

M. Duniz  
P. J. Scheer  
A. Trojovsky  
W. Kaschnitz  
E. Kvas  
S. Macari

## Changes in psychopathology of parents of NOFT (non-organic failure to thrive) infants during treatment

Received: 6 December 1994  
Accepted: 29 September 1995

Dr. M. Duniz (✉) · P. J. Scheer  
A. Trojovsky · W. Kaschnitz · E. Kvas  
S. Macari  
Pädiatrische Psychosomatik  
und Psychotherapie  
Dept. für allg. Pädiatrie  
Univ.-Klinik für Kinder-  
und Jugendheilkunde  
Landeskrankenhaus Graz  
A-8036 Graz, Österreich

**Abstract** This clinical case-study of 50 infants suffering from NOFT (non-organic failure to thrive) and their parents supports the idea that the feeding problem is intimately related to parental disorders. We find a high rate (70%) of parental psychopathology (axis I diagnosis applying DSM-III-R) at the time of referral and a significant reduction (to 37%) during treatment of the infants and their parents. After a year only 12% of the parents were diagnosed with psychiatric disorders. In contrast personality disorders (axis II diagnosis applying DSM-III-R) show more stability and can be regarded as a trait variable, whereas the psychiatric disorders are of a more reactive nature. These conclusions may be influenced somewhat by the strictly hospital based design of our pilot study (infants and parents contacted only after clinical referral) and

by inclusion only of firstborn infants. Nevertheless, they point to the psychopathology of parents as a main cause for non-organic failure to thrive. Psychopathological traits such as severe attachment behavior problems and primary bonding difficulties may have been latent and only became manifest due to the task of nurturing an infant for the first time.

**Key words** Infancy – failure to thrive – parents – psychopathology

**Abbreviations** FTT, failure to thrive – NOFT, non-organic failure to thrive – ZTT-DC:0-3, ZERO TO THREE: Diagnostic Classification of the National Centers for Clinical Infant Programs – CI, Cole's Index = body weight for length in % adjusted for age

### Introduction

Social development of infants depends on the interaction between parent and child; the feeding interaction is of critical importance in establishing the quality of early relationships (14, 44). The association of maternal psychopathology with failure to thrive (FTT) and with maternal attachment disturbances in FTT-infants has been discussed in several studies (6, 15, 25, 35, 40, 47). Traditionally, the child's growth failure has been attributed to inadequate parenting in the form of "maternal deprivation

syndrome" (1, 20, 31, 46). Studies of the origin of FTT in relation to mother – child interaction (10, 17, 18, 19, 22, 24, 36, 37), or to maternal psychopathologies such as narcissistic personality disorders (9, 20, 21, 38) or to additional substance abuse (32) all involve psychiatric disorders in the parents.

Both Polan et al., (32) and Benoit et al., (4) find higher rates of psychopathology in mothers of FTT-babies than in mothers of normal or otherwise diagnosed in-patient babies. Polan and Ward (33) observed less tactile contact in mothers of FTT infants than in a control group. Other studies indicate that "vulnerable child" characteristics (2,

7, 11, 34, 41–43) might influence the development of NOFT. Psychosocial stress tends to influence feeding behavior adversely (39); whereas help addressed to the developing families effects improvement (3). Some reports indicate associations between maternal recollections of their traumatic childhood experiences and self-esteem in FTT cases (3, 5, 16, 29). According to psychoanalytical theory such traumatic memories might have an important impact on parental functioning (12, 23, 26).

Although Lieberman and Birch (27) and Drotar (13, 14) argue that FTT research must concentrate on clinical examination of the whole family, rather than on just the mother (28) we follow the general view that mothering plays the most important role in the etiology of FTT. The planning of this study was influenced by our experience of the emotional reactions, profound psychopathology, and anxiety symptoms of the distressed mothers at the time of the infants' referral, and also by the sudden and almost complete abatement of psychic symptoms in mothers coinciding with the infants' recovery after successful treatment. The mothers' complaints included sleep disturbances, mood disturbances, anxiety, exhaustion, panic attacks, fear, bad dreams, feelings of insufficiency, guilt, hopelessness, and suicidal fantasies. As psychotherapeutically oriented pediatricians, we decided to perform a case study on parental psychiatric disorders in relation to NOFT and its treatment during a 14-month period.

### Sample

This study included 76 parents (48 mothers and 28 fathers) and their 50 firstborn infants – 23 boys and 27 girls – aged 6 to 18 months, admitted over a 14-months period to the psychosomatic unit of the University Children's Hospital, Graz, Austria. All infants were non-handicapped, term-born and organically healthy; birth weight was in normal range. None of the infants was being breast-fed at referral. Referral of 22 infants occurred by the Division for General Paediatrics and Gastroenterology after having undergone a standard organic check-up, 13 infants were referred directly by pediatricians in private practice and 15 were referred by other pediatric hospitals. Of the infants, 47 were of Caucasian origin, 2 were racially mixed (1 Phillipino-Caucasian, 1 Hamite-Caucasian), 1 was African. All infants and their parents were assessed on an in-patient basis, admitted with their mothers in the psychosomatic ward 2–54 days (mean 16.2 days). FTT was diagnosed if the infant showed a weight-loss or stagnation of weight-gain resulting in a Cole Index of <85%.

With the validated scale defined by Woolston (48) for rating the proportion of organicity in FTT-infants in six degrees of organicity we found: 34 infants showed no definable organic factor or only mild secondary complica-

tions of malnutrition (Woolston score 1–2). 16 infants showed malnutrition-based motor developmental delay and/or gastro-esophageal reflux (Woolston score 3). At referral 16 of the 50 infants were being tube fed, 9 intermittently, 7 constantly for a period longer than 2 weeks.

### Method

All infants and all available caregivers (27 cases of both parents, 1 single father, 21 single mothers) were diagnosed independently by three trained raters having previously assessed inter-rater-reliability (0.87 for psychiatric diagnostic rating). All three raters are constant members of the psychosomatic-psychotherapeutic team and have been trained in psychiatry and psychotherapy including special courses in baby observation (Tavistock model). The process of diagnostic assessment consisted of:

A semi-structured clinical psychiatric interview (approx. 30 min) in a German adaptation of the DSM-III-R Non-patient Version (SCID-NP) for evaluation and assignment of psychiatric diagnosis.

A psychiatric interview (approx. 20 min) evaluating DSM-III-R Personality Disorders (adapted after SCID-II) with the parents.

Two standardized Behavior Observation Scales rating a 15-min play- and a 15-min feeding situation (applying Chatoor (8) with 49/52 subitems) recorded on video during the first 2 days after admission.

The Child Working Model Interview (50) evaluates internal representations of the parents. This interview is performed separately with each parent in absence of the infant and provides an impression of the affective quality of the parent-infant relationship with 14 sub-items.

Assignment of DSM-III-R diagnosis for each infant and a diagnosis according to the ZTT-DC: 0–3 (30) including an assessment of the parent-infant relationship according to the manual. The manual in its last revised form provides seven options for relationship disorders (overinvolved/underinvolved/anxious-tense/angry-hostile/three subcategories of abusive relationship) and three degrees of severity: perturbation/disturbance/disorder.

### Procedure

The full diagnostic assessment lasted 4–6 h, performed mostly in the course of 2–3 sessions during the first week of admission. The second assessment, 3 months later, included a check of the infants' weight and re-evaluated the psychiatric condition of the parents. The third assessment was done after 1 year. These diagnostic assessments included measurement of the infant's weight, length and development. In the 3- and 12-month assessments the interviewers did not inform the parents about their previous

diagnosis. (These interviewers were not involved in the actual treatment of the parents or the infants). For the assessment of the infant's relationship to its parents and vice versa, a video (15 min) of the mutual interaction during play and another (10–15 min) of a feeding situation according to the description of Chatoor (8) were recorded at all three evaluations. Chatoor's Play Behaviour Scale and her Feeding Behaviour Scale were evaluated by two trained raters independently and blind to each other, having previously assessed inter-rater-reliability (0.76 for videotape rating).

According to Chatoor's rules (8), a score difference greater than 2 requires re-evaluation on each sub-item. Psychopharmacological treatment was offered in only three cases of extreme maternal dyssomnia for a brief period. Psychotherapy and guidance were offered to all parents with varying degrees of compliance. Psychiatric disorders were treated supportively and dynamic psychoanalytical therapy was avoided. When requested by individual parents, psychotherapeutic treatment was encouraged mostly outside the hospital setting. Additional socio-demographic information about the family was gained by the medical staff and/or by the social worker of our team.

## Treatment

All costs for medical treatment in Austria are covered by the social security and national health services. Coverage is independent of in- or out-patient setting and of duration of treatment. This allows therapy-planning according to individual needs. Within a large general pediatric central University Hospital with 200 in-patient beds, our division is labeled "pediatric psychosomatics and pediatric psychotherapy" and holds a separate in-patient ward with 14 beds, four of which can be adapted as mother-infant units. The members of our team are pediatricians and psychotherapists (two with independent training), in charge of both medical and psychological disorders. As members of a specialized division in the hospital, we are responsible for "difficult" parents and for infantile symptoms associated with interactive or relational difficulties. The nursing staff is also psychotherapeutically trained and can generally cope well with emotional distress. Our theoretical framework is influenced by the concept of "internal representations" (49). "Internal representation" is the psychoanalytic assumption meaning the fantasies and thoughts a mother experiences during pregnancy and after birth about her baby. Their sub- and pre-conscious thoughts and feelings of the mother influence her interaction with her baby and are themselves influenced by the mother-child interaction the mother has experienced herself. They can be assessed by a questionnaire (49) and are used by us for diagnostic impression. (We find mostly severe deficits in internal representations.) The interview is used as a basic exchange between the mothers and psy-

chotherapists and is a starting point for psychotherapy. Fathers are involved in all psychotherapeutic sessions if at all possible. During the first 2–3 weeks the psychotherapy occurs weekly, then less frequently. A generous availability of the team members (available by paging) provides a sense of security for the parents, and also a feeling of being able to share the burden of their problems with knowledgeable and understanding counsellors. In addition to the ward, we have two rooms for psychotherapy, one play-therapy room and one large room for family sessions, both the latter equipped with one-way mirrors for observation, audio- and videotaping equipment, as well as one extra room for pediatric examinations.

Treatment hinges on parental compliance with two basic rules:

- 1) Offer the infant food if and only if a hunger cue has been shown.
- 2) Stop feeding immediately after any hint of refusal of food.

Compliance with these rules results in a marked change in the feeding atmosphere: the stress level is reduced, leading to more relaxed behavior of the infant and its parents. This is the first goal of treatment. Treatment of NOFT must ensure weight gain while at the same time de-emphasizing the topic of weight gain. This paradox is a main focus of the in-patient setting. The parent and the infant select the food they like (no pediatric diet plans). Portions are too small rather than too large. The aim is to stimulate the child to break the vicious circle of opposition against feeding under pressure.

The infants are offered food to experiment with at intervals, e.g., pieces of peeled apple, bread crusts, biscuits. Food intake – content or quantity – is not registered or controlled in any way. Body-weight is measured each morning, a weekly gain of 200–400 grams being considered satisfactory. Feeding itself is performed only by the mother, with support from members of our team as necessary, e.g., provision of high chairs, etc. The supportive and psychotherapeutic ward-atmosphere allows the mothers to become receptive and open to the recommendations of the nurses and thus they can be involved in new learning processes. As various relationships are being established between the mothers and members of the team, transference and countertransference phenomena engage the insecure mothers into a network of support and emotionality resembling a nourishing family atmosphere. The "bad mother" feels she is being transformed into a "good mother".

The focus of treatment is not the child, not the mother, and not the food, but the parent-infant relationship. As the spouse relationship is often found to be unbalanced in cases of NOFT infants, the fathers are integrated into treatment as soon as possible and marital issues are discussed independently of the feeding problems.

*Vignette #1*

Barbara, the first-born girl of two archaeology students aged 20 and 24 years, was referred to our team with the diagnosis of suspected infantile anorexia nervosa. Barbara was 17 months old and had suffered two episodes of gastro-enteritis at 11 and 14 months. Her mother, who had herself suffered from anorexia nervosa from age 14–16 was becoming increasingly tense and anxious about the topic of sufficient weight gain, especially since Barbara had never been a good eater and was now failing to catch up sufficiently after the two intestinal infections. During 10 weeks of in-patient treatment in a traditional pediatric ward, Barbara had been force fed and, since this was unsuccessful, had been put onto continuous feeding by nasogastric tube. During these 10 weeks no weight-gain was achieved. Initially, Barbara had shown strong opposition to all situations concerning feeding but she gradually became passive and distant, even turning away when her parents came for their daily visit. Both parents and the ward staff were very worried since Barbara could not be involved in any pleasurable activity, she only played silently with her dolls and toys. (Cole's Index was 76% at this point, and the infant was not dehydrated). In the videotaped play interaction at the time of referral to our team, both parents seemed eager to reach their daughter by any means and were desperate at their inability to achieve positive contact. Barbara was withdrawn, with frozen expression, automatically playing with a music-box. On admission to our ward with her mother the nasogastric tube was removed. The parents were encouraged to handle Barbara as naturally as possible and to ignore the topic of food. Some 4 h after admission, Barbara got hold of a peeled banana and squeezed it over herself, joyfully catching some with her mouth. The next surprise was that she found a roll and stuffed it eagerly into her mouth. Both parents, after an elaborate psychotherapeutic talk, were persuaded to withhold from immediate interventions; they followed Barbara's activities somewhat amazed and bewildered. The in-patient stay lasted 4 days. After a week, Barbara was back to normal eating, as if the "whole thing had been a bad dream". Her weight gain was impressive: she put on 2 kg in 2 months and showed a CI of 103% after 3 and 98% after 12 months. Supportive counseling and interaction oriented guidance were the essential part of this treatment.

*Vignette #2*

Alexandra had started having abdominal pains and spasms at the end of the third month, about 2 weeks after weaning from the breast. Her 29-year-old mother had stopped breast-feeding earlier than planned because, as she described, she could not free herself from being reminded of a cow. This provoked feelings of disgust, even though at the same time telling herself that breast feeding

was the very best a mother could provide. At Alexandra's birth her parents had been married for 7 years and had a history of unsuccessful attempts to achieve pregnancy. Alexandra was thus the fulfilment of her parents' dreams, and both of them tried hard to be perfect caregivers. During pregnancy sexual contact between the parents stopped to prevent any risk of miscarriage. Alexandra was referred to our unit at the age of 5 months by the family pediatrician. Symptoms included a tendency to constipation and flatulence; appetite was low and weight stagnation over 2 months was resulting in failure to thrive, with weight for length 84% CI at referral. The mother complained about her own severe sleeping problems, nervousness and anxiety, and would not leave her baby 1 min unattended. Alexandra's parents insisted on in-patient treatment.

The mother's diagnosis was: adjustment disorder with mixed emotional features and an obsessive-compulsive personality disorder. The father also showed obsessive-compulsive traits but was not assigned a DSM-III-R diagnosis. Apart from the impending FTT, Alexandra was a healthy, happy, responsive and well attached baby. She simply ended her eating activity about halfway through the meal in a decided and determined manner, with unmistakable cues of refusal. Her mother was deeply upset; she wept, uttered suicidal thoughts, and was sure that the staff was hiding a terrible fatal diagnosis from her. She spent hours feeding Alexandra or staring at her bowel movements, waiting for stool. The father was also upset and said that his wife was becoming more disturbed every day. He was about to leave the country for some time for professional reasons but could not part from his wife in this state.

Individual interviews revealed a highly insecure personality in the mother, who had always depended on her own mother. She was now aware of the need that she had to detach herself from her own mother and take over responsibilities; especially since her mother had been diagnosed with T-cell leukemia during the pregnancy with Alexandra. She had feelings of guilt that Alexandra's presence was threatening her mother's life in a mysterious way. Nine sessions of intensive supportive individual psychotherapy were offered, plus three interviews with both parents. After 3 weeks of in-patient stay, Alexandra's mother dared to try sleeping one night at home with the baby. Her feelings of insecurity were so intense that we were asked to hold the hospital room for 1 week, during which she would sleep at home but spend several hours daily on the ward using it as a day clinic. The feeding problems resolved gradually, but Alexandra remained a "difficult" baby for her mother. Only after long-term individual psychotherapy was set up for the mother did her psychiatric symptoms subside. There was complete normalization of Alexandra's weight-curve, but sleep disturbances became manifest at the age of 10 months and needed another five sessions of combined pediatric-psychotherapeutic intervention at our division.

After 1 year the psychiatric diagnosis for Alexandra's mother was omitted, but the personality disorder could be still found.

### Measures

The data were processed using SPSS for Windows. Since psychopathological data is non-parametrical, only frequencies were calculated. The examinations of parental diagnosis and the measurement of the infant growth parameters are marked with B (at referral), D (after 3 months), E (after 1 year) on Figs. 1 and 2. The weight and length of each infant were assessed weekly, but for the study, five points were chosen: 1) birth (A), 2) referral (B), 3) 1 month after referral (C), 4) 3 months after referral (D), and 5) 12 months after referral (E).

With the Tanner-Whitehouse Standards Sliderule and a computerized program all growth data were transformed to Cole Indices and tested for normal distribution using Kolmogoroff-Smirnoff Goodness of Fit Test. The means of the indices were tested for significance using simple  $\chi^2$ -tests (SPSS for Windows).

Significant difference of all growth data and the Cole indices were tested with Friedman two-way ANOVA.

### Results

Ninety-three percent (46) of the mothers and 38% (7) of the fathers showed axis 1 pathology at the first assessment (axis 1B), shown in Fig. 1. Together, this was 69.7%

of all assessed caregivers. The following diagnoses were assigned using DSM-III-R: Depressive Disorders 296.2-3x (5x), brief reactive Psychosis 298.80 (1x), Dysthymia 300.40 (4x), Somatoform Disorders 300.8x (10x), Eating Disorders 307.50 (4x), Adjustment Disorders 309.xx (20x), reactive attachment Disorder 313.89 (1x), Alcohol Dependence 303.90 (2x), Dyssomnia 307.40 (1x), Impulse control disorder 312.3x (2x), Gender Identity Disorder 302.85 (1x), Sedative Dependence 304.10 (2x). The second evaluation (axis 1D) of axis I diagnosis found a reduction in pathology to 36.8% of all caregivers, 48% (23) of the mothers and 19% (5) of the fathers (Fig. 1). The following diagnoses were assigned using DSM-III-R: Depressive Disorders 296.3x (3x), Dysthymia 300.40 (4x), Somatoform Disorders 300.8x (4x), Eating Disorders 307.50 (1x), Adjustment Disorders 309.xx (10x), Reactive Attachment Disorder 313.89 (1x), Alcohol Dependence 303.90 (2x), Dyssomnia 307.40 (1x), Impulse control disorder 312.3x (2x), Gender Identity Disorder 302.85 (1x), Sedative Dependence 304.10 (1x). The third evaluation (axis 1E) showed pathology on axis I in only 11.8% of all caregivers, 14% (7) of the mothers and 8% (2) of the fathers. The following diagnoses were assigned using DSM-III-R: Depressive Disorders 296.3x (3x), Adjustment Disorders 309.xx (4x), Alcohol Dependence 303.90 (1x), Impulse control disorder 312.3x (1x).

Axis II diagnosis showed a more stable manifestation in all three assessments: 23.7% (axis IIB), 23.7% (axis IID), 18.4% (axis IIE) (Fig. 1). Relationship diagnosis was assigned according to the criteria of the ZTT-DC: 0-3 manual in three degrees of severity at each assessment. This was overinvolved in 34 cases (27 mothers, 7 fathers), underinvolved in 21 cases (13 mothers, 8 fathers), anxious-tense in 10 cases (all mothers) and mixed in 12 cases (9 mothers, 3 fathers). Additionally, there was one

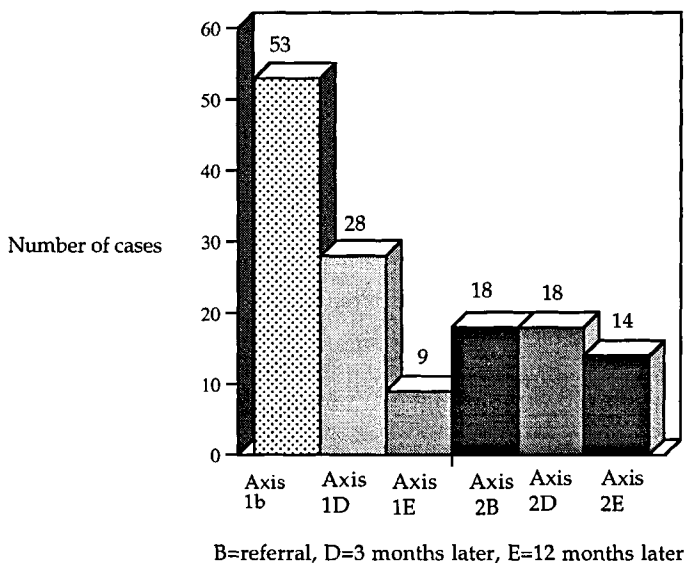


Fig. 1 Reduction of Axis I/II DSM-III-R diagnosis in 76 caretakers during the 1 year treatment period of 50 FTT infants

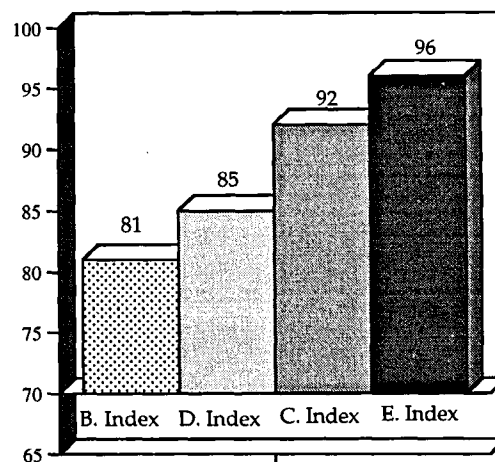


Fig. 2 Mean Coles's Indices (Weight for Height) Treatment period: 1 year, n = 50

**Table 1** Means of weight and length of the infants (before CI was determined)

Weight and length	Mean SD in kg	Mean SD in cm
A = at birth	3.38 ± 0.32	50 ± 1.4
B = at referral	6.54 ± 1.8	67.6 ± 8.7
C = 1 month later	7.32 ± 1.7	69.9 ± 12.8
D = 3 months later	8.6 ± 1.6	74.4 ± 7.1
E = 12 months later	11.07 ± 1.1	82.56 ± 4.9

Normal distribution using the Kolmogorov-Smirnoff Goodness of Fit test

angry-hostile father-infant and one abusive mother-infant relationship. The specific type of relationship disorder proved constant for each parent-infant dyad over the whole period of observation, yet the degree of severity diminished: at the first assessment, relationship disorders were present in 100% of the mother-infant dyads (with mainly high levels (3) of severity) and in 8 of the father-infant dyads. Yet 1 year after treatment only 23 of the mothers and the same 7 of the fathers showed relationship pathology but to a far lesser degree of severity. Overall a striking correlation between the infants' degree of recovery and the simultaneous regression of parental psychopathology and of tension in the dyadic relationship was apparent.

Table 1 shows all infantile growth data. Cole indices (B–E index) showed a normal distribution.

Figure 1 shows the dynamics of parental psychopathology over the course of 1 year. The change of weight/length growth index of the related infants over the same period of observation is demonstrated in Fig. 2. Using Friedman two-way ANOVA a significant difference was found  $p < 0.00001$  level (chi-square 116,568).

## Discussion

The aim of this study was to investigate parental psychiatric disorder and its course during treatment of affected infants. The possible bias introduced by investigating a clinically referred sample, as opposed to a non-referred, community based population, means that our findings cannot be generalized to a wider, representative group of FTT infants (28, 41, 42, 45). During the preparation of this paper psychotherapeutic colleagues indicated that one possible conclusion of our work could be that the psychiatric illness of the parents could be caused by their infants' disorder: Thus the conclusion of the paper could encourage doctors to focus in the infants weight-gain alone, administering a "purely organic" pediatric, e.g., by applying tube-feeding. To meet this criticism we have presented the case-histories and demonstrated our psychotherapeutic setting to illustrate our "psycho-somatic" approach.

There is a widespread tendency in pediatrics to regard parents of FTT-infants as "difficult" parents. In other words, the non-organic nature of the disorder is taken to imply a "parentogenic" cause. The ability to assign psychiatric disorders to parents of children suffering from NOFT can be helpful or harmful because assignment of psychiatric diagnosis can label these parents as lunatics. We emphasize that psychiatric derangement of the parents responds well to appropriate psychotherapeutic treatment. This therapeutic focus shows significant success, whereas when psychodynamic problems of the parents are not addressed in parents of NOFT infants chronicity and secondary complications are frequent.

The onset of treatment should be as early as possible. Another result of treating disorders affecting the parent-infant relationship is that the parents tend to return to our setting much earlier when new difficulties arise at a later stage of childhood, thus facilitating successful intervention. In contrast to Polan's work (32) our results demonstrate a difference between pediatric and psychiatric attitudes. The pediatrician may commonly be confronted with acute reactive psychopathology of the parents, which seems to be an adjustment reaction to the disorders of the infants.

Due to the clinical nature of our sample, priority was given to meet the emotional needs of as many family members as possible in the shortest time possible. A strictly standardized treatment was therefore impossible. Standardization of treatment is a complex task since basically different kinds of variables influence each patient and family differently. A straightforward recovery depends neither on the severity of the failure to thrive, nor on the severity or specific nature of relationship disorders or psychiatric disorders. The most important single factor seems to be the quality of parental compliance, which is related to the quality and type of transference-countertransference relationship established to the responsible therapist. Various kinds of therapy were offered: analytical psychotherapy; supportive psychotherapy; dyadic, relationship-focused guidance; and family counseling. In two cases, therapy was declined (one alcohol dependence, one impulse control disorder).

The issue of causality must be discussed. Did the infants recover because their caretakers' anxieties and fears subsided through counselling? Or did the infants recover because the fathers were reintegrated into the dyadic conflict, restoring triadic communication? (In many cases an impending separation could not be verbalized by the parents prior to treatment.) Or did the parents recover because the infants' feeding problem was finally being treated effectively? We think the chicken and egg question cannot be resolved by means of our study because we only met the parents after their child showed severe symptoms. Such basic questions could only be answered by a prospective study design which starts when people decide to marry or at least when a couple decide to have a baby.

We criticize any purely pediatric approach which excludes the parent from the treatment of the FTT-infant. The traditional in-patient method may lead to recovery, when applied to infants classified with such terms as "underinvolved" with avoidant attachment behavior and "psychosocially deprived"; such infants tend to respond well to professional pediatric care. But after discharge, the infants tend to suffer a rapid relapse. In this group, the need is not necessarily for psychotherapy, but rather for psychosocial support such as early intervention, mental health programmes and regular growth monitoring. Among our cases of underinvolved relationships (15 infants), there were four infants who were subsequently separated from their parents and transferred to foster care. This subgroup showed the highest rates of inaccessible parental axis I pathology and personality disorders. The notable lack of parental co-operation in accepting the suggested treatment contributed to the decision for foster care in these cases. Here the FTT was just one aspect of a general state of neglect and maltreatment.

The large group of overinvolved and anxious-tense relationships was characterized by strong individuation conflicts, particularly after the age of 7 months. This situation calls for psychodynamic understanding of the conflict: the infant's quest for autonomy, the mother's need to control, and the inability to provide secure parenting. The combined in-patient admission of mother and infant proved most effective in the cases of overprotective, overinvolved and anxious mothering, provided the father was also willing to cooperate. In such cases the in-patient admission of mother and baby seems superior to any other treatment paradigm. We had the impression that the hospital atmosphere itself, be it the technical or laboratory equipment (which was present but not utilized), had a direct therapeutic effect on this group of mothers. In-patient stay in this group with a duration of

7 to 42 days (mean 11.7) proved most convincingly effective in this subgroup, resulting in lasting recovery. In post-treatment care, most of these infants could be sufficiently supported by weekly visits to their family pediatrician, who monitored weight and encouraged the parents. On the other hand, the cases of mixed relationships all demanded some sessions of psychoanalytical psychotherapy, ranging from short-term (5–15 sessions) to long-term (>100 sessions).

A possible new and effective approach to preventing feeding disorders of infancy would be the detection of caregivers at risk during pregnancy by obstetricians and within obstetric departments by means of questionnaires. Are children of parents suffering from a psychiatric disorder likely to develop FTT? Or does insufficient weight gain of the child provoke feelings of despair in all parents? One difficulty aggravates the other: a vicious circle begins. Detection of mothers at risk would be most promising, including assessment of psychiatric-, personality- and relationship disorders of couples in a longitudinal design.

## Conclusion

NOFT is not a static syndrome or disturbance like certain congenital anomalies or metabolic deficiencies. NOFT develops gradually and, with good treatment, can resolve to a *restitutio ad integrum* in most cases. Parental attitudes towards an FTT-affected infant involve a dynamic and interaction-related process, which will change as the course of the illness proceeds. Long-term studies of parental psychopathology must consider this dynamic factor and must be cautious with non-dynamic attributions of any causality, be it of an individual or of interactional nature.

## References

1. Altemeier WA, O'Connor SM, Sherrod KB, Vietze PM (1985) Prospective study for antecedents for nonorganic failure to thrive. *Journal of Pediatrics* 106: 360–365
2. Bell LS, Woolston JL (1985) The relationship of weight gain and caloric intake in infants with organic and non-organic failure to thrive syndrome. *Journal of the American Academy of Child Psychiatry* 24:447–452
3. Belsky J, Vondra J (1989) Lessons from child abuse: the determinants of parenting. In: Cicchetti D, Carlson V (eds) *Child Maltreatment. Theory and research on the causes and consequences of child abuse and neglect*. Cambridge University Press, Cambridge
4. Benoit D, Zeanah C, Barton ML (1989) Maternal attachment disturbances in failure to thrive. *Infant Mental Health Journal* 10:185–193
5. Brewin CR, Andrews B, Gotlib IH (1993) Psychopathology and early experience: A reappraisal of retrospective reports. *Psychological Bulletin*, 113: 82–98
6. Brinich EB, Drotar DD, Brinich PM (1989) Significance of bond security of the child to the mother for the psychological and physical development of failure to thrive children. *Praxis in Kinderpsychologie und Kinderpsychiatrie*, 38:70–77
7. Bushnell IWR, Sai F, Mullin JT (1989) Neonatal recognition of the mother's face. *British Journal of Developmental Psychology* 29:267–279
8. Chatoor I (1986) *Mother-Infant/Toddler Feeding Scale*. Copyright with the Children's Hospital National Medical Center, Washington, DC
9. Chatoor I, Dickson L, Schaeffer S, Egan J (1985) A developmental classification of feeding disorders associated with failure to thrive: Diagnosis and treatment. In: Drotar D (ed) *New Directions in Failure to Thrive: Implications for Research and Practice*. Plenum Press, New York

10. Chatoor I, Egan J, Getson P (1987) Mother-infant interactions in infantile anorexia nervosa. *Journal of the American Academy of Child Adolescent Psychiatry* 27:535–540
11. Chatoor I, Schaeffer S, Dickson L, Egan J (1984) Non-organic failure to thrive: A developmental perspective. *Paediatric Annals* 13:829–842
12. Crittenden PM (1990) Internal representational models of attachment relationships. *Infant Mental Health Journal* 11:259–277
13. Drotar D (1989) Behavioral diagnosis in nonorganic failure-to-thrive: a critique and suggested approach to psychological assessment. *Journal of Developmental and Behavioral Pediatrics* 10:1, 48–55
14. Drotar D (1991) The family context of nonorganic failure to thrive. *American Journal of Orthopsychiatry* 61:23–34
15. Drotar D, Eckerle D, Satola J, Pallotta J, Wyatt B (1990) Maternal Interactional behaviour with nonorganic failure-to-thrive infants: A case comparison study. *Child Abuse and Neglect* 14: 41–51
16. Dubowitz H, Zuckerman DM, Bithoney WG, Newberger EH (1989) Child abuse and failure to thrive: Individual, familial, and environmental characteristics. *Violence and Victims* 4:191–201
17. Dunitz M, Scheer PJZ (1991) The interaction model and relationship disturbances in early infancy. Workshop presented at the 38. Annual Meeting of the AACAP, San Francisco
18. Dunitz M, Scheer PJZ, Kaschnitz W (1991) Interactional disturbances. Workshop at the meeting of the European Society for Child and Adolescent Psychiatry, London
19. Emde RN (1991) The wonder of our complex enterprise-steps enabled by attachment and the effects of relationship on relationship. *Journal of Infant Mental Health* 12:163–172
20. Fischhoff J, Whitten CF, Pettit MG (1971) A psychiatric study of mothers of infants with growth failure, secondary to maternal deprivation. *Journal of Pediatrics* 79:209–215
21. Freund A (1946) A psychoanalytic study of infantile feeding disturbances. *Psychoanalytic Study of the Child* 2: 119–132
22. Greenspan SI, Lieberman AF (1980) Infants, mothers, and their interactions: A quantitative clinical approach to developmental assessment. In: Greenspan SJ, Pollock GH (eds) *The Course of Life, Volume I: Infancy and Early Childhood* (pp. 271–312). Bethesda, MD: National Institute for Mental Health
23. Grossmann K, Fremmer-Bonik E, Rudolph I, Grossmann KE (1988) Maternal attachment representations as related to child-mother attachment patterns and maternal sensitivity and acceptance of her infant. In: Hinde RA (ed) *Relations within families* (pp. 241–260). Oxford Press, Oxford
24. Hanks HGI, Hobbs CJ, Seymour D, Stratton P (1988) Infants who fail to thrive: An intervention for poor feeding practices. *Journal of Reproductive and Infant Psychology* 6:101–111
25. Lachenmeyer JR, Davidovicz H (1987) Failure to thrive: A critical review. In Lahey B, Kazdin L (eds) *Advances in Clinical Child Psychology*. Plenum Press, New York
26. Lebovici S (1983) *La mere, le nourisson, et le psychoanalyste: Les interactions Precoces*. Le Centurion. Paidos, Paris
27. Lieberman AF, Birch M (1985) The etiology of failure to thrive: an interactional developmental approach. In: Drotar D (ed) *New Directions in Failure to Thrive: Implications for Research and Practice*. Plenum Press, New York
28. Lindberg R (1991) Early feeding problems in a normal population. *International Journal of Eating Disorders* 10:395–405
29. Main M, Goldwyn R (1984) Predicting rejection of her infant from the mother's representation of her own experience: Implications for the abused-abusing intergenerational cycle. *Child Abuse and Neglect* 8:203–217
30. National Center for Clinical Infant Programs (1994) *ZTT-DC: ZERO TO THREE – Diagnostic Classification Manual – Washington DC: Author*
31. Patton RG, Gardner LI (1962) Influences of family environment on growth: the syndrome of maternal deprivation. *Pediatrics* 30:957–962
32. Polan JH, Kaplan MD, Kessler DB, Shindlecker R, Newmark M, Stern DN, Ward MJ (1991) Psychopathology in mothers of children with failure to thrive. *Journal of Infant Mental Health* 12:55–64
33. Polan JH, Ward M (1994) Role of the mothers touch in failure to thrive. *Journal of the American Academy of Child and Adolescent Psychiatry* 33: 1098–1105
34. Ramsay M, Gisel EG, Bounty M (1993) Non organic failure to thrive: Growth failure secondary to feeding-skills disorder. *Development Medicine and Child Neurology* 35:285–297
35. Russell A, Russell G (1989) Warmth in mother-child and father-child relationships in middle childhood. *British Journal of Developmental Psychology* 7: 219–235
36. Sameroff AJ, Emde RN (1989) *Relationship disturbances in early childhood*. Basic Books, New York
37. Scheer P, Dunitz M, Kaschnitz W, Stix P (1993) *Beziehungsstörungen zwischen Säuglingen und ihren nahen Bezugspersonen am Beispiel der E-Trink- und Nicht-organischen Gedeihstörung*. In: Poustka F, Lehmkuhl U (eds) *Psychotherapeutische und psychosomatische Grundlagen der Kinder- und Jugendpsychiatrie*. (pp 213–225). Quintessenz Verlag, Frankfurt
38. Shapiro V, Fraiberg S, Adelson E (1976) Infant-parent psychotherapy on behalf of a child in a critical nutritional state. *The Psychoanalytic Study of the Child* 31:461–491
39. Singer LT, Song L, Hill BP, Jaffe AC (1990) Stress and depression in mothers of failure-to-thrive children. *Journal of Paediatric Psychology* 15:711–720
40. Skuse DH (1985) Nonorganic failure to thrive: a reappraisal. *Archives of Diseases in Childhood* 60:173–178
41. Skuse D, Pickles A, Wolke D, Reilly S (1994a) Postnatal growth and mental development: Evidence for a sensitive period. *Journal of Child Psychology and Psychiatry* 35:521–546
42. Skuse D, Reilly S, Wolke D (1994b) Psychosocial adversity and growth during infancy. *European Journal of Clinical Nutrition* 48:113–130
43. Skuse D, Wolke D, Reilly S (1992) Failure to thrive: Clinical and developmental aspects. In: Remschmidt H, Schmidt MH (eds) *Developmental Psychopathology*. Lewiston, NY: Hogrefe & Huber
44. Stern D (1977) *The First Relationship: Infant and Mother*. Fontana/OpenBooks, London
45. Wolke D (1994) Sleeping and feeding across the lifespan. In Rutter M, Hay R (eds) *Development across the lifespan*. Blackwell Scientific Publications, London
46. Wolke D, Skuse D (1987) Home-observations of non-organic failure-to-thrive infants. *Bulletin of the British Psychological Society* 40:61
47. Woolston JL (1983) Eating disorders in infancy and early childhood. *Journal of the American Academy of Child Psychiatry* 22:114–121
48. Woolston JL (1985) Diagnostic classification: The current challenge in failure to thrive. In: Drotar D (ed) *New directions in failure to thrive – Implications for research and practice* (pp 225–233). Plenum Press, New York
49. Zeanah C, Barton ML (1988) Internal representations and parent-infant relationships. *Journal of Infant Mental Health* 10:135–140
50. Zeanah C, Benoit D, Barton M (1989) *Working model of the Child Interview and manual*. Providence, Rhode Island: Copyright with: Women's and Infant's Hospital