Maternity Blues and Post-partum Depression – Findings from Greece

a report by
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Abstract
Maternity blues (MB) and post-partum depression (PPD) are two psychological conditions that affect a large percentage of women after child delivery. The role of cultural and social influences in the development of MB and PPD is still under debate. Greece is a Western society that tries to retain family bonds and traditional rituals concerning birth. According to the results of studies conducted in Greece, MB and PPD were experienced with similar frequency and timing to Northern European countries, but possibly due to different causative factors. Various clinical and biological factors were related to the occurrence of MB and PPD. Stressful events and depression during pregnancy, history of depression and prolactin levels after delivery showed strong correlation with the development of PPD. The relation between MB and delivery through Caesarian section, as well as the role of cytokines in the development of PPD, are intriguing and need further investigation.

Key words
Maternity blues, post-partum blues, post-partum depression, post-natal depression, Greece

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‘Maternity blues’ (MB) is a mild and transient phenomenon that occurs during the first days of puerperium and is characterised mainly by tearfulness, mood swings, fatigue, insomnia, negative thinking, low mood and difficulty in thinking. The fact that a number of studies from different countries have reported a variety of prevalence rates and socioeconomic factors related to the occurrence of MB2–4 has raised the issue of cultural differences and especially the influence of culture in family support during puerperium.5 There are authors who have suggested that MB is a cultural-bound syndrome that is observed mainly in Western cultures where the traditional supportive rituals involved in the period of puerperium have subsided.6

Post-partum depression (PPD) is a far more serious disorder than MB. Most authors agree that around 10–15% of women who give birth will suffer from PPD in the first months after delivery.7 Although it has been suggested that PPD might be more frequent in urban Westernised societies,8 recent studies in non-Western countries showed that PPD has similar prevalence rates in different societies worldwide.9–10 It is interesting, though, that the factors that predict PPD in these environments are somehow different from those that have been found to predict PPD in Western societies. Two examples are the infant’s sex10 and poor accommodation.11

Although Greece’s social structure is mainly Western European, Greek society still maintains many of its family traditions. Greek women in puerperium receive a lot of attention and help, usually from their mothers. Even in large cities a lot of women try to keep up with the tradition and stay inside their house, taking care of their newborn baby, for the first 40 days after delivery.

Maternity Blues – Findings from Greece
Gonidakis et al.12 administered the Kennerley and Gath Blues Questionnaire (BQ)1 to 402 women who gave birth in a university obstetric clinic in Athens, Greece. All the women completed the BQ every evening for the first three days following delivery. The 402 women were also asked to complete a battery of questionnaires on demographic data, depression, anxiety, hypochondria, stressful life events and personality traits such as alexithymia and obsessiosity. During the first three days of puerperium, 179 women (44.5%) in total experienced severe MB. According to BQ symptom categorisation, the most frequent symptom cluster was hypersensitivity (days one and two) and despondency (day three). Primary blues (feeling tearful, tired, anxious, forgetful/muddled, overemotional, changeable in mood and low-spirited), although not the most frequent cluster, presented the largest frequency increase from day one (9.2%) to day three (22.1%) measurements. These results were different from those reported in the literature.1 According to Kennerley and Gath,1 primary blues was the most frequent cluster of MB symptoms in their original study. The
reason for the above differences could be attributed to cultural influences in the expression of emotions in British and Greek women. Stressful life events during pregnancy (List of Threatening Experience)\(^{13}\), delivery through Caesarean section and depressive symptomatology (Montgomery-Asberg Rating Scale\(^{14}\)) the first day after delivery, as well as trait anxiety (Spielberger’s State Trait Anxiety Inventory\(^{15}\)) and hypochondriac fears (Whitley Index\(^{16}\)), were the factors that had a significant impact on the occurrence of MB.

MB was also studied in a group of 72 immigrant women from Albania who were living in Athens (Gonidakis et al., unpublished data). The immigrant women were paired with a group of 72 native Greek women according to age, socioeconomic status and number of previous births. Although no difference was found between the two groups concerning the frequency and timing of MB, there were differences in the frequency of second-day primary blues and third-day retardation MB symptom clusters. Higher scores in SCL-90R Depression and Interpersonal Sensitivity subscales, as well as lower scores in the SCL-90R Paranoia subscale, were the factors that had a significant impact on the occurrence of MB in immigrant women.

**Post-partum Depression – Findings from Greece**

In an early study, Thorpe et al.\(^{17}\) studied PPD four to six weeks after delivery in 165 Greek and 101 British mothers by administering the Edinburgh Post-natal Depression Scale (EPDS).\(^{18}\) The authors reported delivery in 165 Greek and 101 British mothers by administering the first day after delivery, as well as trait anxiety (Spielberger’s State Trait Anxiety Inventory)\(^{15}\) and hypochondriac fears (Whitley Index)\(^{16}\), were the factors that had a significant impact on the occurrence of MB.

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Leonardou et al.\(^{21}\) recruited a community sample of 109 women on the second day post-partum in the two largest maternity hospitals in Athens in order to validate the EPDS\(^{18}\) for the Greek population. Ninety-five women consented to participate and to complete the EPDS, the 21-item Beck Depression Inventory (BDI),\(^{22}\) the 28-item General Health Questionnaire (GHQ)\(^{23}\) and the 26-item WHO-Quality of Life (WHO-QOL) questionnaire.\(^{24}\) Of the 95 women, 81 consented to be reassessed two months later. At that time, in addition to the baseline questionnaires, the non-patient version of the Structured Clinical Interview for DSM-III-R (SCID)\(^{25}\) was conducted in order to establish psychiatric diagnosis of major and minor depression. A cutoff point of 11/12 on the EPDS showed optimum receiver operating characteristics. The SCID showed that 12.4% of the subjects suffered from depression at two months post-partum (of those, 5% met criteria for major depressive disorder). Regarding possible risk factors for PPD, the authors found that 70% of the depressed women had a history of a psychiatric disorder.\(^{21}\)

In the previous study, 40 of the 95 participants also consented to give a blood sample (on the third post-partum day, between 8 and 9am, before the morning lactation of their infants). TSH, T4, T3, follicle-stimulating hormone, luteinising hormone, progesterone, oestradiol, prolactin, cortisol, ferritin and filicine were assessed for each blood sample. A statistically significant negative correlation was found between the prolactin levels and the score of the EPDS on the second post-partum day.\(^{26}\)

Finally, Boufidiou et al.\(^{27}\) examined the role of cerebrospinal fluid (CSF) and plasma cytokines (tumour necrosis factor (TNF)-α and interleukin (IL)-6) in the etiopathology of PPD symptoms. This was the first study to examine CSF parameters and post-partum mood disturbances. Fifty-six Greek participants were recruited and consented to complete the Blues Questionnaire\(^{1,12}\) (on admission and on days one to four post-partum) and the EPDS (at the first and sixth week post-partum). At delivery, a blood sample and CSF sample while puncturing for epidural analgesia were taken from 33 participants, whereas only blood samples were obtained from the rest of the participant group (23 women). Multiple regression analysis of psychometric scores, depending on cytokine levels, revealed that cytokine levels were positively associated with a depressive mood during the first four days post-partum, a finding indicative of a possible immune mechanism that could play a role in the aetiology of PPD symptoms.

Dragona\(^{28}\) studied the participation of 157 Greek fathers in the care of their four- to six-week-old children. Almost none of the fathers believed that a woman’s place is in the home, 92% played with the newborn daily, 16–25% were actively involved in child care (e.g. walking with the infant, bathing and changing nappies), 68% wanted to spend more time with the newborn and 92% looked forward to coming home to be with their wife and newborn. On the other hand, 50% felt too tired to care for the infant and 42% thought it was difficult to cope with the baby. The more emotionally depressed a father was, the more likely it was that he did not enjoy fatherhood. In addition, manual labourers and fathers with only a primary education tended to react negatively to fatherhood. Stamatiou et al.\(^{29}\) reported a case of acute urine retention in a woman treated with tricyclic antidepressant for PPD. Leonardou et al.\(^{30}\) reported a case of PPD effectively treated with interpersonal psychotherapy.
Discussion

Although MB is a mild phenomenon, it affects women during a very delicate phase of their lives and the creation of the mother–infant bond. Unfortunately, the only findings that were available from Greece came from two studies. The first study’s results indicated that MB was experienced by women in Greece in a similar frequency and timing, regardless of family support, but showing different symptoms than women in Northern European countries. The same result was also produced by the second study, where native Greek women were compared with immigrant Albanian women. Although some authors have suggested that MB is not related to environmental, social or cultural factors, the above results could lead us to the hypothesis that the expression of MB may be influenced by cultural factors.

The Greek studies on PPD showed similar prevalence rates to those reported in the literature. From all of the factors that were studied prior to delivery, history of depression and stressful life events during pregnancy showed the stronger relation with the development of PPD. Beck, in her meta-analysis, reported that antenatal depression has a medium impact, whereas a personal history of depression and life events has a moderate impact on the development of PPD. Rubartsson et al., in their meta-analysis of the antenatal risk factors of PPD, reported that depression and anxiety during pregnancy, experiencing stressful life events during pregnancy or the early puerperium, low levels of social support and a previous history of depression were the strongest antenatal predictors of PPD.

Considering the findings from the Greek studies on the hormonal and immunological factors that could be correlated with the development of PPD in the literature, there has been an early effort to detect an association between PPD and the rapid changes in the hormonal status of women in the puerperium. A hormonal aetiology has been hypothesised due to rapid and substantial fluctuations in concentrations of steroid hormones associated with pregnancy and the immediate post-partum period. There is also convincing evidence that oestrogens, progestins and related compounds have important central nervous system activity in physiological concentrations. Findings regarding the levels of oestradiol, oestrogens, prolactin and cortisol have been contradictory, and no consistent association has been proved. However, one of the more consistent findings in this respect has been the lower level of prolactin in post-natally depressed women compared with non-depressed controls. On the other hand, the role of cytokines and the immune system in the aetiology of PPD is an intriguing finding that needs further investigation.

Worldwide research has been accumulated over the last two decades, emphasising the need for special care of women during the peri-partum period. The construction and validation of common screening instruments (e.g. the EPDS) has made it easier to define similarities, as well as differences, across cultures. A common aim of this special emphasis on the peri-partum period is the promotion of the mental health of vast numbers of women and, if possible, the prevention of mental health problems of future generations.

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