

The effect of supportive nursing care during labor on maternity blues and birth satisfaction: randomised controlled trial

Nurdan Aymelek Çakıl¹, Evrım Bayraktar²

¹Department of Nursing, Faculty of Health Sciences, Kırşehir Ahi Evran University, Türkiye

²Department of Nursing, Faculty of Health Sciences, Erciyes University, Türkiye

Cite this article as: Aymelek Çakıl N, Bayraktar E. The effect of supportive nursing care during labor on maternity blues and birth satisfaction: randomised controlled trial. *J Health Sci Med.* 2025;8(2):350-355.

Received: 09.01.2025

Accepted: 16.03.2025

Published: 21.03.2025

ABSTRACT

Aims: The purpose of this study is to determine the effect of supportive nursing care given to pregnant women in labor on maternity blues and birth satisfaction.

Methods: The type of research was randomised controlled trial. A total of 47 women with healthy fetuses, 23 in the intervention group and 24 in the control group, were included in the study. Pregnant women in the control group received standard hospital care. Pregnant women in the intervention group received supportive nursing care including physical, emotional, informational and advocating elements during labor. Data were collected with The Gratification from Labor and Delivery Questionnaire (Turkish version), Stein's Maternity Blues Scale (Turkish version) and Pregnant Information Form.

Results: Sociodemographic and pregnancy characteristics of women in both groups were similar. Birth satisfaction in the intervention group was found to be higher than in the control group ($p<0.001$). In the intervention group, the duration of the second stage of labor and maternity blues scores on days 4 and 15 were lower ($p<0.001$). A significant correlation was determined between maternity blues and birth satisfaction ($r=0.611$; $p<0.001$).

Conclusion: Supportive care given to pregnant women during labor was found to shorten the second stage of labor, increase mothers' birth satisfaction, and decrease maternity blues. It was found that as birth satisfaction increased, the level of maternity blues decreased.

Keywords: Maternity blues, supportive care, labor, birth satisfaction

INTRODUCTION

Background and Significance

Maternity blues, which is well known among postpartum mental disorders and one of postpartum depression, is commonly seen.¹⁻³ The maternity blues, defined by Moloney in 1952 for the first time, has not been able to get the standard diagnostic criteria even today. Therefore, although its prevalence varies, it is expressed between 26% and 85% or between 40% and 60% in different studies.³⁻⁵ Being a temporary mental disorder, maternity blues starts within the first few days of the postpartum period and reaches the highest level at the fourth and fifth days. Symptoms usually disappear spontaneously within two weeks. Its characteristic features include mood change, crying, anxiety, insomnia, loss of appetite, irritability, poor concentration, and sadness, as well as feelings of isolation, restlessness, and tension. Although this group of complaints seems to be specific to the postpartum period, it can be distinguished from other reactions by characteristic symptoms against stress. If symptoms do not regress, it can cause disorders leading to

postpartum depression and it is a disorder that needs to be examined with care.^{3,6-8}

In studies conducted on the supportive care given in the first stage of labor, it was emphasized that women's negative feelings about birth and the need for intervention also decreased. Pregnant women who do not receive adequate prenatal care are at higher risk of postpartum depression and instrumental birth. Additionally, women's birth satisfaction has decreased.^{9,10} We know that births with reduced need for intervention positively affect postpartum mood.⁷ Therefore, it is conceivable that the supportive care that is provided affects satisfaction positively and reduces maternity blues. When we look at the supportive care studies in the literature mentioned above, it is seen that most of them focus on disorders such as postpartum depression and dysphoria. In addition, when supportive care procedures were examined, variations were found.^{6,9} To the best of our knowledge, many other studies on maternity blues have not addressed birth experience.^{9,10} In our opinion, there is an information gap regarding the relationship

Corresponding Author: Nurdan Aymelek Çakıl, nurdanaymelek@gmail.com



This work is licensed under a Creative Commons Attribution 4.0 International License.

between maternity blues and supportive care. The importance of non-invasive and spontaneous labor is obvious for a healthy postpartum process.¹¹ It has become necessary to investigate the possible effects of the birth process on maternity blues. Based on this reason, the aim of this study was to evaluate the effect of supportive nursing care given to pregnant women during labour on maternity blues and birth satisfaction.

Research Hypotheses

H1: Supportive nursing care during labor affects satisfaction with birth.

H2: Supportive nursing care during labor affects maternal blues score.

METHODS

Ethics

The study was carried out with the permission of the Erciyes University Clinical Researches Ethics Committee and Kayseri Training and Research Hospital (Date: 03.02.2017, Decision No: 2017/70). All procedures were carried out in accordance with the ethical rules and the principles of the Declaration of Helsinki. Written informed consent was obtained from all participants by the researchers.

Research Design

This randomized controlled experimental study was conducted to determine the effect of supportive nursing care during labour on maternity blues and birth satisfaction. The study was carried out in the obstetric service of a training and research hospital between January and May 2018.

Population and Sampling

The population of the study calculated a total of 1726 deliveries including 732 vaginal deliveries, 3 instrumental delivery, and 991 caesarean sections performed in the hospital in 2017. Because the large effect level was expected between the intervention and control groups for the variables in the study, the sample size was calculated as a total of 52 including 26 in each group with power of 80%, significance level of 5%, and an effect size of 0.8 for each group. 26 pairs of written opaque envelopes were used for randomization. In order to reach the sample size, a total of 98 mothers were included in the study, 45 in the intervention group and 53 in the control group. Of these, 22 pregnant women in the intervention group and 29 pregnant women in the control group were excluded from the sample due to prolonged labor pains and fetal distress. A total of 47 patients were reached in the study, 23 intervention and 24 control. With the post-power analysis conducted with 47 patients, 99% power was reached and data collection was terminated (Figure 1).

Inclusion Criteria

The inclusion criteria for pregnant women included being aged between 19 and 35, speaking Turkish, residence in the city center, having a healthy single fetus of 37-41 weeks, not having any obstacle for vaginal delivery, being in the early latent phase of labor (dilatation max 0-1 cm), and being healthy (no chronic physical and psychological diseases).

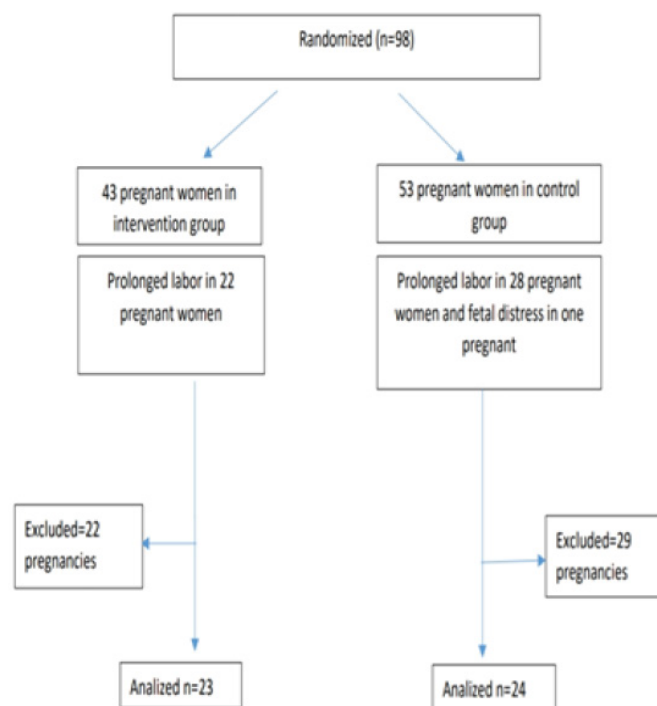


Figure 1. Flow chart of the participancy through each stage of the trial

Study Process

Control group: During the study, the pregnant women in the control group received standard hospital care. In the hospital where the study was conducted, the pregnant women were admitted to the obstetrics ward. Oral intake is restricted, and intravenous isotonic fluid is given to pregnant women in the latent phase with regular contractions. Dilation, non-stress test (NST) and vital signs are monitored by the clinical nurse/midwife according to the frequency of pain. When contractions increase and cervical dilation reaches 3-4 cm, pregnant women determined to be in the active phase are taken to the delivery room. Dilation, vital monitoring and NST are performed more frequently in the delivery room. The pregnant woman is restricted from standing up and walking. No pharmacological or non-pharmacological intervention is performed regarding pain management.

Intervention group: In addition to standard care, pregnant women in the intervention group were given information about breathing techniques and effective pushing during labor. Other supportive nursing care given to pregnant women is shown in Figure 2 according to their categories.

Open epiglottis type pushing was taught to the pregnant woman in the early latent phase when she was open to communication. In this type of pushing, when the woman inevitably feels the urge to push, she pushes forcefully 3-5 times starting from the peak of the contraction without taking a deep breath.¹²

It is taught as a breathing technique in stages;

First stage (normal breathing): The pregnant woman breathes in through her nose and exhales by pursing her lips as if blowing out a candle. Only the chest wall moves during this time. The respiratory rate should be set to 2 times in 15 seconds.^{13,14}

| Care practices | Type of supportive care | | | |
|--|-------------------------|-----------|---------------|------------|
| | Physical | Emotional | Informational | Advocative |
| Accepting the pregnant woman warm-heartedly to the service | | ✓ | | |
| Explaining the hospital routines | | | ✓ | |
| Answering the potential requests of the pregnant woman correctly/clearly | | | ✓ | ✓ |
| Giving information about the frequency of contraction and breathing techniques during delivery | | | ✓ | |
| Supporting the position with objects such as pillows during contraction | ✓ | | | |
| Circular rubbing massage to the sacral area during contraction | ✓ | | | |
| Asking the pregnant to empty her bladder and explaining its importance | ✓ | | ✓ | |
| Giving information about effective straining | | | ✓ | |
| Supporting her to take the position she wants | ✓ | | | |
| Explaining the reasons of possible interventions to pregnant women (enema, parenteral fluid support, NST results) | | | ✓ | |
| Explaining the reason to the pregnant woman whose oral intake is restricted and providing relief by soaking her lips and mouth rinsing | ✓ | | ✓ | |
| Paying attention to personal privacy | | | | ✓ |
| Supporting and praising words | | ✓ | | |
| Empathic interventions such as hand holding or patting the shoulder | | ✓ | | |
| Expressing positive/negative opinions about the interventions | | | | ✓ |

Figure 2. Supportive care practices given to the pregnant women

Second stage (slow or deep chest breathing): Normal breathing is done at the beginning of each contraction. Then, 4-5 seconds of inspiration is followed by 4-5 seconds of expiration and a breath that can be heard from the outside is made. Breath is taken through the nose and exhaled through the mouth.^{13,14}

Third level (rapid-shallow chest breathing): This type of breathing is also called audible breathing. It is also effective in dealing with waves, but it is an example of breathing that requires concentration. It has a great effect in diverting attention and preventing energy loss. The exhalation may be accompanied by “hii” or “hoo” sounds. Breathing should be done only with the chest muscles without using the abdominal muscles. Each wave begins with normal breathing. As the wave intensifies, the respiratory rate gradually increases. When the wave begins to calm down, the respiratory rate also slows down. Normal breathing is continued between two contractions. It is very important to change the air equally to prevent hyperventilation. Breathing is taken in and out through the mouth.^{13,14}

In the early latent phase, normal breathing was followed by slow and deep chest breathing during the contraction period; in the late latent phase and active phase, rapid - shallow chest breathing was applied.

Massage was applied to the sacral region of the pregnant woman under the supervision of a midwife or obstetrician during the contractions. Circular rubbing massage was applied on the sacral vertebrae during the contraction period while the pregnant woman was sitting or lying down, as desired. The duration of the massage application was not standard. Because the frequency and duration of contractions of pregnant women varied.¹⁵

Data Collection

The Pregnancy Information Form was administered to pregnant women in both the intervention and control groups face-to-face when they first arrived at the clinic. After vaginal delivery, the women were administered the 10-question “Labor and Delivery Satisfaction Questionnaire” on the first postpartum day. After discharge, the mother was visited twice at home, on the 4-5th postpartum day when maternity blues were most intense, and on the 14-15th day when maternity blues should have subsided. During these visits, the mother was administered the “Stein’s Maternity Blues Scale.”

Measures

Three instruments were used for data collection.

Pregnant Information Form: It was prepared by the researcher upon the related literature review.^{3,16-18} It consists of a total of 27 questions prepared to determine sociodemographic (age, education level, working status, economic status, etc.) and obstetric characteristics (gestational age, pregnancy intention status, gravidity, sex of the infant, etc.), information about the process of delivery, social support status and delivery duration, presence of episiotomy, and birth weight of the baby

Stein’s Maternity Blues Scale (Turkish version): The scale developed by Stein in 1980 consists of 13 items. The total score of the scale ranges between 0 and 26. If the daily score is between 0-2, it is defined as no maternity blues, the scores between 3 and 8 points are defined as mild to moderate maternity blues and scores of 9 points and more are defined as severe maternity blues. For the use of the scale, Dr. George Stein was contacted for permission. The original English version of the scale was translated by 3 experts specialized in their fields. Thirteen items of the scale which was adapted into Turkish were presented to the opinions of 10 experts. Polit and Back Content Validity Index (CVI) were used to evaluate the expert opinion. After the expert evaluation, all items in the scale were evaluated above 0.78 and the Content Validity Index of the scale was found to be 0.975. In accordance with the analyses and recommendations, it was determined that the content validity of the scale was achieved.¹⁹

The Gratification from Labour and Delivery Questionnaire (Turkish version): The Gratification from Labour and Delivery Questionnaire is a subscale of the Postpartum Self-Evaluation Questionnaire developed by Lederman and Weingarten in 1981. Its Turkish adaptation was carried out by Tasci and Mete in 2007. The Gratification from Labour And Delivery Questionnaire is used to determine the birth satisfaction of mothers. The Cronbach’s alpha coefficient, which is the Gratification from Labour and Delivery Questionnaire, was calculated as 0.88. It is composed of the items 6,9,28,47,48,58,67,68,73, and 79. The evaluation of the scale is a four-point Likert type. The lowest score is 10 and the highest score is 40. Low scores indicate good postpartum adjustment.²⁰

Statistical Analysis

The data were assessed using IBM SPSS Statistics 25.0 statistical software. Descriptive statistics were given as number of units (n), percentage (%), mean±standard deviation (x±SD),

median, minimum value (min), the maximum value (max), and average rank score values. The normal distribution of the data of the numerical variables was evaluated by the Shapiro Wilk normality test and Q-Q graphs. In normally distributed variables, two independent samples t-test was used to compare two groups. On the other hand, the Mann-Whitney U test was applied in variables not showing a normal distribution. Within-group comparisons of variables not showing normal distribution were performed by Wilcoxon analysis. The correlation between categorical variables was examined by Fisher's exact test in 2x2 and rxc tables. The value of $p < 0.05$ was accepted as statistically significant.

RESULTS

It was observed that the mean age, median gravida, median age of marriage, education, employment, family and income levels of the pregnant women in the intervention and control groups in the study were similar (Table 1) ($p > 0.05$).

| Characteristics | Intervention group (n=23) | | Control group (n=24) | | p |
|--------------------------------------|---------------------------|------|----------------------|------|-------|
| | n | % | n | % | |
| Education | | | | | |
| Primery school | 3 | 13 | 5 | 20.8 | 0.914 |
| Middle school | 2 | 21.7 | 6 | 25.0 | |
| High school | 10 | 43.6 | 10 | 41.6 | |
| University and above | 5 | 21.5 | 3 | 12.6 | |
| Working status | | | | | |
| Employee | 4 | 17.4 | 3 | 12.5 | 0.701 |
| Unemployed | 19 | 82.6 | 21 | 87.5 | |
| Family type | | | | | |
| Nuclear family | 17 | 73.9 | 15 | 62.5 | 0.534 |
| Extended family | 6 | 26.1 | 9 | 37.5 | |
| Income status | | | | | |
| Good | 7 | 30.4 | 5 | 20.8 | 0.775 |
| Medium | 13 | 56.5 | 15 | 62.5 | |
| Poor | 3 | 13.1 | 4 | 16.7 | |
| Age X±SD (min-max) | 27.0±4.4 (19-35) | | 26.6±5.1 (19-36) | | 0.812 |
| Gravida [median (min-max)] | 2 (1-5) | | 2 (1-5) | | 0.216 |
| Married age [median (min-max)] | 4 (1-17) | | 4.5 (1-18) | | 0.210 |
| Age of previous child X±SD (min-max) | 4.1±1.9 (1-11) | | (2-8) 4.3±2.8 | | 0.792 |

SD: Standard deviation, Min: Minimum, Max: Maximum

No significant correlation was found between the data of the participating mothers regarding the infant's gender, birth weight of the infant, induction, episiotomy, and duration of the first stage of labour. However, the duration of the second stage of labour was significantly different between the groups (Table 2) ($p < 0.001$).

Table 3 shows the difference between the SMBS scores between the two groups. It was found that the SMBS median score was 2 in the intervention group and 6 in the control group on the postpartum 4th day. There was a statistically

| Characteristics | Intervention group | | Control group | | p |
|--|--------------------|------|-------------------|------|---------|
| | n | % | n | % | |
| Gender of the infant | | | | | |
| Female | 8 | 34.8 | 8 | 33.3 | 0.580 |
| Male | 15 | 65.2 | 16 | 66.7 | |
| Birth weight of the infant | | | | | |
| <3000 g | 6 | 26.1 | 5 | 20.8 | 0.740 |
| 3000-4000 g | 17 | 73.9 | 19 | 79.2 | |
| Situmulation | | | | | |
| Oxytocin | 12 | 80.0 | 9 | 60.0 | 0.427 |
| Cervical prostaglandin | 3 | 20.0 | 6 | 40.0 | |
| Episiotomy | | | | | |
| Yes | 20 | 87.0 | 19 | 79.2 | 0.701 |
| No | 3 | 13.0 | 5 | 20.8 | |
| | X±SD (min-max) | | X±SD (min-max) | | p |
| Duration of the first stage (hours) X±SD (min-max) | 7.1±3.2 (3-12) | | 8.4±3.5 (3-15) | | 0.195 |
| Duration of the second stage (min) X±SD (min-max) | 16.1±7.4 (5-30) | | 27.1±11.2 (10-50) | | <0.001* |

*Statistically significant, SD: Standard deviation, Min: Minimum, Max: Maximum

| SMBS score | Intervention group | Control group | p |
|---|--------------------|---------------|---------|
| Postpartum 4 th day [median (min-max)] | 2 (0-5) | 6 (0-21) | <0.001* |
| Postpartum 15 th day [median (min-max)] | 0 (0-1) | 0 (0-7) | 0.011* |
| Difference (4 th day- 15 th day) [median (min-max)] | 1 [(-1) - (5)] | 5 (0-14) | <0.001* |

*Statistically significant, SMBS: Stein's Maternity Blues Scale, Min: Minimum, Max: Maximum

highly significant difference between the groups in terms of maternity blues scores on the postpartum 4th day ($p < 0.001$). On the other hand, on the postpartum 15th day, the SMBS median score was 0 in the intervention group and 0 in the control group. There was no statistically significant difference between the groups in terms of maternity blues scores on the postpartum 15th day ($p < 0.05$). Satisfaction of the group receiving supportive nursing care was higher than the control group and the difference between them was statistically significant ($p < 0.001$).

Distribution of the mean scores obtained by women from the Gratification from Labour and Delivery Questionnaire is 15.3±3.1 in intervention group and 21.8±6.1 in control group (Table 4).

| | Intervention group | Control group | p |
|--|--------------------|------------------|---------|
| Gratification from labour and delivery scores X±SD (min-max) | 15.3±3.1 (10-21) | 21.8±6.1 (13-32) | <0.001* |

*Statistically significant, SD: Standard deviation, Min: Minimum, Max: Maximum

The correlation coefficient between the Gratification from Labour and Delivery Questionnaire and SMBS scores of women was determined 0.611 [Correlation is significant at the level of 0.01 (2-tailed)]. There is a strong positive relationship between women's satisfaction with their birth experience and their SMBS scores (Table 5).

Table 5. The relationship between satisfaction with the birth experience and SMBS scores of women

| | SMBS | |
|--|---------|-------|
| | r | p |
| Satisfaction with the birth experience | 0.611** | 0.000 |

Correlation is significant at the 0.01 level (2-tailed)

SMBS: Stein's Maternity Blues Scale

DISCUSSION

A positive outcome of labor is important for both the newborn and the mother's health. Supporting the mother with nursing care during labor provides a positive birth experience. Mothers with increased birth satisfaction have a healthier postpartum period. In this section, the findings regarding the effects of supportive nursing care during labor on birth satisfaction and maternity blues will be discussed.^{6,10-12}

When examining the satisfaction scores of the intervention group and the control group, it was found that the intervention group was more satisfied with the birth experience than the control group (Table 4). In related studies, it is known that supportive care at birth change positively women's birth outcomes.^{21,22} Some studies have proved that supportive nursing care yielded the positive results in physiological parameters such as pain, bleeding and perineal laceration in addition to psychological parameters related to supportive nursing care such as fear of birth, anxiety, and concern.²³⁻²⁵ Moreover, in some studies, it was found that supportive care given at birth shortened the delivery duration of women.²⁵⁻²⁸ In the study conducted by İşbir and Serçekuş, the supportive care given at birth and routine hospital care groups were compared and it was determined that the duration of birth was shorter in the intervention group.¹¹ In this study, the length of the first stage of labour was similar between the groups but similar to the literature, the second stage of labour was shorter in the intervention group than the control group (Table 2). Regarding this, it can be thought that the decrease in the delivery duration and therefore the decrease in the contraction time bring about maternal satisfaction. There are features highlighting the latent phase concerning supportive care applied in different phases. For example, since long-term intrapartum pain is associated with birth satisfaction, the latent phase is reported to be the best time for women to share their opinions about their birth requests and analgesia.^{29,30} Therefore, in this study, the information we provided in the latent phase, in which the pregnant woman is open to communicate and can use her focusing ability well, was likely related to the result of the birth satisfaction.

When examining the maternity blues scores on the postpartum 4th day, it was found that the SMBS median scores of the intervention group was lower than the control group (Table 3). In some of studies on maternity blues, the

maternity blues scores of the women who received nursing care for a longer period were not different than those who do not receive nursing care, but they emphasised the importance of supportive nursing care in women since the maternity blues were experienced more in primiparous ones.³ As cited by Smith et al.,²⁴ in their study Field et al., determined that supportive care given at birth to women in the latent phase (dilatation of 3-5 cm) reduced their postpartum depression and reduced their stress levels. In this study, it was thought that in addition to supportive interventions to provide physical comfort related to supportive care, empathic behaviours such as sacral massage and hand-holding shoulder patting were effective in maternity blues. In studies related to massage and therapeutic touch among studies on supportive care, it has been reported that maternity blues, postpartum depression, and similar psychological disorders decrease.^{15,31}

In this study, it was determined that the supportive care increased satisfaction by helping to provide a positive birth experience (Table 4). In addition, a strong positive correlation was found between satisfaction with the birth experience and SMBS scores (Table 5). Maternity blues studies related to positive birth experience are not available in the literature, but studies involving women suffering from postpartum depression shed light on this issue. When we look at the studies related to postpartum depression, it is seen that negative or adverse birth experience affects mothers with depression.^{6,32,33}

Limitations

In this study, the researchers were not blinded. Most of the pregnant women who applied to the clinic for delivery were in the active or transitional stages, which made it difficult to reach the sample size. The cesarean rate was very high. Therefore, it took longer than planned to reach the determined sample size. Another limitation of this study is that some routines in the hospital had to be included in this study.

CONCLUSION

Supportive care given to pregnant women in labor was found to shorten the second stage of labor, increase mothers' birth satisfaction, and reduce maternity blues. In the fourth and fifteenth day follow-ups of mothers in the intervention group, maternity blues scores were significantly lower compared to the control group. It has been found that maternity blues level decreases with increasing birth satisfaction. It may be recommended that similar studies be conducted to support the effects of nursing care on maternity blues.

ETHICAL DECLARATIONS

Ethics Committee Approval

The study was carried out with the permission of the Erciyes University Clinical Researches Ethics Committee (Date: 03.02.2017, Decision No: 2017/70).

Informed Consent

All patients signed and free and informed consent form.

Referee Evaluation Process

Externally peer-reviewed.

Conflict of Interest Statement

The authors have no conflicts of interest to declare.

Financial Disclosure

The authors declared that this study has received no financial support.

Author Contributions

All of the authors declare that they have all participated in the design, execution, and analysis of the paper, and that they have approved the final version.

REFERENCES

- Tosto V, Ceccobelli M, Lucarini E, et al. Maternity blues: a narrative review. *J Pers Med*. 2023;13(1):154. doi:10.3390/jpm13010154
- Al-Abri K, Edge D, Armitage CJ. Prevalence and correlates of perinatal depression. *Soc Psychiatry Psychiatr Epidemiol*. 2023;58(11):1581-1590. doi:10.1007/s00127-022-02386-9
- Luciano M, Sampogna G, Del Vecchio V, et al. The transition from maternity blues to full-blown perinatal depression: results from a longitudinal study. *Front Psychiatry*. 2021;12:703180. doi:10.3389/fpsy.2021.703180
- Durgun SK, Ulaş SC. Knowledge and practices of primary health care professionals on maternal blues. *Int J Mental Health Addict*. 2023;21(1):650-665.
- Gerli S, Fraternali F, Lucarini E, et al. Obstetric and psychosocial risk factors associated with maternity blues. *J Matern Fetal Neonatal Med*. 2021;34(8):1227-1232. doi:10.1080/14767058.2019.1630818
- Adeyemo EO, Oluwole EO, Kanma-Okafor OJ, Izuka OM, Odeyemi KA. Prevalence and predictors of postpartum depression among postnatal women in Lagos, Nigeria. *Afr Health Sci*. 2020;20(4):1943-1954. doi:10.4314/ahs.v20i4.53
- Okunola TO, Awoleke JO, Olofinbiyi B, Rosiji B, Omoya S, Olubiyi AO. Postnatal blues: a mirage or reality. *J Affect Disord Rep*. 2021; 6:100237. doi:10.1016/j.jadr.2021.100237
- Shishido E, Shuo T, Shinohara K, Horiuchi S. Effects of epidural anesthesia on postpartum maternity blues and fatigue and its relation to changes in oxytocin. *Jpn J Nurs Sci*. 2021; 18(3); e12406. doi:10.1111/jjns.12406
- Mariño-Narvaez C, Puertas-Gonzalez JA, Romero-Gonzalez B, Peralta-Ramirez MI. Giving birth during the COVID-19 pandemic: the impact on birth satisfaction and postpartum depression. *Int J Gynaecol Obstet*. 2021;153(1):83-88. doi:10.1002/ijgo.13565
- Finneran MR. The influence of parity on a woman's perception of nursing support during labor and birth satisfaction. undergraduate thesis, Walsh University. Electronic theses and dissertations center. 2019. http://rave.ohiolink.edu/etdc/view?acc_num=walshhonors1555685126717134
- İsbir GG, Serçekuş P. The effects of intrapartum supportive care on fear of delivery and labor outcomes: a single-blind randomized controlled trial. *J Nurs Res*. 2017;25(2):112-119. doi:10.1097/JNR.0000000000000129
- Araújo AE, Delgado A, Maia JN, Lima Campos S, Wanderley Souto Ferreira C, Lemos A. Efficacy of spontaneous pushing with pursed lips breathing compared with directed pushing in maternal and neonatal outcomes. *J Obstet Gynaecol*. 2022;42(5):854-860. doi:10.1080/01443615.2021.1945016
- Taşkın L. Doğum ve Kadın Sağlığı Hemşireliği. Akademisyen Kitabevi. 2019: ss. 314-315.
- Cicek S, Basar F. The effects of breathing techniques training on the duration of labor and anxiety levels of pregnant women. *Complement Ther Clin Pract*. 2017;29:213-219. doi:10.1016/j.ctcp.2017.10.006
- Patyal N, Kumari S, Verma D, Yadav H, Kaur J, Kaur H. Effectiveness of sacral massage on labor pain and satisfaction among antenatal mothers in active phase of labor. *Nation J Commun Med*. 2024;15(4):299-306. doi:10.55489/njcm.150420243670
- Cadman T, Strandberg-Larsen K, Calas L, et al. Urban environment in pregnancy and postpartum depression: an individual participant data meta-analysis of 12 European birth cohorts. *Environ Int*. 2024;185:108453. doi:10.1016/j.envint.2024.108453
- Ntaouti E, Gonidakis F, Nikaina E, et al. Maternity blues: risk factors in Greek population and validity of the Greek version of Kennerley and Gath's blues questionnaire. *J Matern Fetal Neonatal Med*. 2020;33(13):2253-2262. doi:10.1080/14767058.2018.1548594
- Gerli S, Fraternali F, Lucarini E, et al. Obstetric and psychosocial risk factors associated with maternity blues. *J Matern Fetal Neonatal Med*. 2021;34(8):1227-1232. doi:10.1080/14767058.2019.1630818
- Stein GS. The pattern of mental change and body weight change in the first post-partum week. *J Psychosom Res*. 1980;24(3-4):165-171. doi:10.1016/0022-3999(80)90038-0
- Tascı KD, Mete S. Validity and reliability study of postpartum self-assessment scale. *Atatürk Uni School Nurs J*. 2007;10(2):20-29.
- Alvarado G, Schultz D, Malika N, Reed N. United States doula programs and their outcomes: a scoping review to inform state-level policies. *Womens Health Issues*. 2024;34(4):350-360. doi:10.1016/j.whi.2024.03.001
- Nazik E. Doğum, kadın sağlığı ve hastalıkları hemşireliği. Akademisyen Kitabevi. 2022. ss.206-207.
- Bayraktar E, Başer M. Effect of perineum massage with olive oil on perineum integrity and duration of second period of delivery. *J Human Sci*. 2021;18(2):131-142. doi:10.14687/jhs.v18i2.6029
- Smith CA, Levett KM, Collins CT, Dahlen HG, Ee CC, Sukanuma M. Massage, reflexology and other manual methods for pain management in labour. *Cochrane Database Syst Rev*. 2018;3(3):CD009290. doi:10.1002/14651858.CD009290.pub3
- Cankaya S, Can R. The effect of continuous supportive care on birth pain, birth fear, midwifery care perception, oxytocin use, and delivery time during the intrapartum period: An experimental study. *Niger J Clin Pract*. 2021;24(11):1624-1632. doi:10.4103/njcp.njcp_147_20
- Kashanian M, Javadi F, Haghighi MM. Effect of continuous support during labor on duration of labor and rate of cesarean delivery. *Int J Gynaecol Obstet*. 2010;109(3):198-200. doi:10.1016/j.ijgo.2009.11.028
- Bolbol-Haghighi N, Masoumi SZ, Kazemi F. Effect of massage therapy on duration of labour: a randomized controlled trial. *J Clin Diagn Res*. 2016;10(4):QC12-QC15. doi:10.7860/JCDR/2016/17447.7688
- Zuarez-Easton S, Erez O, Zafran N, Carmeli J, Garmi G, Salim R. Pharmacologic and nonpharmacologic options for pain relief during labor: an expert review. *Am J Obstet Gynecol*. 2023;228(5S):S1246-S1259. doi:10.1016/j.ajog.2023.03.003
- Ängeby K, Sandin-Bojö AK, Persenius M, Wilde-Larsson B. Women's labour experiences and quality of care in relation to a prolonged latent phase of labour. *Midwifery*. 2019;77:155-164. doi:10.1016/j.midw.2019.07.006
- Cohen WR, Friedman EA. The latent phase of labor. *Am J Obstet Gynecol*. 2023;228(5S):S1017-S1024. doi:10.1016/j.ajog.2022.04.029
- Rezaie-Keikhaie K, Hastings-Tolsma M, Bouya S, et al. Effect of aromatherapy on post-partum complications: a systematic review. *Complement Ther Clin Pract*. 2019;35:290-295. doi:10.1016/j.ctcp.2019.03.010
- Míguez MC, Vázquez MB. Risk factors for antenatal depression: a review. *World J Psychiatry*. 2021;11(7):325-336. doi:10.5498/wjp.v11i7.325
- Waldenström U, Hildingsson I, Rubertsson C, Rådestad I. A negative birth experience: prevalence and risk factors in a national sample. *Birth*. 2004;31(1):17-27. doi:10.1111/j.0730-7659.2004.0270.x