

Family Functioning, Personality Disorders and Depressive and Anxiety Symptoms among Mothers of Children with Food Refusal

Gülşen ÜNLÜ, Şahbal ARAS, Taner GÜVENİR, Benal BÜYÜKGEBİZ, Özlem BEKEM

SUMMARY

Objective: A review of the literature reveals that feeding problems during early childhood can be related to maternal psychiatric disorders. We aimed to evaluate the personality disorders, levels of depression and anxiety symptoms in the mothers of children with food refusal in addition to family functioning.

Method: Thirty children aged between 1 and 6 years admitted to the clinic for food refusal and their mothers were included in the study. The control group consisted of 30 healthy children and their mothers. The Beck Depression Inventory, State-Trait Anxiety Inventory, McMaster Family Assessment Device and Structured Clinical Interview for DSM-III-R Personality Disorders were performed in mothers, and the presence of any personality disorders was evaluated with the SCID-II Interview.

Results: The depression and anxiety scores of the mothers of patients were higher than those of the controls. Perceived family functioning by mothers of patients was more problematic than that of the controls. Rates of maternal personality disorders were not significantly different between the two groups.

Conclusion: Food refusal is not only related to characteristics of the child or his/her mother, but also to problems in family functioning. An integrative approach which evaluates the whole family is helpful to assess and treat children with food refusal.

Key Words: Food refusal, family functioning, maternal psychopathology

INTRODUCTION

It has been revealed that 15-35% of infants and young children have feeding problems. Failure to eat adequately, refusal to eat certain types of food, inappropriate behaviors at meal time and strange eating habits are the most commonly observed feeding difficulties (Chatoor, 2000). These feeding problems are generally mild and temporary in most cases, but in some children may be chronic and disturbing problem (Munson, 1996). Due to its prevalence and because of its association with retardation of physical and mental development (Raynor and Rudolf, 1996; Puckering et al., 1995; Wilensky et al., 1996), as well as its relationship with behavioral problems (Dahl and Sundelin, 1992; Dahl, 1987; Lindberg et al., 1994), it is of great importance that both diagnosis and treatment of these early childhood feeding problems.

Feeding disorders are biopsychosocial problems, which develop with the contribution of physical, physiological, psychological, and social factors (Satter, 1986). In researches concerning their etiology, the sociodemographic characteristics of the family, psychiatric disorders of the parents, temperament of the child, mother-child interaction and attachment have been commonly evaluated.

Infants and young children are dependent on their caretakers for their nutritional needs (Stein and Barnes, 2002). Parents play an important role in shaping feeding behavior of their children. They can help their children progress toward self-feed-

ing, which is regulated internally, by establishing regular feeding routines, by providing appropriate types and amounts of food, by permitting the child to decide how much to eat, and by setting behavioral limits when needed. Failures in these steps might lead to the emergence of feeding problems (Tebor, 2000). Feeding is a sensitive indicator of both the state of the parent-child relationship and their moods (Satter, 1986). Feeding can be a pleasurable and gratifying experience for the child and parent, or it can be a source of stress. When a child and parent unable to meet expectations of each others, the feeding relationship is no longer pleasurable, and becomes strained and conflicted (Stein and Barnes, 2002).

During the transition to solid food, the parent's behavior plays an important role in the development of the child's feeding habits, and in the development of any feeding problems, which may arise. In particular, the amount of the food consumed may be influenced by child's nervous or sad feelings caused by the practices which include strict discipline. During feeding, if the parent of a child with feeding problems use treat or force to eat, a vicious cycle can develop. If doctors advice the parent to feed the child more, or if they blame the parent for the child's lack of eating, the vicious cycle can escalate. The parent's feelings of diminished adequacy and the consequent worry may lead to more coercive and controlling behaviors on the part of the parent (Black, 1999).

In the literature, there are many studies showing that there are mother-child interaction problems in feeding disorders (Puckering et al., 1995; Chatoor et al., 1998; Sanders et al., 1993; Feldman et al., 2004; Polan et al., 1991b; Heffer, 1989). It has been reported that mothers who have a child with feeding problems are more insensitive, intrusive, overstimulating and, less flexible, accepting and affectionate, are apt to use physical punishment, tend to force the feedings, have difficulty receiving signals of their children, and show feelings of anger and hostility during interaction with their children (Black, 1999; Wolke et al., 1990; Chatoor et al., 1988; Crittenden, 1987; Hutcheson et al., 1993; Black et al., 1995; Monk, 1997). In a study, which evaluated the mother-child interaction during feeding, it was found that there were greater levels of anxiety/depression, more aggressive behavior, and more somatic complaints among children with feeding problems, while there were greater levels

of anxiety, depression, hostility, and inappropriate feeding practices among their mothers (Ammaniti et al., 2004). It was revealed that during routine interactions, mothers of the children with feeding disorders touched their children less, and that these children had a tendency to avoid their mothers. This finding, which indicates a general difficulty in regulation of proximity between mother and infant, might be associated with the process including maternal depression, reduced touching, withdrawal of the child and feeding problems (Feldman et al., 2004). Whether cause or result, these maternal attitudes associated with psychological characteristics of the mother and characteristics of the family are seem to have a considerable effect on the course of the disorder and research on these characteristics is important for providing therapeutic interventions.

Duniz et al. (1996), have found that 70% of parents with children, who have non-organic failure to thrive, have a DSM-III-R Axis I diagnosis at the time of referral, and after one year treatment of infants and their parents, this rate decreased to 12%. Polan et al. (1991a) found higher frequencies of mood and personality disorders among mothers of children with failure to thrive than among mothers of children who do not. Raynor and Rudolf (1996) showed that 19% of these mothers have severe anxiety and 8.5% of them have symptoms of clinical depression. It has been reported that have higher levels of anxiety than those in the control group (Kenis, 1980). There are some studies showing that mothers of failure to thrive children are more depressive (Hufton and Oates, 1977; Gorman and Leifer, 1993). In a case-note study, it was found that there was a history of depression among one-third of mothers and/or fathers of children who are selective eaters and it was suggested that depression may be an important etiological factor (Timimi et al., 1997). In another study, which compared the mothers of children with feeding problems to both the mothers of children with other behavioral problems and the mothers of healthy children, it was reported that there is no difference in prevalence of mood disorders between the three groups of mothers. It was found however, that mothers whose children have feeding problems were significantly more likely to have had or have an eating disorder themselves than the mothers in either of the other two groups (Whelan and Cooper, 2000). On the other hand, there are some studies, which found that there is no higher preva-

Table 1. The Mean Beck Depression Inventory (BDI), State-Trait Anxiety Inventory (STAI), and Family Assessment Device (FAD) Scores of the Mothers.

	Case (n=3) Mean±SD	Control (n=30) Mean±SD	t	p
BDI	14.67±7.11	6.53±6.23	4.712	<0.001
SAI	38.80±11.51	34.1±8.98	1.762	NS
TAI	48.23±11.51	40.97±7.46	3.500	<0.005
FAD-PSOL	2.20±0.70	1.60±0.53	3.714	<0.001
FAD-COM	2.12±0.63	1.45±0.35	5.079	<0.001
FAD-ROL	2.20±0.54	1.77± 0.42	3.429	<0.005
FAD-AFRES	2.07±0.68	1.34±0.39	5.051	<0.001
FAD-AFINV	2.24±0.48	1.88±0.35	3.329	<0.005
FAD-BCON	2.06±0.39	1.74±0.35	3.310	<0.005
FAD-GENF	2.02±0.53	1.31±0.31	6.201	<0.001

t: t test

SD: standard deviation

NS: not significant

FAD-PSOL: Family Assessment Device Problem-Solving; FAD-COM: Family Assessment Device Communication; FAD-FROL: Family Assessment Device Roles; FAD-AFRES: Family Assessment Device Affective Responsiveness; FAD-AFINV: Family Assessment Device Affective Involvement; FAD-BCON: Family Assessment Device Behavior Control; FAD-GENF: Family Assessment Device General Functioning.

lence of psychiatric disorders among mothers of children with feeding problems (Wilensky et al., 1996; Benoit et al., 1989). When the family environment of children who fail to thrive is closely examined, high rates of poverty (Raynor and Rudolf, 1996), violence, abuse (Crittenden 1987), and dysfunctional relationships in the family (Drotar and Eckerle, 1989) are usually found. It was reported that these mothers have less satisfying marital relationships and lower perceived support of family (Benoit et al., 1989). Despite the presence of unhealthy family functioning in adolescent and adult patients with eating disorders were reported in some studies (McDermott et al., 2002; Erol et al., 2002; Friedman et al., 1997), there is a lack of research on family functioning in children with early childhood feeding problems.

There are only case reports and review papers in the literature concerning early childhood feeding problems in Turkey. Because of the lack of

research data on this area in our country, information about feeding disorders is mostly from external sources. Due to the fact that sturdiness and having a good appetite are regarded as indicators of health and having a thin child makes mothers worry in Turkey, feeding problems may very well have an important cultural dimension. Therefore, it is of great importance to investigate the characteristics of parents with children who have feeding problems in order to devise effective preventive and interventional strategies. It's worth noting that in the literature, feeding disorders in infants and young children are investigated and reported with inconsistent terminology, and that diagnostic criteria are not consistent. These inconsistencies in terminology and definition have the effect of placing limitations on researches in this area (Kerwin and Berkowitz, 1996; Lindberg et al., 1996). Because of this, in our study, we set out to evaluate only children who have signs of, but not necessarily a

diagnosable feeding disorder. Our aim therefore, was to evaluate the prevalence of personality disorders and the symptoms of depression and anxiety and the perceived family functioning among the mothers of children with food refusal.

MATERIALS and METHODS

In this study, the case group was consisted of children who presented to the Department of Pediatric Gastroenterology, Nutrition and Metabolism, as well as those who presented to the Department of Child and Adolescent Psychiatry, all at Dokuz Eylul University. The control group was composed of children who have a record in a public health center and are known to have no feeding problem. Both groups were matched for age, gender, and the socio-economic levels of their families.

Inclusion Criteria

1. For the case group, having food refusal of all kinds of food, or of only certain foods for a period of at least one month.

2. For the control group, not having any kind of feeding problem, gastrointestinal disorder, or any complaints of chronic medical illness.

The following criteria pertained to both groups:

3. Age range between 1 and 6 years, a period during which the prevalence of feeding problems is the highest.

4. No presence of other health problem, that might affect growth, or cause pain or discomfort during feeding.

5. No presence of pervasive developmental disorder in the child.

6. Mother must be 18 years of age and older, and must have completed at least elementary school education.

7. No presence of diagnosed mental or physical disorder in the mother, which may impair the mother's reality testing or damage the mother's cooperation in the clinical interview process and the reliability of the interview.

8. After describing the purpose of the study, informed consent must be obtained from the mother.

In the phase of composing the case group, sev-

eral children had to be excluded. One child was excluded because consent was not given by the child's mother. Two other children had to be excluded because of mothers' leaving the study early. One child in the control group could not participate in the study because the mother did not give her consent. Five other control children did not attend the planned interviews. As a result, 30 children with food refusal and 30 with no feeding problem participated in the study.

All of the children in both groups were evaluated with a clinical interview related to pervasive developmental disorders and feeding problems, by a child psychiatrist. In Turkey, since there is no applicable clinical assessment tool, which has been studied for its validity and reliability for preschool-age children, diagnosis was made according to the DSM-IV criteria.

Height and body weight measurements of all the children were performed and body mass indexes, height for age standards, and weight for height ratios were determined. Body mass index is generally accepted as being the best index reflecting the body composition. Body mass index is calculated by dividing body weight by height squared. Height for age standard is the ratio of a child's height to the mean height values of children of the same age and gender. Weight for height ratio is the ratio of the actual weight to the expected weight for actual height. When the height for age standard is below 95%, it is indicative of chronic malnutrition, and when the weight for height ratio is below 90%, it means that the child has acute malnutrition (Taskinen, 2000).

Children in the case and control groups were evaluated in the Department of Pediatric Gastroenterology, Nutrition and Metabolism in order to exclude medical diseases. According to detailed feeding histories, it was considered that none of the children had a medical disease that might cause pain or discomfort during feeding, such as a structural anomaly or an esophagitis. No further examinations were performed on the children without pathological signs or a failure to thrive according to medical history and physical examination. Necessary laboratory examinations were performed on the children found to have malnutrition. After these evaluations, it was determined that none of the children suffered from a medical disease that could result in a feeding problem.

Personal evaluation forms seeking information about the sociodemographic characteristics of the children and their families were filled in by a researcher during one on one interview with the mothers. Mothers of the children completed the Beck Depression Inventory (BDI), the State-Trait Anxiety Inventory (STAI), the SCID-Personality Questionnaire, and the Family Assessment Device (FAD) forms. After the forms were completed, personality disorders were evaluated by an adult psychiatrist using a SCID II interview with the mothers.

BDI was developed by Beck and associates in 1961 and was translated into Turkish by Tegin in 1980. The validity study was conducted by Hisli (1989). The BDI is a self-report scale composed of 21 items, which are used to measure the physical, emotional, cognitive, and motivational signs of depression. The maximum possible score on BDI is 63 points, but in the reliability-validity study for Turkey, the cutoff point was determined to be 17 points.

The STAI was developed by Spielberger et al. in 1970. Reliability-validity study of the STAI was conducted by Öner and Le Compte in 1977, after adapting into Turkish. It's a self-report instrument, which includes two separate 20-item measures: The State Anxiety Inventory (SAI) reflects the emotional state of the individual during certain times and conditions. The Trait Anxiety Inventory (TAI) measures the general emotional state of the individual. The total score for both scales varies between 20 and 80 points. Higher scores on the STAI reflect greater levels of anxiety and lower scores reflect less anxiety (Öner and Le Compte 1983).

The SCID-II Personality Questionnaire was developed by Spitzer and Williams in 1985 and was later translated into Turkish by Sorias et al (1990). The validity and reliability study of the instrument was performed by Coşkunol et al. (1994). It is a 120-item questionnaire that was prepared according to the diagnostic criteria for personality disorders in the DSR-III-R classification system. After the questionnaire is completed, a structured interview is conducted in order to evaluate especially items responded as 'yes'.

The FAD was developed by Epstein in 1983, and its Turkish translation and validity-reliability study was conducted by Bulut (1990). It is com-

posed of 60 items. It contains seven subscales with 6 items for problem-solving, 9 items for communication, 11 items for roles, 6 items for affective responsiveness, 7 items for affective involvement, 9 items for behavior control, and 12 items for general functioning. The score for each item is 1-4. One point represents a healthy answer and 4 points reflect an unhealthy answer. An average score is calculated for each subscale. Since a score above 2 points reflects a tendency to unhealthiness in family functions, 2 is considered as cutoff point. The questionnaire may be completed by individual family members over 12 years of age, and family scores may be obtained by averaging the ratings of each family member on each subscale. However, there are some studies which evaluate perceived family functioning by applying the questionnaire to only one member of a family, such as an adolescent (Prinstein; et al., 2000) or mother (Swanson et al., 1997). In our study, in order to evaluate perceived family functioning by mothers, FAD was only applied to mothers of children with food refusal.

Analyses of all data were performed using SPSS for windows 11.0 software. Differences between categorical variables were compared by chi square test with Yates' continuity correction (or Fisher's exact test if an expected value was less than 5 in the cross tabulations). Comparisons of the continuous variables between the two groups of children were done using t tests. In the case group, statistical differences between the BDI, STAI, FAD scores of the mothers of children with and without malnutrition were tested by the Mann-Whitney U test. P-values less than 0.05 were accepted as statistically significant.

RESULTS

The mean age of children in the case group was 42.4 ± 17.6 months, and 41.3 ± 15.4 months in the control group. There were 18 girls (60%) and 12 boys (40%) in each of the two study groups. No significant difference was found between the groups with regard to gender ratio or mean age.

The mean age of the mothers was 32.6 ± 5.7 years in the case group and 30.4 ± 3.3 years in the control group. In the case group, the mean age of the mothers when they gave birth to their child was 29.0 ± 5.8 years, and in the control group it was 27.1 ± 3.6 years. Despite the fact that there was no significant difference between the two groups

regarding mean age of mothers at birth and at study time, mothers in the case group (24.4 ± 5.5 years) got married significantly later than mothers in the control group (21.9 ± 3.0 years) ($p < 0.05$). Nine (30.0%) mothers in the case group and 11 (36.7%) mothers in the control group had elementary education, while 21 (70%) mothers in the case group and 19 (63.3%) mothers in the control group had high school or higher education. The level of mother's education was not significantly different between the case and control groups. There was no significant difference between the two groups regarding mother's employment status, maternal psychiatric history, socioeconomic level of the family and number of children in the family. Five families (16.7%) in the case group reported that they had a child who died prior to the birth of the child that participated in this study. There was no child loss experience in the control group. Statistically, no significant difference was found between the two groups regarding the presence of child loss in the family ($p = 0.052$).

One (3.3%) mother in the case group and 2 (6.7%) mothers in the control group had a history of psychiatric disease. One mother in the case group had diagnosed depression and in the control group, one mother had depression and one mother had a history of conversion disorder. No significant difference was found between the two groups in terms of maternal psychiatric history.

The mean BDI, STAI and FAD scores for mothers are shown in Table 1. The mean score on the BDI for mothers in the case group was significantly higher than in the control group. Eleven (36.7%) mothers in the case group and 2 (6.7%) mothers in the control group had a BDI score at or above 17, which is the cutoff point for depression, and the difference was found to be significant ($p < 0.05$). According to mean scores on the SAI for both groups, no significant difference was found; however, mothers in the case group were found to have significantly higher scores than mothers in the control group on the TAI. In all subscales of the FAD, the mean score for the case group was significantly higher than that of the control group.

Using the SCID-II Personality Questionnaire, 1 mother was found to have avoidant personality disorder and dependent personality disorder in the case group, and in the control group no mothers were found to have a personality disorder. No significant difference was found between the two

groups regarding the presence of personality disorders.

The mean BMI of the children with food refusal (15.0 ± 1.3) was found to be significantly lower than that of the children in the control group (16.9 ± 2.7) ($p < 0.005$). According to height for age standard and weight for height ratio, it was found that 17 (56.7%) children had normal physical development and 13 (43.3%) had acute and/or chronic malnutrition in the case group. Mothers in the case group were divided into two groups by whether their children had malnutrition or not. According to the BDI, STAI, and the FAD subscales, mothers of children with malnutrition did not show any significant difference when compared to mothers of children without malnutrition.

Nineteen (63.3%) children in the case group and 18 (60.0%) children in the control group were the first-born child of the family. In both case and control groups, no significant difference was found between the BDI, STAI, and FAD subscale scores of the mothers of children who were first born and not first born.

DISCUSSION

In this study, 30 children with food refusal and their mothers formed the case group, while 30 children without feeding problems (matched with cases on age, gender and socioeconomic level) and their mothers formed the control group. Mothers in the case group were married later than mothers in the control group, but there was no significant difference in terms of the age at which the mothers in the two groups had their child included in the study. These two results suggested that mothers in the case group got married later and had a baby in a short time after marriage. After getting married, there is a period of adjustment for the couple to the new situation. Giving birth to a child is a stressful time in a relationship and requires readjustment (Kumbasar, 1998). In our study, for the parents of children with food refusal, it is thought that during the early period of their marriages, before the internalization of a spouse identity and the adjustment to marriage, becoming a parent might have adversely affected the family functions and the demonstration of appropriate attitudes to child.

Benoit et al. (1989) found that among mothers of children with failure to thrive, the rate of unresolved grief related to loss of loved one, is 52%.

In our study, it was found that the difference between the two groups in terms of the loss of a child was not significant, but close to significance level ($p=0.052$). This result may be due to the small sample size. It is remarkable that in this case group the prevalence of child loss is quite high (16.7%), when considering the fact that the under-5 mortality rate was 3.7% according to the preliminary report of the Population and Health Research in Turkey in 1993 (TNSA 2003). Parents who lost a child experience major changes in their belief about the security of their family. Grief reactions, which may be pathological, can affect their parental attitudes toward other children in the family (Black, 2002). In our study, grief and depressive symptoms experienced by mothers of children with food refusal who lost a child might have affected both parental abilities and mother-child relationship.

In the literature, it is controversial whether or not mothers of children with feeding problems are more likely to have psychiatric disorders. There are some studies showing that mothers of these children may be more likely to have mood disorders (Raynor and Rudolf 1996, Timimi et al., 1997; Gorman and Leifer, 1993; Polan et al., 1991a; Hufton and Oates, 1977), anxiety disorders (Raynor and Rudolf, 1996; Kenis, 1980), personality disorders (Polan et al., 1991a), eating disorders (Whelan and Cooper 2000). There are, however, other studies, which fail to show familial loading for psychiatric disorders (Wilensky et al., 1996; Benoit et al., 1989). In the present study, no significant difference was found between the two groups of mothers with regard to diagnosed psychiatric diseases.

Many researchers have revealed that depression and depressive symptoms are common among mothers of children with feeding problems, and it is suggested that parental depression may be important in etiology (Raynor and Rudolf, 1996; Lindberg et al. 1994, Timimi et al. 1997, Gorman and Leifer 1993, Polan et al. 1991a, Hufton and Oates, 1977). Since all these studies were either cross-sectional or retrospective, it is not clear whether maternal depression is the cause or result of the feeding problem. In our study, mothers in the case group were found to be more depressed, based on both the mean BDI score and the number of mothers with a score above the BDI cutoff point. When the depressive symptom level of mothers in the case group was evaluated, no significant differ-

ence was found in BDI scores between mothers of children with and without malnutrition. This data led us to believe that there is no relationship between maternal depressive symptoms and growth retardation of the child.

There are some studies showing that mothers of children with food refusal and failure to thrive have high levels of anxiety (Raynor and Rudolf, 1996; Lindberg et al., 1994; Kenis, 1980). Some studies have also suggested that maternal anxiety may prevent the mother from understanding the child's messages and feeding properly by helping to relax and soothe the child (Chatoor et al., 1997). In the present study, TAI scores of mothers in the case group were higher than those of mothers in the control group, and so it can be interpreted that persistent maternal anxiety is reflected to the feeding relationship. Since no significant difference was found in TAI scores between mothers of children with and without malnutrition, the level of maternal anxiety may not be related to either duration or severity of the food refusal of the child.

The prevalence of personality disorders in the female community has been found to be between 6.4-12.6% (Samuels et al., 1994; Jackson and Burgess, 2000; Torgerson et al., 2001). According to the SCID-II Personality Questionnaire, we found avoidant and dependent personality disorders in 1 (3.3%) mother from the case group in our study. No mother in the control group was found to have a personality disorder. Even though the frequency that we found was lower than that found in some populations abroad, it is difficult to compare this result due to the small sample size in our study.

The FAD, which was completed by mothers in this study, allows for the evaluation of certain family functions. It was found that the FAD general functioning subscale was significantly higher in the families of children with food refusal than in the families of the control group. This data showed that all family functions were perceived by the mothers in the case group as unhealthy.

In the literature, it has been shown that mothers of children with failure to thrive have inadequate problem solving skills. This in turn may affect both taking care and feeding of the child, and contribute to subsequent disorder (Robinson et al., 2001). In our study, the scores on the FAD problem-solving subscale were significantly higher among mothers in the case group than that of the mothers in the

control group, and so this may demonstrate that families of children with food refusal had an inability to properly understand and solve the feeding problem of their children. The FAD communication subscale scores were significantly higher for the case group than those of the control group; this may show that food refusal could be related to a communication problem, either within the family or between mother and child. Problems in mutual communication may make it difficult for the mother to understand the demands or needs of the child, and to respond appropriately. In families with a child who has food refusal, the FAD roles subscale scores were significantly higher than that of the control group; it is possible that the child's food refusal might be the result of unhealthy role-functioning within the family.

The FAD affective responsiveness subscale measures the harmony of the family and the ability of family members to show genuine empathy and to express themselves to each other, both verbally and behaviorally (Bulut, 1990). The FAD affective involvement subscale evaluates the attention, caretaking, and compassion that family members express to each other. The FAD behavior control subscale measures the limit-setting and discipline imposed by the family. In our study, affective responsiveness, affective involvement and behavior control subscale scores of the FAD were significantly higher in the control group than in the case group, suggesting that there are difficulties in these areas for families of children with food refusal.

Relying on self reports of diagnosed psychiatric disorders instead of structured interviews in evaluation of maternal psychopathology and the

assessment of family functioning only by mothers are limitations of this study. In addition, we didn't evaluate the extent to which maternal depression and symptoms of anxiety, as well as the detected family dysfunctions, affected the mother-child relationship. Assessing the mother-child relationship with structured evaluations may be helpful to shed light on specific cultural differences in Turkey.

The present study found that mothers of children with food refusal are more likely to have both depression and symptoms of anxiety, and that the perceived family functioning by mothers is generally unhealthy. The data related to family functioning suggested that the symptoms of child might be related to the underlying family conflict. This demonstrates the importance of evaluating not only the characteristics of the mother and child, but also those of family functioning as well. In Turkey, the exact number of children with food refusal who have accessed to the child psychiatry services is not known. It seems however, that this number is probably rather low, since during the course of a year in our university hospital, only 30 cases were seen for food refusal. When children with food refusal go to a pediatrician, they are usually given sufficient treatment to improve nutrition and physical growth; however, interventions regarding psychosocial aspects of the problem may be insufficient. This is a rather significant shortcoming, when considering the influence of familial factors on both the onset and persistence of food refusal. In order to better understand and treat this early childhood feeding problems, it will be necessary to study it in greater detail and to make effective collaboration between related health professionals.

REFERENCES

- Ammaniti M, Ambuzzi AM, Lucarelli L. et al (2004) Malnutrition and dysfunctional mother-child feeding interactions: clinical assessment and research implications. *J Am Coll Nutr*, 23(3): 259-271.
- Beck AT (1961) An inventory for measuring depression. *Arch Gen Psychiatry*, 4: 561-71.
- Benoit D, Zeanah CH, Barton ML (1989) Maternal attachment disturbances in failure to thrive. *Infant Ment Health J*, 10(3): 185-202.
- Black MM, Dubowitz H, Hutcheson JJ et al (1995) A randomized clinical trial of home intervention for children with failure to thrive. *Pediatrics*, 95(6): 807-814.
- Black MM (1999) Commentary: Feeding Problems: An Ecological perspective. *J Pediatr Psychology*, 24(3):217-219.
- Black D (2002) Bereavement. *Child and Adolescent Psychiatry*. 4th Edition. Rutter M, Taylor E (Eds), Oxford. Blackwell Publishing, pg. 299-308.
- Bulut I (1990) Aile Değerlendirme Ölçeği Elkitabı. Ankara. Özgüzel Matbaası,
- Chatoor I, Egan J, Getson P et al (1988) Mother-infant interactions in infantile anorexia nervosa. *J Am Acad Child Adolesc Psychiatry*, 27(5): 535-540.
- Chatoor I, Getson P, Menvielle E et al (1997) A feeding scale for research and clinical practice to assess mother-infant interactions in the first three years of life. *Infant Ment Health J*, 18(1): 76-91.
- Chatoor I, Hirsch R, Ganiban J et al (1998) Diagnosing infantile anorexia: The observation of mother-infant interactions. *J Am Acad Child Adolesc Psychiatry*, 37(9): 959-967.
- Chatoor I (2000) Feeding and eating disorders of infancy and early childhood. *Comprehensive Textbook of Psychiatry*. Seventh Edition. Kaplan HI, Sadock BJ, Sadock VA (Ed). Philadelphia, Lippincott Williams & Wilkins, pg. 2704-2710.
- Coşkunol H, Bağdiken I, Soriaş S et al (1994) SCID-II (Türkçe versiyonu) görüşmesinin kişilik bozukluklarındaki güvenilirliği. *Türk Psikoloji Dergisi*, 9(32): 26-29.

- Crittenden PM (1987) Non-organic failure to thrive: deprivation or distortion. *Infant Ment Health J*, 8(1): 51-64.
- Dahl M (1987) Early feeding problems in an affluent society. III. Follow-up at two years: natural course, health, behaviour and development. *Acta Paediatr Scand*, 76(6): 872-880.
- Dahl M, Sundelin C (1992) Feeding problems in an affluent society. Follow-up at four years of age in children with early refusal to eat. *Acta Paediatr*, 81(8): 575-579.
- Drotar D, Eckerle D (1989) The family environment in nonorganic failure to thrive: a controlled study. *J Pediatr Psychiatry*, 14: 245-257.
- Duniz M, Scheer PJ, Trojovsky A et al (1996) Changes in psychopathology of parents of NOFT (non-organic failure to thrive) infants during treatment. *Europ Child Adolesc Psychiatry*, 5(2): 93-100.
- Epstein NB, Bolwin LM, Bishop DS (1983) The Mc Master Family Assessment Device. *J Marital Fam Ther*, 9(2): 171-80.
- Erol A, Toprak G, Yazici F (2002) Üniversite öğrencisi kadınlarda yeme bozukluğu ve genel psikolojik belirtileri yordayan etkenler. *Türk Psikiyatri Derg*, 13(1): 48-57.
- Feldman R, Keren M, Gross-Rozval O et al (2004) Mother-Child Touch Patterns in Infant Feeding Disorders: Relation to Maternal, Child, and Environmental Factors. *J Am Acad Child Adolesc Psychiatry*, 43(9): 1089-1097.
- Friedmann MS, McDermut WH, Solomon DA et al (1997) Family Functioning and Mental Illness: A Comparison of Psychiatric and Nonclinical Families. *Fam Proc*, 36(4): 357.
- Gorman J, Leifer M, Grossman G (1993) Nonorganic failure to thrive: Maternal history and current maternal functioning. *J Clin Child Psychol*, 22(3): 327-336.
- Heffer RW (1989) A behavior analytic model for nonorganic failure to thrive: observations of parent and child behavior during feeding interactions. Dissertation thesis.
- Hisli N (1989) Beck depresyon envanterinin üniversite öğrencileri için geçerliliği, güvenilirliği. *Türk Psikoloji Dergisi*, 7(23): 3-13.
- Hufton IW, Oates RK (1977) Nonorganic Failure To Thrive: A Long-Term Follow-up. *Pediatrics*, 59 (1): 73-77.
- Hutcheson JJ, Black MM, Starr Jr RH (1993) Developmental differences in interactional characteristics of mothers and their children with failure to thrive. *J Pediatr Psychiatry*, 18: 453-466.
- Jackson HJ, Burgess PM (2000) Personality disorders in the community: a report from the Australian National Survey of Mental Health and Wellbeing. *Soc Psychiatr Epidemiol*, 35: 531-538.
- Kenis DR (1980) A study of the personality characteristics of mothers of abused children and failure to thrive children. Northwestern University, Dissertation thesis.
- Kerwin ME, Berkowitz RI (1996) Feeding and eating disorders: Ingestive problems of infancy, childhood and adolescence. *School Psychol Rev*, 25: 316-328.
- Kumbasar H (1998) İlişki sorunları. *Psikiyatri Temel Kitabı*. Cilt 2. Güleç C, Köroğlu E (Eds), Ankara. Hekimler Yayın Birliği, pg 817-822.
- Lindberg L, Bohlin G, Hagekull B et al (1994) Early food refusal: Infant and . *Infant Ment Health J*, 15(3): 262-277.
- Lindberg L, Bohlin G, Hagekull B et al (1996) Interactions between mothers and infants showing food refusal. *Infant Ment Health J*, 17: 334-347.
- McDermott BM, Batik M, Roberts L et al (2002) Parent and child report of family functioning in a clinical child and adolescent eating disorders sample. *Austr New Zealand J Psychiatry*, 36(4): 509-514.
- Monk CE (1997) Representational content and quality of mothers whose children are failing to thrive: A Rorschach study linking inner life with interpersonal behavior. City University of New York, Dissertation thesis.
- Munson LJ (1996) Parent-infant interaction during play and feeding for infants who are typically developing and for infants who have a feeding problem and a developmental delay. Vanderbilt University, Dissertation thesis.
- Öner N, Le Compte A (1983) Durumluk/Sürekli Kaygı Envanteri El Kitabı. İstanbul. Boğaziçi Üniversitesi Matbaası.
- Polan HJ, Kaplan MD, Kessler DB et al (1991a) Psychopathology in mothers of children with failure to thrive . *Infant Ment Health J*, 12(1): 55-64.
- Polan HJ, Leon A, Kaplan MD et al (1991b) Disturbances of affect expression in failure-to-thrive. *J Am Acad Child Adolesc Psychiatry*, 30(6): 897-903.
- Prinstein MJ, Boergers J, Spirito A et al (2000) Peer functioning, family dysfunction, and psychological symptoms in a risk factor model for adolescent inpatients' suicidal ideation severity. *J Clin Child Psychol* 29(3): 392-405.
- Puckering C, Pickles A, Skuse D et al (1995) Mother-child interaction and the cognitive and behavioural development of four-year-old children with poor growth. *J Child Psychol Psychiatry*, 36(4): 573-595.
- Robinson JR, Drotar D, Boutry M (2001) Problem-solving abilities among mothers of infants with failure to thrive. *J Pediatr Psychol*, 26(1): 21-32.
- Raynor P, Rudolf MCJ (1996) What do we know about children who fail to thrive? *Child Care Health Dev*, 22(4): 241-250.
- Samuels JF, Nestadt G, Romanosky AJ et al (1994) DSM-III personality disorders in the community. *Am J Psychiatry*, 151(7): 1055-1062.
- Sanders MR, Patel RK, Le Grice B et al (1993) Children with persistent feeding difficulties: an observational analysis of the feeding interactions of problem and non-problem eaters. *Health Psychol*, 12(1): 64-73.
- Satter EM (1986) Childhood eating disorders. *J Am Diet Assoc*, 86(3): 357-361.
- Sorias S, Saygılı R, Elbi H (1990) DSM-III-R yapılandırılmış klinik görüşmesi. Türkçe versiyonu. SCID-II kişilik bozuklukları formu. Bornova, Ege Üniversitesi Basımevi.
- Spielberger CD, Gorsuch RL, Lushene RE (1970) Manual for State-Trait Anxiety Inventory. California Consulting Psychologist Press.
- Spitzer RL, Williams J (1985) Structured clinical interview for DSM-III-R personality disorders (SCID II). New York Biometrics Research Department, New York State Psychiatric Institute.
- Stein A, Barnes J (2002) Feeding and sleep disorders. *Child and Adolescent Psychiatry*. 4th Edition. Rutter M, Taylor E (Eds), Oxford. Blackwell Publishing, pg. 754-775.
- Swanston HY, Tebbutt JS, O'Toole BI et al (1997) Sexually abused children 5 years after presentation: A case-control study. *Pediatrics* 100:600-608.
- Taskinen M (2000) Skeletal muscle protein reserves in children with cancer. Nutritional and metabolic aspects from diagnosis to long term follow up. Medical Faculty of the University of Helsinki. Retrieved August 15, 2005, from <http://ethesis.helsinki.fi/julkaisut/laa/kl/in/vk/taskinen/skeletal.pdf>
- Tegin B (1980) Depresyonda bilişsel şemalar. Hacettepe Üniversitesi Psikoloji Bölümü, Dissertation thesis.
- Tebor SH (2000) The incidence and correlation of feeding problems in a normal population of toddlers. The George Washington University, Dissertation thesis

Timimi S, Douglas J, Tsiftopoulou K (1997) Selective eaters: a retrospective case note study. *Child Care Health Dev*, 23(3): 265-278.

TNSA (2003) Türkiye Nüfus ve Sağlık Araştırması - Ön rapor. Retrieved May 5, 2004, from <http://www.hips.hacettepe.edu.tr/haber/tnsa2003rapor.pdf>

Torgerson S, Kringlen E, Cramer V (2001) The prevalence of personality disorders in a community sample. *Arch Gen Psych*, 58(6): 590-596.

Whelan E, Cooper PJ (2000) The association between childhood feeding problems and maternal eating disorder: a community study. *Psychol Med*, 30(1): 69-77.

Wilensky DS, Ginsberg G, Altman M et al (1996) A community based study of failure to thrive in Israel. *Arch Dis Child*, 75(2): 145-148.

Wolke D, Skuse D, Mathisen B (1990) Behavioral style in failure-to-thrive infants: a preliminary communication . *J Pediatr Psychiatry*, 15(2): 237-254.