

Postpartum Paternal Depression: Its Impact on Family and Child Development

Doğum Sonrası Babalık Depresyonu: Aile ve Çocuk Gelişimine Etkisi

Özge Demirci¹, Emine İnan¹

¹Ankara Yıldırım Beyazıt University, Ankara

ABSTRACT

The postpartum period is when parents undergo great changes and gain new responsibilities. Factors such as the changes that come with having a baby, not meeting the expectations about parenthood, having a child with a difficult temperament or health problems, or relational problems can be quite challenging in this period. These problems can deeply affect the psychological well-being of the parents. Although studies on depressive symptoms of mothers during pregnancy and postpartum are at an important level, studies aiming to examine the psychological state of fathers for the same period are still limited. However, perceptions that postpartum depression develops due to hormonal changes during pregnancy have been reshaped by the findings that this situation may also develop due to psychosocial factors. Relatedly, the number of studies on postpartum depression experienced by fathers has increased over time. Results of those studies show that fathers' psychological state also influences their parenting and the development of children. Fathers may experience paternal depression due to a lack of social support, economic conditions, relationship dynamics, and changing living conditions in the postpartum period. This situation may cause fathers to avoid parenting duties, spend less time with their children, be unable to cooperate with the mother, and have anger problems or deterioration in the relationship with the mother. The effects of depression on individuals' parenting styles negatively affect child-parent attachment and may cause children to develop emotional and behavioral problems. Therefore, it is very important to examine fathers' psychological state for children's development and the healthy progress of family dynamics. This review aims to address the effect of paternal depression on parenting and child development.

Keywords: Postpartum period, paternity, paternal depression, child development

ÖZ

Doğum sonrası dönem, ebeveynlerin büyük değişimlerden geçtiği ve yeni sorumluluklar kazandığı bir dönemdir. Bebek sahibi olmakla birlikte gelen değişiklikler, ebeveynliğe dair beklentileri karşılayamama, zor mizaçlı ya da sağlık sorunları yaşayan bir çocuk sahibi olma ya da ilişkisel problemler gibi faktörler bu dönemde oldukça zorlayıcı olabilmekte ve ebeveynlerin psikolojik iyi oluşlarını derinden etkileyebilmektedir. Gebelik süreci ve doğum sonrasında annelerin depresif semptomlarına dair araştırmalar önemli bir seviyede olsa da aynı dönem için babaların psikolojik durumunu incelemeyi hedefleyen çalışmalar halen sınırlıdır. Ancak doğum sonrası depresyonun gebelikteki hormonal değişimlere bağlı olarak geliştiğine dair algılar, bu durumun psikososyal faktörlere de bağlı olarak gelişebildiğine yönelik bulgular tarafından yeniden şekillendirilmiş ve alanyazında babaların deneyimlediği doğum sonrası depresyonunu da konu alan çalışmaların sayısı zaman içerisinde artmıştır. Araştırmalar incelendiğinde, babaların psikolojik durumunun da ebeveynlikleri ve çocuklarının gelişimi üzerinde etkili olduğu gözlemlenebilmektedir. Doğum sonrası dönemde sosyal destek eksikliği, ekonomik koşullar, ilişki dinamikleri ve değişen yaşam koşulları gibi faktörlerin de etkisiyle babalar babalık depresyonunu deneyimleyebilmektedir. Bu durum babaların ebeveynliğe dair görevlerden kaçınmasına, çocuklarıyla daha az zaman geçirmesine, anneyle iş birliği yapamamasına, öfke problemlerine ya da anne ile olan ilişkide bozulmaya neden olabilmektedir. Depresyonun bireylerin ebeveynlik stilleri üzerindeki etkileri, çocuk-ebeveyn bağlanmasını olumsuz etkilemekte ve çocukların duygusal ve davranışsal problemler geliştirmesine neden olabilmektedir. Dolayısıyla çocukların gelişimi ve aile dinamiklerinin sağlıklı ilerleyişi için, babaların da psikolojik durumunu incelemek oldukça önemlidir. Bu çalışma ile, babalık depresyonunun ebeveynliğe ve çocukların gelişimine etkisine değinilmesi amaçlanmıştır.

Anahtar sözcükler: Doğum sonrası dönem, babalık, babalık depresyonu, çocuk gelişimi

Introduction

In the postpartum period, which is the period when the effects of an important life event, namely having a child, are first revealed, mothers and fathers go through intense physiological and psychological changes (Kim and Swain 2007). With the role of parenting, newborn care, and the varied necessities during this period, families may face a new developmental crisis (Güleç et al. 2014). Furthermore, during this time, feelings such as depression, hopelessness, and helplessness can have a detrimental effect on the parental experience (Ertekin Pinar and Ozbek 2020). Although postpartum depression is a concept associated with mothers, recent studies show that fathers can also experience negative consequences in the postpartum period (Serhan et al. 2012, Bergström, 2013, Eddy et al. 2019). So far, the fact that depressive symptoms due to pregnancy and birth are seen as a product of hormonal changes has led to the association of depression with women in the prenatal and postnatal periods (Wee et al. 2011). As a result of increasing studies in this area, it has been revealed that postpartum depression can also occur with the effect of psychosocial factors (Philpott 2016a). Therefore, it is a factor that should be considered that fathers may also show depressive symptoms depending on these effects in the prenatal and postnatal periods.

While the process of transition to parenthood can create powerful changes in the lives of individuals, it can be affected by personal, environmental, or child-related factors. It has been stated that fatherhood can have a protective effect on men's health and that being a father can be associated with positive behavioral changes and an increased sense of responsibility (Garfield et al. 2010). However, in addition to the positive changes it brings, especially in the postpartum period, parenting greatly changes people's routines (Phillip 2016a). This change can cause both parents to have sleep problems, fatigue, financial concerns, and relationship problems (McCoy 2012). Before this process begins, parents may have concerns about successfully assuming the parenting role. Social and personal expectations about motherhood and fatherhood may not match reality, and mothers may have to cope with feelings of failure and fathers with feelings of uncertainty and inadequacy (Choi 2005, Draper 2003).

Postpartum depression is defined as a major depressive episode with the peripartum onset and observed within four weeks of pregnancy or postpartum (APA 2013). However, in clinical practice, definitions for postpartum depression cover the postpartum period of 4 weeks, 3 months, 6 months, and up to 12 months (Stewart and Vigod 2016). The awareness of postpartum depression experienced by mothers has developed over the years, and studies have increased the awareness of this psychopathology. However, paternal postpartum depression, which is also examined under the name of paternal postnatal depression, is a relatively new concept and screening and diagnostic applications for this disorder are quite weak (Shaheen et al. 2019). The limited information about paternal postpartum depression and the insufficient awareness in society create disadvantages for the factors and conditions that paternal depression affects, together with the diagnosis and treatment processes.

Paternal postpartum depression is a mood disorder observed within one year of having a child (Massoudi 2013). Gender differences that can be observed in depression symptoms also occur for postpartum depression, and fathers may have different depressive symptoms from mothers in the postpartum period. Typical depression symptoms such as anger, depressed mood, and decreased interest/desire are observed more frequently in women in the postpartum period. Whereas symptoms such as risky behaviors, alcohol and substance use, fatigue, and a tendency to violence are among the symptoms observed in men (Winkler et al. 2004). In addition, individuals experiencing paternal depression have difficulty meeting family, work-related and individual requirements and feel less supported (Edhborg et al. 2016). Parents play an important role in the early development of children. Fathers may suffer from paternal postpartum depression, but it can also severely impact children's emotional, behavioral, and cognitive growth and family functionality (Nath et al. 2016). While paternal postpartum depression can be related to delayed speech or behavioral problems in children, it can also impair father-child attachment and mother-child relationships. (Cummings et al. 2005).

Factors affecting individuals' parenting styles and communication with their children should be considered to avoid negative developmental effects. Therefore, the goal of this study is to summarize the existing knowledge about paternal postpartum depression, as well as to identify risk factors and their consequences. In this way, the significance of this subject, which has previously been disregarded, will be made clear, and the gaps in the literature will be identified for future research.

Prevalence of Postpartum Paternal Depression

Previously, it has been suggested that the incidence of postpartum depression in men is almost half of the

incidence of postpartum depression observed in women (Melrose 2010). In a meta-analysis by Goodman (2004), the incidence of paternal depression in the sample during the first year after birth was determined between 1.2 and 25 percent, while this rate was found to be between 24 and 50 percent in men whose partners experienced postpartum depression. In a study conducted by Ramchandani et al. (2005) with 13,351 mothers and 12,884 fathers, the rate of depressive symptoms measured eight weeks after birth was reported as 10 percent for mothers and 4 percent for fathers. Fathers' lack of self-confidence and preparation for raising children, feelings of jealousy and neglect towards the baby, deterioration of social and sexual life, difficulties in taking care of the baby, and spending less time in relationships with the partner or other children, are the factors that can be effective in experiencing paternal depression and complicate the transition to parenthood (Anderson 1996).

Risk Factors

Today, expectations for the parenting role of fathers have changed drastically, and societal expectations have increased for fathers to have a more egalitarian and direct approach to parenting (Veskrna 2010). However, it has been reported that many fathers grew up when different social norms were accepted, where men were less involved in the child-rearing process. Those fathers stated they did not have a role model from which they could learn fatherhood skills (Condon et al. 2004). Studies indicate that fathers are willing to take care of their newborns. However, they believe they do not have the skills, knowledge, and support to do so (Jordan 1990) and that their personal beliefs and childhood experiences are important determinants in the relationship with their babies (Anderson 1996). It has been suggested that individuals may repeat negative thoughts about their childhood after having children and that these thoughts are another factor that can increase vulnerability to postpartum depression (Leigh and Milgrom 2008). Based on this, fathers' own childhood experiences and the difficulties experienced by them in self-confidence, knowledge, and skills may increase the risk of depression by causing significant stress and dissatisfaction.

Although the causal relationship between postpartum depression in women and men remains unclear, it can be said that the partners of mothers with severe depressive symptoms have a high risk of showing depressive symptoms. In many studies, maternal depression was found to be the most important risk factor for paternal depression both in the prenatal and postnatal period (Ballard et al. 1994, Goodman 2004, Paulson et al. 2016). Additively, men with depressive partners in the postpartum period reported that they experienced feelings of disappointment, helplessness, anger, fear, and uncertainty (Schumacher et al. 2008). Under this title, factors identified in different studies as risk factors for postpartum paternal depression will be discussed.

Environmental Risk Factors

Various factors have drawn attention due to the studies conducted to determine the environmental factors affecting postpartum depression in fathers. Factors such as marital problems, not getting enough support from family and friends, education level, work, and financial problems are some of them (Gao et al. 2009, Perez et al. 2017). In addition to the responsibility of having a child, besides the problems during pregnancy and childbirth, the accepted perceptions of fathers as being responsible for the livelihood of families (Waller 2010) and stress factors related to fathers' socioeconomic status and working life increase the risk of experiencing postpartum depression. Especially for fathers who are the primary breadwinners of the family, the new financial obligation of having a child can make it difficult for them to protect the balance between the role of the person responsible for the family's livelihood with the role of a caring father and a spouse (John et al. 2005).

In a study conducted in Turkey, it was observed that the depression level decreased as the income level of fathers increased in the postpartum period, while the increase in the number of dependents, unplanned pregnancy, problems in the relationship with the spouse, and the absence of social support significantly increased the level of depression (Ceyhun-Peker et al. 2019). Similarly, Bergström (2013) studied 812 first-time fathers and found that being a younger father, having low education and income level, and having financial worries increased the risk of depression. Furthermore, it has been revealed that lack of knowledge about postpartum paternal depression, fear of stigma, and expectations arising from gender stereotypes feed the postpartum depression experienced by fathers and create barriers to getting help (Eddy et al. 2019).

Problems related to the relationship with the partner can also be effective in the formation of paternal depression, and the relationship with the partner can also go through various difficulties in the pregnancy and postpartum period when significant changes are experienced. Distancing from the spouse can also complicate parenting stress (Veskrna 2010). It has also been suggested that problems related to sexual intimacy, which may start during pregnancy and continue in the postpartum period, may be considered a risk factor for paternal depression (Condon et al. 2004). The change in the relationship between the partners can be underestimated

before birth, but this change can be seen as a significant loss and create a risk for depression (Alexander 2001). On the other hand, having more difficulties than expected in childcare, having a baby with colic or developmental delay (Philpott 2016b), sleep problems, or temperament characteristics of the newborn can also be triggering factors for paternal depression (Frank and Corcoran 2018).

Biological Risk Factors

Although there are many studies on the relationship between the postpartum depression of mothers and biological processes, the number of studies investigating the biological causes of postpartum depression in fathers is quite limited. One of the factors thought to be effective in paternal depression is hormonal changes (Kim and Swain 2007). It has been suggested that fathers' testosterone levels may decrease during their partners' pregnancy. This decrease may have a quality that may support parenting by reducing aggression (Wynne-Edwards 2001, Bakermans-Kranenburg et al. 2019). It has also been found that the decrease in testosterone levels in men is associated with increased depressive symptoms (McIntyre et al. 2006). Similarly, it has been suggested that vasopressin and oxytocin hormones, which can increase in fathers during the pregnancy of the partner and in the postpartum period, may have effects on increasing fathers' sensitivity to the newborn's responses and strengthening the bond in parenting. Possible decreases in these hormones may be effective in the fathers' postpartum depression (Kim and Swain 2007, Naber et al. 2010, Thijssen et al. 2018).

Psychological Risk Factors

Among the psychological risk factors, having a previous psychiatric diagnosis is another critical risk factor for paternal depression in the postpartum period (Nishimura and Ohashi 2010). Compared to other psychological factors, especially stress and anxiety, a personal history of depression poses a higher risk for postpartum depression (Wee et al. 2011). In addition, while studies are showing that neuroticism is effective on postpartum depression in men (Matthey et al. 2000, Dudley et al. 2001), it has been argued that the adult attachment styles may also increase vulnerability to depression in this period. Individuals with anxious attachment have a higher risk of experiencing postpartum depression (Johansson 2020). Besides, factors such as low self-esteem, substance use, or genetic predisposition (Kendler et al. 2006), which are effective in the occurrence of major depression in men (Kendler et al. 2006), may also be effective factors for paternal depression in the postpartum period, in addition to the presence of a previous psychiatric diagnosis. It has been suggested that traits such as external locus of control and the need for control may increase the risk of postpartum depression (Dalfen 2009). Since such traits can be accompanied by high anxiety, individuals' ability to cope with depression may also be affected (Boyce 2003). Additively, the high expectations of the person against himself and his environment, which can be brought about by having inflexible personality traits, can intensify the feeling of failure in the postpartum period and may create another risk factor for postpartum depression (Ferreira 2016). Although studies focusing on the psychological risk factors of fathers are limited, there are parallels regarding the development of depression in fathers and mothers in the postpartum period. Therefore, it is thought that paternal depression in this period may be affected by the history of psychiatric diagnosis, personality traits, and attachment styles and may develop based on these factors.

Effects of Paternal Postpartum Depression on the Family

Parenting can be such a stressful experience that it can negatively impact both parents. Having a child with a difficult temperament or health problems, economic problems, problems related to sexual intimacy during pregnancy and the postpartum period, or factors related to common life events may affect the depressive symptoms of couples (Salmela-Aro et al. 2006). Several studies have revealed that men report high levels of anger while struggling with depression (Madsen and Juhl 2007). Moreover, they tend to express negative emotions destructively in their relationships with their partners, or they can move away from the requirements and interactions of their relationships with their partners during stressful periods (Papp et al. 2007, Ramchandani et al. 2011). In their study with fathers who showed and did not show depressive symptoms in the 7-week postpartum period, Ramchandani et al. (2011) found that depressed fathers reported higher dissatisfaction, lower sense of intimacy, and higher insecurity about the future of their relationship compared to non-depressed fathers. In the same study, spouses of depressed fathers stated that their partners had low emotional intimacy.

On the other hand, depression can also significantly affect conflict resolution styles and create various obstacles in relationship dynamics. It has been suggested that men reporting depressive symptoms use aggression or ignoring strategies for conflict resolution more frequently (Marchand and Hock 2003), and depression negatively affects men in fulfilling their family responsibilities and spending time with the family (Chuick et al.

2009). Considering the support of spouses to each other in the postpartum period as a protective factor against depression, the decrease in the support of fathers with postpartum depression to their partners makes mothers more vulnerable to stress and psychopathologies (Morse et al. 2000). Salmela-Aro et al. (2006) suggested that couples typically share depressive symptoms and marital dissatisfaction throughout pregnancy and after the birth of the child, and that this sharing includes not only depressive symptoms associated with marital dissatisfaction but also new marital problems caused by depressive symptoms. In addition, both maternal and paternal depression can be strong predictors of children's externalizing behaviors (Weinfield et al., 2009). Therefore, paternal depression in the postpartum period is a concept that can cause significant problems in the family system, and diagnosis and treatment of it are very important.

Paternal Postpartum Depression and Child Development

Parents' psychological states can affect their children's psychological and developmental problems. There is increasing evidence that paternal depression in the postpartum period may negatively affect child development independent of the mother's psychological state (Ramchandani and Psychogiou 2009). There is greater support that there is a significant relationship between the psychosocial adjustment of children at different age periods and the depressive symptoms of mothers (Goodman et al. 2011). However, the current studies focusing on depressive symptoms of fathers reveal that these symptoms are also negatively related to the psychosocial development of children (Goodman et al. 2011, Feldman et al., 2020). Fathers' psychological state can affect their parenting strategies and their views on their children. In their study, Ramchandani et al. (2011) revealed that depressed fathers perceived their infants negatively than non-depressed fathers. As a result of the meta-analysis, Wilson and Durbin (2010) stated that depressive fathers may display fewer positive behaviors, such as warmth and sensitivity, and behaviors, such as hostility and indifference, more often due to symptoms, such as depression and anhedonia. In the same study, it was revealed that there was no statistically significant difference between mothers and fathers for positive parenting behaviors. However, the effect of depression was greater for fathers on negative parenting behaviors. Based on this, it can be said that the psychological state of the fathers has an important role in the healthy bonding of the children with the father and the positive treatment-oriented parenting of the fathers.

Infancy (0-2 years)

The first year following birth is an important process that involves the baby establishing a secure bond with their parents. Paternal depression can change fathers' parenting and relationship with their children and may cause the baby to be more negatively affected by other factors, such as maternal depression (Kim and Swain 2007). In the postpartum period, when the father's parenting can play a protective role against the mother's postpartum depression, the situation of fathers whose partners have postpartum depression becomes important. Fathers with depressive symptoms may reduce the support they provide and increase their partners' vulnerability to showing depressive symptoms (Mezulis et al. 2004).

In the first year after birth, when infants acquire biological and behavioral regulation strategies through communication with their parents, negative parenting strategies brought on by depression may negatively affect the infant's features, such as brain development or self-regulation skills (Cicchetti and Rogosch 2001). The infant's relationship with the caregiver plays an important role in the emotional and mental development of the infant. Again, in this period, parent-infant bonding, which is strengthened by actions such as the parent showing closeness to the baby or talking to the baby (Condon et al. 2013), can be quite effective in the development and growth of children (Işık and Egeliöğlü-Cetişli 2020). Therefore, paternal depression, which is a factor that may negatively affect infant-parent attachment, is also important for the development and well-being of children.

Işık and Egeliöğlü-Cetişli (2020) examined the relationship between early paternal depression and father-infant attachment in their study conducted with 124 fathers in a Turkish sample. As a result of the study, father-infant attachment scores of fathers at risk of depression on the first day and second month following birth were significantly lower than fathers who were not at risk of depression. Likewise, in another study conducted with 175 fathers who had 3-6 months old babies in Turkey, it was found that as the depression risks of fathers increased during this period, father-infant attachment levels decreased (Ertekin Pinar and Ozbek 2020). In addition, paternal depression may have negative effects on the father's parenting behaviors. In a study dealing with the depression levels of fathers and their behavior towards their children in the second month after birth, Takehara et al. (2017) stated that fathers with depressive symptoms in the postpartum period had a higher tendency to treat their children negatively.

Paternal depression has been associated with excessive crying in newborns. It has been stated that factors such

as being less sensitive to the child, making less effort to console the child, and giving nervous or aggressive reactions may support this relationship (van den Berg et al. 2009). It has been reported that depressive symptoms negatively affect the frequency of reading books to children by parents and may cause impairment and delay in language and speech skills in children aged 9-24 months (Paulson et al. 2009). Similarly, fathers' depressive symptomatology can predict children's behavioral patterns, and there is a reciprocal relationship between child behavior and parental depressive symptoms over time (Gross et al. 2008). It was thought that monitoring and diagnosing depressive symptoms of fathers in the postpartum period would be a critical step for children's emotional and behavioral development. Findings revealing the effect of paternal depression on the developmental problems or damage in the parent-child relationship that develops from infancy show that awareness of paternal depression should be increased, especially in the period close to birth and postpartum.

Preschool Period (3-6 years)

The preschool period is a suitable period for the evaluation of problematic behaviors in children. Behaviors that may be permanent and continue into adulthood can also be predicted in this period (Loeber and Hay 1997). Especially the age of 4 is an important time when children step into social functionality, and their problematic behaviors can be evaluated more easily at this age (Hagekull and Bohlin 1992). As one of the important factors affecting parenting, the impact of parental psychology on children can be observed at different levels at different times. For paternal depression, these effects may be exacerbated by the direct effects of paternal depression on the father-child relationship and by indirect effects through its relationship with marital problems or maternal psychopathology (Ramchandani et al. 2005). In a prospective study by Fletcher et al. (2011), it was reported that children whose fathers showed depressive symptoms during infancy had more negative results in emotional difficulty, hyperactivity, and peer problems at the age of 4-5 compared to children whose fathers did not show depressive symptoms. In the same study, the effects of paternal depression varied according to the gender of the children. Early paternal depression was found to be more strongly associated with hyperactivity in boys, while it was found to have a stronger relationship with emotional problems in girls. Again, the measurements taken at the end of 3.5 years from the children of fathers whose depression scores were measured at the 8th and 12th months postpartum revealed that emotional problems and hyperactivity scores of the children were associated with postpartum paternal depression (Ramchandani et al. 2005). In similar studies, parents' postpartum depression and marital conflicts were associated with behavioral problems in children aged 3-4 (Hanington et al. 2011). Moreover, it was revealed that fathers' postpartum depression predicted internalization and externalization problems in children aged 2-3 years (Carro et al. 1993). In their study involving children aged 4-6, Dave et al. (2008) stated that paternal depression is associated with lower prosocial behavior scores and peer conflicts in children. The findings on the effects of paternal depression in the postpartum period in the first childhood are limited. However, it is thought that the long-term effects of paternal depression can be better elucidated with longitudinal studies covering the first childhood period, where behavioral problems can be observed on a larger scale.

Effects in School-Age Period and Adolescence

In developmental psychopathology, explaining the factors that increase the risk of emotional and behavioral maladjustment in children and adolescents has been one of the main goals. Various environmental factors such as the child's temperament, marital problems or divorce, exposure to stress, deprivation of adequate care, and maternal psychopathology have been recognized as important links for the psychopathologies developing in children and adolescents (Downey and Coyne 1990, Phare and Compas 1992). Although the characteristics of fathers, including their psychopathology, have received less attention in studies in terms of their relationship with the development of child and adolescent psychopathology, it has been suggested that fathers of children with psychiatric diagnoses have a higher level of psychopathology compared to fathers of undiagnosed children (Phare and Compas 1992, Weitzman et al. 2011). In their study of school-age children, adolescents, and their families, Wietzman et al. (2011) found that living with fathers with depressive symptoms was associated with increased emotional or behavioral problems in children and adolescents, independent of other factors. Similarly, in the longitudinal study of Ramchandani et al. (2008), paternal depression was associated with various psychiatric disorders, especially behavioral disorders, in children of fathers with depressive symptoms in the postpartum period, compared to children whose fathers did not show depressive symptoms, as a result of measurements made seven years later. As a result of the study, it was observed that psychiatric disorders developed in 12% of the children with depressed fathers, while this rate was found to be 6% in the children with non-depressed fathers. In another study conducted with more than 1 million participants in a Swedish sample, the relationship between academic performance at the age of 16 and parental depression, which was evaluated

at different periods, was examined, and parental depression was found to be associated with children's school performance in all periods (Shen et al. 2016).

Postpartum paternal depression is getting more place in studies day by day. It is also important to increase the number of longitudinal studies examining how it can affect children in the following years. However, in line with the findings, it was thought that paternal depression might play a role in increasing the tendency of children to psychopathology, as it may significantly affect the child's communication and the father's parenting strategies.

Conclusion

When the literature is examined, it is seen that paternal postpartum depression is a concept that has been studied much more limitedly compared to maternal depression but has been studied more in recent years than in the past. In line with the findings of the studies examined in this review, it can be said that factors such as a history of psychiatric diagnosis, economic status, lack of social support, and maternal depression increase the risk ratio for paternal depression. It is also striking that paternal depression is an important concept that can disrupt family dynamics, individual relationships, child-parent relationships, and the developmental processes of children.

The bond that children establish with their parents is a factor that can affect children cognitively, emotionally, and physically and regulates their connection with the outside world. Therefore, the negativities that may affect the attachment between the parent and the child can shape the children's behavior, feelings, and thoughts in the later period. It is critical to monitor parental depression, which can severely impact the parent-child relationship, especially during the postpartum period, when the relationship is just beginning to strengthen.

Paternal postpartum depression is a phenomenon that should be considered more, and specialists should develop different treatment processes with diagnosis and treatment competence. Fathers, who have difficulty finding support in diagnosis and treatment, have to cope with this situation themselves. Cameron et al. (2017) suggested that fathers prefer individual and couple psychotherapy over pharmacotherapy for treating paternal postpartum depression, and they find individual therapy more reliable than all treatment methods. Therefore, from the prenatal period, it is important to include both mothers and fathers in parenting education or intervention programs and increase experts' awareness of possible depressive symptoms in parents. Parents should be encouraged to volunteer to be directed to individual or couple psychotherapies. In addition, considering that the way couples perceive their relationships and their communication can be effective in their experience of depression, individuals' re-evaluation of their communication and conflict resolution styles with their partners and the couple's re-evaluation of their relationship from a constructive point of view may reduce the risk of depression or decrease severity of depression in the postpartum period. Therefore, it is also important to provide parents with the skills that can strengthen their social support and minimize communication problems from the prenatal period. In addition, there are not enough studies on protective factors against paternal depression. Considering factors such as maternal depression, the number of children, or economic situation that affect the experience or severity of paternal depression, it is thought that increasing studies on what protective factors may be related to these concepts may help to understand paternal depression better and reduce its frequency.

Considering the effect of parents' psychological well-being on the development of their children, paternal depression can be an important problem affecting the family, the family's environment, and society. In order to carry out early diagnosis and treatment, there is a need for experts in the field to work in cooperation and for prospective parents to be adequately informed.

References

- Alexander J (2001) Depressed men: an explanatory study of close relationships. *J Psychiatr Ment Health Nurs*, 8:67-75.
- APA (2013) *Diagnostic and Statistical Manual of Mental Disorders*, 5th edition (DSM-5). Washington D.C, American Psychiatric Association.
- Anderson A (1996) The father-infant relationship: becoming connected. *J Soc Pediatr Nurs*, 1:83-92.
- Bakermans-Kranenburg M, Lotz A, Alyousefi-van Dijk K, van IJzendoorn M (2019) Birth of a father: fathering in the first 1,000 days. *Child Dev Perspect*, 13:247-253.
- Ballard C, Davis R, Cullen P, Mohan R, Dean C (1994) Prevalence of postnatal psychiatric morbidity in mothers and fathers. *Br J Psychiatry*, 164:782-788.
- Bergström M (2013) Depressive symptoms in new first-time fathers: associations with age, sociodemographic characteristics, and antenatal psychological well-being. *Birth*, 40:32-38.

- Boyce P (2003) Risk factors for postnatal depression: a review and risk factors in Australian populations. *Arch Womens Ment Health*, 6:43-50.
- Brockington I (2004) Postpartum psychiatric disorders. *Lancet*, 363:303-310.
- Cameron E, Hunter D, Sedov I, Tomfohr-Madsen L (2017) What do dads want? Treatment preferences for paternal postpartum depression. *J Affect Disord*, 215:62-70.
- Carro M, Grant K, Gotlib I, Compas B (1993) Postpartum depression and child development: an investigation of mothers and fathers as sources of risk and resilience. *Dev Psychopathol*, 5:567-579
- Ceyhun-Peker A, Cömert-Okutucu A, Tekiner A, Dağlı Z (2016) Babalarda doğum sonu depresyonu ve etkili olan faktörlerin değerlendirilmesi. *Konuralp Tıp Dergisi*, 8:141-146.
- Choi P, Henshaw C, Baker S, Tree J (2005) Supermum, superwife, supereverything: performing femininity in the transition to motherhood. *J Reprod Infant Psychol*, 23:167-180.
- Chuick C, Greenfeld S, Shepard S, Cochran S, Haley J (2009) A qualitative investigation of depression in men. *Psychol Men Masc*, 10:302-313.
- Cicchetti D, Rogosch F (2001) Diverse patterns of neuroendocrine activity in maltreated children. *Dev Psychol*, 13:677-693.
- Condon J, Corkindale C, Boyce P (2004) The first-time fathers study: a prospective study of the mental health and wellbeing of men during the transition to parenthood. *Aust N Z J Psychiatry*, 38:6-64.
- Condon J, Corkindale C, Gamble E (2013) A longitudinal study of father-to-infant attachment: antecedents and correlates. *J Reprod Infant Psychol*, 31:15-30.
- Cummings E, Keller P, Davies P (2005) Towards a family process model of maternal and paternal depressive symptoms: exploring multiple relations with child and family functioning. *J Child Psychol Psychiatry*, 46:479-489.
- Dalfen A (2009) *When Baby Brings the Blues: Solutions for Postpartum Depression*. Mississauga, Wiley.
- Dave S, Sherr L, Senior R, Nazareth I (2008) Associations between paternal depression and behaviour problems in children of 4-6 years. *Eur Child Adolesc Psychiatry*, 17:306-315.
- Downey G, Coyne J (1990) Children of depressed parents: an integrative review. *Psychol Bull*, 108:50-76.
- Draper J (2003) Men's passage to fatherhood: an analysis of the contemporary relevance of transition theory. *Nurs Inq*, 10:66-78.
- Eddy B, Poll V, Whiting J, Clevesy M (2019) Forgotten fathers: postpartum depression in men. *J Fam Issues*, 40:1001-1017.
- Edhborg M, Carlberg M, Simon F, Lindberg L (2016) "Waiting for better times": experiences in the first postpartum year by Swedish fathers with depressive symptoms. *Am J Mens Health*, 10:428-439.
- Ertekin Pınar S, Ozbek H (2022) Paternal depression and attachment levels of first-time fathers in Turkey. *Perspect Psychiatr Care*, 58:1082-1088.
- Feldman J, Wilson M, Shaw D (2020) Relations between early childhood paternal depression and preschool- and school-age psychosocial functioning. *J Clin Child Adolesc Psychol*, 51:1-15.
- Ferreira L (2016) *Postnatal depression and the evaluation of an integrative parenting programme (Doctoral dissertation)*. Potchefstroom, South Africa, North-West University.
- Fletcher R, Feeman E, Garfield C, Vimpani G (2011) The effects of early paternal depression on children's development. *Med J Aust*, 195:685-689.
- Frank L, Corcoran P (2018) Paternal postnatal depression in Ireland: prevalence and associated factors. *Midwifery*, 56:121-127.
- Garfield C, Isacco A, Bartlo W (2010) Men's health and fatherhood in the urban midwestern United States. *Int J Mens Health*, 9:161-174.
- Gao L, Chan S, Mao Q (2009) Depression, perceived stress, and social support among first-time Chinese mothers and fathers in the postpartum period. *Res Nurs Health*, 32:50-58.
- Goodman J (2004) Paternal postpartum depression, its relationship to maternal postpartum depression, and implications for family health. *J Adv Nurs*, 45:26-35.
- Goodman S, Rouse M, Connell A, Broth M, Hall C, Heyward D (2011) Maternal depression and child psychopathology: a meta-analytic review. *Clin Child Fam Psychol*, 14:1-27.
- Gross H, Shaw D, Moilanen K, Dishion T, Wilson M (2008) Reciprocal models of child behavior and depressive symptoms in mothers and fathers in a sample of children at risk for early conduct problems. *J Fam Psychol*, 22:742-751.
- Güleç D, Kavlak O, Sevil Ü (2014) Ebeveynlerin doğum sonu yaşadıkları duygusal sorunlar ve hemşirelik bakımı. *Hemşirelikte Eğitim ve Araştırma Dergisi*, 11:54-60.
- Hagekull B, Bohlin G (1992) Prevalence of problematic behaviors in four-year-olds. *Scand J Psychol*, 33:359-369.
- Hanington L, Heron J, Stein A, Ramchandani P (2011) Parental depression and child outcomes – is marital conflict the missing link? *Child Care Health Dev*, 38:520-529.
- Işık S, Egelioglu Cetişli N (2020) Paternal depresyon ve baba-bebek bağlanması arasındaki ilişki. *Cukurova Medical Journal*, 45:1663-1671.
- Johansson M, Nordström T, Svensson I (2020) Depressive symptoms, parental stress, and attachment style in mothers and fathers two and a half years after childbirth: are fathers as affected as mothers? *J Child Health Care*, 1-11.

- John W, Cameron C, McVeigh C (2005) Meeting the challenge of new fatherhood during the early weeks. *Clin Res*, 34:180-189.
- Jordan P (1990) Laboring for relevance: expectant and new fatherhood. *Nurs Res*, 39:11-16.
- Kendler K, Gardner C, Prescott C (2006) Toward a comprehensive developmental model for major depression in men. *Am J Psychiatry*, 163:115-124.
- Kim P, Swain J (2007) Sad dads: paternal postpartum depression. *Psychiatry*, 4:35-47.
- Leigh B, Milgrom J (2008) Risk factors for antenatal depression, postnatal depression and parenting stress. *BMC Psychiatry*, 8:1-11.
- Loeber R, Hay D (1997) Key issues in the development of aggression and violence from childhood to early adulthood. *Annu Rev Psychol*, 48:371-410.
- Madsen S, Juhl T (2007) Paternal depression in the postnatal period assessed with traditional and male depression scales. *J Mens Health Gend*, 4:26-31.
- Marchand J, Hock E (2003) Mothers' and fathers' depressive symptoms and conflict resolution strategies in the marriage and children's externalizing and internalizing behaviors. *J Genet Psychol*, 164:227-239.
- Massoudi P (2013) Depression and stress in Swedish fathers in the postnatal period- prevalence, correlates, identification and support (Doctoral Dissertation). University of Gothenburg.
- McCoy S (2012) Postpartum depression in men. In *Perinatal Depression* (Ed MGR Castillo):163-176. London, UK, IntechOpen.
- McIntyre R, Mancini D, Eisfeld B, Soczynska J, Grupp L, Konarski J et al. (2006) Calculated bioavailable testosterone levels and depression in middle-aged men. *Psychoneuroendocrinology*, 31:1029-1035.
- Melrose S (2010) Paternal postpartum depression: how can nurses begin to help? *Contemp Nurse*, 34:199-210.
- Mezulis A, Hyde S, Clark R (2004) Father involvement moderates the effect of maternal depression during a child's infancy on child behavior problems in kindergarten. *J Fam Psychol*, 18:575-588.
- Morse A, Buist A, Durkin S (2000) First-time parenthood: influences on pre-and postnatal adjustment in fathers and mothers. *J Psychosom Obstet Gynaecol*, 21:109-120.
- Naber F, van IJzendoorn M, Deschamps P, van Engeland H, Bakermans-Kranenburg M (2010) Intranasal oxytocin increases fathers' observed responsiveness during play with their children: a double-blind within-subject experiment. *Psychoneuroendocrinology*, 35:1583-1586.
- Nath S, Psychogiou L, Kuyken W, Ford T, Ryan E, Russell G (2016) The prevalence of depressive symptoms among fathers and associated risk factors during the first seven years of their child's life: findings from the millennium cohort study. *BMC Public Health*, 16:509.
- Nishimura A, Ohashi K (2010) Risk factors of paternal depression in the early postnatal period in Japan. *Nurs Health Sci*, 15:1-8.
- Papp L, Goeke-Morey M, Cummings M (2007) Linkages between spouses' psychological distress and marital conflict in the home. *J Fam Psychol*, 21:533-537.
- Paulson J, Keefe H, Leiferman J (2009) Early parental depression and child language development. *J Child Psychol Psychiatry*, 50:254-262.
- Paulson J, Bazemore S, Goodman J, Leiferman J (2016) The course and interrelationship of maternal and paternal perinatal depression. *Arch Womens Ment Health*, 19:655-663.
- Perez C, Brahm P, Riquelme S, Riviera C, Jaramillo K, Eickhorst A (2017) Paternal post-partum depression: how has it been assessed? A literature review. *Ment Health Prev*, 7:28-36.
- Phares V, Compas E (1992) The role of fathers in child and adolescent psychopathology: make room for daddy. *Psychol Bull*, 111:387-412.
- Philpott L (2016a) Paternal postnatal depression: an overview for primary healthcare professionals. *Prim Health Care*, 26:23-27.
- Philpott L (2016b) Spotlight on paternal postnatal depression. *Forum*, 62:12.
- Ramchandani P, Psychogiou L (2009) Paternal psychiatric disorders and children's psychosocial development. *Lancet*, 374:646-653.
- Ramchandani P, Psychogiou L, Vlachos H, Iles J, Sethna V, Netsi E et al. (2011) Paternal depression: an examination of its links with father, child and family functioning in the postnatal period. *Depress Anxiety*, 28:471-477.
- Ramchandani P, Stein A, Evans J, O' Connor T (2005) Paternal depression in the postnatal period and child development: a prospective population study. *Lancet*, 365:2201-2205.
- Ramchandani P, Stein A, O'Connor T, Heron J, Murray L, Evans J (2008) Depression in men in the postnatal period and later child psychopathology: a population cohort study. *J Am Acad Child Adolesc Psychiatry*, 47:390-398.
- Salmela-Aro K, Aunola K, Saisto T, Halmesmaki E, Nurmi J (2006) Couples share similar changes in depressive symptoms and marital satisfaction anticipating the birth of a child. *J Soc Pers Relat*, 23:781-803.
- Schumacher M, Zubaran C, White G (2008) Bringing birth-related paternal depression to the fore. *Women Birth*, 21:65-70.
- Serhan N, Ege E, Ayrancı Ü, Kosgeroğlu N (2012) Prevalence of postpartum depression in mothers and fathers and its correlates. *J Clin Nurs*, 22:279-284.

- Shaheen N, AlAtiq Y, Thomas A, Alanazi H, Alzahrani Z, Younis S et al. (2019) Paternal postnatal depression among fathers of newborn in Saudi Arabia. *Am J Mens Health*, 13:1-12.
- Shen H, Magnusson C, Rai D, Lundberg M, Le-Scherban F, Dalman C et al. (2016) Associations of parental depression with child school performance at age 16 years in Sweden. *JAMA Psychiatry*, 73:239.
- Stewart D, Vigod S (2016) Postpartum depression. *N Engl J Med*, 375:2177-2186.
- Takehara K, Suto M, Kakee N, Tachibana Y, Mori R (2017) Prenatal and early postnatal depression and child maltreatment among Japanese fathers. *Child Abuse Negl*, 70:231-239.
- Thijssen S, Van 't Veer A, Witteman J, Meijer W, van IJzendoorn M, Bakermans-Kranenburg M (2018) Effects of vasopressin on neural processing of infant crying in expectant fathers. *Horm Behav*, 103:19-27.
- van den Berg M, van der Ende J, Crijnen A, Jaddoe V, Moll H, Mackenbach J et al. (2009) Paternal depressive symptoms during pregnancy are related to excessive infant crying. *Pediatrics*, 124:96-103.
- Veskerna L (2010) Peripartum depression – does it occur in fathers and does it matter? *J Mens Health*, 7:420-430.
- Waller M (2010) Viewing low income fathers' ties to families through a cultural lens: insights for research and policy. *Ann Am Acad Pol Soc Sci*, 629:102-124.
- Wee K, Skouteris H, Pier C, Richardson B, Milgrom J (2011) Correlates of ante- and postnatal depression in fathers: a systematic review. *J Affect Disord*, 130:358-377.
- Weinfeld N, Ingerski L, Moreau S (2009) Maternal and paternal depressive symptoms as predictors of toddler adjustment. *J Child Fam Stud*, 18:39-47.
- Weitzman M, Rosenthal D, Liu Y (2011) Paternal depressive symptoms and child behavioral or emotional problems in the United States. *Pediatrics*, 128:1126-1134.
- Wilson S, Durbin C (2010) Effects of paternal depression on fathers' parenting behaviors: a meta-analytic review. *Clin Psychol Rev*, 30:167-180.
- Winkler D, Pjrek E, Heiden A, Wiesecker G, Klein N, Konstantinidis A et al. (2004) Gender differences in the psychopathology of depressed inpatients. *Eur Arch Psychiatry Clin Neurosci*, 254:209-214.
- Wynne-Edwards K (2001) Hormonal changes in mammalian fathers. *Horm Behav*, 40:139-145.

Authors Contributions: The author(s) have declared that they have made a significant scientific contribution to the study and have assisted in the preparation or revision of the manuscript

Peer-review: Externally peer-reviewed.

Conflict of Interest: No conflict of interest was declared.

Financial Disclosure: No financial support was declared for this study.