www.jpnim.com Open Access eISSN: 2281-0692
Journal of Pediatric and Neonatal Individualized Medicine 2013;2(1):15-27
doi: 10.7363/020106

Review

Postpartum depression and the male partner

Anna de Magistris[1], Mauro Carta[2], Vassilios Fanos[1]

[1]Neonatal Intensive Care Unit, Puericulture Institute and Neonatal Section, University of Cagliari, Italy
[2]Department of Psychiatry, University of Cagliari, Italy

Abstract

Background: Numerous studies have shown that postpartum depression is a phenomenon that develops in a family, social and economic context capable of influencing its course.

A predominant role in the onset of the pathology is played by the relationship of the couple, but up to now few studies have been carried out on the role of the partner of the depressed mother and on the interactions between the two partners, that is, on how maternal depression influences the behaviour of the male partner and is in turn influenced, and how the depression of both parents, and not only that of the mother, influences the neuropsychic development of the child and the interactions between the child and the outside world.

Objectives: The objectives are to examine the literature to arrive at an understanding of how the father figure develops during the pregnancy and how postpartum depression impacts on the couple's relationship and the care of the children by both partners.

Materials and methods: This article presents a review of recent literature on the subject through a search for articles in Pubmed and Sciencedirect (keywords: men, postpartum depression, fathers, couple, prediction, detection), and by referring to classic texts in the fields of psychiatry and psychotherapy on the development of the parental figures.

Conclusions: Although up to now the literature on the consequences of postpartum depression on the couple is scanty, the data collected allow us to affirm that it is not a problem that concerns only the mother, but one that has an impact on the entire family, on the child and the partner, triggering a chain reaction of maladjustment and distress that may lead to separation and destruction of the family unit with important repercussions on society as a whole.

Keywords

Depression, delivery, father, mother, couple, child.

Corresponding author

Anna de Magistris, Neonatal Intensive Care Unit, Puericulture Institute and Neonatal Section, University of Cagliari, Italy; annademagistris1981@gmail.com.

How to cite

De Magistris A, Carta M, Fanos V. Postpartum depression and the male partner. J Pediatr Neonat Individual Med. 2013;2(1):15-27. doi: 10.7363/020106.

Introduction

Postpartum depression (PPD) is an important public health problem, one that undermines the health of the mother but also of the child and future adult [1]. Its diffusion is probably underestimated [2, 3]. There may be a neuroendocrinological explanation for it [4] as the final cause of the problem, but the present state-of-the-art does not consent to delineating it clearly.

Within the spectrum of postpartum depression [5] we include the baby blues, with onset at five to ten days after birth, characterized by a symptomatology of profound moodiness, which disappears by itself; true postpartum depression, with onset between the fourth and sixth week after birth according to the DSM IV, and an incidence estimated at around 10 to 15% of new mothers, and the rare but serious puerperal psychosis, with onset within the first two weeks from birth, often the first manifestation of a bipolar illness or, more rarely, of a schizophrenia.

This important collection of information is placed in discussion by the most recent acquisitions. Indeed, although most studies calculate the percentage of cases of postpartum depression at around 10% [3], some authors find a prevalence of 30 to 40% [2, 3] and it is thought that most cases elude clinical observation owing to the reluctance of women to discuss this problem.

Moreover, the endocrinological and genetic components may interact with the environment in a complex way, thus making it difficult to distinguish between cause and effect [6].

Finally, as mentioned above, postpartum depression is not a problem that involves only the woman, but also her partner and the child, which is to say the entire new family that comes into being [1, 6-8].

The effects of PPD on the child's neuropsychic development have been studied exhaustively [1, 8], while very little is known about the effects on the man and the couple. The purpose of this review is thus to provide data and observations to facilitate the understanding of the passage to normal and pathological paternity, thanks to the analysis of available literature.

Materials and methods

The articles examined were those present in Pubmed and Sciencedirect, using as keywords men, postpartum depression, fathers, couple, prediction and detection, using articles and books in English, Italian and French, giving priority in most cases to the period between 1996 and 2012, keeping in mind that in the literature available to us there are often important methodological limits such as, for example, the scarcity of studies on a large enough sample and in some (the most important is that of Condon [7]) the absence of a control sample.

One birth or more than one birth? The psychological bases of the transition to parenthood

According to Daniel Stern [9], during the pregnancy the child models its relationship with its mother and shows the capacity to determine important changes in maternal personality. Paraphrasing Stern [9], we can state that in the period in which the child prepares for birth, the new parents are born with it.

Cristina Trentini analyzed the neurological and neuropsychic foundations in her recent book "Rispecchiamenti" [10] discovering that empathy, that is, the wordless dialogue that begins between mother and child from birth, models all the structures and cerebral functions involved in emotive processes.

It is a passage known in psychology as the "transition to parenthood" . It is a difficult test, but not an immediate one, one that is not created from nothing but is influenced by previous experiences of the couple and conditions its future experiences.

The Cowans (1992) [11] defined such changes appropriately as the "passage from the alcove to the nursery". To deal with the changes brought about by the birth of a child, each of the parents must redefine his/her own spaces and functions so as to create others for the new arrival; this is possible only if each partner has reached an acceptable degree of differentiation from his/her own parents and has created a relationship with the partner based on intimacy and empathy

That means that a relationship that is not firm before the pregnancy is very difficult to be strengthned after. On the contrary, it will be challenged by the changes the pregnancy carries in itself [11, 12].

What are these changes?

Firstly, the physical appearance of the woman [11]. Many men are proud of the physical transormation and succeed in giving her all the support and reassurance she needs; others find it difficult to accept and assume a critical attitude, thus making it distressing for the woman to accept the

changes in her shape and size, with the result of her feeling ashamed of her appearance or embarrassed by it.

It is known that during pregnancy a woman regresses in many ambits of her psychic life: one of the results of this phenomenon is the increased need for dependency experienced more or less consciously. The man can answer to this need more or less properly, and these answers influence the relationship and the emotional stability of the couple, positively or in a negative way.

This aspect is quite important, but it is just as important for the woman to perceive that the difficulties she is facing are the same as those of her partner, who also feels anxiety and lives in a new situation.

Furthermore, the couple's relationship undergoes a complete change since it reduces sexual activity for several reasons [13]:

- initially due to reduced sexual desire in the pregnant woman;
- later due to the fear of both partners of harming the child;
- finally, another more subtle psychological impediment that induces the future parents to avoid sexual intercourse sets in: it is connected with the changes in the identity and roles of both: the husband and wife are now father and mother and in their minds arises the taboo that parents cannot assume certain attitudes, a taboo that is perhaps more deeply felt by the man in relation to the new mother.

That the experience of pregnancy influences the onset of PPD is a fact that has now been acquired. In one of our recent experiments [14] only two variables emerged as statistically significant risk factors for PPD in the woman: experiences during pregnancy (problems of health, problems of the future child's health, the couple's relationship and the parental figures prior to pregnancy) and the state of the neonate's health.

But the most important psychological change concerns the challenge of the parents to modify their relationship so as to include a third person in it. This is first and foremost the task of the mother, and through her also of the father.

Stern [9] speaks of two precise "triangles in movement" in the psychological scenario of the pregnant woman: the first consists of mother-father-child and the second composed of mother-child-maternal grandmother (thus emphasizing the importance for the woman to identify herself with her mother and go from the status of daughter to that of mother). Ammaniti [15], in the introduction to his book "La gravidanza fra fantasia e realtà" points out that the reality perceived concerning oneself and the foetus is experienced, communicated and shared by the expectant mother with the person closest to her.

The steps in the transition to fatherhood

The transition to parenthood differs in times and ways between father and mother [7].

To quantify and comprehend the implications of the transition to fatherhood and its stages, Bartlett [16] analyzed the articles on Medline between 1966 and 2002, using the keywords father and fatherhood, and choosing population studies and cases in English. Despite several methodological limits in the available literature on the subject, this work allows us to state that:

- the social construction of fatherhood is in the process of redefinition,
- the father's role varies with the social context,
- the reactions and relationships differ depending on the number of children: the most important change obviously takes place during the pregnancy and birth of the first child [17-19].

Fatherhood is a social role with cultural and biological grounds.

In the past, many studies have concluded that the creation of a family improves health and longevity, especially in male partners. One of the possible explanations is that becoming a father improves, strengthens and formalizes a man's social network [16].

Bartlett proposes a simple and interesting train of thought, identifying five moments in a couple's life when the transition to parenthood takes place: pregnancy, childbirth, the period immediately after the birth and the later stage of exercising parenthood and (in the case of divorce) custody of the child.

Pregnancy

The news of a pregnancy causes an uncontrolled explosion of emotions, from euphoria and pride to anxiety for the increase in financial responsibilities. According to some authors, this period, especially in its initial stage, is for the man more stressful than the period following birth [12]. If it is true, as stated previously, that the formation of the new family

strengthens the individual, it is also true that in subjects with a weak psychic equilibrium, it may be a factor that activates underlying vulnerabilities [20].

Lemmer [21], through a review of the literature on the effects of pregnancy on fathers, identified certain common themes: the ambivalence of the father in the first period of pregnancy, the existence of the child which becomes truly real only in the final three months and causes the fathers to feel more involved and touched by questions such as financial security, the change in marital and sexual relations and adjustment to the role of fatherhood.

Scholars do not agree on establishing the moment at which the transition to fatherhood begins. According to some [20], the mental process of accepting a possible fatherhood begins in infancy, together with what takes place in the woman, and goes through three stages: recognition of the maternal generative capacity, identification with one's father and elaboration of the three-fold relationship in which the child realizes that he/she is a part of the family triangle, attributing to the parents the relationship of a couple and thus procreation as the fruit of their relationship. According to others [22], contrary to the woman, the acquisition of gender identity is not connected with the generative capacity, that is, it has been found that male adolescents are quite attentive to the sexual aspect of intercourse and do not focus, as do their female counterparts, on its reproductive aspect.

In any case, there is general agreement on the fact that once pregnancy has begun, the first to internalize and create a mental space for the unborn child is the woman, since she is in direct contact with the child from the very first moment of its life and experiences it as real.

The man needs more time to perform this transition, which must be mediated by the woman's body for its realization [22]. According to most authors [20, 23], following an initial reaction of shock or joyful surprise, depending on the circumstances leading to conception, awareness of the existence of the child comes later the day of birth, when the woman's belly begins to swell; placing his hand on the belly the father feels the baby who begins to move, that is, in a period between the 16th and 20th week of pregnancy [20, 23, 24], or according to others [25-28] even later, when the child is born.

The parental couple should do together the journey of pregnancy.

So, when she announced the pregnancy to the partner, she "elects" the father of the child, while knowing the partner concerned with her helps women prepare for motherhood, making her feel less alone.

In this first stage of pregnancy we have the beginning of the mental process of transition to fatherhood which, according to Boyce & Condon, goes through different stages [29].

- Firstly, the man begins to feel an attachment to the foetus. This takes place between the 16th and 20th week of pregnancy. With the passing of the weeks, the involvement of the father tends naturally to increase, but this is affected by circumstances: depression is a factor that blocks this involvement, as does a difficult relationship between the partners. On the contrary, a welcoming attitude of the woman and her effort to communicate encourage the father's involvement [11].
- Secondly, the father realizes that the couple is moving towards becoming a family. To express it in psychoanalytic terms, this is the passage from the dyad to the triad, namely for the future father the first time he is forced to share with someone else the attentions of his partner, something that is not always easy to accept, especially together with the decrease in sexual activity typical of the period of pregnancy, as takes place in most couples [12, 13].
- Finally, the man must arrive at the point of becoming a father, that is, perceiving himself as father, as in building a fatherly mental identity of himself.

It's not always easy. A great obstacle in building this identity can be a bad relationship between the man and his father, or a childish perception that the man might have of himself.

Moreover, who is going to be a father nowadays, doesn't have cultural role models to look up to. The cultural revolutions have dismantled the model of fatherly figure, authoritarian and detached, that we used to know. Therefore a soon-to-be-father takes as a model a fatherly figure that doesn't match the archetype that our society still asks for.

On the contrary, it occurs that the role of the mother is idealized, that is, the mother figure is internalized in place of that of the father. The father is under the illusion that in this way he can have a role in his relationship with the child which, especially in the very first months of the child's life, is not his but that of his partner [28].

As analyzed previously, the transition towards fatherhood is not without distress since this is a

moment of major changes and pressures on the father figure. The father must at one and the same time be capable of acting as a support, the "container" of his partner and the child [12], of ensuring the economic stability of the family in formation and adapting to a change in habits and lifestyle, especially as concerns sex: according to the "First Time Father Study" [7, 28] which analyzed a sample of 312 new fathers using a battery of self-administered questionnaires that covered the psychological symptoms, changes in lifestyles and relations with their partners in four steps: at 23 weeks from the beginning of pregnancy then at 3, 6 and 12 months from the birth. The results revealed the presence of a substantial change in conjugal relations: the first surprising datum is the change in the frequency of sexual intercourse which decreased sharply: the couples who had sex only once a month or even less frequently went from 4% prior to the pregnancy to 25% during the pregnancy [8, 11]. At the same time, still according to the first time father study, there is a statistically significant decrease in satisfaction with conjugal relations measured with the Intimate Bond Measure (IBM) [30] and the Dyadic Adjustment Scale (DAS) [31]. In the same intervals a decrease was found also with Sarason's Social Support Questionnaire (SSQ) [32] both in the amount and quality of support in the relationship, but this was not statistically significant [8]. These data are in contradiction with what has always been thought, that is, after overcoming the initial shock, the couple succeeds in adjusting to the new arrival.

There are also the gender-specific risk factors for the distress experienced during the pregnancy (again Condon 2004) [8, 33]:

- a weakened support network around the child's father compared to that supporting the mother [27];
- a great increase in responsibility in the workplace and as concerns the financial aspect [11, 28, 29];
- a father figure that does not correspond to what today's society feels that the father's role should be [8];
- a greater idealization of maternity, the birth of the child and parenthood in comparison to the woman [33, 34];
- some cultural variables: i.e. the occupational status of the father, together with an history of psychic disturbances, has been found in correlation with paternal PPD in a Japanese sample. In the same sample a correlation with the mother's mood is not emphasized [35].

The form that is probably the most frequent and "benign" in expressing the distress experienced by the man is the "couvade syndrome" [36] (the "brooding" syndrome) or the sympathetic pregnancy in which the man, starting from the second or third three months and up to the birth of the child, has digestive disturbances (diarrhoea, nausea, vomiting), insomnia, moodiness, a spasmodic craving for certain foods, itchiness: in a word, all the symptoms of a pregnant woman.

Various explanations have been advanced for this curious, still poorly understood phenomenon: medical, such as the increase in the secretion of cortisol and other hormones that mime the behaviour of the female body at a lower level [36-38], and psychological, such as anxiety, identification with the foetus, jealousy towards the woman or the foetus itself [19]. In any case, the phenomenon appears to be far more frequent than is imagined.

In fact, according to the study by Trethowan-Conlon [39] conducted on 327 new British fathers and 221 controls (whose wives had not become pregnant in the previous nine months), symptoms indicating the couvade were present in 55.7% of the "expectant" men against 43.4% of controls, a statistically significant difference. Similar results are reported in the study by Lipkin and Lamb [40] in which in a sample of 267 men whose partners were pregnant, 22.5% spoke of a series of symptoms that corresponded exactly to the diagnostic criteria of the couvade. The couvade was diagnosed only if the correlated symptoms were present in the period in which the partner was pregnant, neither before nor after. The number of husbands of pregnant women who consulted a doctor was twice that of the controls.

The First Time Fathers Study [7] took into consideration a battery of tests such as the Beck test [41], the GHQ (Goldberg General Health Questionnaire) [42], the PANAS (Positive and Negative Affect Schedule) [43], the SAIS (Self Assessment of Irritability Scale) [44], the HSCL (Hopkins Symptom Checklist) [45], the AUDIT (Alcohol Use Disorder Identification Test) [46], the EPDS (Edinburgh Post Partum Depression Scale) [47] measured on a sample of 312 fathers, with the conclusion, among others, that during the pregnancy they were more depressed and irritable, they drank more alcohol, had more negative sentiments and somatized more. Following the birth of the child these results decreased in a statistically significant way. The correct interpretation of these

data is however seriously flawed by the absence of a control sample and we cannot state that the pregnancy in itself altered the couples' equilibrium. Indeed, as several authors have pointed out [11, 48], the relations between husband and wife during a pregnancy are influenced by their relationship prior to conception of the child. This is to say that a pregnancy is a period that is critical in a relationship and a couple's equilibrium.

The moment of the birth: Is it really necessary for the man to be in the delivery room?

The opinions of different authors on presence of the father in the delivery room are very discordant, and in the literature there are no solid statistical analysis that could lead to tip the balance to one side or the other [49-61].

In France in the 18th century it was the custom for the queen to give birth in public, a custom that was discontinued after the birth of Marie Therese Charlotte, the future duchess of Angouleme, during which her mother, Queen Marie Antoinette risked a collapse from the heat because the room was overcrowded [50].

There are not many other historically known exceptions, to keep men out of the delivery room, in which the women experience this moment as something extremely intimate and in the knowledge that this is a place when death and life touch each other.

"*In the past there were rituals that kept a man busy while his wife was giving birth: dozens of couvades have been described. A century ago, when children were born at home, the man was asked to boil the water for hours: it was one way to channel his energies and emotions and keep him away from the woman. In the past the man was never present. In all human societies the man was not present at delivery*" [50, 51].

Today, the opinions of the experts differ. Most tend to underscore the beneficial effects of the man's presence in the delivery room on stress management and on the beneficial effects that the man's vicinity has on the woman, on family relations in facilitating the passage from the dyad to the triad [54-56], on the bond between child and father which is facilitated by the latter's participation at the birth which, according to some, has a beneficial effect on the construction of a paternal identity different from the detached model that has been handed down, the offspring of an authoritarian and distant conception of the farther figure [54-57].

In 2010 a french study picked out the differences between the way the father and the mother live the presence of the father in the delivery room, and the delivery room itself.

Although the anxiety and fear are similar, the way the woman and the man perceive the presence of the man is different: the man feels useless whilst for the mother it is important to know that he is there.

These effects are thought to increase drastically when the father is trained to stay in the delivery room and has participated in the different stages of the pregnancy, observing the ultrasound scans and following preparatory courses for delivery [23].

Some scholars also underscore the importance that midwives should have in the delivery room as promoters of the presence of the father, who must be provided with the greatest comfort so that he can be the coach of the delivery [54-57].

However, others believe that the presence of the father in the delivery room is an obvious straining of a situation: in this way the attention of the operator is shifted from the physical protagonists of the delivery – the mother and child – to that of teaching *in situ* how the man should behave and reassure him concerning the woman's pain, which he evidently cannot control and which will continue independently of him fears [55-57].

However, there's no historical notion of a moment in which the presence of the man in the delivery room has been perceived as beneficial.

Perhaps we should reconsider the validity of assigning the same role to the father and the mother, in the education of the child. The father and the mother, because of their differences, are complementary, equally necessary and important for the education of the child, as exaustively studied by many psychoanalysts [58]. Vasconcellos [61] underlines that the tendency of "humanizing" the paternal figure makes him more like a super man. In all probability the concept of having the father play the same role as the mother in the upbringing and care of children is in contrast with what has been studied in depth by a large number of psychoanalysts [58] since it does not take into consideration the intrinsic difference between these two figures and their precious contribution to the child's upbringing, which is possible in consideration of the differences between the two figures, and is thus to be considered a concept based on mistaken premises.

Michel Odent, a surgeon and obstetrician, the head of the Maternity Ward at Pithiviers (France) from 1962 to 1985, a pioneer in the field of delivery

in water and the return to delivery "at home" or at least in a family environment, saw the creation of the delivery room at the origin of the father's participation during birth. When childbirth was transferred to the hospital under strict medical control the woman found herself thrust into an unfamiliar environment and a source of terror. It thus became logical for her to want the person closest to her – her partner – at her side [50]; a secondary reason for this is probably the passage from the patriarchal model of the family to a single-family nucleus, in which other figures of reference (the mother for example) are less present.

But what effect does this have on the male partner? And on the couple? In reality we do not know.

We concentrate, perhaps mistakenly, on the beneficial effect this has on the woman, which may help her to relax, and consequently may have a beneficial effect also on the child's health [59, 60].

However the strong cultural pressure that the fathers find themselves under, has to be kept in mind in regards of participating in the pregnancy and delivery, which lead to conflicting situations that often they do not understand. It's possibile to assume that this submission to a cultural rule conflicts with the anguish specifically related to the masculine gender identity.

Michel Odent, in an interview in ANEP [50] in October 2007, he stated that on the basis of his clinical observations: "*There is a verbal language of women giving birth and another non-verbal language that contradicts the former. Verbally, women say that they cannot even imagine giving birth without the presence of their partner and, after the birth, they say that his participation was important.*

But during delivery they demonstrate a different, non-verbal language that says the exact contrary. (…) in many cases of slow deliveries, everything accelerates when the partner leaves the room (...) Many women in the past gave birth with their mothers, or another reassuring figure who did not observe and did not judge, at their sides." [51].

In agreement with Odent, many authors believe that the father's presence during birth is in the long run associated with negative effects on the father and the wellbeing of the couple [62-72].

Several explanations can be given for this phenomenon:

- firstly, the most important fact is the woman's pain. Most studies concentrate on the enormous and positive emotive charge given by the moment of delivery; however, it's not possible to denie the fear and sense of impotence that fathers experience while observing their partner's suffering, her screams and the blood. Once again, according to Michel Odent [51]: "*there was a certain kind of divorce that was fairly frequent in couples who had gone through delivery together, when the father was very active, giving massages, drying the sweat, giving encouragement and becoming involved and so on. The sexual attraction disappeared, they separated but remained friends and took good care of the child*".
- Moreover, having experienced pregnancy with anxiety and witnessing a caesarean section or in any case a long and difficult delivery favours the onset of depression in the new fathers at six weeks from birth and influences his attachment to the child [61, 62]. According to Boyce and Condon [28], about 20% of new parents do not develop an immediate attachment to the child at the time of birth but it requires a certain period of time. However, the anxiety of being unable to love the child is difficult to live with and may cause the fathers to undergo a crisis.

On analyzing the literature available on the subject, Bartlett [16] feels that being present at the partner's labor has different consequences on the man:

- many men feel they are obliged to be present [62];
- many are ill at ease in the role of "coach" during delivery [63], especially young fathers at their first experience [60];
- some feel excluded or relegated to a role in a certain sense secondary [60, 64];
- in any case there is a substantial gap between what men expect and reality [69, 70].

These observations are validated by a recent study on fifty-three British fathers who had been present at their partners' labour [69] of which:

- 57% felt they were under pressure;
- 56% recall their partner's pain as the worst moment;
- 38% did not believe they were of any help to their partners;
- 22% do not want to be present at future births;
- 56% felt they were in the way in the delivery room.

According to some, being a witness to their partners' pain during delivery [67, 70] produces a devastating effect on the personality and behaviour of the father.

On this subject, we wish to mention an interesting study performed by the team of anaesthetists at the Città di Roma Hospital [65]. The study dealt with the comparison between two groups of fathers who had been present at their partners' labour: in the first group the women received peridural anaesthesia while in the second they did not.

The interview was conducted at three different times (at 36 weeks of pregnancy, at the time of birth and the day after this) using respectively a questionnaire on desires and the father's preparation for the child's birth, the STAI (State Trait Anxiety Inventory) [73] and a questionnaire containing the father's sentiments during delivery.

The results were excellent. The partners of the women who did not choose the epidural anaesthesia felt that their presence was superfluous, unnecessary and incapable of helping, more or less in the same percentage in which the partners of anaesthetized women felt they were necessary and able to help.

Of the fathers who were present at the delivery of their partners under epidural anaesthesia 93.5% recommended this to other fathers, while 78.9% of the partners of women who were not anaesthetized would not recommend it. The STAI score, which measures the degree of satisfaction concerning childbirth, shows a clear distinction between the fathers who saw their wives give birth with pain (who felt totally unsatisfied) and the partners of women who chose anaesthesia who instead felt calm and serene. These results lead us to believe that there is probably a bias in interpretation by the fathers.

Being present at childbirth may be a traumatic experience for the father, something not necessary that risks further destabilization in this delicate period already in itself destabilizing for different reasons [12]:

- the lack of sleep and physical fatigue;
- not knowing how to help;
- implications for one's job, success in caring for the child.

The postpartum period: the man faced with postpartum depression

PPD is cause of anguish in the fathers. Nowadays, they wish to be informed of the problem and moreover they wish to receive help for handling it.

Independently of the woman's mood, the period following the child's birth risks being a difficult one for the man, in which he feels sentiments of distress, exclusion [72] and uselessness in the child's upbringing [48] contrary to his expectations, thus finding the first months of fatherhood far more difficult than he expected. Many case reports indicate that the birth of a child may, in extreme cases, bring on mental disturbances and a paternal psychosis. Clinton [75] interviewed fifty fathers using the Expectant Father's Monthly Health Interview founding in the postpartum period significantly higher levels of nervousness, difficulty in concentrating, fatigue, insomnia, headache and irritability. Several authors have noted the lack of a model of reference for the father figure as desired today, that is, involved and active [21, 53].

If there is also the presence of maternal depression, the man's role becomes extremely delicate and the pressures on him are even stronger.

Firstly, with the depressed mother the father activates protective behaviour, but with the passing of time it becomes difficult for him to continue in this and stand the sense of impotence and adapt to the sensation of being put aside and criticized, of not being certain of going back to normal sexual activity after the child's birth and the fear that care for the child will be solely his responsibility owing to the incapacity of the mother to deal with the child's needs [76-79].

In the best of cases, men tend to assume the upbringing of the children [77], which for the depressed mother appears as further proof of her incapability, but the man's reactions may also go in the direction of blaming the woman, thus setting off a vicious cycle that feeds itself.

This is when the man also runs the risk of becoming depressed.

Among these men there are frequent cases of addiction to drugs and alcohol, together with hypercriticism and violence [77, 78].

Pinheiro [78] highlights the presence, in research, of bipolar disorders, with PPD episodes associated with episodes of mania and hypomania in prepartum and in early postpartum.

We cannot say that all the couples who face problems of postpartum depression have problems of communication and adjustment prior to a pregnancy, but this is a situation that is often found: mothers with postpartum depression have a poorer dyadic adjustment, that is, they have less approval, satisfaction and support from their partners [26-28].

In such dysfunctional couples, there is frequently a lack of communication which, together with all the other factors, may lead to separation. This does not mean that postpartum depression is directly responsible for separation, but only that, as stated above, it does nothing but aggravate problems that existed prior to the pregnancy.

To date, there are few studies on post partum depression in men, but most of them agree that paternal postpartum depression is a direct consequence of maternal depression. According to Condon [7] the partners of depressed mothers run a risk 2.5 times higher than controls of developing postpartum depression.

According to Sèjournè the involvement of the father two months after birth correlates negatively with the maternal PPD [79].

Enjoying the paternity leaves favours the involvement of the father in caring the child and it gives support to the mother, thus being a shield, it appears, against the maternal PPD.

From what has been said thus far on psychological changes in pregnancy, the hypothesis that postpartum depression does not start from nothing, but may be preceded by depression phenomena during pregnancy, arises spontaneously. This hypothesis is confirmed in most studies performed up to now. Furthermore, the problem concerns women but also impacts on men [7, 13, 48].

Matthey [48] analyzed 453 couples over a period of about eighteen months, administering the Edinburgh Questionnaire together with other kinds of psychiatric tests to both members of the couple at twenty weeks of pregnancy and at six weeks, four months and twelve months of the child's life. The result was that postpartum depression, independent of the period of onset, is preceded both in the woman and the man by antepartum depression. This means that the couples who had antepartum depression were more susceptible to PPD, even at a distance of one year from the child's birth.

Matthey noted different risk factors depending on the period of onset of PPD. Specifically, besides the EPDS, two scales capable of measuring relations with parents (PBI) [80] and the partner (IBM) [81] as well as interpersonal sensitivity (IPSM) [82] were used.

It was seen that the risk factors change with the periods: one month after the birth the main risk factor for the development of PPD is represented by an absent partner, at three months by a hyper-controlling partner and at six months by hyper-sensitivity to interpersonal relations.

As concerns the couple's morbidity, that is, the percentage of depression of both parents, the authors calculate it at approximately 36% at six weeks and 53% at twelve months, but with the suspicion that many cases escape detection.

But what are the risk factors of PPD for the man? And how do they appear?

As already underscored, at present in the data in the literature the only risk factor is depression of the partner.

Even the causal connection is not known, but we can advance several possible explanations:

- living with a depressed person is in itself a difficult task that drains vital energies. It has in fact emerged, also from Milgrom's team [76], that the partners of depressed women feel less supported in their daily lives and experience fear, confusion, frustration, lack of help, anger, poor family stability and uncertainty concerning the future [77];
- it is plausible that a melancholy person with a tendency towards depression will tend to stay with a person in a similar state, one who understands him/her. In the few studies on the subject published to date, it emerges that those at greater risk of PPD are unemployed men, those who have a more conflicting and less satisfactory relationship with their partners and less emotional and social support from the family and friends [77, 83, 84].

As in the case of women, other risk factors associated with depression, as for example the socioeconomic status or similar factors, have not been found. But some studies have brought to the surface new elements which we list briefly below:

- the man who is the father in a reconstructed family (step-family, that is, a family in which one or both of the partners had previous marriages with children) in which a woman presents PPD is at a greater risk of depression than in traditional families [84];
- the presence of peculiar psychic factors brings with it a vulnerability to depression: an anxious personality for both partners and hypersensitivity to interpersonal relations for the mother [13, 27, 84];
- the presence of hyper-protective parents who display anxious and intrusive behaviour with their children who in turn become parents is recognized as a depression favouring factor for both partners [84].

The children and their custody: the children of depressed parents

Paulson's team [85] studied the interaction between depressed mothers and fathers and their behaviour with the child and revealed quite interesting data:

- as previously found in numerous other studies, maternal depression is correlated with less care devoted to the child. This aspect was explored by means of seven different items administered to the fathers and mothers, indicated in the table. With these studies it was observed that paternal and maternal depression is expressed in two different ways: the responses to the items taken into consideration are different, especially those concerning playing with the child. For example, depressed women are less inclined to play peek-a-boo with their child, while the men are less inclined to take the child out for walks and sing songs;
- if only the father is depressed, the mother's attention shifts from the child to the husband. The mother reacts to her partner's depression with a compensatory attitude.

In this context the small child suffers much more from the mother's depression, and as a reflex (owing to the shift in the mother's attention to her partner) than he/she does from the father's.

An interesting and in-depth study conducted by Ramchadani's team [86, 87] examined approximately 13,000 families over a period of seven years, measuring with appropriate scales postpartum paternal and maternal depression and the behavioural and psychiatric disturbances of the children at the ages of six and seven.

The behavioural questionnaire (SDQ) [88] was filled in by one of the parents or by the children's teachers; five areas of interest were examined: emotive problems, hyperactivity, problems of conduct, problems of behaviour and interaction with children of the same age; at the end a score for pro-social behaviour over a period of time was attributed.

The data that emerged from this study indicated that 12% of the children of depressed fathers were in turn depressed, with no gender-related differences, against 6% of children of fathers who were not depressed. A quite important fact is that on examining the subtypes of behavioural problems there was a significant association with disorderly conduct and behaviour showing mistrust and opposition toward authorities. On removing the confusing effects given by maternal depression and the father's cultural level, this association remained significant; furthermore, pro-social conduct was not efficacious and there were problems of hyperactivity.

Behavioural problems had previously been observed in three-year-olds, and they were statistically less important when correlated with paternal depression compared to maternal depression, but still undeniable.

As in previous studies, the risk factors for PPD in the man were previous depression, depression or states of anxiety in the partner during pregnancy, a high cultural level and having other children.

It is also reasonable to assume that children born prematurely, children of depressed parents are more exposed to the occurrence of behavioral problems, because prematurity is itself a risk factor that can act on the area cognitive, emotional and relational [81].

Several considerations stem from this study:

1. depression in men is relatively common and there is an important correlation between the depressive symptoms in the school-age child and that of the father in the pre-school age, but we do not know if there is also a persistence of the depressive symptoms of the father because this has not been investigated;
2. the problem of PPD in the male risks, despite the accuracy of this study, being underestimated, both because males for their very nature are inclined not to attribute great importance to psychological inquiries and because depressed subjects are less inclined to complete the questionnaires;
3. the most important datum is perhaps the correlation between paternal depression and the appearance in the child of behavioural problems and relations with children of the same age. This relative specificity of a connection between PPD and anti-social behaviour of the children appears to reflect the role of the father in the socialization of the child, or an association between paternal depression and a negative way of being parents. Depression, with its train of symptoms of lack of energy and loss of interest, also appears to seriously damage the ability of certain parents to be parents, especially in the daily interactions between parents and child;
4. it is also probable that there is a period in the child's life in which he/she is sensitive to the father's depression;

5. in the light of the correlation and co-morbility between paternal and maternal PPD, it is probable that the effects previously attributed to maternal PPD are to be considered as the consequence of the state of both parents;
6. it would be desirable to propose, in children at risk, early rehabilitation intervention to facilitate social integration and optimal learning [82, 89-91].

Conclusions

We can briefly state that PPD is a pathology of the woman which in turn may reflect rather seriously on the man's psychic health and on the couple's relations, thus undermining the relationship and placing in jeopardy the family's stability and the child's psychological and emotive equilibrium. It clearly appears that a change in point of view is required with a taking of this pathology in hand from the standpoint of a family system.

Also worthy of our attention is the redefinition of the father's role in today's society and the consequences, both positive and negative, that this has on the man.

These observations should receive greater attention by the competent authorities to support that can be offered to families to help them overcome this difficult moment.

Declaration of interest

The Authors declare that there is no conflict of interest.

References

1. Dawson G. The effects of maternal depression on children's emotional and psychobiological development. Paper presented at the National Institute of Health Conference on Parenting, Bethesda, MD, 1999.
2. Carpiniello B, Pariante CM, Serri F, Costa G, Carta MG. Validation of the Edinburgh Postnatal Depression Scale in Italy. J Psychosom Obstet Gynaecol. 1997;18(4):280-5.
3. Halbreich U, Karkun S. Cross-cultural and social diversity of prevalence of post partumdepression and depressive symptoms. J Affect Disord. 2006;91(2-3):97-111.
4. Paoletti A, Romagnino S, Contu R, Orrù MM, Marotto MF, Zedda P, Lello S, Biggio G, Concas A, Melis GB. Observational study on the stability of the psychological status during normal pregnancy and increased blood levels of neuroactive steroide with GABAa receptor agonist activity. Psy Neu En. 2006;31:485-92.
5. American Psychiatric Association Diagnostic and Statistical Manual of Mental Disorders, 4th ed. (DSM-IV). Washington, DC: American Psychiatric Association, 2000.
6. Halbreich U. Postpartum disorders: Multiple interacting underlying mechanism and risk factors. J Affective Disorders. 2005;88:1-7.
7. Condon JT, Boyce P, Corkindale CJ. 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. 2004;38:56-64.
8. Goodman SH, Gotlib IH. Risk for psychopathology in the children of depressed mothers: A developmental model for under standing mechanism of transmission. Psychol Rev. 1999;106:458-90.
9. Stern DN, Bruschweiler-Stern N, Freeland A. La nascita di una madre. Milan: Mondadori, 2000.
10. Trentini C. Rispecchiamenti. L'amore materno e le basi neurobiologiche dell'empatia. Rome: Il Pensiero Scientifico Editore, 2008.
11. Cowan PA, Cowan CP. When partners become parents. New York: Basic Bocks, 1992.
12. Cavallero P, Monti Migliaccio F. La funzione dell'uomo durante la situazione di gravidanza per una relazione simmetrica madre-bambino. Rivista di Sessuologia. 1983;7(2):45-58.
13. Capodieci S, Ferralo I, Dell'Alba B, Ruolo G, Baldo M, Can B. Gravidanza, maternità, paternità e vita sessuale di coppia. Rivista di Sessuologia. 1990;14(4):331-46.
14. De Magistris A, Coni E, Puddu M, Zonza M, Fanos V. Screening of Postpartum depression: comparison between mothers in the neonatal intensivecare unit and in neonatal section. J Matern Fetal Neonatal Med. 2010;23(Suppl 3):101-3.
15. Birksted-Breen D. Fantasia e realtà in gravidanza e nel periodo postnatale. In: Ammaniti M. La gravidanza tra fantasia e realtà. Rome: Il Pensiero Scientifico Editore, 1992.
16. Bartlett E. The effects of fatherhood on the health of men: a review of the literature. JMHG. 2004;1:159-69.
17. Anthony EJ. Fatherhood and fathering: an overview. In: Cath SH, Gurwitt AR, Ross JM. Father and child: development and clinica perspectives. Boston: Little Brown and Co., 1982.
18. Grossman FK, Eichler LS, Winickoff SA. Pregnancy, birth, and parenthood. San Francisco: Jossey-Bass, 1980.
19. Masoni S, Maio A, Trimarchi G, de Punzio C, Fioretti P. The couvade syndrome. J Psychosom Obstet Gynaecol. 1994;15:125-31.
20. Smorti A. La paternità come processo evolutivo. Psicologia contemporanea. 1987;80:36-43.
21. Lemmer C. Becoming a father: a review of nursing research on expectant fatherhood. Matern Child Nurs. 1987;16:261-75.
22. Pietropolli Charmet G. La nascita del bambino nella mente del padre. Nascere. 1991;3:16-21.
23. Grigio M, Riva Crugnola C, Zanelli Quarantini A. Simbolizzazioni relative alla gravidanza e alla nascita in gruppi di psicoprofilassi al parto. Nascere. 1984;1:13-7.
24. Condon J. What about dad? Psychosocial and mental health issues for new fathers. Aust Fam Physician. 2006;35(9):690-2.
25. Delaisi de Parseval G. Padre al padre. Milan: Bompiani, 1982.
26. Ventimiglia C. Di padre in padre. Milan: Franco Angeli, 1994.
27. Seimyr L, Sjögren B, Welles-Nyström B, Nissen E. Antenatal maternal depressive mood and parental-fetal attachment at the end of pregnancy. Arch Womens Ment Health. 2009;12:269-79.

28. Pietropolli Charmet G. La donna madre e l'uomo maternalizzato. Nascere. 1992;55:7-12.
29. Boyce P, Condon J, Barton J, Corkindale C. First-Time Fathers' Study: psychological distress in expectant fathers during pregnancy. Aust N Z J Psychiatry. 2007;41:718-25.
30. Wilhelm K, Parker G. The development of a measure of intimate bonds. Psychol Med. 1988;18:225-34.
31. Spanier GB. Measuring dyadic adjustement: New scale for assessing the quality of marriage and similar dyads. J Marriage Fam. 1976;38:15-28.
32. Sarason IG, Sarason BR, Shearin EN, Pierce GR. A brief measure of social support: practical and theoretical implications. J Soc Pers Relat. 1987;4:497-510.
33. Cronenwett LR, Kunst-Wilson W. Stress, social support and the transition to fatherhood. Nurs Res. 1981;30:196-201.
34. Zelkowitz P, Milet TH. Stress and support as related to postpartum paternal mental health and perceptions of the infant. Infant Mental Health J. 1997;18:424-35.
35. Nishimura A, Ohashi K. Risk factors of paternal depression in the early postnatal period in Japan. Nurs Health Sci. 2010;12(2): 170-6.
36. Klein H. Couvade syndrome: male counterpart to pregnancy. Int J Psychiatry Med. 1991;21:57-69.
37. Wynne-Edwards KE, Reburn CJ. Behavioral endocrinology of mammalian fatherhood. Trends Ecol Evol 2000;15:464-8.
38. Storey AE, Walsh CJ, Quinton RL, Wynne-Edwards KE. Hormonal correlates of paternal responsive-ness in new and expectant fathers. Evol Human Behav. 2000;21:79-95.
39. Trethowan WH, Conlon MF. The couvade syndrome. Br J Psychiatr. 1965;111:57-66.
40. Lipkin M, Lamb GS. The couvade syndrome: an epidemiologic study. Ann Int Med. 1982;96:509-11.
41. Beck AT, Ward CH, Mendelson M, Mock J, Erbaugh J. An inventory for measuring depression. Arch Gen Psychiatry. 1961;4:53-63.
42. Goldberg DP. Manual of the General Health Questionnaire. Windsor: NFER, 1978.
43. Watson D, Clark LA, Tellegen A. Development and validation of brief measures of positive and negative affect: The PANAS scales. J Pers Soc Psychol. 1988;54:1063-70.
44. Snaith RP, Constantopoulos A, Jardine MY, McGuffin P. A clinical scale for the self-assessment of irritability. Br J Psychiatry. 1978;132:164-71.
45. Derogatis LR, Lipman RS, Rickels K, Uhlenhut EH, Cori L. The Hopkins Sympton Checklist (HSCL): a self-report inventory. Behav Sci. 1979;19(1):1-15.
46. Saunders JB, Aasland OG, Babor TF, de la Fuente JR, Grant M. Development of the AUDIT. WHO collaborative project on early identification of persons with harmful alcohol consumption – 2. Addiction. 1993;88:791-803.
47. Scottish Intercollegiate Guidelines Network. SIGN Publication No. 60. Postnatal depression and puerperal psychosis: a national clinical guideline. Edinburgh: SIGN, 2002.
48. Matthey S, Barnett B, Ungerer J, Waters B. Paternal and maternal depressed mood during the transition to parenthood. J Aff Dis. 2000;60:75-85.
49. Moreau A, Kopff-Landas A, Séjourné N, Chabrol H. [The primiparae couple's experience of childbirth: Quantitative study]. [Article in French]. Gynecol Obstet Fertil. 2009;37(3): 236-9.
50. Erickson C. Maria Antonietta. Milan: Mondadori, 1997.
51. Ferrari G. Intervista a Michel Odent. Available at http://anepitalia.blogspot.it/2007/10/intervista-michel-odent-di-gabriella.html, date of publication: October 2007, last access: January 2013.
52. Cowan C, Cowan PA. Working with couples during stressful transitions. In: S. Dreman. The family on the Threshold of the 21st Century: Trends and Implications. Mahwah: Lawrence Erlbaum Associates, 1997, pp. 17-46.
53. Cowan PA. Becoming a father: A time of change, an opportunity for development. In: Bronstein P, Cowan C. Fatherhood Today: Men's Changing Role in the Family. New York: John Wiley & Sons, 1988, pp. 13-35.
54. Bertsch TD, Nagashima Whalen L, Dykeman W, Kennel JH, McGrath S. Labor support by first-time fathers: Direct observations with a comparison to experienced doulas. J Psychosom Obstet Gynaecol. 1990;2:251-60.
55. Chalmers B, Meyer D. What men say about pregnancy, birth and parenthood. J Psychosom Obstet Gynaecol. 1996:17:47-52.
56. Chapman LL. Expectant fathers and labor epidurals. MCN Am J Matern Child Nurs. 2000;25:133-8.
57. Szeverenyi P, Pòka R, Hetey M, Torok Z. Contents of childbirth-related fear among couples wishing the partner's presence at delivery. J Psychosom Obstet Gynaecol. 1998;19:38-43.
58. Vehviläinen-Julkunen K, Liukkonen A. Fathers' experiences of childbirth. Midwifery. 1998;14(1):10-7.
59. Bettelheim B. The uses of enchantment. The meaning and importance of fairy tales. New York: Alfred A. Knopf, 1976.
60. Hodnett ED. Caregiver support for women during childbirth. Cochrane Database Syst Rev. 2002;(1):CD000199.
61. Vasconcellos D. Devenir père: crise identitaire. Recherche-pilote. Devenir. 2003;32(2):191-209.
62. Greenhalgh R, Slade P, Spiby H. Fathers' coping style, antenatal preparation, and experiences of labor and the postpartum. Birth. 2000;27(3):177-84.
63. Berry LM. Realistic expectations of the labor coach. J Obstet Gyn Neonatal Nurs. 1988;17:354-5.
64. Tanzer D, Block JL. Why natural childbirth? Garden City, NY: Doubleday, 1972.
65. Capogna G, Camorcia M, Stirparo S. Expectant fathers' experience during labor with or without epidural analgesia. Int J Obstet Anesth. 2007;16(2):110-5.
66. Antle-May K, Perrin SP. Prelude, pregnancy, and birth. In: Hanson SMH, Bozett FW. Dimensions of fatherhood. Beverly Hills: Sage, 1985.
67. Vehvilainen-Julkunen K, Liukkonen A. Fathers' experiences of childbirth. Midwifery. 1998;14:10-7.

68. Jordan PL. Laboring for relevance: expectant and new fatherhood. Nurs Res. 1990;39:11-6.
69. Chandler S, Field PA. Becoming a father. First-time fathers' experience of labor and delivery. J Nurse Midwifery. 1997;42(1):17-24.
70. Chalmers B, Meyer D. What men say about pregnancy, birth, and parenthood. J Psych Obstet Gynec. 1996;17:47-52.
71. Steinberg S, Kruckman L, Steinberg S. Reinventing fatherhood in Japan and Canada. Soc Sci Med. 2000;50:1257-72.
72. Johnson MP. An exploration of men's experience and role at childbirth. J Men's Studies. 2002;10:165-82.
73. Spielberger CD. Manual for the State-Trait Anxiety Inventory (STAI). Palo Alto, CA: Consulting Psychologists Press, 1983.
74. Henderson AD, Brouse AJ. The experience of new fathers during the first three weeks of life. J Adv Nurs. 1991;16: 293-8.
75. Clinton JF. Physical and emotional responses of expectant fathers throughout pregnancy and the early postpartum period. Int J Nurs Stud. 1987;24:59-68.
76. Milgrom J. Dépistage et traitement de la dépression postnatale. Un approche cognitiviste et comportamentale. Devenir. 2001;13(3);27-50.
77. Goodman JH. Paternal postpartum depression, its relationship to maternal postpartum depression, and implications for family health. J Adv Nurs. 2004;45:26-35
78. Tavares Pinheiro KA, Monteiro da Cunha Coelho F, de Ávila Quevedo L, Jansen K, de Mattos Souza L, Oses JP, Lessa Horta B, Azevedo da Silva R, Tavares Pinheiro R. Paternal postpartum mood: bipolar episodes? Depressão paterna: episódio bipolar? Rev Bras Psiquiatr. 2011;33(3):283-6.
79. Séjourné N, Beaumé M, Vaslot V, Chabrol H. [Effect of paternity leave on maternal postpartum depression]. [Article in French]. Gynecol Obstet Fertil. 2012;40(6):360-4.
80. Parker G, Tupling, H, Brown, LB A parental bonding instrument. Brit J Med Psychol. 1979;52:1-10.
81. Wilhelm K, Parker G. The development of a measure of intimate bonds. Psychol Med. 1988;18(1):225-34.
82. Boyce P, Parker G. Development of a scale to measure interpersonal sensitivity. Aust N Z J Psychiatry. 1989;23:341-51.
83. Meignan M, Davis MW, Thomas SP, Droppleman PG. Living with postpartum depression: the father's experience. MCN Am J Matern Child Nurs. 1999;24(4):202-8.
84. Deater-Deckard K, Pickering K, Dunn JF, Golding J. Family structure and depressive symptoms in men preceding and following the birth of a child. Am J Psychiatry. 1998;155:818-23.
85. Paulson JF, Dauber S, Leiferman JA. Individual and combined effects of postpartum depression in mothers and fathers on parenting behavior. Pediatrics. 2006;118:659-68.
86. Ramchandani PG, Stein A, Evans J, O'Connor TG; ALSPAC study team. Paternal depression in the postnatal period and child development: a prospective population study. Lancet. 2005;365(9478):2201-5.
87. Ramchandani PG, Stein A, O'Connor TG, Heron J, Murray L, Evans J. Depression in men in the postnatal period and later child psychopathology: a population cohort study. J Am Acad Child Adolesc Psychiatry. 2008;47(4):390-8.
88. Goodman R, Scott S. Comparing the Strengths and Difficulties Questionnaire and the Child Behavior Checklist: is small beautiful? J Abnorm Child Psychol 1999;27(1):17-24.
89. Perricone G, Morales MR. The temperament of preterm infant in preschool age. Ital J Pediatr. 2011;37:4
90. Perricone G, Morales MR, Polizzi C, Anzalone G. Rehabilitative training of preterm children's attention: a study on sustainability, J Pediatr Neonat Individual Med. 2012:1(1):87-96.
91. Corridori M, Fanos T, Fanos V. Il padre contemporaneo. Quartu Sant'Elena: Hygeia Press, 2009.