

Paternal depression and attachment levels of first-time fathers in Turkey

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Abstract

Purpose: Paternal depression and inadequate attachment experienced in the postpartum period may be associated with future emotional and behavioural problems of children. This study aimed to investigate the paternal depression and attachment levels of first-time fathers.

Design and Methods: The sample of this descriptive study consisted of 175 fathers with 3–6 months old babies whose wives applied to the polyclinic for check-up.

Findings: When the cut-off point of the scale was evaluated at 13 and above in this study, the risk of depression was found to be 14.2%. The level of attachment decreases as fathers' risk of depression increases ($p < 0.05$).

Practice implications: There is a risk of depression in fathers in the postpartum period. The level of attachment decreases as fathers' risk of depression increases.

KEYWORDS

father, first time father, infant attachment, paternal depression

1 | INTRODUCTION

Parenting is a common responsibility that should be undertaken equally by both mother and father.¹ This process can be a stressful transition period for individuals who are new parents. This period can affect parents physically, mentally and socially. It may also be difficult to adapt to changing roles and expectations.^{2,3} In addition, the presence of feelings, such as depression symptoms, irritability, helplessness, and hopelessness can negatively affect parenting abilities, making this process more difficult.^{4,5}

In the postpartum period, depression can be experienced in men as well as in women.⁶ It is known that postpartum depression in women has adverse effects for infants and children in the future.⁷ Fathers are most likely to experience a first onset of paternal PPD in the first 3 to 6 months of the postpartum period.⁵ Even though postpartum depression occurs in fathers, this situation remains an unknown problem.⁸ It is stated that 10% of first-time fathers experience depression in the first year; this rate increases between the 3rd and 6th months, occurring later than the depression seen in mothers and presenting less symptoms. Therefore, it is very difficult to detect depression that develops in fathers.² In a study, it was

reported that the depression rate in fathers between 6 and 12 months after birth was 11.7%,⁸ and perinatal depression was 5%–10% in another study.⁹ In another study, it was reported that men mostly expressed the situation they experienced with symptoms such as fatigue, insomnia, lack of concentration and irritability.¹⁰ Therefore, it should not be ignored that fathers may also experience posttraumatic stress symptoms after birth and may be at risk of suicide.⁹

Postpartum paternal depression can negatively affect both the physical and psychological development of the baby.⁵ It has been stated that the depression experienced in fathers, particularly in the 8th week after birth, was related to the future emotional and behavioural problems of the children.⁷ In a systematic study by O'Brien et al.,¹¹ it was found that paternal depression negatively affected the mother's and child's health as well as family relationships. It is also reported that paternal depression is associated with father-infant attachment and affects attachment negatively.^{12,13} A study has shown that father-infant attachment, which positively affects the social and physical development of babies, is lower in fathers with postpartum depression symptoms.¹⁴

Parent-infant attachment has an important role in infancy. This process, which develops with pregnancy and childbirth, can affect one's relationships with other people, psychological adjustment, and physical and mental development.¹⁵ Since the baby is not yet able to meet its own needs independently, it becomes dependent on the caregiver. The one-to-one relationship with the caregiver in this process is extremely important for mental and emotional development.¹⁶ It has been reported that successful paternal attachment in the early period positively affects the cognitive development of the baby, increases weight gain in premature babies and improves breastfeeding rates.¹⁷ Positive attachment is also important for the future academic success, risky behaviours, and social and emotional development of children.¹⁶ Positive attachment during childhood may be associated with positive emotional well-being and low-level psychiatric disorders later in life.^{14,18} Fathers who have insufficient attachment with their baby, anxious and depressed are at a disadvantage in building father-child relationships.³ In another study, it was found that negative attachment in fathers was associated with having a bad marital relationship.¹³

When the national and international studies are examined, although there are many studies on the role of the mother in the mental development of the baby, there is a limited number of studies on fathers' role.^{10,14,16,19,20} In addition, it has been reported that the effects of depression and negative attachment on infant development in fathers and specific risk factors are not yet fully known.¹⁴ Determining the depression symptoms and attachment levels of fathers in the early period will be helpful in preventing future problems that may develop in both the child and the father. Thus, serious mental illnesses that may occur in the future can be prevented and the costs to be incurred by the institutions can be minimized. Therefore, the findings obtained from this study are thought to be a guide have an important role in the postpartum period, in terms of planning care and handling risky groups. In this context, the study aimed to investigate the paternal depression and attachment levels of first-time fathers with 3–6-month-old babies.

2 | METHODS

2.1 | Study design and sample

This descriptive study was carried out with postpartum fathers who applied to the gynaecology and obstetrics policlinic of a public hospital located in the Central Anatolia Region (Sivas, Turkey). The sample size was calculated by power analysis. The sample size of the study was calculated according to the effect width ($d = 0.95$) and the double-tailed hypothesis method with the G*Power 3.1 program, taking into account the mean scores of the father attachment scale in the study of Turk Dudukcu and Tas Aslan.²¹ According to the result of the calculation, it was determined that the number of people to be included in the sampling should be 172, considering the possible data loss, 175 people were included in the sample. The data were collected between January 1 and December 31, 2019.

2.2 | Inclusion criteria

- Applying to the obstetrics and gynaecology clinic for their wives' postpartum control
- Being a first-time father
- Having a baby that was 3–6 months old
- Being able to speak Turkish and answer questions
- Volunteering to participate in the research

2.3 | Measures

2.3.1 | The personal information form

This form was created to determine the socio-demographic characteristics of fathers. In the form, there are a total of 16 questions about the fathers' age, educational level, occupational status, family type, financial situation, being a wanted child, relationship with the spouse, number of pregnancies, gender of the baby, presence of support person in the family and about their baby.

2.3.2 | The Edinburgh postnatal depression scale (EPDS)

The Edinburgh postnatal depression scale (EPDS) was developed by Cox et al.²² to determine the presence and/or risk of depression in the postpartum period. The Turkish validity and reliability study was conducted by Engindeniz et al.²³ This self-assessment scale is 4-point Likert-type and consists of 10 items. All questions are scored between 0 and 3 and the highest possible score from the scale is 30. Explanations of EPDS items are as follows: "I can laugh and see the funny side of things. I am looking forward to the future. I unnecessarily blame myself when something goes wrong. I feel distressed or anxious for no reason. Everything is getting on my back. I'm so unhappy that I have trouble sleeping. I feel sad or depressed. I'm so unhappy that I'm crying. The thought of harming myself comes to mind." In the validity and reliability study of the scale, the cutoff point was calculated as 13 and above. In the validity and reliability study, the Cronbach's alpha coefficient was found to be 0.79, and in our study, it was found to be 0.76.

2.3.3 | The paternal–infant attachment scale (PIAS)

The paternal–infant attachment scale (PIAS) was developed by Condon et al.²⁴ to evaluate postpartum father–infant attachment. The Turkish validity and reliability study was conducted by Gulec and Kavlak.¹⁶ The scale consists of 18 items and three subscales. These are "patience and tolerance," "pleasure in interaction," and "affection and pride." Each item of the scale is scored between 1 and 5, and high scores obtained from the scale indicate that the attachment level is high. Gulec and Kavlak¹⁶ found the reliability values of the scale to

be between 0.52 and 0.80. In our study, Cronbach's alpha coefficient was found to be between 0.66 and 0.81 in fathers with a 3–6-month-old baby.

2.4 | Data analysis

The data were evaluated with SPSS 23.0 package program. The suitability of the data for normal distribution was examined with the Shapiro–Wilk test. Socio-demographic characteristics were evaluated by number and percentage distribution, and scale scores were evaluated by average and standard deviation, median. When parametric test assumptions were provided, an independent sample *t* test (financial situation, relationship with the spouse) and one-way analysis of variance (educational level) was used. When parametric test assumptions were not provided Mann–Whitney *U* test (wanted baby) was used. The Tukey test determined from which group the difference originated and the relationship between the variables was evaluated by Pearson correlation analysis. The results were accepted significant at 95% confidence interval and at $p < 0.05$.

2.5 | Ethical considerations

Ethical approval (decision no: 2018-10/16) and written permission was obtained from the hospital where the study was conducted. It was explained to the fathers that names would not be written on the forms, the information would be kept confidential, the data obtained would be used only for research and that they could withdraw from the research at any time. The research was carried out according to the Helsinki Declaration Principles. The fathers who volunteered to participate in the study were informed about the subject and purpose of the study and their informed consent was obtained. The forms were applied to the fathers who met the inclusion criteria in a suitable room in the outpatient clinic by face-to-face interview method while waiting for their spouses to be examined. Data collection forms were applied by the researchers in a single session and it took 10–15 min to fill the forms.

3 | RESULTS

3.1 | Socio-demographic characteristics

The mean age of the fathers in the study was 29.64 ± 5.13 (min: 18; max: 45) and 44% were between the ages of 26–30. Within the sample group, 37.7% were university graduates, 86.9% had a profession, 73.1% had a nuclear family type, 54.3% perceived their financial situation at a moderate level, 89.1% of the fathers stated that they wanted the baby and 78.9% of them stated that their relationship with their spouse was at a good level (Table 1).

TABLE 1 Sociodemographic characteristics of fathers

Characteristics	n (%)	
Mean age	29.64 ± 5.13 (min: 18; max:45)	
Age group	18–25	32 (18.3)
	26–30	77 (44.0)
	31 and above	66 (37.7)
Educational level	Primary school	48 (27.4)
	High school	61 (34.9)
	University and above	66 (37.7)
Employment status	Not working	23 (13.1)
	Working	152 (86.9)
Family type	Nuclear	128 (73.1)
	Extended	47 (26.9)
Perceived financial situation ^a	Good	80 (45.7)
	Moderate	95 (54.3)
Wanted baby	Yes	156 (89.1)
	No	19 (10.9)
Relationship with the spouse	Good	138 (78.9)
	Moderate	37 (21.1)

^aThe financial situation and the relationship with the spouse were grouped as “good”, “moderate” and “bad” and no “bad” answer was given.

TABLE 2 EPDS and PIAS mean scores of fathers

Scales	Min–Max	$X \pm SD$
EPDS	0–21 ^a (0–30) ^b	6.53 ± 4.83
PIAS		
Patience and tolerance	15–40 ^a (8–40) ^b	31.75 ± 6.58
Pleasure in interaction	13–35 ^a (7–35) ^b	25.54 ± 4.68
Affection and pride	6–15 ^a (3–15) ^b	12.17 ± 2.21

Abbreviations: EPDS, Edinburg postnatal depression scale; PIAS, Paternal–infant attachment scale.

^aMin–max scores obtained from the scale by the fathers.

^bMin–max scores to be obtained from the scale.

3.2 | EPDS and PIAS related results

The mean score of the EPDS was 6.53 ± 4.83 (min: 0; max: 21; Table 2). When the cut-off point of the scale was at 13 and above, the risk of depression in fathers was calculated as 14.2% ($n = 25$).

The patience and tolerance mean score of the PIAS was 31.75 ± 6.58 (min: 15; max: 40), the pleasure in interaction mean score was 25.54 ± 4.68 (min: 13; max: 35), and the affection and pride mean score was 12.17 ± 2.21 (min: 6; max: 15; Table 2). In the

TABLE 3 The relationship between fathers EPDS and subscales of the PIAS

	PIAS		
	Patience and tolerance	Pleasure in interaction	Affection and pride
EPDS	$r = -0.622$ $p = 0.001^a$	$r = -0.330$ $p = 0.001^a$	$r = -0.527$ $p = 0.001^a$

Note: r = Pearson correlation analysis.

Abbreviations: EPDS, Edinburg postnatal depression scale; PIAS, Paternal–infant attachment scale.

^aThe difference is statistically significant.

study, the scores obtained from patience and tolerance and affection and pride were above the average, whereas the scores obtained from pleasure in interaction were found to be moderate.

A negative statistically significant relationship was found between the EPDS and patience and tolerance at a high level ($r = -0.622$; $p = 0.001$), between the EPDS and pleasure in interaction at a low level ($p = -0.330$; $p = 0.001$), and between the EPDS and affection and pride at a moderate level. As the depression risk levels of fathers increased, their attachment levels decreased in patience and tolerance, pleasure in interaction, and affection and pride (Table 3).

There was a statistically significant difference among the EPDS mean scores according to the educational level of fathers ($p = 0.001$). According to the Tukey test, primary school graduates were found to have higher depression scores than university graduates. In addition, the depression scores of the fathers, who perceived their financial situation ($p = 0.033$) and relationship with their spouse at a moderate level ($p = 0.001$) and stated that they did not want their baby ($p = 0.001$), were statistically significantly higher (Table 4).

There was a statistically significant difference among affection and pride scores according to the educational level of fathers ($p = 0.001$). According to the Tukey test, university graduate fathers were found to have higher attachment levels than primary school and high school graduate fathers in terms of affection and pride (Table 5).

Attachment levels of fathers who perceived their financial situation as good were statistically significantly higher in terms of pleasure in interaction ($p = 0.001$). In addition, attachment levels of fathers, who perceived their relationship with their spouse at a good level ($p = 0.001$) and stated that the baby was a wanted baby, were found to be statistically significantly higher patience and tolerance ($p = 0.001$), pleasure in interaction ($p = 0.007$), affection and pride ($p = 0.001$) in subscales (Table 5).

In addition, no statistically significant difference was found between the EPDS, patience and tolerance, pleasure in interaction and affection and pride scores according to the age of the father, occupation, family type, number of pregnancies, gender of the baby, and the presence of a support person in the family ($p > 0.05$).

TABLE 4 EPDS mean scores of fathers according to some sociodemographic characteristics

Characteristics	EPDS X ± SD	Test
Educational level		
Primary school	8.77 ± 5.64	$F = 8.784$
High school	6.32 ± 5.18	$p = 0.001^a$
University	5.10 ± 3.00	
Financial situation		
Good	5.68 ± 4.15	$t = -2.154$
Moderate	7.25 ± 5.25	$p = 0.033^a$
Relationship with the spouse		
Good	5.74 ± 4.20	$t = -4.390$
Moderate	9.48 ± 5.88	$p = 0.001^a$
Wanted baby		
	Median (min–max)	
Yes	5.00 (0–21)	MU = 610.000
No	13.00 (1–18)	$p = 0.001^a$

Note: F = one way variance analysis; MU = Mann–Whitney U test; t = independent sample t test.

Abbreviations: EPDS, Edinburg postnatal depression scale.

^aThe difference is statistically significant.

4 | DISCUSSION

This study investigated the depression and attachment levels of fathers with 3–6-month-old babies. In our study, the risk of depression in first time fathers was 14.2%. Based on this finding, it can be said that there is a risk of depression in fathers in the postpartum period. In a study, has been reported the rate of depression was found to be 11.7% in fathers paternal postpartum.⁸ This rate was between 5%–10% in the study by Darwin et al.¹⁰ and 10% in the study by Goldstein et al.² In a meta-analysis study, it was reported that approximately 14% of first-time fathers experienced depression within 6 months postpartum.²⁵ The paternal depression finding obtained from our study is similar to other study results in the literature.

In our study, the scores obtained from the patience and tolerance subscale and the affection and pride subscale in terms of father–infant attachment were above the average, while the scores from the pleasure in interaction subscale were at a moderate level. In the study of Condon et al.²⁴ in which the original scale was developed and in the validity and reliability study of the attachment scale in Turkey, pleasure in interaction mean scores were found to be similar to our study findings. However, the scores obtained from the subscales of patience and tolerance and affection and pride were higher than the scores obtained in our study.^{16,24} The reason for this difference can be explained by the different sociodemographic and cultural characteristics of the fathers. However, in the study by Aslan et al.,²⁰ carried out with 301 fathers of infants between

TABLE 5 PIAS subscales mean scores of fathers according to some socio-demographic characteristics

Characteristics	PIAS		
	Patience and tolerance, $X \pm SD$	Pleasure in interaction, $X \pm SD$	Affection and pride, $X \pm SD$
Educational level			
Primary school	30.16 \pm 7.95	24.93 \pm 4.89	11.58 \pm 2.45
High school	31.80 \pm 6.44	25.01 \pm 4.56	11.80 \pm 2.27
University	32.86 \pm 5.38	26.48 \pm 4.54	12.95 \pm 1.74
<i>F/p</i>	2.368/0.097	2.157/0.120	7.111/0.001 ^a
Financial situation			
Good	32.33 \pm 6.41	26.90 \pm 4.78	12.48 \pm 2.01
Moderate	31.26 \pm 6.72	24.41 \pm 4.30	11.91 \pm 2.35
<i>t/p</i>	1.075/0.284	3.624/0.001 ^a	1.708/0.089
Relationship with the spouse			
Good	32.93 \pm 5.85	26.13 \pm 4.54	12.45 \pm 1.97
Moderate	27.35 \pm 7.34	23.35 \pm 4.60	11.13 \pm 2.73
<i>t/p</i>	4.867/0.001 ^a	3.304/0.001 ^a	3.310/0.001 ^a
Wanted baby			
	Median (min-max)		
Yes	34.00 (15-40)	26.00 (14-35)	13.00 (6-15)
No	27.00 (16-40)	22.00 (13-33)	10.00 (6-12)
<i>MU/p</i>	655.000/0.001 ^a	919.500/0.007 ^a	452.000/0.001 ^a

Note: F = one way variance analysis; MU = Mann-Whitney U test; t = independent sample t test.

Abbreviation: PIAS, Paternal-infant attachment scale.

^aThe difference is statistically significant.

4 and 12 weeks in Turkey, the scores obtained from the patience and tolerance, pleasure in interaction, and affection and pride subscales were found to be similar to our study.²⁰ The results in the literature support our research findings.

In our study, as the depression risks of fathers increased, their attachment levels decreased. The presence of depression symptoms can cause a decrease in paternal abilities.²⁶ In a study by Sethna et al.,²⁷ it was found that paternal depression negatively affected the father-infant interaction, and the depressed fathers had less verbal and behavioural interaction with their babies. In another study, it was reported that depression detected in fathers in the postpartum period also increased the risk of bad behaviour towards their children.²⁸ In addition, in other studies, it was reported that fathers with postpartum depression symptoms had a decrease in father-infant attachment levels.^{13,14,18} Based on these studies in the literature and our study findings, it can be said that the level of attachment is affected by depression.

In our study, fathers with higher education levels had a lower risk of depression and higher attachment levels in terms of affection and pride. Unlike our findings, there are a study in which the father's education is not related to depression.²⁷ However, in a study, the fact that the general attachment levels of fathers with higher education levels were significantly higher supported our research findings.²¹ Another study found that there was no significant

relationship between attachment and the father's education level.²⁰ In addition, de Cock and Henrichs²⁹ found that the highest attachment rates were found in parents with the lowest education, which was different from our findings. The reason for these differences is explained by the different socio-cultural characteristics of the fathers included in the sample.

Fathers who perceived their financial situation at a moderate level had higher depression risk levels. In the literature, there are studies showing that there is a relationship between the employment status and low-income level of fathers and the risk of depression.^{30,31} Similarly, negative situations, such as job loss and low economic situations, have been reported to increase the risk of depression.¹² In addition, in our study, fathers who perceived their financial situation well had higher attachment levels in terms of pleasure in interaction. In a study conducted, it was reported that fathers that did not have financial problems supported the attachment level and this was an important factor.²¹ The findings obtained from these studies in the literature are similar to our findings.

A positive relationship between spouses can facilitate problem solving. Parents' preoccupation with marital conflicts can also harm parents' child rearing practices.¹³ Fathers who perceived their relationship with their spouses at a moderate level had higher levels of depression, and fathers who perceived their relationship with their spouses at a good level had higher attachment levels. In other

studies, it was found that fathers with a good relationship with their spouses had lower depression scores and that fathers' depression increased mismatch between spouses, which supports our research findings.^{3,32} Similar to our findings, Aslan et al.²⁰ found that the patience and tolerance subscale and general attachment levels of the fathers without marriage problems were higher than fathers with marriage problems. In studies in the literature, it is stated that the quality of the relationship between the parents plays an important role in the father-infant interaction.^{13,33,34}

In our study, the depression risk levels of the fathers who stated that the baby was not a wanted baby and the attachment levels of the fathers who stated that the baby was a wanted baby were higher. A study showed that there was a relationship between unwanted pregnancy and fathers' risk of depression, which supports our finding.⁷ In addition, Condon et al.²⁴ found a significant relationship between planned pregnancies and attachment scores in the 6th month after birth, but contrary to our findings, another study showed that there was no relationship between the level of attachment and the baby being planned.²¹ This difference is explained by the fact that the sample groups are different.

4.1 | Limitations

This study has some limitations. The findings obtained from this study include only fathers who are fathers for the first time and who have babies between 3 and 6 months old. The results cannot be generalised for all other fathers. Another limitation is that the research is descriptive and cross-sectional. In addition, it was difficult to obtain an adequate sample size because the study was conducted in a city located in the Central Anatolia region of Turkey and because fathers did not go to hospital with their wives.

5 | CONCLUSION

There is a risk of depression in fathers after birth. As the risk of depression increases, attachment levels decrease. Educational level, financial situation, relationship with the spouse and the baby being wanted affects the depression risk levels of fathers and father-infant attachment. In line with these results, fathers should be evaluated and followed for the risk of depression, and father-infant attachment should be supported.

6 | IMPLICATIONS FOR PSYCHIATRIC NURSING PRACTICE

Especially in determining fathers at risk for depression and low attachment the consultation liaison psychiatric nurses have important responsibilities. Fathers who are at risk for depression and weak attachment should be identified in the early period, and they should

be provided with training and counselling by the consultation liaison psychiatric nurse. The consultation liaison psychiatric nurses, who have an important role, should target care services that are family-centred along with the conventional mother-centred care. Also should make plans (such as involving the father in the care of the baby, holding it, touching it, feeding and bathing it) and support these activities to ensure the protection and development of the future health of the baby. In addition, it is recommended to carry out different studies including the follow-up of depression that may develop in fathers at different time intervals after birth.

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CONFLICT OF INTERESTS

The authors declare that there are no conflict of interests.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions. Research data are not shared.

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