross-sectional study, using complex cluster-sampling, was conducted in the city of Santos, Brazil with 439 mothers. Frequency of family meals was assessed by asking if mothers did or did not usually have a) breakfast, b) lunch, and c) dinner with family. Linear regression analyses were conducted for the number of meals eaten with family per day and each of the potential explanatory variables, adjusting for the mother's age. Poisson regression with robust variance was used to analyze each factor associated with eating with family as classified categorically: a) sharing meals with family, b) not eating any meals with family. Only 16.4% (n = 72) of participants did not eat any meals with family. From the 83.6% (n = 367) of mothers that had at least one family meal per day, 69.70% (n = 306) ate dinner with their families. Mothers aged ≥40 years reported significantly fewer meals eaten with family compared to mothers aged 30–39 years (β: −0.26, $p = 0.04$). Having family meals was 54% more prevalent among mothers with ≥12 years of education (PR for no meals eaten with family: 0.54, 95% CI: 0.30; 0.96, $p = 0.03$), when compared to mothers with less than nine years of education. Eating no meals with family was 85% more prevalent among mothers who reported that eating was one of the biggest pleasures in their lives (PR: 1.85, 95% CI: 1.21; 2.82, $p = 0.004$). We suggest the need for further research investigating the effects of family meals on mothers' health through nutritional and phenomenological approaches.

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1. Introduction

Commensality is defined as eating with others. While sharing meals, people also share values around food. Meals are most often eaten with family, which is the most important commensal circle (Sobal & Nelson, 2003). Eating with family is evidenced to have social, cultural, and health benefits (Eisenberg, Olson, Neumark-Sztainer, Story, & Bearinger, 2004; Martin-Biggers et al., 2014). Martin-Biggers et al. (2014) define family meals as "meals eaten at the same time in the same location by all or most family members in the same household" (p. 243).

In a period in which convenience is emphasized as a primary factor in food choice (Connors, Bisogni, Sobal, & Devine, 2001), fast food restaurants and food-delivery service are frequently part of daily meals (Nielsen, Siega-Riz, & Popkin, 2002). Recent research has focused on how these changes influence family meals (Kjærnes, Holm, Gronow, Mäkelä, & Ekström, 2009; Martin-Biggers et al., 2014; Sobal & Nelson, 2003). Although some studies suggest that eating has become a series of random, unstructured events characterized by social isolation (Kjærnes et al., 2009; Sobal & Nelson,

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2003), others affirm that eating together is still very present in contemporary eating practices and very likely to persist (Martin-Biggers et al., 2014; Sobal & Nelson, 2003). Findings about the maintenance or disappearance of commensality are still very ambiguous, and therefore, there is a need for research focusing on contemporary food practices (Fischler, 2012).

There is a great deal of evidence supporting the association between family meals and health promotion (Eisenberg et al., 2004; Fiese & Schwartz, 2008; Fruh et al., 2011; Martin-Biggers et al., 2014). The American Academy of Pediatrics recognizes the practice of family meals as a strategy for child obesity prevention, and the benefits of family meals for children, adolescents, and young adults are well described in the literature (Martin-Biggers et al., 2014). A study conducted by Berge et al. with 3709 parents and caregivers of adolescents reported no association between the parents' body mass index (BMI) and family meals (Berge et al., 2012). Nevertheless, there is still a gap in the understanding of the effects of eating with family on parents' weight status, which could be related to conflicting assessment methods. Moreover, Lund and Gronow (2014) have discussed that commensality practices differ according to life stage. In this sense, it is relevant to explore the practices of mothers around family meals and to understand how social roles that comply with the social construction of the mother/spouse function may affect their eating behavior.

The review conducted by Martin-Biggers et al. on family meals indicated the need to explore the characteristics of parents that may mediate the frequency of family meals, such as employment, marital status, years of education, and ethnicity (Martin-Biggers et al., 2014). Sobal and Nelson (2003) observed that among American adults some demographic variables, such as marital status and education, were associated with a higher frequency of eating with family. Other variables, such as working outside the household, have been associated with fewer family meals (Devine, Connors, Sobal, & Bisogni, 2003).

According to Poulain and Proença (2003), eating interacts with objective and subjective aspects. Thus, an eating behavior such as having family meals is not isolated from other eating habits, attitudes, values, and opinions. They define eating practices as a set of objective and subjective data that facilitates the description and understanding of a food phenomenon. In this study, we hypothesized that several aspects of the eating practices of urban women (i.e., food preparation, eating habits, food preferences, and table manners) would relate to the frequency of eating with family and could help to understand the implications of this practice.

In this context, Brazil seems to be a relevant setting for this investigation, due to its recent economic growth, vast social inequality, and nutritional transition (Sato et al. 2014). However, the lack of representative-population studies and the low diversity of the groups studied do not provide an adequate assessment of how contemporary eating practices interact with family meals in Brazil. The city of Santos could provide an interesting setting to study contemporary family meals. Santos is an urban city located in the southeast region of Brazil, with an important economy because it hosts the largest port city in Latin America. However, the city also presents significant social inequality: while it has the ninth highest per capita income in the country, 10% of its residents live in poverty (IBGE, 2007).

Addressing the assertion of increased participation in individualized meals, the present study investigates the frequency of meals eaten with family among mothers living in Santos, Brazil. Currently, few studies have investigated family meals through the eating practices of mothers, who comprise an important population due to their central social roles in family meals. Therefore, we describe participants' eating practices and explore the association between frequency of family meals with years of education, age, living with partner, employment status, number of children, BMI, and eating practices.

2. Material and methods

The current study was part of two research projects: "Nutritional Environment Assessment in the City of Santos, Brazil" (funded by the São Paulo Research Foundation—FAPESP, 2009/01361-1) and "Influence of Eating Practices and Nutritional Environment on Weight Gain in Mothers Residing in the City of Santos, Brazil" (funded by the National Council for Scientific and Technological Development—CNPq), which have been described elsewhere by Cremm et al. (2012),[16] Scagliusi et al. (2012),[17] and Sato et al. (2014)[14]

A population-based cross-sectional study was conducted with mothers of children who were ten years old or younger. In this study, we used a complex cluster-sampling plan in which the census tracts from the Brazilian Institute of Geography and Statistics census from the year 2000 formed the primary units (IBGE, 2007). Census tracts are the smallest territorial unit, which are defined for the purpose of taking a census. In Santos, a census tract comprises a few blocks. This study was conducted in three of the five regions of Santos (Center, Northwest, and Waterfront), in which we randomly selected 35 of the 533 census tracts. The sample was demographically representative of Santos, but because Brazil is characterized by vast territory and cultural diversity, Santos may only be representative of other urbanized cities in the southeast of the country.

The researchers enrolled all selected tracts to identify the eligible households in each sector. Inclusion criteria were established according to the requirements of the abovementioned studies in which this work took part and included: 1) being a female city resident older than 18 years living with their biological child up to 10 years of age; 2) not having health conditions that could affect their nutritional status, and 3) not having undergone elective weight loss surgery. A total of 439 mothers were assessed through a home-based interview (response rate of 78.3%). This study was approved by the Ethics and Research Committee of the Federal University of São Paulo (Protocol # 0300/10). Written informed consent was obtained from all participants.

2.1. Measures

The household questionnaire was pilot tested with a sample of 20 mothers with characteristics similar to the study's target population living in a city close to Santos. Two trained interviewers conducted interviews lasting approximately 30 min (with a ±10 min-variation), covering 27 questions that investigated the following aspects of the mothers: age, ethnicity, home location, years of education, occupation, marital status, number of children, food preparation and consumption practices, and frequency of family meals per day.

Martin-Biggers et al. (2014) highlight that the variety of family meal definitions makes it difficult to compare studies. In this study, we adopted their definition of family meals as "meals eaten at the same time in the same location by all or most family members in the same household" (Martin-Biggers et al., 2014, p. 243). Frequency of family meals was measured as the number of meals that participants usually ate with their family in one day (0, 1, 2, or 3 meals). Participants were asked if they did or did not usually have a) breakfast, b) lunch, and c) dinner with family. Answer options were "yes" or "no".

Questions regarding eating practices were elaborated based on the quantitative studies by Tivadar and Luthar (2005) and Bourdieu (2010) on eating practices and cultural taste. The researchers

adapted the questions to make them culturally appropriate and to align with the study's aims. This tool has been previously described in another work with the same population by Sato et al. (2014). Investigated themes were food preparation (5 items), eating habits (5 items), food preferences (5 items), and pleasure from eating (1 item). Answers were posed in a Likert-type scale format, with the options never/seldom, sometimes, often, and always. Questions are presented in Table 1.

Eight trained data collectors directly measured the weight and height of all participants at their homes. Mothers were weighed without shoes and while wearing light clothing by a portable electronic scale with a capacity of 150 kg and an accuracy of 0.1 kg (Tanita, Tokyo, Japan). Height was assessed by a portable stadiometer with a length of 190 cm and an accuracy of 0.1 cm (Alturexata, Minas Gerais, Brazil). Scales and stadiometers were placed on hard, level, smooth floors and each measurement was taken twice. If data collectors observed discrepancy between values, a third measurement was taken. After height and weight were obtained, we calculated each participant's BMI (kg/m^2). As the focus of this research was to investigate family meals and mothers' eating practices, the height and weight of other family members were not measured.

2.2. Data analysis

The main dependent variable of interest was family meals, measured as meals frequently eaten with family (breakfast, lunch, and dinner). Family meals were explored in two ways: frequency of meals eaten with family per day and occurrence of family meals versus no family meals (i.e., mothers that affirmed usually having at least one family meal per day versus mothers who reported having no family meals). Explanatory variables included mother's age, years of education, number of children, employment status, marital status, and BMI. Eating practices were also considered.

Age was explored according to the following categories: a) less than 30 years old, b) from 30 to 39 years old, and c) 40 years or older. Years of education were classified as <9 years, 9–11 years, and ≥12 years as an indicator of socioeconomic status. Categories for number of children were one, two, and three or more. Finally, for the purpose of our analysis, BMI was divided as underweight and healthy weight (BMI < 25 kg/m^2), overweight (BMI ≥ 25 kg/m^2 and <30 kg/m^2), and obese (BMI ≥ 30 kg/m^2), according to the criteria used by the World Health Organization (2015). Underweight and healthy weight categories were grouped together because only 16 (3.7%) mothers were underweight.

Linear regression analyses were conducted for the frequency of family meals as a continuous variable (number of meals eaten with family in one day, ranging from 0 to 3 meals) and for each of the potential explanatory variables, adjusting for the mother's age. Prevalence ratios (PR) and their 95% confidence intervals (95% CI), also adjusted for mother's age, were obtained for each factor associated with eating with family as explored in a categorical classification of the occurrence of family meals ("no family meals" versus "at least one family meal" per day) using multiple Poisson regression models with robust variance. For both analytical approaches, covariates were selected for multiple regression models considering their crude associations with family meals at $p < 0.20$, and also according to a conceptual approach with hierarchical levels for the dependent variable of interest, as follows: (1) years of education, (2) employment status, (3) family characteristics (presence of a partner and number of children), and (4) BMI. At each level, conceptually relevant covariates were retained in the models if they were associated with family meals at $p < 0.10$, if categories followed a dose-response pattern, or if inclusion in the model changed R^2 or PR by 10% or more.

Eating practices were explored through 17 questions concerning

Table 1
Percentual distribution of eating practices of 439 mothers living in the city of Santos, Brazil.

	Never/Seldom (%)	Sometimes (%)	Often (%)	Always (%)	T-test
Do you like to cook?	78 (17.80)	112 (25.50)	52 (11.80)	197 (44.90)	0.994, 0.945
Are you the main responsible for the cooking in the household?	65 (14.80)	75 (17.10)	40 (9.10)	259 (59.00)	0.751, 0.752
Do you or the person preparing the food often prepare more dishes that your family likes instead of dishes that you like?	205 (46.70)	95 (21.60)	50 (11.40)	89 (20.30)	0.339, 0.328
When you eat with your family, do you serve the others plates?	229 (52.20)	50 (11.40)	21 (4.80)	139 (31.70)	0.006, 0.003
Daily, when you have little food at mealtime, do you end up eating less than other people?	155 (35.30)	86 (19.60)	36 (8.20)	162 (36.90)	0.251, 0.275
Do you eat standing up?	344 (78.40)	78 (17.80)	9 (2.10)	8 (1.80)	0.715, 0.662
Do you eat fast?	138 (31.40)	140 (31.90)	37 (8.40)	124 (28.20)	0.285, 0.289
Do you eat while doing other things, like reading, watching TV, working or cooking?	120 (27.30)	142 (32.30)	49 (11.20)	128 (29.20)	0.143, 0.141
Do you usually buy ready to eat meals?	175 (39.90)	213 (48.50)	34 (7.70)	17 (3.90)	0.677, 0.633
Do you use practical foods (for example, noodles, ready tomato sauce, packaged soup and boxed cake mix)?	111 (25.30)	194 (44.20)	58 (13.20)	76 (17.30)	0.391, 0.378
Do you like to eat in fast food restaurants, such as McDonald's and Burger King?	163 (37.10)	178 (40.50)	40 (9.10)	58 (13.20)	0.912, 0.911
Do you like plentiful and simple food that provide sustenance and energy for you to work?	31 (7.10)	84 (19.10)	78 (17.80)	246 (56.00)	0.641, 0.642
Do you like elaborated and sophisticated food?	158 (36.00)	165 (37.60)	40 (9.10)	76 (17.30)	0.849, 0.853
Do you like to try new foods and dishes?	76 (17.30)	160 (36.40)	36 (8.20)	167 (38.00)	0.805, 0.805
Do you prefer home-made food instead of restaurant food?	26 (5.90)	76 (17.30)	53 (12.10)	284 (64.70)	0.380, 0.418
Is eating one of the greatest pleasures of your life?	162 (36.90)	127 (28.90)	68 (15.50)	87 (18.70)	0.248

food preparation, eating habits, food preferences, and eating for pleasure. Answers were tabulated in a descriptive analysis and t-tests were conducted to look for significant differences between the groups ("no family meals" versus "at least one family meal" per day) (Table 1). In additional multiple regression models, eating practices were included in a supplemental level to estimate their association with commensality, with proper adjustment for mother's age, years of education, employment status, family characteristics, and BMI.

All reported p values were two-tailed and a 5% significance level was used. We used Stata software, version 13.1, for all analyses.

3. Results

A total of 439 mothers, living in the Center, Northwest, and Waterfront areas of the city of Santos were assessed. Age ranged from 18 to 55 years old and the mean age was 33.50 (SD 7.21) years. The mean BMI was 25.91 kg/m^2 (SD 5.29) and 50.92% of the participants were considered overweight or obese. Other sociodemographic characteristics are presented in Table 2.

Only 16.40% (n = 72) of participants did not regularly eat any meals with family. Of the 83.60% of mothers that had at least one family meal a day, 40.55% (n = 178) frequently shared one meal, 28.02% (n = 123) shared two, and 15.03% (n = 66) shared all meals with their families. Breakfast was eaten with the family by 25.50% (n = 112) of participants, while 46.50% (n = 204) ate lunch, and 69.70% (n = 306) ate dinner with their families.

Considering the frequency of family meals as the number of meals regularly eaten with the family in one day, covariates retained in the multiple regression model were mother's age, years of education, employment status, and BMI. Mothers aged ≥40 years reported significantly fewer meals eaten with family compared to mothers aged 30–39 years (β: −0.26, p = 0.04). A multiple regression model with mothers' age categories is presented in Table 3. Though BMI was not significantly associated with family meals, it was estimated that overweight mothers had 0.18 more family meals than did healthy weight mothers (95% CI: −0.02; 0.39, p = 0.08).

When exploring the occurrence of family meals, mother's age, years of education and number of children were retained in the multiple model (Table 4). Having family meals was 54% more prevalent among mothers with ≥12 years of education (PR for no meals eaten with family: 0.54, 95% CI: 0.30; 0.96, p = 0.03), when compared to mothers with less than 9 years of education.

Table 1 describes the frequencies of eating practices, while the crude and adjusted associations between family meals and eating practices are presented in Table 5. In the adjusted analysis, mothers who reported being primarily responsible for cooking in the household ate 0.21 more family meals than those who were not responsible for cooking (95% CI: 0.01; 0.41, p = 0.04). After calculating the mean effect, we observed that those mothers responsible for cooking had an average of 1.47 family meals per day, whereas mothers who were not responsible for cooking had 1.27 family meals a day.

Furthermore, mothers who reported eating less than other family members when there was little food for the meal seemed to share slightly more family meals (β: 0.17), though this result was not statistically significant (95% CI: −0.01; 0.35, p = 0.06). Surprisingly, pleasure from eating was inversely associated with family meals among mothers. Eating no meals with family was 85% more prevalent among mothers who reported that eating was one of the biggest pleasures in their lives (PR: 1.85, 95% CI: 1.21; 2.82, p = 0.004).

Table 2
Sociodemographic characteristics of 439 mothers living in the city of Santos, Brazil.

Variables	Total (%)
Age (years)	
<30 years	113 (30.30)
30–39 years	211 (48.10)
≥40 years	95 (21.60)
Education (years)	
<9 years	23 (5.90)
9–11 years	216 (55.80)
≥12 years	148 (38.20)
Employed	248 (56.5)
Lives with partner	341 (77.70)
Number of children	
1	161 (46.10)
2	107 (30.70)
3 or more	81 (23.20)
BMI	
<25 kg/m^2	212 (49.10)
≥25 kg/m^2 < 30 kg/m^2	141 (32.60)
≥30 kg/m^2	79 (18.30)
Ethnicity	
Caucasian	299 (68.10)
African American	77 (17.50)
Asian	2 (0.5)
Native American	2 (0.5)
No answer	59 (13.40)

Table 3
Predictors for frequency of meals eaten with family of 439 mothers living in the city of Santos, Brazil.

Family meals[a]	β (SE)	p-value	95% CI
Age			
<30 years (Ref)	–	–	–
30–39 years	0.09 (0.10)	0.38	−0.11; 0.30
≥40 years	−0.25 (0.13)	0.04	−0.51; −0.004
Education			
<9 years (Ref)	–	–	–
9–11 years	0.09 (0.13)	0.45	−0.15; 0.34
≥12 years	0.15 (0.14)	0.27	−0.11; 0.41
Employed	0.05 (0.09)	0.59	−0.13; 0.23
BMI			
<25 kg/m^2 (Ref)	–	–	–
≥25 kg/m^2 < 30 kg/m^2	0.18 (0.10)	0.08	−0.2; 0.38
≥30 kg/m^2	−0.03 (0.12)	0.80	−0.27; 0.21

SE–standard error; CI–confidence interval.
[a] Number of meals eaten in family in one day (0, 1, 2 or 3).

4. Discussion

The present study indicates that family meals are still very frequent in Santos, Brazil. Despite the described individualization of

Table 4
Predictors for no meals eaten with family of 439 mothers living in the city of Santos, Brazil.

No meals in family	PR (SE)	p-value	95% CI
Age			
<30 years (Ref)	–	–	–
30–39 years	0.81 (0.22)	0.43	0.48; 1.36
≥40 years	1.55 (0.43)	0.11	0.91; 2.66
Education			
<9 years (Ref)	–	–	–
9–11 years	0.66 (0.17)	0.11	0.40; 1.09
≥12 years	0.54 (0.16)	0.03	0.30; 0.96
Number of children			
1 (Ref)	–	–	–
2	0.64 (0.16)	0.08	0.39; 1.05
3 or more	0.66 (0.19)	0.16	0.37; 1.18

SE–standard error; CI–confidence interval.

Table 5
Multivariable models for frequency of family meals and no meals with family by maternal eating practices, Santos, Brazil.

Eating with family behavior	β (SE)	*p*-value	95% CI	β* (SE)	*p*-value	95% CI
Frequency of family meals[a]						
Mother as the main responsible for the cooking in the household	0.13 (0.09)	0.16	−0.06; 0.32	0.021 (0.10)	0.04	1.04; 2.02
Eat less food than other family members when meal seems to not be enough for everybody	0.15 (0.09)	0.09	−0.02; 0.33	0.17 (0.09)	0.06	−0.01; 0.34
	β (SE)	***p*-value**	**95% CI**	**PR* (SE)**	***p*-value**	**95% CI**
No family meals						
Eating is one of the greatest pleasures of life	1.72 (0.37)	0.01	1.13; 2.62	1.85 (0.40)	0.004	1.21; 2.82

SE—standard error; CI—confidence interval.
β model adjusted for age.
* model adjusted for age, level of education, employment and BMI.
[a] Number of meals eaten in family in one day (0, 1, 2 or 3).

meals and the "privatization" of eating choices among Western societies in general, a high percentage of our sample of mothers living in Santos ate dinners with their families.

Our findings corroborate three other studies that question the decrease of family meals among adults in several countries (Lund & Gronow, 2014; Martin-Biggers et al., 2014; Sobal & Nelson, 2003). While the literature review conducted by Martin-Biggers et al. (2014) showed limited scientific evidence supporting a decrease in the frequency of family meals, Sobal and Nelson (2003) observed that most of their American respondents ate dinner at home with their families. Finally, Lund and Gronow (2014) indicate that the decline in shared meals and structured food habits was not found in research regarding eating rhythms in Nordic countries in 1997 and 2012. While we recognize the variety of cultural contexts where the abovementioned studies took place, our results add to the literature questioning the disappearance of family meals in industrialized Western countries. In spite of modern lifestyles, it is possible that dinners are still frequently a family meal.

The negative association between mothers' age and family meals also suggests that family meals occur in young families and are not a behavior engaged in by mostly older mothers. Since younger mothers are most likely to have younger kids, our results suggest that the traditional value of family meals is still being taught to young children in Santos. One possible reason for older mothers eating fewer meals with their families may be the busier schedule of older children; the literature shows that family meal frequency declines as children get older (Miller, Waldfogel, & Han, 2012). No other studies have related mother's age to the frequency of family meals; thus, further research could help define target populations in need of nutritional interventions aimed at promoting family meals.

Years of education had a positive association with having at least one family meal. Our study supports other research that has found that formal education was associated with more traditional eating practices, such as eating more home-made meals (Martin-Biggers et al., 2014; Mellor, Blake, & Crane, 2010; Tivadar & Luthar, 2005). In this study, mothers' BMI was not associated with the frequency of family meals. However, the tendency of more family meals among overweight mothers suggests an opposite relation to the one described for children and teenagers, in which family meals were a protective factor against being overweight (Hammons & Fiese, 2011). Our findings corroborate Sobal and Hanson (2014) work that described no association between parents' BMI and family dinners. These observations highlight the complex and still to be understood role that family meals may have on parents' health.

We observed a significant association between not having family meals and reporting pleasure from eating. Despite seeming contradictory, this finding can be interpreted in the context of other studies with mothers (Burnier, Dubois, & Girard, 2011; Latreille & Ouellette, 2008; Slater, Sevenhuysen, Edginton, and O'neil (2012). It is possible that the lack of pleasure described reflects differences in mother's attitudes towards preparing and sharing family meals. One qualitative study with employed mothers described that many of them felt pressured to prepare and provide family meals (Slater et al., 2012), and Latreille and Ouellette (2008) found that 20% of the interviewed married mothers said that dinner was the most stressful activity of their day. These observations, in connection with our findings, suggest that the stress associated with often being the only one responsible for meals may interfere in the pleasure that mothers have in eating. Attitudes towards eating with family may also contribute to a lack of pleasure. Burnier et al. (2011) observed that for 20% of the mothers in their study, family meals often involved arguments between family members and were considered unpleasant.

Our results also point to attitudes towards sharing meals that could be influenced by social class. Mothers who reported "eating less than others when there was little food for the meal" shared more family meals. This observation suggests that among families living with food insecurity, eating with family may aggravate this practice for mothers. Qualitative studies conducted in the United States and Argentina corroborate the importance of this issue (Aguirré, 2000; Bove & Olson, 2006). In both studies, mothers reported providing other members of the family with nutritious food and satiating their hunger with high calorie snacks. The substitution of nutritious meals for foods high in fat and sugar may contribute to obesity in the population of low-income women, which has been described as vulnerable to obesity (Monteiro, Conde, & Popkin, 2004).

Having the mother as the one mainly responsible for preparing meals in the household was positively associated with more meals eaten with family. However, less than half of participants affirmed to always appreciating being responsible for cooking. This observation was further investigated with a chi-square analysis to look for differences in liking to cook and the employment of mothers; no significance was observed. However, statistically significant differences ($p = 0.004$) were found for differences between the professional groups in our population: domestic and physical services, retail, educator, low-level administrative (i.e., secretaries, real estate brokers, and sales assistants), senior level administrative (i.e., administrative managers, systems analysts, entrepreneurs, and lawyers), and health professionals. Mothers who liked to cook the least worked as educators; 31.81% (n = 7) indicated never liking to cook, and only 13.63% (n = 3) always liked to cook. Mothers employed in domestic and physical services liked to cook the most; 67.24% (n = 39), always liked to cook, and only 12.06% (n = 7) never enjoyed cooking. The responsibility for daily meal preparation may influence one's fondness for cooking, since deciding what to serve involves tension, as observed by Barbosa (2007).

If on one hand, the results indicate some difficulties that

mothers perceive in eating with their families; on the other, quantitative and qualitative studies have found that family meals have beneficial effects on family relationship and cohesion (Fulkerson, Neumark-Sztainer, & Story, 2006; Welsh, French, & Wall, 2011). The beneficial effects of commensality have been so widely recognized that eating with others was incorporated as a recommendation in the new Brazilian Food Guide (Monteiro et al., 2015). This new approach values cultural practices and has been complimented by several international scientists in the nutrition field (Ministry of Health of Brazil, 2014). The guidelines reflect that orienting "how" to eat is as important as orienting "what" to eat. The recommendations recognize the duration of the meal, as well as attention to the food, setting, and company. They highlight the benefits of eating with others, as they avoid eating quickly, favor proper eating settings, and increase the pleasure in eating. The Food Guide goes beyond only recommending eating with others by suggesting the sharing of other aspects of the meal, such as buying, preparing, and serving the food (Monteiro et al., 2015). This recommendation not only encourages sharing moments together and preserving traditions, but also helps to not overwhelm one member of the family with all the work (Ministry of Health of Brazil, 2014). The disproportional division of cooking responsibilities in families was observed in this study and should be addressed in future nutritional interventions.

It is important to create new strategies to deal with the burden of preparing the family meals, such as composing grocery shopping lists, planning meals, making meals ahead of time and storing them, developing a structured meal routine, and using microwave ovens and slow cookers. Thus, improving parents' cooking self-efficacy has been proven to help them overcome barriers and have more family meals (Martin-Biggers et al., 2014). Sharing the responsibility of preparing meals between family members can make it a lighter task for the mother and allows an extension of the social sharing of food from just eating to preparing and cooking.

Finally, we suggest the need for more studies investigating the effects of being responsible for family meals and of having family meals through nutritional and phenomenological approaches. Such studies will contribute to the practice of public health and nutrition, since recognizing the barriers mothers face will help to trace strategies to promote family meals. Our study presents some limitations. First, this is a cross-sectional study, which limits our ability to make causal associations. The present study adopted a closed-ended questionnaire, which might have limited the acquired data, not allowing a deeper exploration of the topics. In addition, given that we investigated cooking-related behaviors, performing a complementary qualitative approach would have helped to identify and contextualize these constructs.

On the other hand, it is important to emphasize that constraints may be imposed by the number of participants in an investigation and that the representative sample of mothers is a strength in this study. In an attempt to minimize this barrier, we worked with a broad approach to family meals accessed by two variables (frequency of family meals and occurrence of family meals).

5. Conclusions

Despite the claim of meal destructuralization in Western countries, the majority of mothers living in Santos ate dinner with their families. Younger mothers were more likely to eat with their families and higher levels of education were positively associated with eating at least one meal with family. Finally, the frequency of family meals was not associated with mother's BMI or with living with a partner. This study demonstrates the importance of incorporating strategies to deal with the responsibility of family meals in nutritional educational activities targeting women. Thus, quantitative and qualitative studies are needed to investigate the psychosocial and health impacts of eating with family on mothers.

In short, public health messages encouraging family meals should also take into consideration barriers related to the responsibility of meal preparation. Future studies should focus on identifying barriers and facilitators of cooking meals at home in order to implement culturally appropriate interventions to improve commensality practices.

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