

# Emotional changes occurring in women in pregnancy, parturition and lying-in period according to factors exerting an effect on a woman during the peripartum period

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## Abstract

**Introduction.** Pregnancy, parturition and childcare, which are important moments in a woman's life, are connected with many emotional states of a future mother, a pregnant woman and a lying-in woman. The perinatal period is the time when the risk of psychological disorders in a pregnant woman may increase by even several times.

**Objective.** The objective of the study was recognition of the main emotional and psychological changes in pregnant women, those in labour and lying-in, according to the factors occurring during the peripartum period.

**Material and method.** The study was conducted in the form of a survey and covered a group of 108 mothers who were hospitalized in gynaecological-obstetric and obstetric wards in the Karol Marcinkowski Gynaecological-Obstetric University Hospital in Poznań.

**Results.** There are a number of factors which may exert a negative effect on the emotions of women in pregnancy, parturition, and during lying-in. The study showed that there is a close relationship between the occurrence of these factors and emotional states of the mothers after giving birth.

**Conclusion.** Special attention should be given to women in whom already during pregnancy factors arise which may have a negative impact on their mental state. Emotions during pregnancy, parturition and lying-in are often quite extreme, and achieve a high intensity, as well being very variable within a short period of time.

## Key words

pregnant woman, parturition, lying-in, emotional states

## INTRODUCTION

Analysis of data from the literature showed [1, 2, 3, 4, 5, 6, 7] that the period of pregnancy, parturition and lying-in bring about many emotional changes for a woman. The time directly after confirmation of pregnancy is associated with a specific swing of emotions – in many women there arises tension which maintains itself until the first visit to a physician. Many ambivalent feelings occur, which depend on the fact whether the pregnancy was planned or not, whether this is the first or a subsequent pregnancy, if the woman has a permanent life partner, or if her state of health does not require constant administration of certain drugs which may affect the development of the foetus [7, 8, 9, 10]. If a woman already has offspring, she may be concerned about difficulties with the care of the children. A woman giving birth for the first time will experience different expectations and fears with respect to delivery and labour than a multiparous woman. For primiparous women, the source of anxiety may be the lack of knowledge or experience, while in multiparas, the previous childbirth – its duration, course and early postpartum period, may be of a key importance [2, 3, 5, 11, 12].

For the majority of women, giving birth is the experience which they will remember for the rest of their lives. It is therefore important that this experience should be perceived

in positive terms, building self-esteem ('despite difficulties I was able to deliver my baby'). The situation is more difficult when a woman exhausted with labour remembers the experience as a nightmare, and for the rest of her life will perceive it only as a traumatic experience.

According to the American College of Obstetricians and Gynecologists [13], the perinatal period is the time when the risk of psychological disorders in a pregnant woman may increase by even several times. Usually, mood swings, concerns about the health of the baby and her own, and irritability are approached with slight indulgence, whereas when intense and prolonged in time, may evidence slowly developing mental disorders. Based on the statistics, approximately 25% of women at reproductive age suffer from depression. Steiner [14] estimates that in the first trimester of pregnancy 7.4% of pregnant women develop depression, in the second trimester the level increases to 12.8%, and in the third trimester reaches 12%. Pregnancy and the perinatal period, with hormonal changes and frequent mood swings, including falling into extreme states (crying-euphoria), being typical of this period, are conducive to the development of depression [13, 14, 15].

The most frequent symptom of difficulties with adjustment to the new situation and role of the mother is so-called 'baby blues', also called 'postpartum blues'. It occurs in the majority of mothers, usually about the third or fourth day after delivery, and lasts for about two weeks [1, 5]. It clinically falls within a sub-depression state, with symptoms such as: nervousness, embarrassment, sadness, crying, and mood

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swings. The therapeutic team providing care for the mother still in hospital and the significant others, after discharge home of the mother and baby, should not ignore these states or approach them as 'exaggerated' fears or oversensitivity. In some women, 'baby blues' increases the risk of development of postpartum depression [1, 5, 15, 16, 17].

Postpartum depression developing about the first and second months after childbirth may occur even in 10% – 20% of mothers. Many symptoms contribute to this disorder, including the feeling of constant fatigue, anhedonia, isolating oneself, or suicidal thoughts [1, 5, 15]. The diagnosis and treatment of this disorder is important, according to the degree of intensification of symptoms, pharmacologically or by psychotherapy.

The most severe disorder related with giving birth is postpartum psychosis. This occurs in approximately 0.1%–0.2% of mothers, and its onset is observed in the first two weeks after delivery. The patient may have hallucinations, delusional content or even suicidal thoughts or plans. The risk of committing an infanticide is also high. The procedure usually covers hospitalization of the patient in a closed psychiatric unit [5, 15, 16, 17, 18].

## OBJECTIVE

The objective of the presented study is recognition of the main psychological changes taking place in a woman during the period of pregnancy, parturition and lying-in, according to the factors occurring in the perinatal period.

## MATERIAL AND METHOD

The survey covered a group of 108 mothers hospitalized in gynaecological-obstetric and obstetric wards in the Karol Marcinkowski Gynaecological-Obstetric University Hospital in Poznań, and conducted by means of a questionnaire form designed for the purpose of the study, consisting of 25 open and closed questions. While providing a reply to three items, the respondents could indicate the experienced feelings and emotions, and specify their intensity according to a scale from 1–10. The evaluation covered the moment prior to the onset of labour, during labour, and directly after delivery. The questionnaire forms were completed by the lying-in mothers up to the third day after delivery. The replies collected in the questionnaire were subjected to statistical and descriptive analysis. The results were analyzed with the use of the software PQStat and Microsoft Office Excel 2007, by means of the following statistical tests: t-Student, Mann-Whitney, r-Spearman correlation, Kruskal-Wallis test (ANOVA), and descriptive statistics.

**Characteristics of the study group.** The largest group (43.6%) were women aged 26–30, while the smallest (4.6%) those aged >30. Nearly 80% of respondents had a university education level; more than 91% of them were married; 57% of respondents gave birth for the first time; in 34% of mothers the course of pregnancy was abnormal (complicated by disease concerning the mother or her baby). More than 82% of pregnancies terminated between weeks 37–42 of pregnancy; 71.3% of respondents gave spontaneous vaginal delivery, while 28.7% of pregnancies were terminated by

Caesarean section. Considering the duration of the first stage of labour, the largest group were mothers who delivered within 3–6 hours (36%), whereas in 5.7% of the women in childbirth this stage of labour lasted for over 16 hours. In 37% of respondents the second stage of labour lasted for less than 30 minutes, and the percentage of women in whom this stage of labour lasted from 1–2 hours constituted an equally numerous group.

## DISCUSSION

The following factors were considered which might exert an effect on respondents' emotions: age, marital status, education level, material standard, assistance from significant others after giving birth, presence of an accompanying person during the childbirth, preparation for delivery, past obstetric history, course of pregnancy, type of delivery termination (spontaneous vaginal, surgical delivery, Caesarean section), medical interventions (intravenous and intramuscular analgesics, extradural anaesthesia, use of oxytocin, performance of amniotomy, bladder catheterization procedure, collecting foetal scalp capillary blood specimens, episiotomy, curettage after delivery, blood transfusion, assessment of the health of the newborn using Apgar scoring system in the first minute of life, early skin-to-skin contact between the mother and her baby.

For the majority of respondents the sources of knowledge concerning childbirth were mainly journals and the Internet – as many as 70%, they also often talked to women who had already given birth – (65%), used relevant professional literature – 59%, and attended childbirth classes – 22%. Only 8% of the respondents admitted that they in no way prepared for childbirth (Fig. 1).

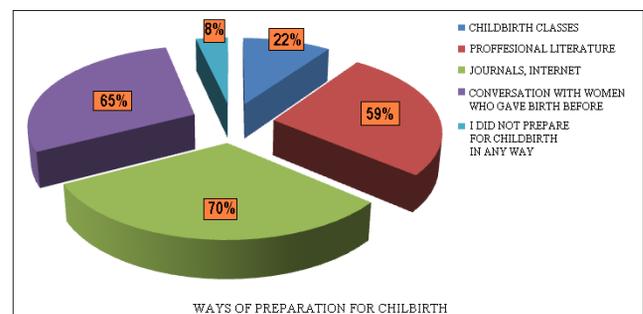


Figure 1. Compilation of ways of preparation for childbirth

While determining the degree of preparation for childbirth, 22.4% of respondents evaluated this degree as mediocre, 65.4% – as good, and 9.3% – as very good, whereas only 2.8% of mothers had a feeling that they were not well prepared for childbirth (Fig. 2).

The figures below present the importance of the preparation of a woman for childbirth. Fig. 3 describes the relationship between the feeling of mobilization before delivery, and the mother's self-reported preparation for childbirth. Analysis of the data clearly shows that the better the preparation of a woman for childbirth, the higher the intensity of the feeling of mobilization before delivery ( $p = 0.04$ ;  $r_s = 0.33$ ).

The feeling of mobilization exerts an effect on the emotions experienced by a woman during labour and the lying-in period. Figure 4 presents a very strong relationship between

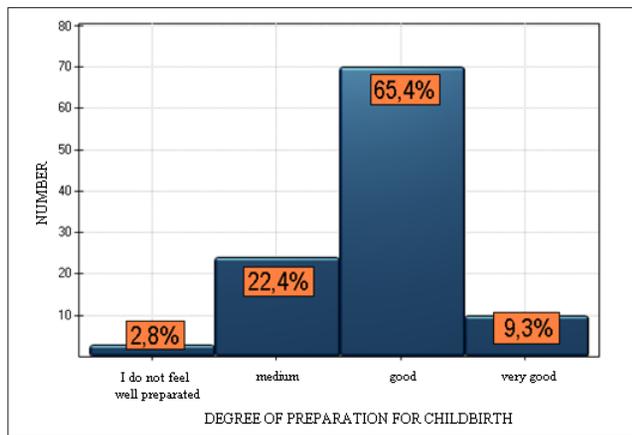


Figure 2. Degree of preparation for childbirth

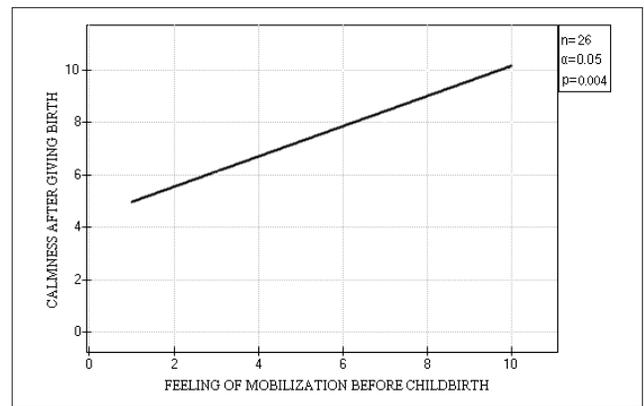


Figure 5. Intensification of the feeling of calmness according to degree of mobilisation before delivery

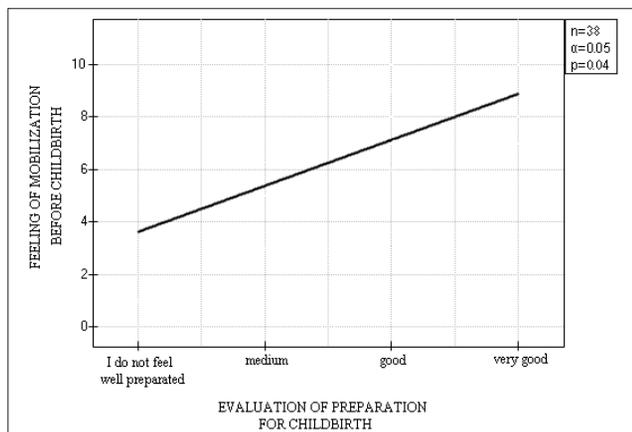


Figure 3. Analysis of intensity of the feeling of mobilization before childbirth according to the degree of preparation for childbirth

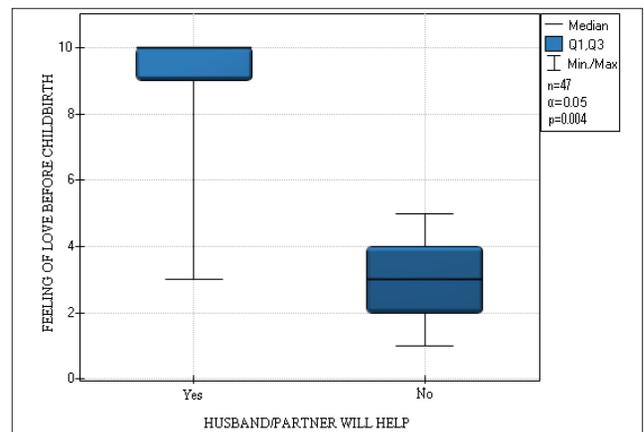


Figure 6. Intensity of the feeling of love for the baby/babies before delivery according to the husband's/partner's declaration of assistance with the care of the baby



Figure 4. Intensification of the feeling of happiness during childbirth according to the feeling of mobilization before childbirth

the feeling of happiness during labour, and the feeling of mobilisation before giving birth ( $p = 0.006$ ;  $r_s = 0.75$ ).

A higher intensity of calmness after delivery was also confirmed in women who were more strongly mobilised before childbirth ( $p = 0.004$ ;  $r_s = 0.54$ ) (Fig. 5).

The declaration given before delivery by the pregnant woman's husband/partner to provide assistance with the care of the baby was an important factor affecting the emotions of the future mothers (Fig. 6). The feeling of love was significantly higher (median 10) in the group of respondents who were supposed to receive such assistance; in mothers

who provided a negative reply to this question the median was only 3.

Directly after delivery, in 57.4% of mothers the newborn was placed on their chest, the so-called early skin-to-skin contact between the mother and her newborn baby, while 42.6% of the mothers did not experience such a contact (Fig. 7).

While analyzing the relationships between the below-mentioned variables, attention should be paid to the essence of the early postpartum 'skin-to-skin' contact between the

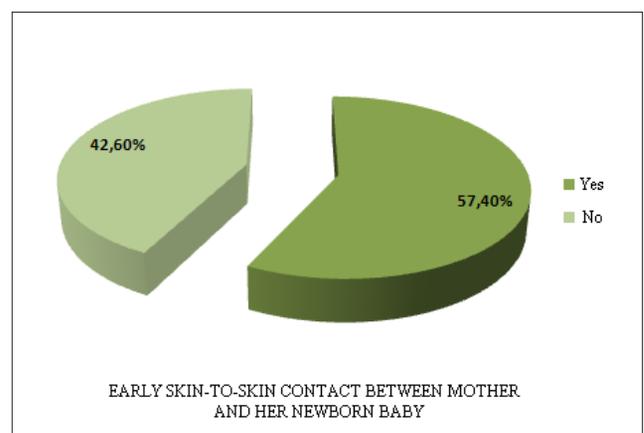
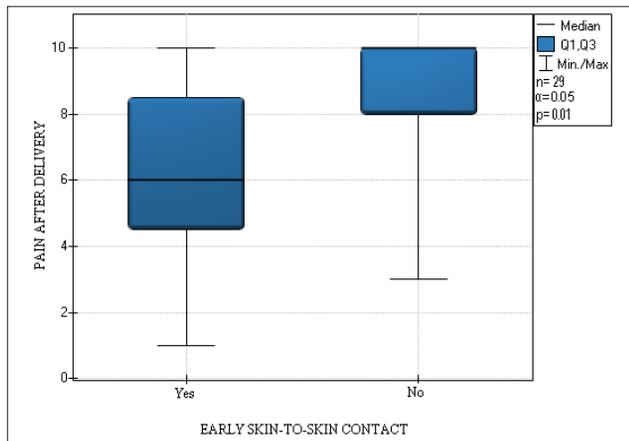
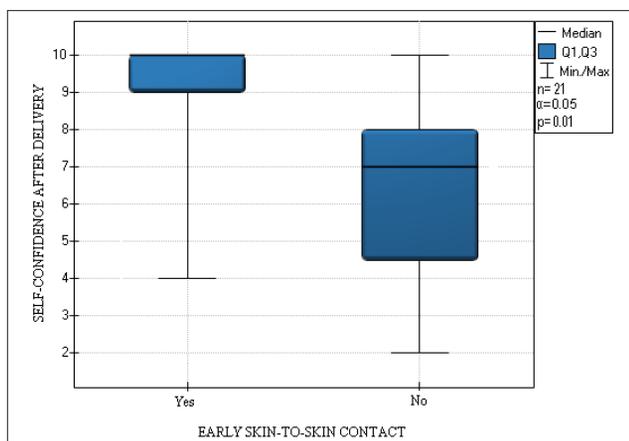


Figure 7. Early skin-to-skin contact between the mother and her newborn baby

mother and her newborn baby. In women who experienced this contact, the sensation of pain after delivery was weaker – median 6, compared to those who did not place the baby on their tummy directly after birth – median 10 (Fig. 8). Also, the mothers who experienced an early ‘skin-to-skin’ postpartum contact were more self-confident – median 10, compared to those who did not experience this contact – median 7 (Fig. 9).



**Figure 8.** Intensification of pain after delivery according to the early postpartum ‘skin-to-skin’ contact between the mother and her newborn baby



**Figure 9.** Analysis of intensity of self-confidence after delivery according to early post-partum ‘skin-to-skin’ contact

The survey conducted by M. Gierszewska in a delivery room [11] revealed that a half of the women in this survey did not feel safe during delivery. According to the reliability of the source from which the woman obtained information concerning childbirth (professional literature, journals, Internet forums), a pregnant woman may develop the feeling of self-confidence or panic fear – if she becomes acquainted with the histories of women who remember their delivery in negative terms. It should also be borne in mind that emotional problems unresolved during the perinatal period will exert a long-term, often unfavourable effect, on the mother and her family [1, 11].

While comparing the age of the women in the presented study with the results by other researchers, statistical differences were obtained. In the study by Gierszewska [11], who evaluated the expectations of the women in childbirth with respect to the midwives managing delivery, the largest group of mothers were aged from 20–25 (44%), whereas the smallest group constituted women aged over 40 (2%). In

the report by Czerwiak [18], who investigated emotional problems related with childbirth, the largest group of women were those aged 34–38 (30%), while the smallest group – mother aged over 39 (4%). In the presented analysis, the largest group of women were aged 26–30 (43.6%), while the smallest – those aged over 36 (4.6%). Similar results were obtained by Reroń et al. [15], who analyzed the frequency of occurrence of postpartum depression, where the mean age of the population examined was 28.65.

In the presented study, the highest percentage of respondents (79.6%) had a university education level. Gierszewska [11] and Reroń [15] report that the largest number of women had secondary school education – 64% and 38.5%, respectively, and only 18% (Gierszewska) and 32% (Reroń) had university education. In these studies, married women constituted 84% and 87.5%, respectively, while 16% and 12.5% were never-married. There were no divorced women in the study. Similar to the presented analysis, the largest group of women in childbirth were primipara – 64%, followed by women who gave birth to their second or third baby – 30% and 6%. In the study by Reroń [15], the percentage of primiparous women was higher than that of multiparas – 55.5% and 45.5%, respectively. An interesting interpretation of the result of the conducted study was performed by Czerwiak [18], who found that the respondents’ economic status exerted the greatest effect on the risk of development of emotional disorders during the perinatal period. No such relationship was observed in the presented study.

Evaluation of the type of delivery in the Karol Marcinkowski Gynaecological-Obstetric University Hospital in Poznań showed that 28.7% of all deliveries were terminated with Caesarean section, which was due to the highest – the third reference level of this hospital, while 71.3% of women had spontaneous vaginal delivery, and 10 – were surgical deliveries. Similar results were presented by Czerwiak [18], where 30% of all deliveries were terminated with Caesarean section, and 70% of deliveries took place by the forces of nature. In the study by Gierszewska [11], only 8% of deliveries were terminated with Caesarean section, and 92% were physiological births.

Since 1996, an early ‘skin-to-skin’ contact between the mother and her newborn baby has been recommended by the World Health Organization (WHO). The study indicated that this contact was applied in over 57% of respondents. Analysis of the data obtained shows how important this procedure is for the building of positive emotions. The mothers are calmer and more self-confident after giving birth. Oslislo [19] even claims that women who experienced such a contact not only experience satisfaction from delivery, but would also like to bear the subsequent child in similar conditions. The ‘skin-to-skin’ contact also brings about tremendous benefits for the newborn – provides optimum conditions for normal thermoregulation, and the baby’s skin is colonized with the bacterial flora of the mother. In addition, it is possible to attach the baby to the breast, and the baby – by drinking even small amounts of colostrum – uptakes immune antibodies, which are extremely important for the newborn’s organism [19].

The feeling of mobilization before childbirth was also found to be extremely important. Analysis of the data showed that women who before delivery indicated a high intensity of this feeling, more strongly experienced positive emotions during and after delivery. They felt joyful expectation and happiness during childbirth, and were also calmer after

giving birth. Also, Offtinowska [20] in her report pays special attention to the building in pregnant women of the feeling of strength, the possibility of overcoming delivery pain, and coping with difficulties which may occur during labour.

## CONCLUSIONS

1. During the perinatal period there may occur many factors exerting an effect on the emotions of a woman in pregnancy, labour and the lying-in period.
2. Special attention should be paid to the factors which, in a pregnant woman, shape the feeling of mobilization before giving birth, because this feeling positively affects the number of emotions which occur during and after delivery.
3. An early 'skin-to-skin' contact between the mother and her newborn baby after delivery is an important moment, which decreases postpartum pain complaints, and exerts an effect on the building of positive emotions in the mother.
4. Special attention should be paid to the symptoms of postpartum depression occurring in pregnant and lying-in women, and prevent it as early as possible.

## REFERENCES

1. Krzyżanowska-Zbucka J. Problemy emocjonalne kobiet w okresie okołoporodowym. Fundacja Rodzić po Ludzku, Warszawa 2008 (in Polish).
2. Lepiarz A. Zmiany psychiczne doświadczane przez kobiety oczekujące narodzin dziecka. *Gin Prakt* 2010; 1: 54–57 (in Polish).
3. Tymińska A. Poród – czy można go przeżyć inaczej? *Mag Med.* 1993; 4(6/7): 19, 21–22 (in Polish).
4. Doliński D. Ekspresja emocji. Emocje podstawowe i pochodne. In: Strelau J (eds.). *Psychologia. Podręcznik akademicki.* Gdańskie Wydawnictwo Psychologiczne, Sopot 1999, p. 351–368 (in Polish).
5. Kosińska-Kaczyńska K, Horosz E, Wielgoś M, Szymusik I. Zaburzenia afektywne u położnic w pierwszym tygodniu po porodzie – analiza rozpowszechnienia i czynników ryzyka. *Ginekol Pol.* 2008; 79: 182–185 (in Polish).
6. Mariańczyk K, Libera A, Oleszczuk J. Poczucie beznadziejności a style radzenia sobie ze stresem u kobiet po porodzie przedwczesnym. *Ginekol Pol.* 2010; 81: 342–346 (in Polish).
7. Makara-Studzińska M, Moryłowska-Topolska J, Sygit K, Sygit M, Goździewska M. Socio-demographical and psychosocial determinants of anxiety symptoms in a population of pregnant women in the regions of central and eastern Poland. *Ann Agric Environ Med.* 2013; 20(1): 195–202.
8. Wojtyła A, Kapka-Skrzypczak L, Biliński P, Paprzycki P. Physical activity among women at reproductive age and during pregnancy (Youth Behavioural Polish Survey – YBPS and Pregnancy-related Assessment Monitoring Survey – PrAMS) – epidemiological population studies in Poland during the period 2010–2011. *Ann Agric Environ Med.* 2011; 18(2): 365–374.
9. Wojtyła A, Kapka-Skrzypczak L, Paprzycki P, Skrzypczak M, Biliński P. Epidemiological studies in Poland on effect of physical activity of pregnant women on the health of offspring and future generations – adaptation of the hypothesis Development Origin of Health and Diseases. *Ann Agric Environ Med.* 2012; 19(2): 315–326.
10. Wojtyła A, Bojar I, Boyle P, Zatoński W, Marcinkowski J, Biliński P. Nutritional behaviours among pregnant women from rural and urban environments in Poland. *Ann Agric Environ Med.* 2011; 18(1): 169–174.
11. Gierszewska M, Klusek D, Lewandowska J. Oczekiwania kobiet rodzących wobec położnych pracujących na Sali porodowej. *Pielęgniarstwo Polskie* 2003; 2(16): 119–123 (in Polish).
12. Kaźmierczak W, Fiegler P, Węgrzyn P, Cholewa D. Rola porodu rodzinnego we współczesnym położnictwie. *Wiad Lek.* 2006; 59: 5–6 (in Polish).
13. American College of Obstetricians and Gynecologists Use of psychiatric medications during pregnancy and lactation. *Clinical Management Guidelines for Obstetrician-Gynecologist.* *Obstetrics & Gynecology* 2008; 111: 1001–1020.
14. Steiner M, Yonkers K. Depresja u kobiet. *Via Medica, Gdańsk* 1999.
15. Reroń A, Gierat B, Huras H. Ocena częstotliwości występowania depresji poporodowej. *Gin Prakt.* 2004; 12(3): 32–35 (in Polish).
16. Billert H, Gaca M, Mikulska J, Bręborowicz G. Ocena lęku u rodzących zdecydowanych na analgezję zewnątrzoponową. *Ginekol Pol.* 2007; 78: 532–538 (in Polish).
17. Hannah P, Adams D, Lee A, Glover V. Links between Early post-partum mood and postnatal depression. *Br J Psychiatry.* 1992; 160: 777–780.
18. Czerwiak G, Michalska M, Zdziebło K. Problemy emocjonalne związane z porodem. *Ann Acad Med Siles.* 2006; 60(1): 31–34 (in Polish).
19. Oslisło A, Offtinowska A. Najważniejsza chwila w życiu. O pierwszym kontakcie matki z dzieckiem i możliwości jego realizacji w placówkach położniczych w Polsce. *Fundacja Rodzić po Ludzku, Warszawa* 2008 (in Polish).
20. Offtinowska A. Przygotowanie do porodu nie jest szkołą. *Magazyn Pielęgniarki i Położnej* 1997; 6: 24–26 (in Polish).