North Clin Istanb 2023;10(1):101–107
doi: 10.14744/nci.2021.90688

ORIGINAL ARTICLE PSYCHIATRY

Mother-child interactions among children with visual impairment: Addressing maternal attachment style, depression-anxiety symptoms, and child's behavioral problems

Koray Kara,[1] Mualla Hamurcu,[2] Hesna Gul,[3] Mehmet Ayhan Congologlu[3]

[1]Department of Child and Adolescent Psychiatry, Antalya Training and Research Hospital, Antalya, Turkiye

[2]Department of Ophtalmology, Ankara State Hospital, Ankara, Turkiye

[3]Department of Child and Adolescent Psychiatry, Gulhane Training and Research Hospital, Ankara, Turkiye

ABSTRACT

OBJECTIVE: The birth of a visually impaired child leads to stress, disappointment, and medical challenges for the family due to the economic and financial costs, unmet expectations of other family members, and social embarrassment-isolation of the family from society. In these families, mothers are exposed to the stressors more often than other family members, because, in most families, they are the primary caregivers. In this study, we examined the relationship between maternal attachment styles, maternal depression and anxiety levels, and behavioral problems of children with visual impairment.

METHODS: This is a case–control study. In the study group, there were 35 children with visual impairment, and in the control group, there were 31 healthy children. All mothers completed adult attachment style dimensions scales, beck depression, and anxiety inventories, and the aberrant behaviour checklist.

RESULTS: Our results demonstrated that children with visual impairment have higher levels of behavior problems including irritability, stereotypic behavior, and inappropriate speech when compared with healthy controls. Contrary to our expectations depression and anxiety, scores of mothers were similar, also, there was not a difference in terms of maternal attachment types. Interestingly, there was a positive relationship between secure attachment and depression among mothers of the visual impairment group. In other words, securely attached mothers were more depressive. On the other hand, there was a positive relationship between anxious/ambivalent attachment and the child's irritability.

CONCLUSION: The relationship between maternal depression and secure attachment could be a consequence of higher maternal sensitivity due to a child's impairment and should be evaluated in future studies.

Keywords: Inappropriate speech; irritability; maternal attachment; maternal depression; stereotypic behavior; visual impairment.

Cite this article as: *Kara K, Hamurcu M, Gul H, Congologlu MA. Mother-child interactions among children with visual impairment: Addressing maternal attachment style, depression-anxiety symptoms, and child's behavioral problems. North Clin Istanb 2023;10(1):101–107.*

Until 1960s, it is known that the relationship with the primary caregiver, in other words "attachment" is an important predictor of social-emotional development. A child develops relationships with others, approaches the environment, and resolves social problems of life by the effect of attachment. Bowlby suggests that secure attachment is related to the available, responsive, and helpful attachment figure(s) who make feel the child lovable and valuable. When a child is securely attached, he/she will have positive expectations from the social environment

Received: March 29, 2021 *Revised:* April 25, 2021 *Accepted:* May 28, 2021 *Online:* February 06, 2023

Correspondence: Hesna GUL, MD. Gulhane Egitim ve Arastirma Hastanesi, Cocuk ve Ergen Ruh Sagligi ve Hastaliklari Klinigi, Ankara, Turkiye.
Tel: +90 312 586 70 00 e-mail: drhesnagul@gmail.com

and will tackle the alarming situations effectively. In contrast, emotionally neglected or abused infants will view the world as unpredictable and frightening [1, 2]. Bowlby suggests that problems in the attachment relationship are mainly the cause of psychopathology, including anxiety and distrust.

The birth and the presence of a child with a disability often lead to stress and challenge for the family due to the economic and financial costs, unmet expectations of other family members, and social embarrassment-isolation of the family from society [3–7]. In these families, mothers are exposed to the stressors more often than other family members, because, in most families, they are the primary caregivers [5, 8, 9]. Although they have more challenges than other mothers, studies demonstrated that most of them adapted to the situation quickly and experience positive outcomes and resilience, while some of them find caregiving as burdensome and difficult [10–12].

Stress is an important problem for parents/caregivers while raising a child with a disability. To date, higher maternal stress has been demonstrated among the mothers of children with developmental disorders, cerebral palsy, autism, and intellectual disabilities [3, 5, 13, 14]. One of the most important causes of this stress is child's behavior. A study that investigated the causes of this parental stress of autistic children found that externalizing behaviors, especially conduct problems, were the predictors [15]. The other important cause seems to be attachment style. Fonseca, Nazaré, and Canavarro [16] examined the role of attachment on parental adjustment by comparing the differences between congenital anomaly and healthy control infant groups. They found that, regardless of the infants' condition, insecure attachment predicted maternal psychological stress. This result emphasizes that insecure attachment predicts stress regardless of the situation.

Another study revealed that insecurely attached mothers of infants with congenital heart disease have more distress than securely attached ones. They also found that avoidant attachment was significantly higher among the mothers of infants with severe congenital heart disease [17]. On the other hand, studies demonstrated that many of the mothers who have a child with a disability easily adapt to the situation and report quite high resilience [12, 18, 19]. Hence, addressing the predictors of attachment and mental health consequences of disabilities on family members, caregivers, and children in homogenous groups seem to be crucial.

Highlight key points

- Children with visual impairment have higher levels of behavior problems including irritability, stereotypic behavior, and inappropriate speech when compared with healthy controls.
- Depression and anxiety scores of mothers were similar among visual impairment and healthy control groups, also, there was not a difference in terms of maternal attachment types.
- There was a positive relationship between secure attachment and depression among mothers of the visual impairment group. In other words, securely attached mothers were more depressive.
- There was a positive relationship between anxious/ambivalent attachment and the child's irritability.

In this study, we planned to examine the relationship between maternal attachment styles, depression and anxiety levels of mothers, and behavioral problems of children in a group of children with visual impairment.

Our hypothesis was as follows:

- The children with visual impairment whose mothers have insecure attachment styles have higher behavior problems.
- The mothers of the visual impairment group would have more depression and anxiety than the control group, and these psychiatric problems' severity would be associated with the severity of child's behavioral problems.

MATERIALS AND METHODS

Participants and Procedure

In this study, we used a case–control design and we included two groups of children; the study group consisted of 35 children with visual impairment and the control group consisted of 31 healthy children. The research protocol was approved by the Research Ethics Board of Ufuk University Faculty of Medicine. The aim and procedure of the study were explained to all parents and children and written informed consent was obtained from parents.

The mothers of two groups enrolled the adult attachment style dimensions scales, beck depression and anxiety ınventories, and the aberrant behaviour checklist (ABC).

Materials

Adult Attachment Style Dimensions Scales

This is a Likert-type self-report scale that was developed by Collins and Read in 1990 [20]. This scale evaluates

TABLE 1. Sociodemographic characteristics

	Study group (n=35)	Control group (n=31)	Statistics and p-value
Age of the child	9.02±4.37	11.25±2.51	**F=4.99; t=2.48, df=63, p=0.016**
Maternal age	36.47±6.30	38.26±5.60	F=4.20; t=-1.19, df=62, p=0.23
Maternal education (years)	2.44±1.63	2.8±1.18	F=1.11; t=-0.99, df=62, p=0.325
Paternal age	40.30±6.81	41.93±5.35	F=3.98; t=-1.03, df=60, p=0.30
Paternal education (years)*	2.75±1.03	3.55±1.78	**F=3.98; t=-2.17, df=60, p=0.03**

three types of attachment: secure, anxious/ambivalent, and avoidant (Secure, anxious, and avoidant) attachment. The sum of the 3, 4, 7, 12, 13, and 16 items gives the secure attachment score, the sum of the 1, 2, 5, 14, 15, and 17 items gives the avoidant attachment score, and the sum of the 6, 8, 9, 10, and 11 items gives the ambivalent/anxious attachment score. Avoidant and anxious/ambivalent attachment styles are insecure attachments. The Turkish validity/reliability study has been completed by Alp et al. [21].

The ABC

The ABC is developed to measure psychiatric symptoms and behavioral disturbances across five domains: (1) Irritability, agitation, and crying; (2) lethargy/social withdrawal; (3) stereotypic behavior; (4) hyperactivity/noncompliance; and (5) inappropriate speech [22]. The Turkish validity/reliability study has been completed by Karabekiroglu et al. [23].

Beck Depression Inventory

BDI has 21-items and measures the emotional, somatic, cognitive, and motivational symptoms in depression [24, 25]. It is a Likert-type scale, in which the items are rated between 0 and 3. Higher scores predict higher depression severity. The highest score is 63. The Turkish reliability and validity study was completed [26].

Beck Anxiety Inventory

The beck anxiety inventory has 21-items and measures the severity of anxiety in children and adults [27]. It is a Likert-type scale in which the items are rated between 0 and 3 items in the scale are rated between 0 and 3. The highest score is 63. The Turkish reliability and validity study was completed.

Statistical Analysis

Statistics analysis was performed with SPSS.20 program (SPSS for Windows, version 20.0. Armonk, NY: IBM Corporation; 2012). Demographic variables including gender, age, parental age, parental education, and scale scores were compared with the control group using t-tests, Pearson Chi-square, Fisher exact test, and Contingency table analyses as appropriate, using SPSS 18 for Windows. The associations between depression, anxiety, irritability, social withdrawal, stereotypic behavior, hyperactivity, inappropriate speech scores, and attachment types were examined with the Pearson correlation analyses. A 5% type-1 error level was used to infer statistical significance. $P<0.05$ was considered significant.

RESULTS

Study group children were aged 4–17 years (9.02±4.37 years), and 31.4% of the sample were male. Maternal age was 36.47±6.30 and paternal age was 40.30±6.81 years. Control group children were aged 4–17 years (11.25±2.51 years), and 58.1% of the sample were male. Maternal age was 38.26±5.60 and paternal age was 41.93±5.35years (Table 1).

The ABC total score, ırritability, stereotypic behavior, and inappropriate speech scores were significantly higher among children with visual impairment than control (p=0.004; <0.001, 0.04, and 0.012, respectively). There were no significant differences between secure, avoidant, ambivalent/anxious attachment, anxiety, and depression scores of mothers between groups (Table 2).

Due to correlation analysis, there was a positive significant relationship between secure attachment-depression (r=0.35) and anxious/ambivalent attachment-child's irritability (r=0.36) in the study group, but correlations are generally weak (Table 3).

Table 2. Differences of scale scores among study and control group

	Study group	Control group	Statistics and p-value
ABC- total score*	18.8±14.96	9.25±9.60	**F=8.0; t=2.99, df=60, p=0.004**
ABC- irritability*	5.51±4.04	2.32±2.56	**F=4.76; t=3.71, df=60, p<0.001**
ABC- social withdrawal	4.19±5.62	1.93±2.82	F=5.89; t=1.99, df=60, p=0.051
ABC- stereotypic behavior*	1.61±2.98	0.45±0.85	**F=8.50; t=2.08, df=60, p=0.04**
ABC- hyperactivity	4.93±4.74	3.45±4.51	F=0.66; t=1.26, df=60, p=0.21
ABC- inappriate speech*	2.58±2.91	1.09±1.27	**F=12.11; t=2.59, df=60, p=0.012**
Secure attachment score	9.42±3.15	9.68±3.30	F=0.001; t=-0.29, df=53, p=0.77
Avoidant attachment score	8.06±5.09	7.54±4.18	F=0.57; t=-0.39, df=53, p=0.69
Ambivalent/anxious attachment score	4.06±4.33	3.36±3.35	F=3.26; t=0.64, df=53, p=0.52
Beck anxiety score	7.09±5.80	8.32±9.30	F=3.73; t=-0.63, df=62, p=0.525
Beck depression score	9.11±6.21	6.12±6.44	F=0.18; t=1.90, df=63, p=0.06

ABC: Aberrant behaviour checklist.

Table 3. Correlations between attachment types scores and maternal-child psychiatric problems

	Depression	Anxiety	Irritability	Social withdrawal	Stereotypic behavior	Hyperactivity	Inappriate speech	ABC-total
Secure attachment								
Study group	**0.35***	-0.04	0.14	0.16	0.06	-0.001	-0.00	0.10
Control group	0.09	0.10	0.19	-0.003	0.02	0.01	-0.13	0.04
Anxious/ambivalent attachment								
Study group	0.31	0.07	**0.36***	0.13	0.04	-0.06	-0.01	0.12
Control group	0.24	0.13	-0.25	-0.05	-0.11	-0.10	-0.08	-0.15
Avoidant attachmen								
Study group	0.19	-0.19	0.02	-0.09	-0.12	-0.27	0.13	-0.12
Control group	0.19	-0.02	-0.12	-0.06	-0.002	-0.07	-0.16	-0.10

ABC: Aberrant behaviour checklist.

DISCUSSION

Our results demonstrated that children with visual impairment have higher levels of behavior problems including irritability, stereotypic behavior, and inappropriate speech when compared with healthy controls. Contrary to our expectations, depression and anxiety scores of mothers were similar, also, there was not a difference in terms of attachment scores. Interestingly, there was a positive relationship between secure attachment and depression among the mothers of the visual impairment group. In other words, securely attached mothers were more depressive. On the other hand, there was a positive relationship between anxious/ambivalent attachment and the child's irritability. When the maternal anxious/ambivalant attachment scores increase, then the irritability of children also increases.

Since the 1960s, many publications have considered that blind children have many autistic-like behaviors and these behaviors were based on the lack of visual experience on the development of self-image and self-representations [28]. In detail, restricted symbolic play, difficulties in social interaction with peers and family members, echolalic speech, and increased stereotyped behavior have all been

frequently reported in blind children [28–31]. Our results are following the previous studies, irritability, inappropriate speech, and stereotypic behaviors were higher in our study group even there was not a child diagnosed with ASD. In the literature, these "autistic-like" behaviors are termed as "blindisms" for explaining in the context of visual impairment [32], and blindism should be kept in mind while evaluating ASD symptoms in this group.

To date, many studies demonstrated that mothers of infants with visual impairment are at increased risk of parenting stress [33–36]. However, the number of studies in childhood and adolescence are insufficient. Our study demonstrated that maternal depression and anxiety levels were similar among visual impairment and control groups. This result may be related to increased maternal adjustment to the chronical problem of child over time. On the other hand, a recent review demonstrated that parents of chronically ill children have more anxiety and depression and mothers of those with congenital anomalies may have a greater risk of cardiovascular disease and mortality than parents of healthy children [37]. We suggest that the burden of caregivers and especially mothers should be evaluated in homogenous different age groups.

In our study, we found that maternal secure attachment is positively associated with maternal depression scores in the visual impairment group. Indeed, the relationship between maternal depression and infant attachment type is different in clinical and non-clinical samples. In a recent meta-analysis that included 42 studies, infants of depressed mothers feel 20% more insecure than the normal population, and there was a significant relationship between the mother's depressive symptoms and the baby's feeling of insecurity. Furthermore, they found that infants of the depressed mothers were nearly twice as likely to have a non-secure attachment than the infants of healthy mothers [38]. To the best of our knowledge, our study is one of the first which demonstrates a reverse relationship between maternal attachment style and maternal depression in a group of children with impairment. This relationship could be a consequence of higher maternal sensitivity to child's impairment in mothers with secure attachment. This result should be reevaluated in the future, because the previous studies indicate that insecure attachment, not secure attachment, is a risk factor for postnatal depression among the mothers of newborns and normally developed infants [39–43]. Indeed, the birth of a child is a stressful life event for insecure mothers, they are more likely to react negatively to the birth so have an increased risk for postnatal depression when compared the others. On the other hand, a longitudinal study with mother-preterm infant dyads, results demonstrated that the risk factor of parenting stress at 4 months of infants was maternal lower education and higher depressive symptoms and having multiple infants or having an infant with medical problems [44]. Furthermore, they found that parenting stress decreased over time for mothers of multiples and mothers with lower education when compared to the others. Considering that visual impairment is not a temporary condition and mothers with a secure attachment pattern will exhibit more sensitive parenting styles, the relationship between maternal depression and secure attachment seems reasonable for this group.

And finally, as expected, we found a relationship between maternal anxious/ambivalent attachment and child's irritability. In recent studies, maternal adverse childhood experiences, depressive symptoms, parenting, and insecure attachment styles had been demonstrated as predictors of young children's internalizing and externalizing problems in clinical groups with psychiatric diagnosis [45, 46], but irritability of a child with visual impairment often interpreted as a child-origin problem. The irritability of children with visual impairment should be addressed in the perspective of mother-child relationship.

Conclusions

Unlike the normally developing child-mother samples, the relationship between the secure attachment style and depression observed in the mothers of children with visual impairment is an important result that should be kept in mind in terms of maternal burnout. Future studies should investigate other predictors of maternal depression in this group.

Ethics Committee Approval: The Ufuk University Clinical Research Ethics Committee granted approval for this study (date: 16.05.2018, number: 20180516/5).

Conflict of Interest: No conflict of interest was declared by the authors.

Financial Disclosure: The authors declared that this study has received no financial support.

Authorship Contributions: Concept – KK, MH; Design – KK, MH, HG; Supervision – MAC, HG; Fundings – KK, MH, MAC; Materials – KK, MH; Data collection and/or processing – KK, MH; Analysis and/or interpretation – HG, MAC; Literature review – HG, MAC, KK; Writing – KK, HG, MAC; Critical review – HG, KK, MAC.

REFERENCES

1. Bowlby J. Separation: Anxiety and Anger (Attachment and Loss: Volume II). New York: Basic Books; 1973. p.1–429.
2. Bowlby J. Developmental psychiatry comes of age. Am J Psychiatry 1988;145:1–10. [CrossRef]
3. Findler L, Klein Jacoby A, Gabis L. Subjective happiness among mothers of children with disabilities: the role of stress, attachment, guilt and social support. Res Dev Disabil 2016;55:44–54. [CrossRef]
4. Estes A, Olson E, Sullivan K, Greenson J, Winter J, Dawson G, et al. Parenting-related stress and psychological distress in mothers of toddlers with autism spectrum disorders. Brain Dev 2013;35:133–8.
5. Florian V, Findler L. Mental health and marital adaptation among mothers of children with cerebral palsy. Am J Orthopsychiatry 2001;71:358–67. [CrossRef]
6. Papaeliou C, Polemikos N, Fryssira E, Kodakos A, Kaila M, Yiota X, et al. Behavioural profile and maternal stress in Greek young children with Williams syndrome. Child Care Health Dev 2012;38:844–53.
7. Safe A, Joosten A, Molineux M. The experiences of mothers of children with autism: managing multiple roles. J Intellect Dev Disabil 2012;37:294–302. [CrossRef]
8. Montes G, Halterman JS. Psychological functioning and coping among mothers of children with autism: a population-based study. Pediatrics 2007;119):e1040–6. [CrossRef]
9. Rogers ML, Hogan DP. Family life with children with disabilities: the key role of rehabilitation. J Marriage Fam 2003;65:818–33. [CrossRef]
10. Pelchat D, Levert MJ, Bourgeois-Guérin V. How do mothers and fathers who have a child with a disability describe their adaptation/ transformation process? J Child Health Care 2009;13:239–59. [CrossRef]
11. Van Der Veek SM, Kraaij V, Garnefski N. Down or up? Explaining positive and negative emotions in parents of children with Down's syndrome: goals, cognitive coping, and resources. J Intellect Dev Disabil 2009;34:216–29. [CrossRef]
12. Hastings RP, Beck A, Hill C. Positive contributions made by children with an intellectual disability in the family: mothers' and fathers' perceptions. J Intellect Disabil 2005;9:155–65. [CrossRef]
13. Siman-Tov A, Kaniel S. Stress and personal resource as predictors of the adjustment of parents to autistic children: a multivariate model. J Autism Dev Disord 2011;41:879–90. [CrossRef]
14. Johnston C, Hessl D, Blasey C, Eliez S, Erba H, Dyer-Friedman J, et al. Factors associated with parenting stress in mothers of children with fragile X syndrome. J Dev Behav Pediatr 2003;24:267–75. [CrossRef]
15. Lecavalier L, Leone S, Wiltz J. The impact of behaviour problems on caregiver stress in young people with autism spectrum disorders. J Intellect Disabil Res 2006;50:172–83. [CrossRef]
16. Fonseca A, Nazaré B, Canavarro MC. Parental psychological distress and confidence after an infant's birth: the role of attachment representations in parents of infants with congenital anomalies and parents of healthy infants. J Clin Psychol Med Settings 2013;20:143–55. [CrossRef]
17. Berant E, Mikulincer M, Florian V. Attachment style and mental health: a 1-year follow-up study of mothers of infants with congenital heart disease. Pers Soc Psychol Bull 2001;27:956–68. [CrossRef]
18. Kayfitz AD, Gragg MN, Orr RR. Positive experiences of mothers and fathers of children with autism. JARID 2010;23:337–43. [CrossRef]
19. Scorgie K, Sobsey D. Transformational outcomes associated with parenting children who have disabilities. Ment Retard 2000;38:195–206.
20. Collins NL, Read SJ. Adult attachment, working models, and relationship quality in dating couples. J Pers Soc Psychol 1990;58:644–63.
21. Alp E. A validation study of two attachment inventories with Turkish young adults (dissertation). Istanbul: Bogazici University; 1998.
22. Aman MG, Singh NN. Aberrant Behavior Checklist. East Aurora, NY: Slossen Educational Publications; 1986. [CrossRef]
23. Karabekiroglu K, Aman MG. Validity of the aberrant behavior checklist in a clinical sample of toddlers. Child Psychiatry Hum Dev 2009;40:99–110. [CrossRef]
24. Beck AT, Steer RA, Ball R, Ranieri W. Comparison of Beck Depression Inventories -IA and -II in psychiatric outpatients. J Pers Assess 1996;67:588–97. [CrossRef]
25. Beck AT, Steer RA. Internal consistencies of the original and revised Beck Depression Inventory. J Clin Psychol 1984;40:1365–7. [CrossRef]
26. Hisli N. A study on the validity of Beck Depression Inventory. J Psychol [Article in Turkish] 1988;6:118–22.
27. Beck AT, Epstein N, Brown G, Steer RA. An inventory for measuring clinical anxiety: psychometric properties. J Consult Clin Psychol 1988;56:893–7. [CrossRef]
28. Molinaro A, Micheletti S, Rossi A, Gitti F, Galli J, Merabet LB, et al. Autistic-like features in visually impaired children: a review of literature and directions for future research. Brain Sci 2020;10:507. [CrossRef]
29. Pring L, Tadić V. The behavioral and cognitive manifestations of blindness in children. In: Nass RD, Frank Y, editors. Cognitive and Behavioral Manifestations of Pediatric Diseases. New York: Oxford University Press; 2010. p.531–43. [CrossRef]
30. Rogers SJ, Puchalski CB. Social smiles of visually impaired infants. J Vis Impair Blind 1986;80:863–5. [CrossRef]
31. Minter ME, Hobson RP, Pring L. Recognition of vocally expressed emotion by congenitally blind children. J Vis Impair Blind 1991;85: 411–5. [CrossRef]
32 Andrews R, Wyver S. Autistic tendencies: are there different pathways for blindness and Autism Spectrum Disorder? Br J Vis Impair 2005;23:52–7. [CrossRef]
33. Sakkalou E, Sakki H, O'reilly MA, Salt AT, Dale NJ. Parenting stress, anxiety, and depression in mothers with visually impaired infants: a cross-sectional and longitudinal cohort analysis. Dev Med Child Neurol 2018;60:290–8. [CrossRef]
34. Sola-Carmona JJ, López-Liria R, Padilla-Góngora D, Daza MT, Sánchez-Alcoba MA. Anxiety, psychological well-being and self-esteem in Spanish families with blind children. A change in psychological adjustment? Res Dev Disabil 2013;34:1886–90. [CrossRef]
35. Leyser Y, Heinze A, Kapperman G. Stress and adaptation in families of children with visual disabilities. Fam Soc 1996;77:240–9. [CrossRef]
36. Tröster H. Sources of stress in mothers of young children with visual impairments. J Vis Impair Blind 2001;95:623–37. [CrossRef]
37. Cohn LN, Pechlivanoglou P, Lee Y, Mahant S, Orkin J, Marson A, et al. Health outcomes of parents of children with chronic illness: a systematic review and meta-analysis. J Pediatr 2020;218:166–77. [CrossRef]
38. Barnes, J. and J. Theule, Maternal depression and infant attachment security: A meta-analysis. Infant Mental Health Journal, 2019. 40(6): p. 817–834. [CrossRef]
39. Warfa N, Harper M, Nicolais G, Bhui K. Adult attachment style as a risk factor for maternal postnatal depression: a systematic review. BMC Psychol 2014;2:56. [CrossRef]
40 Bifulco A, Figueiredo B, Guedeney N, Gorman LL, Hayes S, Muzik M, et al; TCS-PND Group. Maternal attachment style and depression associated with childbirth: preliminary results from a European and US cross-cultural study. Br J Psychiatry Suppl 2004;46:s31–7. [CrossRef]
41. Kuscu MK, Akman I, Karabekiroglu A, Yurdakul Z, Orhan L, Ozdemir N, et al. Early adverse emotional response to childbirth in Tur-

key: the impact of maternal attachment styles and family support. J Psychosom Obstet Gynaecol 2008;29:33–8. [CrossRef]
42. McMahon C, Barnett B, Kowalenko N, Tennant C. Psychological factors associated with persistent postnatal depression: past and current relationships, defence styles and the mediating role of insecure attachment style. J Affect Disord 2005;84:15–24. [CrossRef]
43. Scharfe E. Cause or consequence?: Exploring causal links between attachment and depression. J Soc Clin Psychol 2007;26:1048–64.
44. Spinelli M, Poehlmann J, Bolt D. Predictors of parenting stress trajectories in premature infant-mother dyads. J Fam Psychol 2013;27:873–83.
45. Khan M, Renk K. Mothers' adverse childhood experiences, depressive symptoms, parenting, and attachment as predictors of young children's problems. J Child Custody 2019;16: 268–90. [CrossRef]
46. Boris NW, Renk K. Beyond reactive attachment disorder: how might attachment research inform child psychiatry practice? Child Adolesc Psychiatr Clin N Am 2017;26:455–76. [CrossRef]