

Common Early Feeding Contexts: Study in Primary Caregiver and Son or Daughter Dyads

Fernanda Díaz-Castrillón^{1,2}, Claudia Cruzat-Mandich^{1*}, Paula Lizana-Calderón^{1,3}, Alejandra Gil¹, and María José León-Papic⁴

¹Center for Studies of Eating Behavior, Universidad Adolfo Ibáñez, Santiago, Chile

²Medical Anthropology and Global Health, Universitat Rovira i Virgili, Tarragona, Spain

³University of Madrid, Madrid, Spain

⁴Center for Eating Behavior Studies, Universidad Adolfo Ibáñez, Santiago, Chile

Abstract

It is important to investigate the beginning of eating behavior given the high rates of child obesity that exist all around the world and in Chile. Many investigations give importance to the role of parents in the formation of eating habits during early childhood. This work aims to relate the characteristics of the usual feeding context in early childhood with the emotionality of the caregiver-baby dyad, and the alimentary style of the main caregiver. Descriptive, correlational, and transversal study. Observation by expert judges of 29 video recordings of caregiver-baby dyad in a habitual feeding practice. The average age of the children was 2.12 years (DS = 0.48), most of them had normal nutritional status (51.7%), and 62% were males. Applied questionnaires: socio-demographic survey, checklist of habitual eating behaviors, measurement of the child's socio-emotional state (CBCL Y ASQ-SE), affective and alimentary symptomatology of the main caregiver (DASS 21 Y DEBQ). The most frequent problematic eating behaviors of children are: Reject to eat specific foods due to texture/flavor and a tense emotional state during the feeding. The depressive and stress symptoms of the caregiver are significantly associated with the behavior of the child during the habitual feeding practice. It is noted a significant relationship between the caregiver's perception of the child's emotional state, an unusual context to perform feeding practice and the more directive attitude assumed by the adult during the alimentary interaction. It is necessary to investigate the food interaction especially during the first years of life, when eating habits are established.

Keywords: Food Interaction; Early Childhood; Keeper-Baby Dad; Interacción Alimentaria; Infancia Temprana; Diada Cuidador-Bebé

***Correspondence to:** Claudia Cruzat-Mandich, Center for Studies of Eating Behavior, Universidad Adolfo Ibáñez, Santiago, Chile; E-mail: claudia.cruzat@uai.cl

Citation: Díaz-Castrillón F, Cruzat-Mandich C, Lizana-Calderón P, et al. (2021) Common Early Feeding Contexts: Study in Primary Caregiver and Son or Daughter Dyads. *Prensa Med Argent*, Volume 107:5. 344. DOI: <https://doi.org/10.47275/0032-745X-344>

Received: September 10, 2021; **Accepted:** September 24, 2021; **Published:** September 30, 2021

Introduction

Chile has become the country with the highest rates of childhood obesity in Latin America [1]. 34.67% of Chilean children up to 6 years of age are overweight or obese, which is in itself a serious public health problem, requiring prevention efforts [2].

Early childhood is a period of vital importance to incorporate eating habits, with food preferences and the development of basic patterns of behavior towards food being conditioned by the family context [3]. It is important that the introduction of a diverse and healthy diet be done during the first two years of age, especially since the acceptance of new food changes with age, making it increasingly difficult to incorporate new foods [4,5]. The food learning that occurs in the first years of development seems to remain throughout life, so it should be considered as a special moment of intervention [4,5].

In this period, parents play a fundamental role since they are models of the eating behavior of their children, being able to favor varied nutritional guidelines and promoting an autonomous diet in which children can explore all kinds of foods [6].

Kerzner B, et al. (2015) [7] distinguished a link component in the

food interaction; Therefore, the strategy used by caregivers will serve as a modulator of the infant's future eating behavior, as long as it is repeated and frequent over time [8]. Parental strategies that have been correlated with eating problems in children are those that imply a highly sensitive interaction with low levels of structure [9]. The frequent use of persuasion to eat, coercion, intrusiveness, and hostility to teach how to eat, causes the child to have a negative disposition towards food, with a predominance of decreased feeling of hunger, slowness to eat and low enjoyment of food [10]. Specifically in relation to the mother's attitudes in the eating context [11], a positive and significant association is observed between mothers who emotionally regulate their children through food and the child's overweight at 3 years of age. In the same way, the pressure to eat is positively associated with the risk of overweight in the child at 3 years of age, which is intensified if the food that is forced to eat is unhealthy and the child is already overweight previously. There is also a relationship between the mother's negative beliefs about nutrition; For example, ideas such as: healthy food is more expensive and takes a long time to prepare are positively associated with a child's body mass index (BMI) [11]. Finally, negative feeding strategies (persuasion, restriction, and highly structured feeding context) are also directly associated with the child's BMI [12].



Likewise, the mother's negative emotionality is related to the child's eating behavior at an early age [13]. The ability to regulate and inhibit the mother's behavior affects the way her children cope with eating behavior [13,14]. Mothers with depression and low socioeconomic status (SES) may adopt authoritarian and distant eating practices with their children [15]; mothers with depressive and anxious symptoms report feelings of hostility and stress when feeding their children [16]; children under 3 years of age with mothers who present psychological stress are more likely to be obese [17]; Certain types of anxious mothers predispose the development of obesity in their children because they tend to respond to their crying by feeding them [18].

In Chile, Vargas Martínez G, et al. (2015) [19] report that mothers with obese children tend to confuse food and emotional needs in their children. In early childhood, it has been seen that the most successful interventions with caregivers are those that help them discriminate between the signs of hunger and emotional stress, in such a way that they learn not to calm their children's anxiety with food [20]. There is also a consistent relationship between maternal depressive symptoms and less controlling eating practices [15], and little enjoyment and excess intrusion [21], and more passive practices when feeding, which is why they tend to eat while watching television [22].

In this sense, the objective of this work is to relate the characteristics of the daily eating context in early childhood with the emotionality of the mother (father) -child dyad, and the eating style of the mother or main caregiver.

Subjects and Method

A cross-sectional correlational study was carried out. 29 dyads of caregivers (mothers or fathers) and sons or daughters were recruited, through non-probabilistic sampling by networks (snowball), which were videotaped during a daily food interaction from beginning to end, between October and December 2016. They responded 28 mothers and one father took the questionnaires and carried out the eating practice.

The inclusion criteria were the following:

1. Children: first-born sons / daughters; father and mother responsible for the upbringing (although they could live separately), between 17 months to 36 months of age.

2. Caregivers: of legal age; must be the primary caregiver in the upbringing; You must have the ability to read in order to understand the consent and the questionnaires.

Exclusion criteria:

1. Children: premature, pervasive developmental disorder, physical or sensory problems that could interfere with feeding (e.g. cleft lip, food allergy, visual or hearing problems);

2. Caregivers: cognitive difficulties that prevent answering questionnaires and understanding consent.

Procedure

Each main food caregiver was asked to answer five questionnaires: two to assess the child's socio-emotional state (CBCL and ASQ-SE), a check list of the child's eating behavior based on the Zero to three [23], and two that measured the symptoms affective (DASS 21) and alimentary (DEBQ) of the main caregiver. A sociodemographic survey was also applied with identification data, morbid family history and nutritional status of the child.

Trained technical personnel applied the questionnaires and recorded a habitual feeding interaction between the main caregiver and the child. Each video was analyzed using an observation checklist type guideline and built ad hoc for the investigation. A research assistant tabulated each video according to that guideline, and then each video was re-evaluated by a second previously trained judge. The expert judges who re-evaluated the first tabulation were six graduate students, specializing in clinical work in eating disorders and obesity, rating the videos that were randomly assigned to them. The aspects that were requested to observe in the pattern were: habitual place to feed, who controls feeding, mother or child is anxious / sad / relaxed during feeding, use of electronic devices during feeding, among others (Table 1). The coincidence of both observations was evaluated in each

Table 1: Frequency distribution of food interactions observed on videotape.

| Type of practice | Percentage | |
|--|--|-------|
| Food practice is carried out in the usual place for food | 75.9% | |
| There are many objects around food that can interfere with practice (toys, pets, others) | 24.1% | |
| Use of electronic devices that interfere with concentration / attention of the mother or child | 34.5% | |
| Use of resources to encourage practice (toys, books, songs, stories, games) | 55.2% | |
| There is an order, different types of food are not mixed. One ends, then another begins (food, dessert, sweet) | 86.2% | |
| Contains at least three different types of food (proteins, carbohydrates, vitamins, etc.) | 86.2% | |
| Eats: strained / chopped / strained whole food | Eats: strained / chopped / strained whole food | 20.7% |
| chopped | chopped | 27.6% |
| whole meal | whole meal | 51.7% |
| Eat alone (always / sometimes / never or almost never) always | Eat alone (always / sometimes / never or almost never) always | 20.7% |
| sometimes | sometimes | 27.6% |
| never or almost never | never or almost never | 51.7% |
| Feeding speed. high | Feeding speed. high | 13.8% |
| half | half | 72.4% |
| come down | come down | 13.8% |
| Energy of the child in feeding hyperactive | Energy of the child in feeding hyperactive | 41.4% |
| | | 48.3% |
| | | 10.3% |
| The child rejects some food and / or does not eat it | | 20.7% |
| The child interacts with the mother directly (looks at her / vocalizes / smiles / touches her / draws her attention) always or almost always | The child interacts with the mother directly (looks at her / vocalizes / smiles / touches her / draws her attention) always or almost always | 41.4% |
| sometimes | sometimes | 37.9% |
| | never or almost never | 20.7% |
| Child directs feeding | | 37.9% |
| Mother is shown: | anxious | 27.6% |
| | fearful | 0.0% |
| | quiet | 13.8% |
| | annoyed | 6.9% |
| | cheerful / playful | 37.9% |
| | sad / depressed | 6.9% |
| | permissive / absent | 6.9% |
| | norm centered | 0.0% |
| Mother reinforces the child during practice | | 72.4% |
| Mother punishes the child during practice | | 6.9% |
| Mother maintains a suitable position for a reciprocal exchange with the child | | 82.8% |
| Mother restricts child's movements / actions | | 20.7% |
| Mother directs feeding | | 69.0% |
| Mother eats with child | | 10.3% |



item, and when there was a discrepancy, an additional observation was made by a third judge, also a graduate student and different from the previous judges.

Applied Instruments

Child Behavior Check list (CBCL) (from Achenbach, T.M., 1992) Self-report questionnaire for parents, describes behaviors related to affective, behavioral and social problems of the minor that occurred during the last 2 months. In the Chilean validation, the questionnaire includes seven first-order syndromes and two large groups of second-order syndromes, called internalization and externalization. Internalization includes the first order factors: affective problems, anxiety, somatizations, withdrawal behaviors and / or thinking; and the second second order syndrome called externalizing behavior includes attention problems and aggression. Sleep disturbances are not part of either of the two major second-order syndromes mentioned [24].

Social-Emotional: A Parent-Completed, Child –Monitoring System for Social-Emotional Behaviors (ASQ-SE) (from Squieres J, Bricker D, Twombly E, 2002). Self-report questionnaire for parents that checks the level of psychomotor development of children from birth to 5 years. It has a presentation of 19 stages according to age range, and three sections,

1. Demographic questions,
2. Thirty items aimed at evaluating five areas of development: communication, fine and gross motor, problem solving and personal-social,
3. Seven free questions aimed at collecting parental concern. In the validation carried out in Chile, the psychometric properties of this instrument are sensitivity 58.8%, specificity, 87.2%, predictive value: 43.5% and negative predictive value 92.7% [25].

Depression, anxiety and stress; Depression Anxiety and Stress Scale (DASS 21), (from Lovibond & Lovibond, 1995): It is a self-applied scale for adults that consists of three sub-scales that measure depression, anxiety and stress. The abbreviated Chilean version was translated and adapted in Chile by Antúnez Z, et al. (2012) [26], and modified by Román [26]. In the exploratory factor analysis, a forced solution of three factors was found that explained 49.99% of the total variance. In the concurrent and discriminant validity analyzes with the depression and anxiety subscales of the SCL-90-R and with the anxiety and depression BDI, the correlations with all the corresponding scales were greater than 0.6226,

Dutch Eating Behavior Questionnaire (DEBQ) (from van Strien, Frijters, Bergers & Defares, 1986). This instrument consists of 33 items that make up 3 subscales: emotional eating, external intake and food restriction, which measure: eating behaviors that can be influenced by emotional states, eating behaviors whose appearance may be related to external stimuli such as the smell and appearance of food, and behaviors related to the management and control of body weight, respectively. Andrés A, et al. (2017) [27] established the psychometric properties of the instrument in a sample of the Chilean adult population, detecting that the internal consistency of the subscales in the studied sample was excellent, with indices of 0.899, 0.954 and 0.870 in the restriction subscales food, emotional intake, and external intake respectively.

Check list of the minor's eating behavior, self-reported by the main food caregiver who qualifies the presence / absence of a certain behavior. Built ad hoc and based on the Zero to Three instrument [23], to describe the habitual eating behaviors of children and that assess the

risk of being overweight or obese.

Analysis performed

Descriptive statistics (mean, standard deviation) were calculated for age, birth weight, current weight, body mass index, and frequency distributions and proportions for categorical variables.

To determine the association between the early feeding context characteristics and emotionality, mean comparisons were made for independent groups and correlations (Pearson), after evaluating compliance with the requirements of the variable distributions. A level of statistical significance of $\alpha = 0.05$ was used. The analyzes were made with the SPSS 26.0 program.

This study was approved by the Ethics Committee of the Adolfo Ibáñez University School of Psychology and all participants signed an informed consent.

Results

Sample characteristics

The average age of the children was 2.12 years (SD = 0.48), with a minimum of 1 year 5 months and a maximum of 3 years. Meanwhile, the age of the mothers fluctuated between 21 and 40 years, with a mean of 30.52 (SD = 4.99). The age range of the parents-men ranged from 22 to 45 years, with a mean of 32.55 (SD = 6.22). 65.5% of the mothers had university or postgraduate studies, and in the case of the fathers, 100%.

62.1% of the children were boys. 86.2% received breastfeeding, the duration of which was between 2 to 25 months, with a mean of 9.82 (SD = 6.0). 55.2% attended a nursery. The birth weight of the children ranged from 2 to 4.7 kg (mean = 3.464 and SD = 0.546). From the weight / height for age indicator, it was established that the percentage of children at risk of malnutrition corresponded to 6.9% (2 cases); 51.7% with normal nutritional status; and with excess malnutrition, specifically 13.8% overweight and 10.3% obese.

The most frequent eating behaviors in children, and reported by caregivers through the self-applied checklist, were: 100% of the child eats without difficulty when offered their favorite foods, the child actively interacts with their caregiver in 96.6%, 44.8% eat faster than normal, the eating behavior of non-nutritive and non-food substances does not correspond to a culturally accepted food practice in 41.4%. On the contrary, the behaviors that are not observed in children according to the evaluation of the caregiver are: eating until they feel unpleasantly full, eating large amounts of food when they do not feel physically hungry and the child immediately causes self-vomiting 0% having eaten food.

In relation to the food interactions observed in the video recording by the expert judges, it is highlighted that 75.9% are carried out in their own place for feeding, in 86.2% there is an order (different types of food are not mixed), 34.5% use electronic devices that interfere with the mother's or child's concentration / attention, and 55.2% use resources to encourage practice. In 82.8% of the cases the mother maintains a position that allows a reciprocal exchange with the child, in 69% the mother directs the feeding, in 72.4% the mother reinforces the child, and 6.9% punished him during eating practice. Mostly, children eat whole meals (51.7%), during the time that the feeding lasts, children never or almost never eat alone (51.7%), at a medium speed (72.4%); Regarding the child's energy, 48.3% are calm, 20.7% reject some food, and the child always or almost always interacts with the mother (41.4%). Regarding the observed mothers, they are mainly happy followed by anxious (Table 1).



Table 2: Correlations between the caregiver's emotional symptoms and the child's behavior.

| Carer (DASS-21) | Child (CBCL) | |
|---------------------|----------------------------------|---|
| Depressive symptoms | Anxiety / depression problems | r=0.703; p<0.01; r ² =0.533 |
| | Withdrawal and thinking problems | r=0.498; p=0.006; r ² =0.248 |
| | Aggressive behavior | r=0.478; p=0.009; r ² =0.228 |
| Symptoms of stress | Attention problems | r=0.5; p=0.006; r ² =0.25 |
| | Aggressive behavior | r=0.505; p=0.005; r ² =0.255 |

Table 3: Difference of means in the perception of the caregiver regarding the child in their emotionality according to who directs the feeding (caregiver or child).

| CBCL/Child/a | Caregiver guides feeding Half (DE) | Child guides feeding Half (DE) | t | p | g ¹ | IC g (95%) |
|------------------------|---------------------------------------|-----------------------------------|-------|-------|----------------|---------------|
| Emotional reactivity | 3.48 (2.42) | 1.38 (1.5) | 2.278 | 0.031 | 0.92 | [0.072-1.768] |
| Anxiety/Depression | 3.09 (2) | 1.5 (1.41) | 2.060 | 0.049 | 0.82 | [-0.013-1.67] |
| Internalizing behavior | 10.43 (5.32) | 5.5 (3.97) | 2.372 | 0.025 | 0.96 | [0.107-1.808] |

Table 4: Difference of means in the perception of the caregiver with respect to the child in his / her emotionality according to the usual or non-usual context for feeding.

| CBCL/Child/a | Usual context Half (DE) | Unusual context Half (DE) | T | p | g ¹ | IC g (95%) |
|------------------------|----------------------------|------------------------------|--------|-------|----------------|------------------|
| Emotional reactivity | 2.23 (1.77) | 5 (2.94) | -3.058 | 0.005 | -1.29 | [-2.203- -0.377] |
| Anxiety/Depression | 2.05 (1.56) | 4.58 (2) | -3.5 | 0.002 | -1.47 | [-2.406- -0.543] |
| Internalizing behavior | 7.45 (4.16) | 14.14 (6) | -3.33 | 0.03 | -1.40 | [-2.328- -0.480] |

Regarding the association between the variables, it stands out that the caregiver's depressive symptoms were significantly associated with the child's perceived behavior during daily eating habits, especially with anxiety / depression problems ($r = 0.703$; $p < 0.01$); withdrawal and thought problems ($r = 0.498$, $p = 0.006$) and aggressive behavior ($r = 0.478$, $p = 0.009$) For their part, caregiver stress symptoms were associated with attention problems ($r = 0.5$, $p = 0.006$) and aggressive behavior perceived in the child ($r = 0.505$, $p = 0.005$) (Table 2).

Caregivers who tend to direct eating practice. When they perceive in children's higher levels of emotional reactivity ($t = 2.278$, $p = 0.031$). Higher levels of anxiety and depression ($t = 2.06$, $p = 0.049$) and higher frequency of internalizing behavior ($t = 2.372$, $p = 0.025$) (Table 3).

Likewise, those caregivers who carry out eating practices in an unusual context tend to perceive in the children's higher levels of emotional reactions ($t = -3.058$, $p = 0.005$). Symptoms of anxiety / depression ($t = -3.5$, $p = 0.002$) and internalizing behavior ($t = -3.33$, $p = 0.003$) (Table 4).

Discussion

There is important evidence on how the behavior of caregivers during feeding enhances adaptive or desadaptive behaviors of their children towards food, which is especially relevant during early childhood [20]. The importance of investigating not only the behavior of caregivers during feeding but also psychosocial variables and the eating context in which food interactions occur, such as emotional states, eating strategies, economic and sociodemographic variables, has also been discussed, characteristics of family meals during an early age, among other variables [12,28, and 29]. In addition, Eloise-kate VL, et al. (2017) [28], affirms that, especially the characteristics of the meals during this period have been less studied than in later ages.

Specifically for this work, the associations between emotional states of the children during eating practice, perceived by the caregiver, -such as higher levels of emotional reactivity, anxiety and depression and higher frequency of internalizing behavior were found to be significant. This perception is associated with the unusual place where the eating practice occurs and with a rather directive attitude of the caregiver in the process. Some studies have found that when infant feeding occurs

in places that are not suitable for such effects, this is associated with poor quality of the diet, since the consumption of fruits and vegetables decreases, the proportions of the food are inappropriate and reduces the emotional connection between parents and baby [28]. On the other hand, the directive, controlling, coercive, intrusive, and hostile attitudes of parents during eating practices causes children to have a negative disposition towards food with a predominance of decreased feeling of hunger, slowness to eat and low enjoyment of food [10] and also with the development of obesogenic behaviors in children [12].

Wood AC, et al. (2020) [20] state that it is relevant that caregivers provide a structured food environment in relation to time and quality of food for the child. It is also pointed out that when parents make direct attempts to control how and how much their children eat, the response is emotional overflow. In this sense, caregivers with young children should only start and finish feeding without interfering with the eating process [20]. According to the findings of our study, caregivers who perceive emotional alterations in their children tend to be more directive when feeding their children which according to the literature [10,20], could promote inappropriate eating habits.

In this research, the association between the perceptions that parents have of the child's emotional states during eating and feeding children in unusual places for this purpose such as pieces, sitting on the table, in the yard is interesting, and on the other hand, that caregivers assume a more directive role during feeding. It is possible that eventually the perception of negative emotional states in children during feeding may influence how caregivers make decisions related to the place form and way in which they feed their children.

The focus of this work was placed on the food interaction between the caregiver and the child. in the literature the importance of investigating the food context especially in early childhood is raised due to the influence it has on the development of habits healthy food or not [28]. The context variables that coincide with those evaluated by us are the use of electronic devices during feeding [12], since in general it has been argued that the use of electronic devices during eating contributes to distracting the child from their internal signals of satiety [30]. In this research, although the use of electronic devices was evaluated was not significant with any other variable in the sample. It is possible that these results are due to the age of the children; the



relationship between BMI and eating behavior is observed at an older age because it requires certain cognitive skills that are still developing during early childhood [12].

Other variables mentioned in the literature [28,29], are the level of education of the parents and degree of knowledge they have about the nutrition of their children. The participants of the present sample have high educational levels, and in this work, it was not evaluated the knowledge they have about nutrition. Skafida V (2007) [29], argues that families with a high educational and socioeconomic level have greater adherence to following recommendations and introducing healthy food preferences in their children. On the other hand, it argues that most of the investigations evaluate only the perception of mothers and fathers are absent [29], which is also observed in this sample in which only one father participates in the daily feeding of his baby and responds to the questionnaires applied.

Finally, this work shows the need to continue investigating the emotionality of the mother dyad -main food caregiver- during early childhood. Its association with the child's eating behavior and how the food environment or context unfolds during this period in which the basic behavior patterns towards eating are learned. According to our findings, it seems relevant to investigate what may affect early daily infant feeding interactions. such as: degree to which the caregiver or child guides feeding, perception of emotional problems in caregivers and children, and unusual contexts of feeding, considering the early ages whose results could vary in later ages.

The limitations of the study are the lack of representation of children with obesity in the sample and the reduced number of cases observed. The high educational level of the parents in our sample means that it does not represent a significant proportion of caregivers especially in Chile and / or Latin America. Despite the above. It is possible that the observation and evaluation of these processes in situ could provide more useful information.

References

1. de Salud Pública S (2017) Encuesta nacional de salud 2016-2017 Primeros resultados. Santiago, Chile.
2. Lanigan J (2018) Prevention of overweight and obesity in early life. *Proc Nutr Soc* 77: 247-256. <https://doi.org/10.1017/S0029665118000411>
3. Mura Paroche M, Caton SJ, Vereijken CM, Weenen H, Houston-Price C (2017) How infants and young children learn about food: A systematic review. *Front Psychol* 8: 1-33. <https://doi.org/10.3389/fpsyg.2017.01046>
4. Henry CJ, Nicklas TA, Nicklaus S (2019) Nurturing a healthy generation of children: research gaps and opportunities. 91st Nestlé Nutrition Institute Workshop, Manila, Philippines. Nestlé Nutrition Institute. Karger AG, Switzerland.
5. Schwartz C, Scholtens PA, Lalanne A, Weenen H, Nicklaus S (2011) Development of healthy eating habits early in life. Review of recent evidence and selected guidelines. *Appetite* 57: 796-807. <https://doi.org/10.1016/j.appet.2011.05.316>
6. Bravo P, Hodgson M (2011) Trastornos alimentarios del lactante y preescolar. *Revista Chilena Pediatr* 82: 87-92. <http://dx.doi.org/10.4067/S0370-41062011000200002>
7. Kerzner B, Milano K, MacLean WC, Berall G, Stuart S, et al. (2015) A practical approach to classifying and managing feeding difficulties. *Pediatrics* 135: 344-353. <https://doi.org/10.1542/peds.2014-1630>
8. Benton D (2004) Role of parents in the determination of the food preferences of children and the development of obesity. *Int J Obes* 28: 858-869. <https://doi.org/10.1038/sj.ijo.0802532>
9. Steinsbekk S, Bonneville-Roussy A, Fildes A, Llewellyn CH, Wichstrøm L (2017) Child and parent predictors of picky eating from preschool to school age. *Int J Behav Nutr Physic Act* 14: 87. <https://doi.org/10.1186/s12966-017-0542-7>
10. Jansen PW, Roza SJ, Jaddoe VW, Mackenbach JD, Raat H, et al. (2012) Children's eating behavior, feeding practices of parents and weight problems in early childhood:

results from the population-based Generation R Study. *Int J Behav Nutr Physic Act* 9: 2-11. <https://doi.org/10.1186/1479-5868-9-130>

11. Haszard JJ, Russell CG, Byrne RA, Taylor RW, Campbell KJ (2019) Early maternal feeding practices: Associations with overweight later in childhood. *Appetite* 132: 91-96. <https://doi.org/10.1016/j.appet.2018.10.008>
12. Boswell N, Byrne R, Davies P (2019) Family food environment factors associated with obesity outcomes in early childhood. *BMC Obes* 6: 1-11. <https://doi.org/10.1186/s40608-019-0241-9>
13. Ashcroft J, Semmler C, Carnell S, Van Jaarsveld CH, Wardle J (2017) Continuity and stability of eating behaviour traits in children. *Eur J Clin Nutr* 62: 985-990. <https://doi.org/10.1038/sj.ejcn.1602855>
14. Larson N, Miller JM, Eisenberg ME, Watts AW, Story M, et al. (2017) Multicontextual correlates of energy-dense, nutrient-poor snack food consumption by adolescents. *Appetite* 112: 23-34. <https://doi.org/10.1016/j.appet.2017.01.008>
15. McCurdy K, Gorman KS, Kisler T, Metallinos-Katsaras E (2014) Associations between family food behaviors, maternal depression, and child weight among low-income children. *Appetite* 79: 97-105. <https://doi.org/10.1016/j.appet.2014.04.015>
16. Francis LA, Hofer SM, Birch LL (2011) Predictors of maternal child-feeding style: Maternal and child characteristics. *Appetite* 37: 231-243. <https://doi.org/10.1006/appe.2001.0427>
17. Schrepft S, van Jaarsveld CH, Fisher A, Fildes A, Wardle J (2016) Maternal characteristics associated with the obesogenic quality of the home environment in early childhood. *Appetite* 107: 392-397. <https://doi.org/10.1016/j.appet.2016.08.108>
18. Castillo BG, Romero MG, Flores VM (2013) Vínculo entre la madre y el niño obeso. *Revista Electrónica De Psicología Iztacala* 16: 1180-1213.
19. Vargas Martínez G, Cruzat Mandich C, Díaz Castrillón F, Moore Infante C, Ulloa Jiménez V (2015) Factores del vínculo temprano madre-hijo asociados a la obesidad infantil. *Nutrición Hospitalaria* 32: 1994-1999. <https://dx.doi.org/10.3305/nh.2015.32.5.9571>
20. Wood AC, Blissett JM, Brunstrom JM, Carnell S, Faith MS, et al. (2020) Caregiver influences on eating behaviors in young children. *J Am Heart Assoc* 2020: 1-15. <https://doi.org/10.1161/JAHA.119.014520>
21. Wan MW, Green J (2009) The impact of maternal psychopathology on child-mother attachment. *Arch Women's Mental Health* 12: 123-134. <https://doi.org/10.1007/s00737-009-0066-5>
22. Ramasubramanian L, Lane S, Rahman A (2011) The association between maternal serious psychological distress and child obesity at 3 years: a cross-sectional analysis of the UK Millennium Cohort Data. *Child: Care, Health Develop* 39: 134-140. <https://doi.org/10.1111/j.1365-2214.2011.01325.x>
23. Zeanah CH, Carter AS, Cohen J, Egger H, Gleason MM, et al. (2016) Diagnostic classification of mental health and developmental disorders of infancy and early childhood dc: 0-5: selective reviews from a new nosology for early childhood psychopathology. *Infant Mental Health J* 2016: 471-475. <https://doi.org/10.1002/imhj.21591>
24. Lecannelier F, Ewert JC, Groissman S, Gallardo D, Bardet AM, et al. (2014) Validación del Inventario de Conductas Infantiles para niños de entre 1.5-5 años (CBCL 1.5-5) en la Ciudad de Santiago de Chile. *Universitas Psychologica* 13: 491-500.
25. Schonhaut L, Salinas P, Armijo I, ALVAREZ J (2009) Validación de un Cuestionario Autoadministrado para la Evaluación del Desarrollo Psicomotor. *Rev Chil Pediatr* 80: 513-519. <http://dx.doi.org/10.4067/S0370-41062009000600003>
26. Antúnez Z, Vinet EV (2012) Escalas de depresión, ansiedad y estrés (DASS-21): validación de la versión abreviada en estudiantes universitarios chilenos. *Terapia Psicológica* 30: 49-55. <http://dx.doi.org/10.4067/S0718-48082012000300005>
27. Andrés A, Oda-Montecinos C, Saldaña C (2017) Eating behaviors in a male and female community sample: psychometric properties of the DEBQ. *Terapia Psicológica* 35: 141-152.
28. Eloise-kate VL, Campbell KJ, Spence AC (2017) Family meals with young children: an online study of family mealtime characteristics, among Australian families with children aged six months to six years. *BMC Public Health* 17: 111. <https://doi.org/10.1186/s12889-016-3960-6>
29. Skafida V (2007) The family meal panacea: exploring how different aspects of family meal occurrence meal habits and meal enjoyment relate to young children's diets. *Sociol Health Illness* 35: 906-923. <https://doi.org/10.1111/1467-9566.12007>
30. Silva GA, Costa KA, Giugliani ER (2016) Infant feeding: beyond the nutritional aspects. *J Pediatr* 92: S2-S7. <https://doi.org/10.1016/j.jpeds.2016.02.006>