

'My Child Doesn't Eat!'; Parental Feeding Strategies, Parental Attitudes and Family Functioning of Children with Poor Appetite

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Abstract

Purpose: Children's low interest in food and 'lack of appetite' are of serious concern for parents and in consequently for the professionals. This study aimed to examine parental feeding strategies, effects of meal time environment, describe family functioning, and clarify general parental attitudes of the children with poor appetite from a developing country without any physical health problem that might affect growth, cause pain or discomfort during feeding.

Methods: Fifty-two mothers and their children were interviewed for data collection on sociodemographic characteristics, meal time structure, parental feeding strategies used by mothers, and child eating response to these strategies. Mothers completed Family Assessment Device (FAD) and Parental Attitude Research Instrument (PARI) for the evaluation of general parental attitudes, and family functioning.

Results: Parents most oftenly tended to use praise, offers of food rewards, threats to withhold food/play rewards. In response to parental control strategies, parents reported that 44.2% (n=22) of children ate a few more bites, and 9.6% (n=5) ate no more than they otherwise might have. PARI-I (over-parenting; implying an over controlling, anxious and over-demanding parental attitude) is the most frequent parental attitude in families of child with low interest in food. FAD 5, implying affective involvement in the family, and FAD 7, implying behavioral control in the family are the prominent family functioning dimensions of children whose mothers are concerned about their low interest in food.

Conclusion: The results of the study are in accordance with data from developed countries implying little cultural differences.

Keywords: Poor appetite, parental attitudes, parental feeding strategies, parental attitudes, family functioning

INTRODUCTION

Children's low interest in food and 'lack of appetite' are very serious problems that concern parents and professionals. The willingness of children to take new foods or specific foods modulates by environmental factors. These factors are early exposure to both taste and texture of foods, mealtime location, size, frequency and timing of meals, mother-child interactions, parental eating styles and parents' child feeding strategies (1-4).

Studies on parental attitudes and strategies that investigate children's eating behavior mostly focus on three strategies: (a) parental use of restriction of specific food, (b) parental pressure on their child to eat, (c) parental monitoring. Researchs focusing on the outcomes of different feeding strategies on children's interest in food indicate variety of results. Modeling food consumption by adults, peers and siblings, especially when paired with enjoying comments, has been shown to be an effective means of promotive food consumption (5, 6). Pressuring a child to eat and finish their

food is not effective in encouraging intake of food and also results show negative affective reactions of the children to the food as they are forced to eat (7). Using food as a reward is also believed to have an unhealthy effect on later appetite regulation and following BMI by increasing its affective value (5, 8).

It is possible that parents employ a larger range of methods than those mentioned above, but little is known about the ways in which they use them, how they put together or change among them. It is even not known that all the strategies have the same results in every culture. Studies investigating feeding strategies of parents from developed countries indicate two major feeding strategies: parental feeding restriction and pressure to eat. But very little is known about the other feeding strategies, and also the effects of mealtime environment in developing countries. There are only case reports in the literature concerning early childhood feeding problems in

Turkey. In these studies, having a good appetite is regarded as an indicator of health and also it is understood that having a meager child makes mothers worry.

In this study, parental feeding strategies are examined in a sample group of children from Turkey, without any organic cause for poor appetite. We aimed to (a) understand the effects of the mealtime environment, (b) identify the strategies that parents use to affect children's eating, the frequency of use of each strategy, and children's eating response, (c) examine sociodemographic variations in meal time structure and the strategy used if any, (d) describe family functioning, and (e) clarify general parental attitudes of children with low interest in food.

METHODS

The sample of the study is composed of children and their mothers who were worried enough to bring their children to the department of pediatrics of University Hospital, within consecutive six months due to 'lack of appetite'. This university hospital is a teaching hospital in Izmir which is the third densely populated city in Turkey, with around 4 million habitants.

Ethics Committee approval was received for this study from the local Ethics Committee of the University School of Medicine (Protocol Number: 2010/13-38).

The inclusion criteria were:

1. Mothers' concern of their child having low interest for all kinds of food or for certain foods, for at least a month.
2. Children aged between 1 year and 13 years.
3. Absence of any physical health problem that might affect growth, cause pain or discomfort during feeding.
4. Absence of pervasive developmental disorder, mental retardation and any neurological abnormality in the child.
5. Absence of any diagnosed psychiatric disorder of the parent, which may impair reality testing or cooperation during clinical interview.
6. Agreement to provide informed consent.

During the study period, 52 mothers and their children meeting the inclusion criteria were admitted to the department of pediatrics. All of the mothers agreed to participate in the study. Detailed physical examination, blood count, liver and renal function tests, electrolytes, and routine urine analysis were applied to the children to exclude any medical condition which may interfere with eating.

Following pediatric evaluation, all of the children and their parents were interviewed separately by a child psychiatrist for collection of data on sociodemographic variables, mealtime structure, parental feeding strategies, and child eating response to these strategies. Mothers were asked to fill out Family Assessment Device (FAD), and Parental Attitude Research Instrument (PARI).

Instruments and procedure:

I) Sociodemographic data form:

Sociodemographic data form developed by us included age, gender, prenatal, perinatal, postnatal, and general medical and developmental history of the child, maternal age, educational level, history of any psychiatric morbidity, family composition, and number of children in the family, their ages and gender.

II) Assessment of feeding problems:

A) Parental concern about the amount of the food consumed by their children:

Mothers were asked; "Which description best suites the amount of food your child eats during the day?" and were instructed to choose from normal/small than peers/very very small than the peers/almost never eat.

B) Mealtime pattern:

Mealtime environment were assessed as identified by Joan K. Orrell-Valente et. al. (9). The variables included (1) meal place (coded as dining room/kitchen, living room, or other); (2) child television viewing during meal (coded as yes/no); (3) parent presentation during child's meal (coded as yes/no); (4) family meals (coded as yes/no); and (5) child's activity during meal, such as playing/moving around/running during the meal (coded as yes/no).

C) Mealtime period variables:

Mealtime period variables included (a) the type of strategies parents used to affect children's eating; (b) child's response to these strategies.

(a) Parental strategies:

We used nine parental strategies identified by Orrell-Valente et. al. in the study (9). Parents were asked if they generally used any of these nine parental strategies or not:

- (1) Neutral demands: Use of constant tone; only wanting child to eat. There is no statement, no remarks and threats.
- (2) Force to eat: Use of impolite and harsh tone. Parent reprimands, wants, threatenings and yells at the child to eat.
- (3) Causal explanation: Use of a reason to get child to eat but decision is child's.
- (4) Food reward: Use of food as a reward/bribe/bargain to get child to eat.
- (5) Praise: Consent child for his eating.
- (6) Food limitation/portion control: Limitation of child's eating.
- (7) Threaten to give a desired food: Threaten to give a desired food if child does not eat.
- (8) Threaten to stop playing: Threat to withhold a desired non-food item or activity if child does not eat.
- (9) Play rewards: Use of non-food item or activity as a reward/bribe/bargain to get child to eat.

We also asked whether the parent or the child decided the amount of the food. We asked to the parents: "Does your child make up how much he will eat?" We coded the answers either yes (the child makes up) or no (the parent makes up).

(b) *Child eating response:*

We asked the child's parent the frequency of their children's eating compliance or refusal after they applied the most preferred feeding strategy using a 4-point scale (0 = eats no more, 1 = eats a few bites; 2 = eats a moderate portion; 3 = eats quite a substantial portion).

III) Assessment of family functioning and the parental attitudes:

Parental Attitude Research Instrument (PARI)

The Parental Attitude Research Inventory (PARI) was used to evaluate the parental attitudes about child growing. PARI was improved by Shaffer and Bell and adaptation to Turkish population was made. The instrument is a Likert type of self-test having 60 questions and identifies the parental attitudes under 5 factors: attitude of over-parenting (factor I), implying an over controlling, anxious and over-demanding parental attitude; democratic attitude (factor II), implying an encouraging a supportive and a sharing relationship; attitude of hostility and rejection (factor III), mother is nervous, distressed and angry, dependent on her own mother for the care taking activities; marital discordancy (factor IV), describes the effects of marital discordance on the child rearing activities and the authoritarian attitudes; (factor V) describing an over punishing and a rigid parental attitude. For each factor a separate score is calculated. The higher the score of the factor, the more the attitude is displayed by the parents (10).

Family Assessment Device (FAD)

FAD was used to evaluate the family functioning. It was improved by Epstein in 1983, and its Turkish adaptation was made by Bulut (1990) (11, 12). It contains 60 items and 7 subscales such as: problem-solving (FAD 1), communication (FAD 2), roles (FAD 3), affective responsiveness (FAD 4), involvement (FAD 5), behavior control (FAD 6), and general functioning (FAD 7). The score for each item is between 1 and 4. An average score of two or more, points to problems in family functions.

Statistical analysis

We used Statistical Program for the Social Sciences (SPSS) for Windows. In addition to descriptive statistics, Chi-Square and Kruskal-Wallis Test were used for potential group differences of categorical and continuous variables, respectively. The differential contribution of the groups to the significant findings were investigated by Mann-Whitney U test. Downward adjustment was conducted for the p value due to multiple comparison. P values <0.05 were considered to be statistically significant for all of the analysis.

RESULTS

I) Sociodemographic data:

Mean (SD) age of the children were 68.4 (33.6) months (range: 12–156 months). Twenty-eight (53.8%) of them were girls and 24

Table 1. Sociodemographic characteristics of the sample

Sociodemographic Variables	N=52 n (%)
Problems during pregnancy	
Present	16 (30.8)
Not present	36 (69.2)
Timing of birth	
Term	51 (98.1)
Prematurite	0 (0.0)
Postmaturite	1 (1.9)
Mode of delivery	
Spontaneous vaginal	30 (57.7)
Caesarean section	22 (42.3)
Medical problems after birth	
Present	13 (25.0)
Not present	39 (75.0)
Duration of breastfeeding	
None	0 (0.0)
From birth to 6 months old	17 (32.7)
From birth to 12 months old	33 (63.5)
Longer than 12 months	2 (3.8)
Family composition	
Married-couple families	51 (98.1)
Divorced-single parent families	1 (1.9)
Number of siblings	
None	21 (40.4)
1	20 (38.5)
2	10 (19.2)
3 or more	1 (1.9)

(46.2%) were boys. Other sociodemographic characteristics are presented in Table 1.

Mean (SD) maternal age was 31.90 (5.23) years (range: 22–45 years). Thirty (57.7%) of the mothers were educated at the level of primary school. College graduates constituted 11.5% (n=6) of the sample. Fourteen (26.9%) of children had a family history of a psychiatric disease.

II) Results regarding data on feeding problems:

A) Parental concern about the amount of the food consumed by their children:

Analysis of the answers given to the question "Which description best suites the amount of food your child eats during the day?" showed that mothers thought 9 (17.3%) of the children eat a normal amount, 27 (51.9%) eat less than peers, and 16 (30.8%) eat very very less than peers, almost never eat.

B) Results for the mealtime structure variables are summarized in Table 2.

C) Mealtime process variables:

Table 2. Meal time structure

	N=52 n (%)
Meal in kitchen/dining room	40 (76.9)
Mealtime television viewing	37 (71.2)
Family eats together	46 (88.5)
Parents present in the room	51 (98.0)
Child plays, moves, walks around	24 (46.2)

Parental strategies:

At least three strategies were used in 30.8% (n=16) of families. Table 3 displays the frequencies of each strategy used and the best working strategy which is found to be the one parents used the most often.

Table 3. Frequencies of strategy used and the strategy best worked

	Frequencies of strategy used	Frequencies of strategy best worked
	n (%)	n (%)
Neutral prompts	7 (13.5)	2 (3.8)
Pressure/demand to eat	3 (5.8)	3 (5.8)
Reasoning	5 (9.6)	0 (0.00)
Offer of food rewards	1 (1.9)	3 (5.8)
Praise	2 (3.8)	2 (3.8)
Threat to withhold food	1 (1.9)	1 (1.9)
Threat to withdraw play privileges	8 (15.4)	8 (15.4)
Offer of play rewards	25 (48.1)	33 (63.5)
Total	52 (100.0)	52 (100.0)

For statistical purposes, three groups were formed according to the most commonly used strategies. The first group included strategies involving pressuring and restriction. The second group had strategies of praising, offering of food or play rewards, reasoning, neutral prompts. In the third group we included the strategies involving punishment. Evaluation of potential group differences did not display any statistically significant difference between the three groups in terms of sociodemographic data.

Child eating response:

In response to parental control strategies, parents reported that 19.2% (n=10) of children ate substantially more, 29.2% (n=15) ate moderately more, 44.2% (n=22) ate a few bites more, and 9.6% (n=5) ate no more than they otherwise might have.

III) Assessment of family functioning and the parental attitudes:

Results of PARI:

Mean (SD) scores of PARI factors I, II, III, IV and V were 45.98 (8.79), 28.32 (3.66), 29.40 (7.73), 13.90 (4.40) and 34.65 (9.06), respectively. PARI-I (over-parenting; implying an over controlling, anxious, and over-demanding parental attitude) is the most frequent parental attitude in families of child with low interest in food.

Results of FAD:

Mean (SD) scores of FAD factors 1, 2, 3, 4, 5, 6 and 7 were 1.76 (0.63), 1.71 (0.49), 1.91 (0.37), 1.66 (0.57), 2.53 (0.56), 2.02 (0.30), 1.63 (0.48), respectively. FAD 5, implying affective involvement in the family, and FAD 6, implying behavioral control in the family are the prominent family functioning dimension.

DISCUSSION

The etiology of eating problems in childhood is multicausal. Among those, the most important causes are parental strategies, parental attitudes, family influence and socio-cultural factors, including socio-demographic variations. In our sample, the

majority of the mothers' educational level was low, and a quarter of the children had medical problems after birth. It is widely accepted that early life experiences of maternal child-feeding method play an important role. Regarding our sample, medical problems after birth might have increased mothers' concerns about their children's weight. These concerns might have influenced maternal feeding strategies (13). Researchs showed that parents are more likely to use higher levels of control over child feeding when they are much more worried about their child's weight but that excessive control may prevent child's ability to self-regulate his/her eating (14).

Meal time structure and frequency of family meals are indicated to be related to child eating behavior (15). The level of mealtime structure provided by caregivers is very important for the relational process in feeding (16, 17). Meals should be in a positive environment, have clear expectations for behavior, occur in an undistracted atmosphere, and be held on a predictable and consistent schedule. In our study, almost half of the children watch television while eating; i.e., in a distracted environment. In our study, most of the mothers reported that their children ate in the kitchen or in the dining room with their parents but while watching television. Watching television while eating is more prevalent among low-income children as compared to higher income children (18, 19). The results of the present study show consistency with literature indicating negative effects of watching television during meals.

In our sample "offer of play rewards" was the most commonly used parental strategy to promote eating although this strategy was helpful 'for only a few more bites'. The relationship between food and rewards appears to be complicated. Some researches have explored the effect of controlling food intake by rewarding the consumption of 'healthy food'. Birch et al. gave children food in association with positive adult attention compared to more neutral situations (1). This seemed to increase food preference. On the other hand, in another study, children were offered fruit juice as a means to play in an enjoying play area (19). The results showed that using fruit juice as a means to get the reward reduced the preference for that food –a finding supported by similar studies (20, 21). In our study, play rewards also did not seemed to increase food intake.

Our study points that over-parenting which is an anxious and over-demanding parental attitude and behavioral control which measures the limit-setting and discipline used by the family are the prominent family functioning dimensions. Numerous studies have shown that parental pressure was negatively associated with children's weight. Within the framework of a child-responsive model, this feeding strategy can be interpreted as a response to child weight. This means that parents of children with underweight probably pressure their children to eat more. However, parental pressure to eat reduces children's enjoyment of food, and as a result causes less eating and loss of weight. Alternatively, pressure to eat might also be a parent's response to children who quickly feel 'full'. Clearly, longitudinal research with repeated measurements of children's eating behavior, feeding practices of parents, and child weight is needed to further unravel these pathways.

Despite the limitations of being cross-sectional, offering only a snapshot of the current situation, and having a small sample size plus lacking tangible measures of children's eating, intake control, and food preferences typically observed in laboratory settings; our study explores an area of little research. Our data is generally in accordance with studies from other countries having little cultural differences. Further research from various cultures are needed to explore further dimensions of feeding relationship and problems.

Ethics Committee Approval: Ethics Committee approval was received for this study from the local Ethics Committee of the University School of Medicine (Protocol Number: 2010/13-38)

Informed Consent: All of the mothers agreed to participate in the study.

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Author Contributions: Concept - AO, CK; Design - EB, AO; Supervision - AO, ASH; Resource - EB, CK; Materials - CK; Data Collection and/ or Processing - CK; Analysis and/ or Interpretation - CK, EB; Literature Search - ASH, EB; Writing - CK, AO; Critical Reviews - ASH, CK

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