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# Maternal expectations and paternal self-efficacy as factors associated with the occurrence of depressive symptoms in parents after childbirth

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**Abstract:** Depressive symptoms with onset after the birth of a child can affect both parents. The aim of the presented study was to determine whether fathers and mothers differ in terms of postpartum depression symptoms and such variables as the sense of parental competence and the prenatal expectations of discrepancy, and whether these variables are related to the occurrence of postpartum depression symptoms in women and men. 271 people, including 165 women and 106 men, who became parents in the last 12 months, were examined. The Edinburgh Postnatal Depression Scale (EPDS), Parental Sense of Competence Scale (PSOC) and Prenatal Expectations Scale (PES) was used. The results indicate differences between mothers and fathers in postpartum depressive symptoms, parental competencies, and prenatal expectations discrepancy as well. While maternal depression symptoms are determined by failure to meet prenatal expectations, depressive symptoms in new fathers are associated with a low sense of paternal competence.
**Keywords:** postpartum depression symptoms, mothers, fathers, prenatal expectations, parental competency

## Introduction

With the birth of a child, many changes occur in the lives of parents, especially first-time parents. For many of them first-time parents were not prepared. Adaptation to the new role and the resulting challenges is therefore a challenge for both mothers and fathers, and in the postpartum period they may be accompanied by mental health problems. Postpartum depression (PPD) is the most prevalent psychological condition following childbirth, and it can have adverse effects on the social, emotional, and cognitive well-being of parents, infants, and the family. The reported prevalence of maternal PPD is 10–20% (O'Hara and Swain, 1996) but depending on the adopted diagnostic criteria, measurement methods, and finally sociogeographical factors, such as income in a geographic region, this percentage may be higher (Wang et al. al., 2021).

Although paternal postpartum depression (PPPD) has received less attention, research by Ballard et al. (1994) almost three decades ago indicated that more than 10% of fathers suffer from psychiatric morbidity in the postnatal period. In recent years, there has been an increased interest in the mental health of fathers during the perinatal period, leading to more studies on the occurrence of postpartum depression in men (cf. Ayinde et al., 2019; Fletcher et al., 2008; Koch et al., 2019; Segre et al., 2019). Thus, the postpartum period is increasingly recognized as a critical phase not only for mothers but also for fathers, as both parents experience significant changes during this time while adapting to their new roles and responsibilities as caregivers for their newborn child.

Prevalence rates of paternal depression are slightly lower, but it also depends on factors such as the method of measurement, or cultural bias. A meta-analysis of 43 studies with more than 28 thousand participants by Paulson and Bazermore (2010) found that symptoms of depression occurred in about 26% of fathers during the period from the 3rd to the 6th month postpartum, while a meta-analysis by Cameron et al. (2016) pointed to 13%.

The symptoms of postpartum depression include low mood, anxiety, sense of guilt, decreased interests, lower self-esteem of one's competences, fatigue, concentration disorders, sleep, and appetite disorders typical for a major depressive episode (APA, 2013). There may also be an inadequate fear for the child's health and life, excessive worrying about the situation and excessive concern for one's own health (Wasilewska-Pordes, 2000). However, the above-mentioned symptoms are considered more typical of maternal PPD, which is dominated by depressed mood and apathy, while PPPD is additionally accompanied by aggressiveness, irritability, indecisiveness, and restricted range of emotion (Madsen & Juhl, 2007) or isolation from the environment (Leśniewska et al., 2021) and resorting to substance use as well (Dhillon et al., 2022).

The etiology of maternal PPD is complex. Risk factors include previous episodes of depression, low self-esteem, childcare stress, prenatal anxiety, stressful life experiences, lack of social support, conflicted marital relationships, child's temperament, baby blues, single motherhood, low status economic and unplanned and/or unwanted pregnancy (Beck, 2001). Among the risk factors associated with PPPD confirmed in the studies, the most considered is prenatal and postnatal maternal depression (Albicker et al., 2019), but also poor interpersonal relations with spouse and inadequate social support (Dhillon et al., 2022), and history of severe depression in the past, prenatal depression/anxiety, educational level, paternal unemployment, or marital conflicts (Wang et al., 2021).

The negative impact of unmet unrealistic expectations about motherhood and fatherhood on depressive symptoms in new parents was also found by Biehle and Mickelson (2012), but this variable was analyzed in few studies (*cf.* Bielawska-Batorowicz-Kossakowska-Petrycka, 2006; Staneva and Witkowski, 2013). Nicolson (1986) also indicates that one of the causes of childbirth-related depression may be the overload resulting from the additional responsibilities imposed on parents. In such a situation, much depends on the individual's sense of parental competence, which, if high, will facilitate coping with new challenges and responsibilities, and if low, may affect the occurrence of depression symptoms. This is confirmed by the results of recent study (Dlamini et al., 2023). However, it has not been checked so far whether the relationship between these two variables and postpartum depression is similar for both mothers and fathers.

Due to the negative impact of postpartum depressive disorders in fathers and mothers, affecting the behavioral, emotional, cognitive, and physical development of the child (Parsons et al., 2012; Ramchandani et al., 2005), it is imperative to recognize factors associated with both paternal and maternal depression. This recognition is essential to implement appropriate activities aimed at protecting against these consequences.

**The present study**

The study aimed to assess: 1) whether first-time mothers and fathers differ in postpartum depression scores? 2) whether there are differences in such factors as the sense of parental competence and 3) the discrepancy of prenatal expectations depending on the parent's sex? and 4) whether the above-mentioned factors are related to the symptoms of postpartum depression in mothers and fathers alike. The last research objective was exploratory in nature; therefore, no directional hypothesis was formulated. However, the following research hypotheses addressed to the first three objectives of the study were formulated:

H1: First-time fathers and mothers differ in the postpartum depression scores.
H2: Fathers and mothers differ in their sense of parental competence.
H3: Fathers and mothers differ in terms of the discrepancy between prenatal expectations and reality after the child is born.

# 1. Method

### 1.1. Procedure and participants

The research was cross-sectional. The data comes from two different studies on factors related to postnatal depression symptoms in mothers and fathers, collected between July 2017 and December 2019. Participants were recruited through advertisements on social media platforms such as Facebook and Instagram, which were devoted to family life, parenting, fatherhood/motherhood, or childcare. Additionally, information was distributed at birth classes or pediatric clinics, and participants' friends and relatives were included through snowball sampling. New mothers and fathers interested in participating in the study first contacted the researcher via email (the email address was provided in the recruitment advertisement). Participants completed either a paper-pencil or electronic version of the survey based on their preferences or the recruitment method. For instance, some participants were directly recruited by a research assistant during the distribution of a leaflet with an invitation to the study at health clinics and were given the opportunity to make an appointment for survey completion.

Irrespective of the data collection method, each participant had to provide their consent to participate by signing a paper or electronic informed consent form. Subsequently, they received a set of questionnaires or a personalized link to the web-based survey. The research procedure adhered to the principles of the Helsinki Declaration of Human Rights (WMA, 2013) and received approval from the university advisory board. Participants were fully informed about the purpose, risks, and benefits of the survey, and they were assured that they could withdraw from the study at any time and for any reason without facing any consequences.

Only primiparous mothers or fathers were eligible to participate and the inclusion criteria were as follows: Polish nationality, aged at least 18 years, birth of a child in the last 12 months, living in a stable marriage/relationship, lack of past or current diagnosis of any psychiatric illness including depression, uncomplicated course of pregnancy, childbirth without medical-obstetrics complications and the birth of a healthy infant.

The sample consisted of 271 new parents (including 165 mothers, 69%) aged 19 to 51 (M = 29.9, SD = 4.9). Their relationship duration was from 1 to 20 years (M = 5.8, SD = 3.7) and from 4 to 48 weeks since birth (M = 15.7, SD = 7.3). Most new parents declared planned pregnancy (n = 219, 80.8%), without pregnancy complications (N = 211, 77.9%), previous fertility problems (n = 243, 89.7%), or miscarriages (N = 219, 80.8%). In the majority, the birth was natural (n = 167, 61.7%). Among newborns, a slight majority were girls (n = 141, 52%). A more detailed description with a distinction between mothers and fathers is presented in Table 1.

### 1.2. Study tools

#### 1.2.1. The Sociodemographic and gynecological-obstetric status survey

The Sociodemographic and gynecological-obstetric status survey collected information including parental age, and relationship duration. The participants were also asked to provide *yes/no* answers to questions concerning the following: planned or unplanned last pregnancy, previous miscarriages, last pregnancy complications, and fertility difficulties. They were also surveyed about type of delivery (vaginal/instrumental/cesarean and sex of infant (male/female) and finally, about psychiatric history: had ever been clinically diagnosed with depression (*yes/no*) or other mental illness (*yes/no*) and whether felt depressed during pregnancy and if they have, they used medication for depression or other mental illnesses in the last 12 months (*yes/no*). Psychiatric history data were collected to identify participants who entered the study despite not meeting the inclusion criteria.

#### 1.2.2. The Edinburgh Postnatal Depression Scale (EPDS)

The Edinburgh Postnatal Depression Scale (EPDS) (Cox, Holden & Sagovsky, 1987) consists of 10 statements describing mental state in the last 7 days. Participants check one of the four possible answers which comes closest to them. The answers are scored from 0 to 3. The overall score is the sum of scored

Table 1. Study sample characteristic of first-time mothers and fathers ($N$ = 271)

| Variable | | Mothers $n$ = 165 | | Fathers $n$ = 106 | |
|---|---|---|---|---|---|
| | | $M$ | SD | $M$ | SD |
| Age | | 29.5 | 4.6 | 30.5 | 5.3 |
| Marriage/relatiosnhip duration (in years) | | 6.3 | 3.4 | 5.1 | 4.1 |
| Time since birth (in weeks) | | 18.8 | 6.8 | 10.7 | 4.7 |
| | | $n$ | % | $n$ | % |
| Current pregnancy complications | Yes | 41 | 24.8 | 19 | 17.9 |
| | No | 124 | 75.2 | 87 | 82.1 |
| Previous fertility problems | Yes | 23 | 13.9 | 5 | 4.7 |
| | No | 142 | 86.1 | 101 | 95.3 |
| Previous miscarriages | Yes | 37 | 22.4 | 15 | 14.2 |
| | No | 128 | 77.6 | 91 | 85.8 |
| Planned pregnancy | Yes | 127 | 77.0 | 92 | 86.8 |
| | No | 38 | 23.0 | 14 | 13.2 |
| Child's gender | Male | 92 | 55.8 | 38 | 35.8 |
| | Female | 73 | 44.2 | 68 | 64.2 |
| Type of delivery | Natural | 93 | 56.4 | 74 | 69.8 |
| | Caesarean section | 72 | 43.6 | 32 | 30.2 |

points (max. 30 points). A higher score indicates higher postpartum depressive symptoms. The EPDS was originally developed for screening postpartum depression symptoms in mothers, however it was also used in research concerning depression in fathers during the first postpartum year (*c.f.* Bielawska-Batorowicz & Kossakowska-Petrycka, 2006; Cameron et al., 2016; Pinto et al., 2016). In the present study the EPDS was administered both to fathers and mothers. The cut-off score of 13 was proposed originally by Cox et al. (1987) for mothers. However, a lower cut-off score (9-10 points) on the EPDS for fathers has been suggested by Mathey et al. (2001) as for EPDS contains items being more relevant to mothers such as an endorsement of tearfulness or crying. In the current study, first, the originally recommended cut-off score of 13 was used to detect a depressive symptomatology both in new fathers and in mothers. However, also EPDS total score ≥ 10 has been evaluated for both parents, similarly as in other studies investigated PPD and parental morbidity (Edhborgh 2008; Figuereido & Conde 2011). The Polish EPDS shows satisfactory psychometric parameters; the reliability of the scale is 0.85 to 0.91 (Bielawska-Batorowicz, 1995; Kossakowska, 2013).

### 1.2.3. Parenting Sense of Competence Scale (PSOC)

Parental competencies were assessed using the Polish language version of the Parenting Sense of Competence Scale (PSOC; Gibaud-Wallston & Wandersman, 1978; Johnston & Mash, 1989; Kossakowska, 2017). The PSOC is a self-reporting scale consisting of 17 items assessed on a six- point scale ranging from 1 (*strongly agree*) to 6 (*strongly disagree*) which addresses the competence, problem-solving ability, and capability of the parents in their parental's role. Higher scores indicate higher competencies. The PSOC shows satisfactory psychometric parameters; Cronbach's alpha coefficient was found to be 0.79 and 0.86 for the original and Polish total scores respectively (Johnston & Mash 1989; Kossakowska 2017).

#### 1.2.4. Prenatal Expectation Scale (PES)

Prenatal Expectation Scale (PES; Kossakowska, 2002) was administered to assess in what extent prenatal expectations concerning life after the baby is born are similar or different from postpartum reality. PES consists of 18 items rated on a 10-point scale, where a score of 1 indicates that prenatal expectations were confirmed and 10 indicates that prenatal expectations were completely different. PES consists of the three following subscales: 1) Expectations towards the child – PES Child (concerning contact with a baby), 2) Expectations towards social functioning – PES Social (concerning time for social life), and 3) Expectations towards a partner – PES Partner (concerning changes in the marital/partner relationship). The total scores range from 18 to 180 points, and higher scores indicate a greater discrepancy between expectations and postpartum experiences. Psychometric properties of PES in samples of Polish new parents were found to be satisfactory, with internal consistency coefficients from 0.94 to 0.95 (Kossakowska & Śliwerski, 2023; Piwińska, 2019).

### 1.3. Data analysis

Statistical analyses were conducted using SPSS 27. Descriptive statistics, including frequency, percentage, mean and standard deviation, were used to describe demographic and gynecological-obstetric characteristics. The independent t-test was used to determine whether the postpartum depression scores differed significantly between men and women. Also, the independent t-test was used to compare parental competencies and prenatal expectations scores between mothers and fathers. Finally, multivariate linear regression with a stepwise approach in both directions was used to estimate the relationship between postpartum depression symptoms (dependent variable) and parental competencies and prenatal expectations (independent variables). Regression analyses were performed separately for mothers and fathers. For each regression model, the VIF (Variance Inflation Factor) value and its tolerance to detect multicollinearity in the regression analysis were determined. A VIF of 1 indicates no predictors of collinearity. The higher the value of VIF, the more significant the correlation of the outcome variable with other variables. An a priori power analysis using G*Power 3.1. software (Faul et al., 2007) performed to establish the sample size for t-tests, ANOVA, and regression analysis with two predictors, indicated that with a medium effect size ($\alpha = 0.05$, a standard power level of 0.95), a required minimum sample size for all types of analyses was attained (i.e., 128 participants for t-test, 107 for regression analysis). The level of statistical significance for the study was set at $p < 0.05$.

## 2. Results

### 2.1. Postpartum depression symptoms in new mothers and fathers

The mean postpartum depression score obtained from all participants was 11.55 (SD = 5.25; range 0-27). Significantly higher mean postpartum depression symptoms scores ($t(269) = 8.226$; $p < 0.001$) were observed in mothers (M = 13.44; SD = 4.53; range 6-27) compared to fathers (M = 8.62; SD = 4.96; range 0-19); the strength of the effect was high (Cohen's d = 1.28). When the cut-off score of 10 was used, symptoms of postpartum depression affected as many as 82.4% of mothers (n = 136) and 39.6% of fathers (n = 42). However, based on the original recommendation the cut-off score of 13, PPD symptoms were reported in 50.9% of mothers (n = 84) and 25.5% of fathers (n = 27).

### 2.2. Parental competencies in new mothers and fathers

The mean parental competencies scores obtained by all participants was 66.75 (SD = 10.95) which, assuming a range of 36 to 92 points, can be considered as being in the middle of the scale. Significantly higher mean parental competencies scores ($t(269) = -20.603$; $p < 0.001$) were observed in fathers (M = 77.42; SD = 7.74; range 66-92) compared to mothers (M = 59.89; SD = 6.18; range 36-73) and the strength of the effect was high (Cohen's d = 2.50).

Table 2. Comparison of the discrepancy of prenatal expectations and reality between mothers and father measured by PES

| Variable | Mothers | | Fathers | | t | p-value | Cohen's d |
|---|---|---|---|---|---|---|---|
| | *M* | SD | *M* | SD | | | |
| PES Total | 76.04 | 32.15 | 68.03 | 18.45 | 2.331 | 0.010* | 0.2 |
| PES Child | 20.20 | 11.88 | 18.16 | 5.74 | 1.648 | 0.050* | 0.2 |
| PES Social | 24.27 | 12.85 | 20.34 | 7.32 | 1.634 | 0.052 | NA |
| PES Partner | 31.58 | 12.74 | 29.33 | 7.67 | 2.717 | 0.004** | 0.2 |

*$p < 0.05$; **p<0.01; NA – not applicable

## 2.3. Discrepancy between prenatal expectations and reality among new mothers and fathers

The mean prenatal expectations discrepancy total scores obtained by all participants was 72.91 (SD = 27.85; range 19-143). A statistically significant differences between mothers and fathers were found. Women showed higher discrepancy between prenatal expectations and reality in the total scores, PES Child scores and PES Partner scores (see: Table 2). There were no statistically significant differences in PES Social scores however, the means scores were higher among mothers, as well.

## 2.4. Predictors of postpartum depression symptoms among new mothers and fathers

The multiple linear regression analysis was used to determine predictors of postpartum depression for both, mothers, and fathers, separately. Before it was performed, Pearson's correlation analyses were conducted in the total sample to determine the relations between the variables considered for inclusion in regression analysis. For the postpartum depression (EPDS scores), the negative relationships were found between EPDS and parental competencies, and positive between EPDS and prenatal expectations discrepancy. The results indicate that a lower level of parental competencies and higher discrepancy between prenatal expectation discrepancy are linked to higher intensity of postpartum depression symptoms. However, the correlate's coefficients indicated a weak relationship. Table 3 shows the relationships between the EPDS, the parental competencies and prenatal expectations total scores.

Table 3. Correlation matrix for the variables in the regression analysis (*N* = 271)

| Variable | 1 | 2 |
|---|---|---|
| 1. Prenatal depression (EPDS) | 1 | |
| 2. Parental competencies (PSOC) | -0.44** | 1 |
| 3. Prenatal expectations (PES) | 0.32** | -0.32** |

**p < .001

Multiple linear regression optimized by the stepwise method was conducted separately for mothers and fathers to assess the predictors of postpartum depression (outcome variable). In both analyses, explanatory variables introduced into the regression equation included parental competencies and prenatal expectation discrepancy.

Based on regression analysis results, it was found that the model proposed to predict postpartum depression in the mothers' group was proven significant (F (2,162) = 11.212; $p < 0.001$). Only prenatal expectations discrepancy was significant in this model (adjusted R2 = 0.111, $p < 0.01$). The results of regression analysis for mothers are presented in Table 4.

For fathers, it was found that the model proposed to predict postpartum depression in the was proven significant (F (2,103) = 5.442; p < 0.01). In the first step also prenatal expectation discrepancy was found significant (β = 0.218*, p* < 0.05*)*. However, adding paternal competencies variable in the second step to the regression analysis found paternal competencies ceasing to be a significant predictor of EPDS score (see: Table 5). Finally, for fathers only paternal competencies was significant in this model (adjusted R2 = 0.096, p < 0.01).

## 3. Discussion

The first aim of the study was to assess whether first-time fathers and mothers differ in postpartum depression scores. As expected, higher severity of postpartum depression symptoms was found in mothers. This finding is consistent with Goodman (2008), who reported significantly higher depression scores on the EPDS at 2 to 3 months postpartum for mothers compared to fathers in her study. Similar results were also obtained by Kiviruusu et al. (2020) and Matthey et al. (2003). However, in these studies,

Table 4. Summary of the regression analysis for variables predicting postpartum depression among new mothers (N = 165)

| Variable in the equation | *B* | *SE B* | *β* | *t* | *p-value* [LL; HL 95% CI] | *VIF* |
|---|---|---|---|---|---|---|
| Step 1 | | | | | | |
| Prenatal expectations (PES) | 0.047 | 0.010 | 0.336 | 11.468 | < 0.001 [0.027; 0.068] | 1.000 |
| Step 2 | | | | | | |
| Prenatal expectations (PES) | 0.053 | 0.011 | 0.373 | 4.706 | <0.001 [0.030; 0.075] | 1.158 |
| Maternal competencies (PSOC) | 0.072 | 0.048 | 0.099 | 1.248 | 0.214 [-0.042; 0.187] | 1.158 |

Note: *B* – non-standardized regression coefficients; *SE B* – non-standardized regression coefficients error; *β* – standardized regression coefficient.

Table 5. Summary of the regression analysis for variables predicting postpartum depression among new fathers (N = 106)

| Variable in the equation | *B* | *SE B* | *β* | *t* | *p-value* [LL; HL 95% CI] | *VIF* |
|---|---|---|---|---|---|---|
| Step 1 | | | | | | |
| Prenatal expectations (PES) | 0.059 | 0.026 | 0.218 | 2.281 | < 0.05 [0.008; 0.110] | 1.000 |
| Step 2 | | | | | | |
| Prenatal expectations (PES) | 0.037 | 0.027 | 0.139 | 1.396 | 0.166 [-0.016; 0.091] | 1.131 |
| Paternal competencies (PSOC) | -0.149 | 0.064 | -0.233 | -2.336 | 0.214 [-0.276; -0.023] | 1.131 |

Note: *B* – non-standardized regression coefficients; *SE B* – non-standardized regression coefficients error; *β* – standardized regression coefficient.

depression measurement tools other than EPDS (e.g., Center for Epidemiologic Studies Depression Scale or the Diagnostic Interview Schedule–Depression and Anxiety modules) were used to assess postpartum depression symptoms. Therefore, it is not possible to directly compare their results with the findings of the current research.

The choice of measurement tool appears to play a crucial role in recognizing postpartum depression symptoms, particularly among fathers. The Edinburgh Postnatal Depression Scale was originally developed as a screening instrument for mothers (Cox et al., 1987), but it has also been utilized in many cross-sectional and longitudinal studies involving men (e.g., Bielawska-Batorowicz & Kossakowska-Petrycka, 2006; Cameron et al., 2016; Edmonson et al., 2010; Figuereido & Conde, 2011; Pinto et al., 2016). Using the EPDS to measure postpartum depression symptoms in men offers the advantage of questionnaire statements that do not include references to somatic symptoms typically associated with biological and hormonal changes in postpartum women.

On the other hand, as suggested by Martin et al. (2013) fathers may express their depressive symptoms differently and due to a masculinity roles and expectations, they may demonstrate less tearfulness and rather more anger and irritability (Caldberg et al., 2018; Rutz et al., 1995; Martin et al., 2013). This could have influenced the answers given by men, and a lower total score does not necessarily mean low depressiveness, so the results should be interpreted with caution. Nevertheless, regardless of the measurement tool used, in current, as in other previous studies, attention is drawn to the average values of postpartum depression symptoms, which are higher among mothers compared to fathers. It is worth noting that the prevalence rate of postpartum depression symptoms in current study are also higher for mothers than for fathers.

The next two objectives served to determine whether fathers and mothers differ in terms of the discrepancy between prenatal expectations and reality after the child is born and their sense of parental competences. These differences occur in the case of both analyzed variables.

First, higher parental competencies were observed in fathers compared to mothers. This result is surprising. Rather, either no difference was expected, as in the Portuguese (Nunez et al., 2023) or Australian (Gilmore & Cuskelly, 2008) studies, because the participants were first-time parents, so both mothers and fathers had no prior experience in childcare. Because the parenting sense of competence measured in the current study referred to the judgments that parents hold about their abilities as caregivers, it may be that lower maternal scores are associated with greater severity of postpartum depressive symptoms, as described above. Such a relationship was noticed in previous studies (Huang et al., 2023; Kossakowska, 2017). However, to correctly interpret these results, factors that were not analyzed and controlled in the present study should be considered. These factors include methods of coping with parental stress or difficulties related to the child's temperament or health, as well as social support. For instance, in studies with Chinese mothers and fathers, maternal competence, also measured by PSOC, was found to have a positive correlation with spouse support (Yang et al., 2020).

Secondly, in the study, first-time mothers obtained a stronger prenatal expectation discrepancy compared to first-time fathers for total scores and in two areas of expectations: concerning a child and a partner, but not for social functioning. The transition to parenthood is associated with numerous challenges that can affect the functioning of family and social roles (Lavesque et al., 2020). The promoted vision of parenthood often presents an unrealistic picture of the family after the child is born, which may influence the formation of unrealistic expectations. Confronting this idealized vision with reality reveals that the functioning of a family with an infant is associated with numerous difficulties for which first-time parents were not prepared. As mothers are more involved in caring for children, especially up to 1 year of age (i.e., due to breastfeeding), they can confront this discrepancy between expectations and reality to a greater extent, as shown by the obtained results. The lack of differences in terms of expectations regarding social functioning is also worth commenting on. The PES Social subscale refers to the social functioning of new parents, including their ability to find free time for themselves and ask friends for help. It contains statements such as "In spite of many duties, I am able to find some time for meetings with my friends," "After the birth of my child, I am as much an attractive social partner as before delivery for my friends," or "I can call on my friends for help." The lack of differences in this factor between the surveyed mothers and fathers can be explained in two ways. On the one hand, fathers may not experience significant discrepancies because they are probably less affected by limitations in leading a social life. Fathers are more likely to remain professionally active after having a child, while mothers take maternity leave (The European Labor Force Survey, 2006). Professional activity, in turn, is associated with social contacts, which may serve as a counterbalance for the feeling of loneliness and isolation typical of the first period of parenthood, when most activities revolve around childcare and social activity is reduced. On the other hand, it can be assumed that women preparing for the first period of motherhood are focused primarily on issues related to the child and the functioning of the family, including their relationship with the infant's father. Therefore, their expectations relate to a lesser extent to social life, and thus they experience less disappointment in this area.

Finally, the findings concerning identifying the best predictors of postpartum depressive symptoms for first-time mothers and fathers indicate that there are differences in each group. In the case of mothers, the symptoms of postpartum depression were solely conditioned by the prenatal expectations of discrepancy, and the level of parental competencies did not change this relationship. Previously, the discrepancy between prenatal expectations and postnatal reality was found to be a predictor of vulnerability to postpartum distress and depression for women by Marshall (1993).

A positive relationship between prenatal expectation discrepancy and postpartum depression symptoms was also found in fathers, but it ceased to exist if they had a high sense of parental competence at the same time. It seems, therefore, that this failure to meet expectations from the prenatal period in relation to postnatal reality is particularly burdensome for the mental health of new mothers. The arrival of a child brings about many changes in the current way of life. If the mother was not cognitively prepared for the challenges of caring for an infant, the accompanying sleep deprivation, and emotional and physical overload, the experience of such an unforeseen new reality may increase stress, anxiety, and eventually lead to the appearance of depressive symptoms. Then, the sense of parental competence, which generally correlates negatively with postpartum depression (Dlamini et al., 2023; Kossakowska, 2017), seems to lose its protective meaning.

On the other hand, another characteristic seems to accompany men in the early stages of fatherhood. Unfulfilled expectations from the prenatal period coexist with symptoms of postpartum depression, but if, additionally, paternal sense of competence is low, the discrepancy of expectations ceases to have a significant impact on depressive symptoms, and it has the entire share in their occurrence. Since the relationship between depressive symptoms and the discrepancy in prenatal expectations is bidirectional, the results can also be interpreted in a positive perspective. In this case, a high sense of competence among fathers seems to protect against depression symptoms. It is probably easier for fathers to adapt to the challenges of the new role and cope with potential difficulties. In addition, if a parent feels competent, they are more likely to engage in activities related to childcare, and greater involvement is beneficial for paternal mental health. In a study by Bamishigbin et al. (2020), fathers who spent more time with their infants declared higher paternal self-efficacy and had lower depressive symptoms one year after the child was born.

The results described above seem to be of practical importance. Professionals dealing with expectant and brand-new parents should consider the gender of the parent in dedicated interventions and preventive actions. For example, childbirth school programs should include issues related to expectations related to the transition to motherhood, with particular emphasis on information that the socially created and promoted image of motherhood, including on social media, is not always problem-free. In turn, medical personnel (gynecologists-obstetricians, midwives, pediatricians) should provide greater support to fathers in their decisions and actions, as it enhances their sense of effectiveness as parents. Encouraging paternal involvement and offering resources tailored to the specific needs and experiences of both mothers and fathers can contribute to improved mental well-being during the early stages of parenthood.

## Study limitations and conclusions

Despite the relevance of the current findings and their practical implications, the study has certain limitations that should be considered. First, the cross-sectional nature of the study precludes drawing causal conclusions, and prospective longitudinal studies seem to be necessary to explore the nature of the relationship between the variables. Additionally, this study should be repeated with larger, more representative samples to examine whether certain sociodemographic and child-related factors, such as parents' education, household income, or infant gender and temperament, influence the occurrence of postpartum depression symptoms. In further research, it is worth considering the use of a measurement tool other than the EPDS for assessing symptoms of postpartum depression in men. In addition to self-report measures, a structured clinical interview should also be used to confirm the presence of depression symptoms.

However, the results of the presented study confirm that the symptoms of postpartum depression affect not only mothers but also fathers. The factors accompanying these symptoms in mothers differ from those in fathers, which suggests that preventive and supportive activities for mothers and fathers at risk or experiencing postpartum depression should be appropriately tailored and matched to their specific needs and experiences.

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