

Paternal postnatal depression – a review

Wioletta Tuszyńska-Bogucka, Karolina Nawra

“And the third day I drowned in tears...”

Summary

Objective. Among the factors responsible for the occurrence of paternal postnatal depression, the following are the most frequent: biological factors (mainly hormonal changes), mental pathogens (mainly a specific personal profile, including neuroticism, perfectionism and obsessiveness, mental disorders and problems such as fear, anxiety or mental disorders, marital coincidence of depression, a high level of stress experienced and lower quality of sexual life in the postpartum period), and finally – socioeconomic status (mainly poverty, young age of the spouse, his low level of education and structural problems in the family). However, it should be noticed that the subject of paternal postnatal depression is relatively rarely taken up in research or discussed in specialist magazines.

Conclusions. However, due to the fact that postnatal depression, both in mothers and in fathers, greatly impacts the life of the child and the functioning of the family, it seems that this area of research is of crucial importance. The identification of risk factors of depression in new fathers may not only lead to a more profound understanding and description of the ethiology and symptomatology of paternal postnatal depression, but also to distinguishing a risk group in order to provide it with professional prophylactic and therapeutic care.

**paternal postnatal depression / predictors of postpartum depression / ethiology
and symptomatology of paternal postnatal depression**

INTRODUCTION

Currently, in research studies, in widely available guidebooks, the so-called “women’s magazines”, and also clinical practice, much attention is devoted to Maternal Postnatal Depression (and derivative disorders, e.g. the widely known today “baby-blues”). The psycho-social problems of “new” fathers have been ignored to a significant extent, which is why postnatal depression is a hugely unknown phenomenon, and as such, attributed only to women. It seems to be quite similar to culturally constructed beliefs about typical parenting behaviors, models of activities or specific problems [1]. This approach to

problems of “young fathers” proved to be quite wrong, as research shows that fathers are equally affected by postnatal depression and stress connected with babies coming into the world as mothers, but they receive much less social support. Furthermore, it is the father that is burdened with the responsibility of providing a sense of security and proper living conditions. Men need to adapt to changes in their lifestyle, the functioning of the family, and their new role in the family, and they often cope with their partner’s postpartum depression. This growing male problem can be confirmed by the fact that, e.g., the SadDaddy.com website is visited daily by three thousand men seeking help¹

Wioletta Tuszyńska-Bogucka, Karolina Nawra: Department of Educational and Family Psychology, Maria Curie-Skłodowska University of Lublin. **Correspondence address:** wioletta.tuszyńska.bogucka@wp.pl

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Due to the fact that postnatal depression, both in mothers and fathers, hugely affects the life of the child and the functioning of the family, it is a research area of a significant importance. The identification of the risk factors of depression development in new fathers might not only contribute to establishing a risk group which then may be provided with professional care, but also to learning more about the etiology of paternal postnatal depression. When we learn about the causes and symptoms of paternal depression, we are close to establishing an effective method of diagnosing, creating preventive programmes, and suitable care for new fathers, and, in a broader perspective, also to the basic and most important social group – the family.

RESEARCH ON PATERNAL POSTNATAL DEPRESSION – A REVIEW

In a clinical sense, depression in an affective mood disorder, which has a destructive, serious and long-term influence on physical, mental and behavioral experiences [2]. The symptoms of postnatal depression are similar to, or the same as, depressive disorder, and a characteristic feature of postnatal depression is the period when it occurs – after the child is born, and also the presence of thoughts and emotions connected with the relationship with the baby [3].

In the International Statistical Classification of Diseases and Related Health Problems, ICD-10, it is incorporated in the group of “mild mental and behavioral disorders associated with puerperium” and not elsewhere classified, or, depending on the state of the mother or father, in one of the codes defining the affective mood disorders F30 – F39, whereas in the DSM-IV [4] postnatal depression was included under “affective disorders due to a general medical condition” [4, 5]. According to both classifications, the DSM, and ICD [6], postnatal depression is a disorder occurring in the first few weeks after the baby is born (up to four weeks postpartum). However, many researchers and clinicians engaged in this field emphasise that it can occur within the first year, especially when fathers are concerned. In the case of mothers, depression usually occurs at the early postnatal stage. How-

ever, the evidence shows that postnatal depression occurs in men, but most often emerges later on, often after it appears in women. The symptoms are depressive or sad mood, a substantial decrease of activity, loss of interests, significant weight loss or increase, insomnia or increased somnolence, psychomotor or mental agitation, fatigue or low energy, a sense of worthlessness or guilt, poor concentration or ability to think, and recurring thoughts of death [7, 8].

In order to diagnose depression you need to observe at least five of the above mentioned symptoms, experienced for at least two weeks, and the symptoms occurring should include a depressive or sad mood or significant or complete loss of interest and pleasure from almost all activities. However, these are also the criteria for maternal depression. Accurate diagnostic criteria for male postnatal depression have not yet been developed. The creation of similar diagnostic criteria for paternal depression is a significant step in allowing better diagnosis of the disease and further research in this area [4, 9].

It seems, however, that these symptoms are also present in young males suffering from Paternal Postnatal Depression (PPND). In addition, men can display different depressive symptoms from women [10], which is why paternal depression might not be identified using the available diagnostic tools. Other symptoms of depression in fathers may include: withdrawal from social interactions, indecisiveness, cynicism and irritability, and also avoidance behavior, alcohol abuse, drug use, extramarital sex and violent behavior towards the partner. Male emotions might occur more as fear or anger than sadness [11]. When no uniform assessment criteria are available, the symptoms of paternal postnatal depression may be misunderstood. For example, irritability in a young father is more often assigned to sleepless nights due to the baby’s crying or to exclusion from the mother-baby bond than to the symptoms of depression [9]. Similarly, working late, away from the family, may be seen as a desire to fulfil the traditional role of a man – provider and breadwinner – and not as avoidance behavior indicating depression [10].

The epidemiology of depression in fathers has until now been discussed in relatively few studies – e.g. in the years 1980-2009 this issue was mentioned in literature 256 times, nevertheless,

only 60 studies met the methodological criteria of correctly prepared research projects [12]. It was indicated that 4 – 13% of new fathers suffer from postnatal depression [13]. However, as Goodman's meta-analysis shows [14], depression which lasts from several months to a year occurs in 1.2 – 25.5% of men in a random sample, and even from 24% to 50% of men whose partner was diagnosed with postnatal depression. Results obtained by Paulson & Bazemore [12] indicated that the frequency of depression among fathers reaches even 14% in the total population (which, compared to the 20% of women showing signs of postnatal depression, is a very considerable number). The highest depression rates were noticed in the period between the third and sixth month postpartum (25.6%), and the lowest in the first three months of the child's life (7.7%). Soliday et al. [15] stated that 25.5% of the total number of fathers with postnatal depression, 69% were diagnosed with mild depression, and 30.8% with moderate depression. When the length of the depression was considered, it was found that among the 10% of fathers who were diagnosed with depression six weeks postpartum, 54% suffered from depression at least for another six months [16]. Another study showed a similar regularity - 60% of fathers with diagnosed postnatal depression 2 months postpartum suffered from it for another six months [17].

BIOLOGICAL RISK FACTORS (PATHOGENS) OF POSTNATAL DEPRESSION AMONG FATHERS

Risk factors have been defined generally as the characteristics, variables or threats which, if they occur in relation to a given person, make it more probable that disorders will develop in this person, and not someone chosen from the total population [18].

Only a few studies concerning biological factors contributing to the development of paternal postnatal depression exist, despite extensive literature relating to the biological risk factors of postnatal depression among mothers. Maternal postnatal depression seems to be connected with the level of hormones such as estrogen, oxytocin or prolactin [3]. On the basis of the knowledge about postnatal depression among mothers,

a hypothesis has developed which states that the depression suffered by fathers may be caused by hormonal changes occurring during the pregnancy and the postpartum periods [19].

Research has shown that paternal postnatal depression might be connected with changes in the man's testosterone level, which is lower during the pregnancy and postpartum of his partner [20]. During the tests the level of testosterone in men began to decrease at least several months before the delivery and it remained at that level at least several months after in most fathers [21]. Some researchers suggest that such a drop leads to less aggression, serving the creating of a stronger bond with the newborn [21]. Fathers whose testosterone levels were lower expressed more compassion and the need for reaction when they heard a crying baby [20]. Also, research carried out among older men indicates a significant correlation between a low level of testosterone and the frequency of depression, e.g. men aged 45 to 60 with clinically diagnosed depression show lower levels of testosterone than healthy men [21].

Another predictor of paternal depression may be a lower estrogen level. Among men, the estrogen level increases during the last month of their partner's pregnancy until the early postpartum period. Taking into consideration the conclusions concerning the relation between the increase in estrogen levels and the behavior of mothers, the increase in estrogen in fathers can cause a desire for more parental activity after the baby is born [22]. Moreover, Fleming et al. [20] claimed that the higher the father's commitment to the upbringing, the higher the level of estrogen in comparison with other fathers. Perhaps the unbalanced estrogen levels in fathers might constitute another important risk factor in paternal depression.

Paternal depression may also be connected with a lower cortisol level, a hormone which regulates physiological reactions to stressful experiences. A high level of cortisol usually correlates with a high stress level. However, in the case of a mother in the early postpartum period, it corresponds to her increased sensitivity in relation to the child, and a lower level of depression. Thus, a lower level of cortisol among some fathers might be connected with their dif-

difficulties in connecting with the child, and low mood [23].

Another hypothesis concerning paternal depression is connected with a low level of vasopressin, whose level rises in the total population of fathers after the child is born analogically to the levels of oxytocine in the mother [24]. Paternal behavior in the first month of the baby's life is connected with a rapid growth in the vasopressin receptors in the prefrontal cortex of the brain. This specific area of the brain is important for planning and organisation of the parents' behavior. Fathers with low vasopressin levels might have difficulties with parental behavior and be more prone to depression [25].

Paternal depression may also be connected with changes in prolactin concentration. Prolactin is significant for developing and sustaining parental behavior. Its concentration increases in the period of pregnancy and grows further in the first year after the baby is born. A high prolactin level is connected with higher responsiveness to the stimuli from the newborn among new fathers. Thus, a lower level of prolactin can cause difficulties in adapting to parenthood, which results in a higher level of negative moods [19].

PSYCHOLOGICAL FACTORS (PSYCHOPATHOGENS)

Personality. Among the personality characteristics which might be responsible for depression in women, there is neuroticism, also connected with introversion [26] and obsessiveness [27]. Research has confirmed that also in men high levels of neuroticism are indicators of depression within the first year after the baby is born [7]. In their study, Dudley et al. [28] confirmed that fathers who experienced symptoms of depression were much more withdrawn and had less mature defensive styles than the fathers who did not suffer from depression. However, it should be emphasised that the personality area in such studies is so vast that surely new research will bring new, unexpected conclusions.

Marital coincidence of depression. Beck's meta-analysis [29] indicates a highly significant correlation between postnatal depression in fathers and previous postnatal depression in mothers.

According to Goodman [14] the probability of depression in men whose partner has postnatal depression is significantly higher, and it ranges from 24 up to 50%.

Previous occurrence of the disease. Another important risk factor identified by the scientists is an event when persons themselves suffered from depression, or other psychiatric disorders. Studies show that the depression rate of fathers who suffered from mental disorders before and/or during the pregnancy was higher 3 and 12 months postpartum, and exhibited a higher stress level 3 and 12 months postpartum. Men who had depression also frequently experienced a high level of anxiety and fear during the pregnancy of their partner [9].

The most common mental disorders co-occurring with depression in the postnatal period shown in research are fear and obsessive-compulsive disorders (OCD). Studies on the experiences of fathers transiting to parenthood showed that approximately 10% of the fathers had considerably higher levels of anxiety and fear [17]. Matthey et al. study [9] showed that, in comparison to men without the fear problem, men exhibiting such problems were 30 to 100% more prone to depression.

Obsessive-compulsive disorders occur both in mothers and fathers. Typical postnatal OCD includes obsessive thoughts in relation to the baby (e.g. about harming the child) and/or compulsive behavior (such as constant checking if the baby is all right). Studies conducted by Abramowitz, Moore & Carmin [30] demonstrate that depression and high fear levels during the year postpartum might be correlated with OCD. In this study, 45% of fathers reported frequent fear that their children might suffocate, 25% reported fears about unintentional harm to the baby during daily care, and approximately 3% of men reported fears of losing their children. Fathers frequently reported somatic symptoms and mental problems occurring during the postpartum period, including excessive fatigue, irritability, nervousness and insomnia, which affected the probability of depression [31]. Psychopathologic symptoms before and during pregnancy should then be treated as risk factors for long term depression and higher psychosocial stress in fathers during the transition into parenthood.

Support versus stress. In quality studies on postnatal depression mature men reported the following symptoms connected with lower mood postpartum: fear, disorientation, constant concern for their spouse, frustration, anger, helplessness, uncertainty about tomorrow, the necessity for sacrifice, a disturbed family, social and recreational relations, and financial problems [32]. Fathers who felt less supported by their partners, and those noticing a greater change in their partner and in their relationship postpartum, had a more negative attitude towards the role of the father and indicated bigger adaptive problems postpartum [33].

A high stress level occurring after the birth is connected with depression. Moreover, gender differences can be clearly distinguished. The most stressful area for fathers is work, whereas for mothers it is the domain of the family [9].

An interesting study concerning aiding fathers with postnatal depression was conducted by Letourneau et al. [33]. The aim of the pilot study was to describe the experiences, the need for support and the available resources and obstacles connected with support. It was the first and so far the only widely available study which entirely related to the need for the support of fathers suffering from depression. The sample consisted of eleven fathers. Most of them experienced a variety of symptoms of depression, including fear, sleep disorders, fatigue, irritability, sadness, appetite disorders and concerns about harming their child. The fathers described feelings of their own helplessness and doubts, and they felt they could not help their partners. Frequently, they experienced feelings of anger, frustration, even fury, often at being unprepared for the possibility of postnatal depression occurring in their lives. They indicated that their feelings depended on various factors, including the baby's health, the family situation, and also work or finances. Lower income due to maternity leave and bigger expenses connected with the baby were characterised as stressful for some of them. Others reported loss of freedom connected with the new responsibilities imposed by parenthood and marital conflicts as reasons for their blues. Some fathers described the flight into work as a defensive mechanism, others, being active, exercises, going out or withdrawal, or isolation from their families.

Fathers reported numerous needs for support for themselves and their families. Access to information on PPD and professional health services for their partners were identified as important needs. It turned out that having a person who would listen to the fathers' problems and talked to them (both friends and professionals) was crucial.

Research conducted by Zelkowitz and Milet [17] showed that mental symptoms of depression are positively correlated with the number of stressors and negatively correlated with the number of people giving support. Fathers whose spouses were diagnosed with depression reported more stressors and less social support than fathers whose spouses did not suffer from depression. The fathers reported mainly stress connected with the family, work and finances. Fathers whose spouses were diagnosed with depression reported less sources of support (mainly from their parents-in-law, other relatives and friends). The stress was primarily connected with concerns about losing marital intimacy and stability.

Sex postpartum. During this time, fathers report increased dissatisfaction from the relations with their partners, including lack of intimacy, and losing interest in sex life by their partner [34]. Olsson et al. [35] conducted studies aiming at describing the sex life of fathers 6 months postpartum and a subjective interpretation of their experiences. The qualitative approach was adopted the study. The method chosen was focus group discussion and one-to-one interviews. The study showed that young fathers were prepared for a break in sexual intercourse after the baby was born. They were ready to postpone sex until both partners felt comfortable and until their marriage adapted to the new family situation to the extent that they felt secure in intimate situations again. However, men showed a huge need to communicate and talk about intimate relations, and also other types of closeness, such as touching or hugging, which departs from the male sexuality stereotype. The main non-physical reasons for postponed intercourse included their partner's fatigue and a negative image of their body after pregnancy [35].

In their study on the validation of the Edinburgh Postnatal Depression Scale in relation to fathers, Matthey et al. [9] claimed that most fa-

thers refrain from crying, even though they often feel the need.

DEMOGRAPHIC, SOCIAL AND ENVIRONMENTAL RISK FACTORS (SOCIOPATHOGENS)

Marital and family relations. One of the main stress factors in the young fathers' sample was a subjective feeling of change in relations and the functioning of the relationship. Stress connected with relations with the partner can greatly influence the father's mood in the postpartum period. Sudden changes in life related to the first child's coming cause huge disturbances in marriages. During this time, fathers reported increased dissatisfaction with relations with their partners, including lack of intimacy, and also their partner's lack of interest in their sex life [34]. Pregnant women and their partners who noticed numerous negative aspects in their relations had a higher level of fear and an increased probability of depression in comparison with couples who positively assessed their relations. The quality of relations affected the level of fear and the probability of depression, and the level of fear, and the occurrence of depression influenced the quality of relations. In cases when partners lived apart or the pregnancy was unexpected the probability of chronic fear and depression in each of the partners was much higher [36].

Some studies also showed that the quality of relations with other people from the surroundings, especially the in-laws, had a great impact on the degree of commitment of fathers in parenthood, and on the level of satisfaction from being a parent [37].

Another factor was the difficulties in creating an emotional bond with a newborn. Mothers bond with their child almost automatically postpartum; however, this process is spread over time and sometimes quite difficult for fathers. In most cases, this bond is created within the first two months postpartum. This discrepancy might lead to the fathers feeling lost, helpless and perhaps feeling low during the first months postpartum [38].

Roles. Social perceptions about the roles of the mother and the father are quite meaningful. Fathers are usually burdened with the role of the "breadwinner". When the baby is born, fi-

nancial burdens grow, and fathers often have to get more engaged in their work, which in turn can limit the time they spend with their family. The psychological burdens connected with work and finances leads to a depressed mood in young fathers during the postpartum period [38]. Men nowadays face different requirements for the role of a father than even a decade or two before. One of the main problems of managing the new role is the absence of a model to follow. Young fathers often lack the ability to meet all their child's and partner's needs, especially in the emotional sphere. Lack of understanding of what is expected of him as a father might cause anxiety, especially with the firstborn, which can increase the risk of paternal depression [39].

In the study, after the birth of the firstborn, young fathers exhibited frustration caused by the lack of positive reinforcement during the care of the newborn. However, this problem almost completely disappeared after some time. Fathers with more than one child said that the biggest reward for caring for their child was their smile. However, fathers who lacked experience in raising children and who spent less time with their newborn, entered the relationship with their child very nervously, not knowing what to expect. Fathers also showed envy of their partner's dominance in intimate relations with the children and the time spent with them, especially during breastfeeding. They also reported feelings of jealousy towards their children, because they absorbed most of their partner's attention [14].

Age. The youth of the fathers negatively affects the marital situation, and also the effective and satisfactory entering into the role of a father. Parenthood, along with pursuing a career, often overwhelms the young father, negatively influencing the satisfaction from being a parent. Only when turned forty do fathers possess a greater ability to reconcile the role of a parent with a career, and derive more satisfaction from being a parent [40].

Socioeconomic status. Currently, it is one of the most important research domains on postnatal depression of both parents, but specifically fathers. When it comes to women, a connection between postnatal depression and negative SES elements was identified [41]. Studies conducted by Bielawska-Batorowicz and Kossakowska-

Petrycka [42] show that risk factors contributing to postnatal depression in men were current situational factors, and not individual personality features. A (positively verified) hypothesis was posed stating that the level of neuroticism is less connected with the risk of postnatal depression among men than the following factors: partner's depression, marital conflicts, insufficient social support, financial commitments and unfulfilled expectations concerning the care of the baby. Fathers experienced most stress in the areas connected with work, mothers in the areas connected with family life. No significant differences between mothers and fathers concerning overall feeling of stress were identified. Moreover, Deater-Deckard et al. [43] studies show that a lower level of education, and unemployment, was connected with a higher level of depression symptoms postpartum.

Much higher levels of depression were evident in fathers who did not live with the mother of their child, or those who had to rent living quarters with their families, and also those living with their relatives or strangers in flats/houses [43].

An important reason for stress mentioned were the finances of the family [36]. Bielawska-Batorowicz & Kossakowska-Petrycka research [42] show that among men who assessed their economic situation as "poor" there was a much bigger percentage of depressed fathers than among men who assessed their economic situation as "good".

CONCLUSIONS

To sum up, it should be emphasised that the connections between dysfunctions and risk factors are very compound, it is very rare that one risk factor is connected to a specific disorder; an influence of the risk factors may change along with the change of the state of an individual, and the exposure to numerous risk factors usually has a cumulative effect [44].

Furthermore, emphasis should be placed on the fact that there are no diagnostic criteria developed which would allow defining and diagnosing paternal postnatal depression. Developing such criteria is a crucial step towards better diagnosis of the disease and further research in

this field [9]. In the research carried out the paternal postnatal depression was defined, diagnosed and assessed using diagnostic criteria and tools developed for maternal postnatal depression, which nonetheless was considered a reliable procedure in this case [13].

Another controversial subject constitutes a question whether diseases occurring postpartum should be treated as separate nosological units or types of different, less specific mental disorders, such as affective disorders or schizophrenic psychoses occurring accidentally during the postpartum period [45]. Kumar & Brockington [46] claim that birth should be perceived as a stress-inducing event, as any other "life accident" which may cause an attack of a disease from the whole spectrum of mental disorders. Currently, this view is very popular. Various clinical disorders occurring postpartum and a variety of the symptoms of diseases which start after birth seems to confirm this view [46].

Due to the fact that research suggests that parental depression is a factor influencing the development and/or functioning of children [39, 47-56] it seems that, despite the methodological problems, it is worth conducting research in the discussed area.

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