Behavioral, interactional and developmental symptomatology in toddlers of depressed mothers: a preliminary clinical study within the DC:0-3 framework

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Relations between maternal depression and infant behavior, attachment and development were examined within a clinical diagnostic framework. The sample consisted of a study group of 15 infants and their mothers with depression compared to a group of 16 infants and their mothers with no diagnosable psychiatric disorders. The study group scored lower on expressive ($p<.03$), receptive ($p<.05$) and overall communication ($p<.03$) and coping skills ($p<.03$) of the Vineland and total scales ($p<.05$) of both developmental measures and higher on psychosocial stressor severity assessments ($p<.01$). More mother-infant dyads in the study group presented with relationship disorders ($p<.01$) with considerably lower PIR-GAS (global assessment scale for parent-infant relationship) scores ($p<.001$). Infants of depressed mothers were also significantly more likely to show problematic attachment behavior to their mothers ($p<.01$). As a factor leading to the increased risk of childhood developmental problems and psychopathology, maternal depression requires special attention during clinical assessment of infants and toddlers.

Key words: maternal depression, infant, toddler, development, behavior, relationship.

Depression leads to considerable morbidity, mortality and impairment in the quality of life. The prevalence of depression is 8-12% for women during the childbearing age[1,2]. Pregnancy and childbirth are stressors that may precipitate or aggravate depression[3]. Up to 85% of new mothers experience a depressed mood after birth and in 5-20% of these cases, the onset is in the first six months. Reviews of the literature equivocally conclude that maternal depression affects parenting behavior[4-8]. Maternal attitudes and caregiving skills under the influence of depressive mood influence mother-infant interaction[9-12]. Studies have revealed that some depressed mothers showed negative, critical, coercive and intrusive behavior while others presented with disengaged and withdrawn behavior patterns. Maternal depressive symptoms such as unhappiness, apathy, social withdrawal, disengagement, helplessness, irritability and hostility that interfered with a nurturing mother–infant interaction consequently hindered the development of a secure attachment relationship[13-15]. It has been shown[16] that children of parents with major depression had a 61% risk of developing a psychiatric disorder during childhood or adolescence and were four times more likely to develop an affective disorder compared to children with healthy parents. Cognitive developments of these infants were also found to be impaired at very early stages[17-19] due to the fact that depressed mothers were unable to provide the optimal conditions for play, sufficient stimulation, appropriate responses and positive affective involvement.

A relatively recent development in the field of child psychiatry has been the implementation of a classification system for the disorders of infants and young children: the Diagnostic Classification: 0-3 (DC:0-3)[20]. Although maternal depression is known to play an important role in infant maladaptive behavior, to our knowledge, studies that investigate the topic in the context of this newly developing

classification system do not exist. Therefore, a clinical population of mother-toddler dyads was evaluated in the present preliminary study with the assumptions that a greater number of toddlers of depressed mothers compared to those of non-depressed mothers presented with: i) distinct psychopathology, ii) problematic relationship and attachment patterns with their mothers, and iii) developmental delay.

Material and Methods

The study group consisted of 15 depressed mother-toddler dyads enrolled from all consecutive dyads approached (N=96) during a six-month period from referrals to the Child Psychiatry outpatient clinic of a university hospital. Toddlers were in the 14-38 months age range. Sixteen consecutive non-depressed mother-toddler dyads that were matched for infant's age and gender and mother's age and level of education were recruited for the comparison group. Dyads were excluded for the following reasons: i) Physical illness or disability of the mother that would be a confounding factor by affecting daily functioning and caregiving skills; ii) Maternal comorbid diagnosis for the same reason; iv) Toddler's preliminary diagnosis of a Multisystem Developmental Disorder (DC:0-3) which by definition are a group of neurodevelopmental disorders that impair communicational and relational skills of the child.

Demographic Information and Family History Form

The form was designed specifically for the study to obtain demographic information on the mother's age, level of education, profession, other members of the family, family members who assist the mother in caregiving, professional caregiver(s), family income and resources, housing conditions, parental physical and/or mental illnesses, number of children and order of birth of the index child, prenatal and perinatal history, problems during previous pregnancies, and physical well-being of the index child. Information on mother's depressive illness such as duration, periods of hospitalization and ambulatory follow-up were also noted and verified with official hospital records. This form was used in the study to make group comparisons of these various independent variables that could affect a child's mental health and development.

Structured Clinical Interview for DSM-IV (SCID-I)[21]

All modules of this clinical interview for the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) Axis I disorders adapted to Turkish[22] were administered to mothers by a trained rater (DO). Mothers who fulfilled criteria for depression alone were included in the study group and mothers who received no Axis-I diagnoses were placed in the comparison group.

Psychiatric Assessment Interview (PAI)[23]

The PAI is a comprehensive interview form that was previously designed for clinical purposes based on the practice parameters developed for the American Academy of Child and Adolescent Psychiatry for the assessment of infants and toddlers. It provides basic information about chief complaints, development of symptoms, major areas of development, behavior, daily routines and household environment of the infant and provides a foundation for further evaluation and diagnosis.

Infant–Toddler Mental Status Exam (ITMSE)[23,24]

The ITMSE adapts the mental status exam for use with infants and toddlers and provides a framework for clinicians to organize their observations. It can best be conducted during play interaction with the parent. It has sections regarding appearance, apparent reaction to situation, self-regulation, motor, speech and language, thought, affect and mood, play, cognition and relatedness. In the present study, the ITMSE was applied during the PAI and Clinical Problem Solving Procedure (CPSP) and observations, which were altogether used to contribute to the final clinical formulation and DC:0-3 diagnosis.

A Clinical Problem Solving Procedure (CPSP)[24,25]

The CPSP is a semi-structured observation procedure designed for children 12-54 months of age to assess caregiver-child interaction and attachment behavior. DC:0-3 Axis I and II diagnoses as well as the global assessment scale for parent-infant relationship (PIR-GAS) and functional emotional developmental level (FEDL) ratings were also based on CPSP, by integrating with data obtained from the PAI and ITMSE.

Diagnostic Classification of Mental Health and Developmental Disorders of Infancy and Early Childhood, Diagnostic Classification: 0-3 (DC:0-3)[20]

The DC:0-3 is a clinical tool that seeks to address the need for a systematic developmentally based approach to the classification of mental health and developmental difficulties in the first four years of life. Its multiaxial construct allows the clinician to blend in descriptive, relational, physical, neurobiological, environmental and developmental aspects of the infant's presenting problems to achieve a useful formulation for effective treatment planning. Axis I is for the primary diagnosis, Axis II is for parent-child relationship disorders, Axis III is for physical, neurological and developmental problems of the child, Axis IV is for psychosocial stressors and Axis V is for the FEDL of the child scored on a five-point scale. The acute and enduring psychosocial stressors for the family are noted and an Overall Impact of Stress is determined on a rating scale from 1 (no obvious effects) to 7 (severe effects). Overall FEDL (Axis V) is also determined on a five-point scale ranging from "1 - has fully reached expected levels" to "5 - has not mastered any prior levels". The nine-point PIR-GAS, which categorizes the severity of the relationship disturbance, is included in the DC:0-3 and is scored between 90 ("well adapted") and 10 ("grossly impaired").

In the present study, the clinical information and observations obtained through the PAI, ITMSE and CPSP were integrated to arrive at the DC:0-3 multiaxial diagnoses.

Ankara Developmental Screening Inventory (ADSI)[26]

The ADSI is a developmental screening instrument that assesses development between 0-6 years of age, in 154 items and five categories (communication-cognitive, fine motor, gross motor, social skills-self care and total), based on information obtained from parent interviews. Its test-retest reliabilities for three age groups (0-12 months, 13-44 months and 45-72 months) were.99-.88 and internal consistency was .99-.80.

Vineland Adaptive Behavior Scales (VABS)[27]

This measure consisting of 297 items grouped in five scales (communication, daily living skills, socializing, motor development and total) and their sub-scales is administered to parents to determine children's developmental level of adaptive behavior. Turkish adaptation, reliability and validity of the scales[28] were completed for infants and young children in the 0-47 month age range and were proven to have high inter-rater reliability (.97-.99), test-retest (.91-.98) and internal consistency (.95-.97).

The research protocol was approved by the University Ethical Committee. Informed consent was obtained from mothers who agreed to participate. Dyads were assessed in two sessions. The first session was held for maternal psychiatric assessment with SCID-I and for part of the toddler's assessment with the Demographic Information and Family History Form, the PAI and a preliminary ITMSE. In the second session, developmental assessments and the CPSP were administered and the ITMSE was completed. At the end of the second session, the family was provided with preliminary feedback, including a formulation of the child's clinical status and a tentative treatment plan. Sessions were videotaped and evaluated by two child psychiatrists, one of which was blind to clinical and control groups. Category descriptions and guidelines of the DC:0-3 were followed for selecting diagnoses, using clinical data obtained from interviews and observations. Differences in evaluations were discussed between two raters observing video recordings for the second time and final ratings were accepted as data following mutual agreement.

Results

The study and comparison groups were independent, there were no outliers and the study population met the assumptions of normality, linearity and homoscedasticity that underlie one-way MANCOVA. Although the groups were matched for infant's age and gender and mother's age, a preliminary correlation analysis was conducted to determine the effect of the independent variables other than maternal depression (i.e. infant age and gender, mother's age) on developmental parameters. Infant gender was found to be correlated with the total communication ($r=.38$, $p<.04$) and expressive language ($r=.36$, $p<.05$) scales of the VINELAND and infant age was found to be correlated with the overall development scales of the ADSI ($r=.58$, $p<.002$) and VINELAND ($r=.66$, $p<.001$).

Therefore, a one-way multivariate analysis of covariance was conducted to determine the effect of the two groups (toddlers of depressed and non-depressed mothers) on the dependent variables, the ADSI and VABS subscale scores and total scores by controlling the effect of the independent variables, infant age and infant gender. Table I presents the means and standard deviations of the dependent variables for the two groups.

Table I. Results of the One–Way MANCOVA for ADSI and VINELAND Scales of Development

Parameter	Study (Mean)	Comparison (Mean)	F	p
ADSI				
Communication-cognitive	23.15	26.67	2.51	n.s.
Fine motor	23.10	26.35	1.21	n.s.
Gross motor	28.85	34.89	2.33	n.s.
Social skills-self care	25.13	28.19	1.11	n.s.
Total	23.34	27.74	4.27	<.05
VINELAND				
Total communication	22.28	30.31	5.48	<.03
Receptive language	26.14	35.19	4.45	<.05
Expressive language	21.50	30.19	6.15	<.03
Daily living skills	28.14	32.38	2.05	n.s.
Personal care	27.71	31.94	1.88	n.s.
Home	31.21	31.81	.00	n.s.
Socializing total	27.24	31.47	1.81	n.s.
Social skills	23.50	28.94	2.97	n.s.
Interpersonal	28.85	29.94	1.20	n.s.
Play	27.78	30.56	.47	n.s.
Coping skills	9.07	22.06	6.13	<.03
Total motor	27.43	30.00	1.38	n.s.
Gross motor	26.64	29.25	.73	n.s.
Fine motor	27.21	29.43	1.10	n.s.
Total	25.42	30.37	4.94	<.05

ADSI: Ankara Developmental Screening Inventory. n.s.: Not significant.

Chi-square was used for demographic and family history variables. Groups showed no significant differences in terms of demographics.

A multiaxial diagnosis on the DC:0-3 was determined by integrating data obtained from the PAI, ITMSE and CPSP. These three clinical tools provided both information and opportunity to observe toddler behavior, parent behavior and toddler-parent relationship. At the time of admission, the main presenting problems of toddlers in the study group were reported by mothers during the PAI as sleeping/feeding problems (1 child), speech delay (5 children), behavioral problems such as irritability, overactivity or temper tantrums (5 children), and problems in toilet training (3 children). Stuttering (1 child), overactivity (3 children), fears (3 children) and questions concerning other developmental issues such as thumb sucking were the reasons for admission of the comparison group. Chi-square analyses were conducted for the DC:0-3 axes and attachment behavior comparisons. PIR-GAS ratings were compared by an independent samples t-test. Table II shows the DC:0-3 multiaxial assessment of the toddlers in the two groups.

Discussion

The main findings of this study partly supported our hypotheses that in a clinical population, toddlers of depressed mothers presented with significant difficulties in development, behavior and attachment compared to those of non-depressed mothers. Mother-toddler relationships of these dyads were also more problematic. Three cases in the study group received an Axis-I diagnosis of Regulatory

Table II. Results of the Chi-Square and T-Test Analyses for Comparisons of the DC:0-3 Variables

Parameter	Study (n)	Comparison (n)	X^2	SD	p
Axis I					
Primary diagnoses	8	6	.78	1	n.s.
Eating behavior disorder	1	–			
Post–traumatic stress disorder	2	–			
Reactive attachment disorder	1	–			
Regulatory disorder	3	–			
Depression	1	–			
Anxiety disorder	–	3			
Adjustment disorder	–	3			
Axis II					
Relationship disorders	10	2	9.57	1	<.01
Under–involved	4	–			
Over–involved	3	–			
Anxious/tense	–	1			
Abusive	2	1			
Mixed	1	–			
Axis III					
Medical and developmental disorders	7	6	.26	1	n.s.
Axis IV					
Psychosocial stressors	15	5	15.98	1	<.01
Marital	5	1			
Economic	2	–			
Previous depression	2	–			
Marital & previous medical	2	1			
Marital & economic	1	–			
Marital & violence	3	–			
Bereavement	–	1			
Birth of a sibling	–	2			
Psychosocial stressor severity	15	5	17.04	4	<.01
Mild	4	3			
Moderate	5	1			
Severe	6	1			
Axis V FEDL	15	16	7.63	4	n.s.
At expected level	–	5			
At expected level, constricted	6	7			
Achieved all prior levels	7	3			
Achieved some prior levels	1	1			
Not mastered any prior levels	1	–			
PIR–GAS (mean)	46.0	70.62	t= –4.45	29	<.001
Attachment Behavior Problems	9	2	7.63	1	<.01

FEDL: Functional Emotional Developmental Level. PIR-GAS: Global Assessment Scale for Parent-Infant Relationship. ns: Not significant.

Disorders, defined as "distinct patterns of atypical behaviors coupled with specific difficulties in sensory, sensory-motor or organizational processing"[20]. The processing abilities are presumed to develop from repeated interactions between infant and caregiver around the achievement of physical and emotional homeostasis. There are a small number of empirical studies that have used the Regulatory Disorder classification, and to our knowledge there are no studies to link maternal depression to this diagnostic category. There are, however, studies that have noted the impact of caregiving on child temperament, which is a construct that includes the child's ability to regulate affect and behavior[29-31]. The

sensory processing problems of a regulatory disordered child require empathic and sensitive caregiving, which is usually a challenge with which a depressed mother may not be able to cope. In our study group, mothers of all three cases with a regulatory disorder diagnosis had reported marital and income problems as stressors, which might have challenged their caregiving skills even further. The relationship between eating disorders (i.e. Failure to Thrive-FTT) and maternal psychopathology in general is controversial. While certain clinical and community studies indicated more mental illness in mothers of infants with FTT, others did not report any differences[32-34]. As with children with Regulatory Disorders, children with Eating Disorders evidence difficulties in self-regulation, including in experiencing hunger and satiety. Therefore, the same requirements concerning caregiving attitudes would be needed of their mothers. Depressed mothers who are unable to maintain a sensitive and cooperative approach to their young children, especially during feeding times, might have contributed to the problem to the point that an eating disorder developed.

Maternal psychopathology is a parental factor which has been related to childhood Posttraumatic Stress Disorder (PTSD)[35]. Among several explanations proposed, the inability of the symptomatic mother to provide a protective support to her traumatized child and her active and direct effect on the child that promotes symptoms are relevant to the link between maternal depression and child PTSD. Both of the children in our study group who received a PTSD diagnosis had witnessed repeated violence towards their mothers and evidenced considerable relationship problems and insecure attachment behaviors when they were with their mothers. A major proportion of studies involving maternal depression have focused upon its relation to attachment behaviors. Most of these studies obtained similar results in that more infants of depressed mothers exhibited insecure attachment patterns[36, 37]. Although nine toddlers in the study group exhibited problematic attachment behaviors, only one of them had symptoms severe enough to warrant a diagnosis of Axis-I Reactive Attachment Disorder[20] with an emotional withdrawal pattern. This child was subject to physical and verbal abuse by her mother and the dyad had also received an Axis-II Abusive Relationship Disorder diagnosis.

Our findings were consistent with previous studies which showed relationship difficulties between depressed mothers and their infants[6,38]. In these studies, relationship patterns were categorized as negative/coercive, disengaged and abusive. The "Underinvolved" and "Abusive" Relationship Disorder diagnoses in the present study were consistent with the relationship patterns described in the above-mentioned studies for "Disengaged" and "Negative/ Coercive" Relationship Disorder, respectively. Comparison of PIR-GAS mean scores supported these findings by revealing that the dyads in the study group had significantly more problems in their relationships than the dyads in the comparison group. The PIR-GAS revealed a higher significance than the categorical Relationship Disorder classifications, indicating that although mother-toddler relationships were much more problematic in the study group, only a subgroup of these dyads received a Relationship Disorder diagnosis.

The rapid and complex development of the toddler was evaluated from different perspectives using multiple tools as suggested in previous research[39]. There are no standardized Turkish measures of infant development which can be administered to the infant (i.e. Bayley Scales); therefore, we had to rely on measures based on parental report. The numbers of developmentally delayed children were quite close between groups, probably due to developmental concerns being a reason for referral in the comparison group as well. However, differences between the developmental assessment scores of the two groups revealed that developmental delay, especially in the areas of communication and coping skills (as seen in VINELAND comparisons), was more profound in the study group toddlers. This finding supported those of earlier studies which pointed to increased problems in both short- and long-term psychosocial development in children of depressed mothers[19,40]. The inconsistency between the ADSI and VINELAND subscales was ascribed to the small sample size and the limited number of items of the ADSI.

Consistent with previous studies that showed a relation between child psychopathology, maternal depression and psychosocial stressors[5,9,37], findings of Axis IV revealed differences between groups with respect to psychosocial stressor severity. We believe that

psychosocial stressors such as marital conflict increase the severity of maternal depressive symptoms which in turn further impairs the mother's problem-solving skills and thereby negatively influences the emotional atmosphere in the home.

More toddlers in the study group were below age-appropriate FEDL levels during interaction with their mothers. Findings were consistent with those for other developmental measures used in the study, especially the communication and cognitive development scales of the ADSI and VABS.

There were several methodological limitations to our study: i. The foremost was the small sample size which precluded sub-categorizations for important dimensions such as Axis I and II disorders or FEDL. ii. Our sample consisted of mothers who were referred due to complaints on behalf of their children instead of themselves. Therefore, our findings - no matter how consistent with previous studies that used community samples - may at best be generalized to child psychiatric clinical populations. iii. Severity of maternal depression, which was not assessed in the present study, might also have influenced the mothers' awareness of their children's symptoms and their decision-making in terms of seeking psychiatric help for their children. Depression severity should also have been assessed as an important variable contributing to children's symptoms and diagnoses. iv. Although none of the mothers in the study and comparison groups fulfilled criteria of DSM-IV Axis II personality disorders, this was not confirmed by the application of a structured assessment device. v. Toddlers were assessed only during interaction with their mothers and not during interaction with their fathers or significant others. We believe that this method of evaluation limited the observation of the full range of the children's capacities.

In conclusion, in a clinical setting, toddlers of depressed mothers should be considered at increased risk for psychopathology compared to toddlers of healthy mothers. The increased probability of attachment and relationship problems place these toddlers under additional risk of long-term difficulties. Therefore, the clinician must be attentive to cues that point to maternal depression during the evaluation of the child and should provide appropriate treatment and support when a diagnosis of depression is confirmed. The present study is a preliminary cross-sectional study which aimed to utilize the DC:0-3 system as a framework in understanding the mental health problems of very young children of depressed mothers at the time of admission. Follow-up studies with larger samples are required to see the treatment effects on the children, their mothers and the relationships of the dyads. Future studies should also focus on the apparently healthy infants of depressed mothers to explore the factors that contribute to their resiliency.

REFERENCES

1. Kessler RC, Nelson CB, McGonagle KA, Liu J, Swartz M, Blazer DG. Comorbidity of DSM-III-R major depressive disorder in the general population: results from the US National Comorbidity Study. Br J Psychiatry 1996; 168: 17-30.
2. Kılıç C. The prevalence of mental disorders for the adult population, associated factors, disability and applying for health care. In: Mental Health Profile Report of Turkey, Turkish Republic Ministry of Health, General Directorate of Primary Health Care, Ankara: Eksen Publishing; 2001.
3. Braverman J, Roux JF. Screening for the patient at risk for postpartum depression. Obst Gyn 1978; 52: 731-736.
4. Fleming AS, Ruble DN, Flett GL, Shaul DL. Postpartum adjustment in first-time mothers: relations between mood, maternal attitudes and mother-infant interactions. Dev Psychol 1998; 24: 71-81.
5. Goodman SH, Gotlib IH. Risk for psychopathology in the children of depressed mothers: a developmental model for understanding mechanisms of transmission. Psychol Rev 1999; 106: 458-490.
6. Lovejoy MC, Graczyk PA, O'Hare E, Neuman G. Maternal depression and parenting behavior: a meta-analytic review. Clin Psychol Rev 2000; 20: 561-569.
7. Stein A, Wooley H, Murray L, et al. Influence of psychiatric disorder on the controlling behavior of mothers with 1-year-old infants. Br J Psychiatry 2001; 179: 157-162.
8. Leiferman J. The effect of maternal depressive symptomatology on maternal behaviors associated with child health. Health Educ Behav 2002; 29: 596-607.
9. Cohn JF, Campbell SB, Matias R, Hopkins J. Face-to-face interactions of postpartum depressed and nondepressed mother-infant pairs at 2 months. Dev Psychol 1990; 26: 15-23.
10. Field T, Healy B, Goldstein S, Guthertz M. Behavior-state matching and synchrony in mother-infant interactions of nondepressed versus depressed dyads. Dev Psychol 1990; 26: 7-14.
11. Gelfand DM, Teti DM. The effects of maternal depression on children. Clin Psychol Rev 1990; 10: 329-353.

12. Radke-Yarrow M, Nottelmann E, Belmont B, Welsh JD. Affective interactions of depressed and nondepressed mothers and their children. J Abn Child Psychol 1993; 21: 683-695.

13. Zeanah CH, Emde RN. Attachment disorders in infancy and childhood. In: Rutter M, Taylor E, Hersov L (eds). Child and Adolescent Psychiatry: Modern Approaches (3rd ed). Oxford: Blackwell Scientific Publications; 1995: 490-504.

14. Cicchetti D, Rogosch FA, Toth SL. Maternal depressive disorder and contextual risk: contributions to the development of attachment insecurity and behavior problems in toddlerhood. Dev Psychopathol 1998; 10: 283-300.

15. Carter AS, Garrity-Rokous E, Chazan-Cohen R, Little C, Briggs-Gowan MJ. Maternal depression and comorbidity: predicting early parenting, attachment security and toddler social-emotional problems and competencies. J Am Acad Child Adolesc Psychiatry 2001; 40: 18-26.

16. Lavoie F, Hodgins S. Mental disorders among children with one parent with a lifetime diagnosis of major depression. In: Hodgins S, Lane C, Lapalme M, et al. (eds). A Critical Review of the Literature on Children at Risk for Major Affective Disorders. Ottawa: The Strategic Fund for Children's Mental Health; 1994: 37-82.

17. Whiffen VE, Gotlib IH. Infants of depressed mothers: temperament and cognitive status. J Abn Psychol 1989, 98: 274-279.

18. Murray L. The impact of postnatal depression on infant development. J Child Psychol Psychiatr 1992; 33: 543-561.

19. NICHD Early Child Care Research Network. Chronicity of maternal depressive symptoms, maternal sensitivity and child functioning at 36 months. Dev Psych 1999; 35: 1297-1310.

20. Diagnostic Classification Task Force. Diagnostic Classification:0-3. Diagnostic Classification of Mental Health and Developmental Disorders of Infancy and Early Childhood. Washington: Zero To Three / National Center for Clinical Infant Programs; 1995.

21. First MB, Spitzer RL, Gibbon M, Williamson JB. Structured Clinical Interview for DSM-IV Clinical Version (SCID-I/CV). Washington DC: American Psychiatric Press; 1997.

22. Özkürkçügil A, Aydemir Ö, Yıldız M, Esen A, Köroğlu E. DSM-IV Eksen Bozuklukları için Yapılandırılmış Klinik Görüşmenin Türkçe'ye Uyarlanması ve Güvenirlik Çalışması (Turkish adaptation and reliability study of Structured Clinical Interview for DSM-IV axis disorders). İlaç ve Tedavi Dergisi 1999; 12: 233-236.

23. American Academy of Child and Adolescent Psychiatry Practice parameters for the psychiatric assessment of infants and toddlers (0-36 months). J Am Acad Child Adolesc Psychiatry 1997; 36 (Suppl): 21–36.

24. Zeanah CH, Larrieu JA, Heller SS, Valliere J. Infant – parent relationship assessment. In: Zeanah CH (ed). Handbook of Infant Mental Health. New York: The Guilford Press; 2000: 222-235.

25. Crowell JA, Fleischmann MA. Use of structured research procedures in clinical assessment of infants. In: Zeanah CH (ed). Handbook of Infant Mental Health (1st ed). New York: Guilford Press; 1993.

26. Savaşır I, Sezgin N, Erol N. Ankara Gelişim Tarama Envanteri (Ankara Developmental Screening Inventory) (2nd ed). Ankara: Türk Psikologlar Derneği (Turkish Psychological Association); 1993.

27. Sparrow SS, Balla DA, Cicchetti DV. Vineland Adaptive Behavior Scales (Survey Form). Circle Pines, Minn: American Guidance Service; 1984.

28. Alpas B, Akcakin M. Vineland Adaptive Behavior Scales (Survey Form): adaptation, validity and reliability for infants of 0-47 months of age. Turkish J Psychol 2003; 18: 57-71.

29. Barton ML, Robins D. Regulatory disorders. In: Zeanah CH (ed). Handbook of Infant Mental Health (2nd ed). New York: The Guilford Press; 2000: 311-325.

30. Sroufe LA. Emotional Development: The Organization of Emotional Life in the Early Years. Cambridge: Cambridge University Press; 1995.

31. Whiffen VE. Maternal Depressed Mood and Perceptions of Child Temperament. J Gen Psychol 1990; 151: 329-339.

32. Polan HJ, Kaplan MD, Kessler DB, Schindledecker MN, Stern DN, Ward MJ. Psychopathology in mothers of children with failure to thrive. IMHJ 1991; 12: 55-64.

33. Wilensky DS, Ginsberg G, Altman M, Tulchinsky TH, Yishay B, Auerbach J. A community based study of failure to thrive. Arch Dis Child 1996; 75: 145-148.

34. Benoit D. Feeding disorders, failure to thrive and obesity. In: Zeanah CH (ed). Handbook of Infant Mental Health (2nd ed). New York: The Guilford Press; 2000: 249-265.

35. Scheeringa MS, Gaensbauer TJ. Posttraumatic stress disorder. In: Zeanah CH (ed). Handbook of Infant Mental Health. New York: The Guilford Press; 2000: 369-381.

36. Hipwell AE, Gossens FA, Melhuish EC, Kumar R. Severe maternal psychopathology and infant-mother attachment. Dev Psychopathol 2000; 12: 157-175.

37. Cicchetti D, Rogosch FA, Toth SL. Maternal depressive disorder and contextual risk: contributions to the development of attachment insecurity and behavior problems in toddlerhood. Dev Psychopathol 1998; 10: 283-300.

38. Stein A, Gath DH, Bucher J, Bond A, Day A, Cooper PJ. The relationship between post-natal depression and mother-child interaction. Br J Psychiatry 1991; 158: 46-52.

39. Thomas JM, Benham AL, Gean M, et al. Assessment of infants and toddlers. J Am Acad Child Adolesc Psychiatry 1997; 36 (Suppl): 21-36.

40. Murray L. The impact of postnatal depression on infant development. J Child Psychol Psychiatry 1992; 33: 543-561.