Evaluation of Factors Affecting Depression and Sexual Dysfunction in the Postpartum Period

Postpartum Dönemde Depresyon ve Cinsel Disfonksiyonu Etkileyen Faktörlerin Değerlendirilmesi

Şebnem Alanya Tosun¹, Muhammet Bulut²

¹Giresun Üniversitesi Tip Fakültesi, Kadın Hastalıkları ve Doğum Ana Bilim Dalı, Giresun
²Giresun Üniversitesi Tip Fakültesi, Çocuk Sağlığı ve Hastalıkları Anabilim Dalı, Giresun

ABSTRACT

Objective: Postpartum depression and sexual dysfunction are common disorders in postpartum period and negatively effects infant’s development. The aim is to evaluate the effect of parameters such as breastfeeding, mode of delivery and birth education program on depression and sexual dysfunction of postpartum women.

Materials and Methods: Postpartum women 3 months after childbirth were enrolled in this cross-sectional cohort study. Postpartum depression risk and sexual dysfunction were scanned by Edinburgh Postpartum Depression Scale (EPDS), Female Sexual Function Index (FSFI); socio-demographic and obstetric features were assessed through a self-developed survey including daily life style and breastfeeding.

Results: A total of 89 postpartum women without a history of psychiatric illness were included. 45/89(50.6%) of them completed the birth education program during antenatal period. EPDS and FSFI scores were 6.57 ± 7.2, 26.6 ± 11.4 in those who attended birth education program and 9.70 ± 8.3, 19.4 ± 18 in those who did not, respectively (p<0.05).According to the status of breastfeeding or mode of delivery, there was no statistically significant difference in postpartum depression risk and sexual function scores. Additionally, as secondary outcomes we assessed the relation of the birth education program with mode of delivery and breastfeeding. 64.4% of postpartum women who delivered vaginally participated to the birth education program, whereas only 35.6% of women who delivered with caesarean section participated (p=0.056).Secondly, when we compared the status of breastfeeding with participation in the birth preparation program, there was no significance (p=0.4).

Conclusion: This study has shown that systematic and multidisciplinary developed birth education program reduces the possibility of postpartum depression and improves level of sexual function.

Key Words: Breastfeeding, Edinburgh Postpartum Depression Scale, Female Sexual Function Index, birth preparation program, postpartum depression, sexual dysfunction

ÖZET

Amaç: Postpartum depresyon ve cinsel işlev bozukluğu, postpartum dönemde sık görülen bozukluklardır ve bebeğin gelişimi olumsuz etkiler. Amacımız, emzirme, doğum şekli ve gebe eğitim programı gibi parametrelerin doğum sonrası kadınlarda depresyon ve cinsel disfonksiyon üzerindeki etkisini değerlendirilmektir.

Gereç ve Yöntem: Doğumdan 3 ay sonra postpartum kadınlar kesitsel çalışmasına alındı. Doğum sonrası depresyon riski ve cinsel işlev bozukluğu Edinburgh Doğum Sonrası Depresyon Ölçüğü (EPDS), Kadın Cinsel İşlev İndeksi (FSFI); günlük yaşam tarzı ve emzirme açısından sosyo-demografik ve obstetrik özellikler anket ile değerlendirildi.

Bulgular: Psikiyatrik hastalık öyküsü olmayan toplam 89 postpartum kadın dahil edildi. 45/89’u (% 50,6) doğum öncesi dönemde gebe eğitim programını tamamlamıştı. Gebe eğitim programına katılanlarda EPDS ve FSFI skorları 6.57 ± 7.2, 26.6 ± 11.4 ve katılımlayandırular srasıyla 9.70 ± 8.3, 19.4 ± 18 idi (p<0.05). Emzirme durumu veya doğum şekline göre, postpartum depresyon riski ve cinsel işlev skorları arasında istatistik olarak anlamlı bir fark yoktu. Ayrıca, ikincil sonuç olarak gebe eğitim programının doğum şekli ve emzirme ile ilişkisini değerlendirildi. Vajinal doğum yapan postpartum kadınların% 64,4’ü İçe (p=0.056) ve katılmayanlarda sadece %35,6’sı bu eğitimi aldı. (p = 0,056). Emzirmenin durumu ile gebe eğitim programına katılmadığında karşılaştırılmışa anlamlı bir fark yoktu (p = 0.4).

Sonuç: Bu çalışma, sistematik ve multidisipliner geliştirilmiş gebe eğitimi programının, doğum sonrası depresyon olasılığını azaltuggage ve cinsel işlev seviyesini gelişirdiği göstermiştir.

Anahtar Kelimeler: Emzirme, Edinburg Postpartum Depresyon Skalası, Kadın Cinsel Fonksiyon İndeksi, gebe hazırlık programı, postpartum depresyon, cinsel disfonksiyon
Introduction

Postpartum depression is an annoying childbirth complication and it is not easily recognised because of the similar changes in the habits of sleeping, eating and psychological mood during normal postpartum period (1). This subtype of major depressive disorder emerges within 1 year after the childbirth and is related with being irrelevant to the baby (2). Approximately 13% of postpartum women suffer from postpartum depression (3). Paediatricians have to be careful and cooperate as gynaecologists during the 1st year of infant [4, 5]. Further, the American Academy of Paediatrics recommends to screen this disorder at the 1st, 2nd, 4th and 6th month postpartum visits for infant (1, 4). Depression disrupts the mother’s duties and can also negate the infant’s growth and development.

On the other hand, sexual problems frequently eventuate in the postpartum period and the prevalence ranges between 30% and 60% during the first 3 months postpartum (6). Although it is a common disorder, both physicians and women may postpone sexual concerns during pregnancy and postpartum period due to the inconvenience in raising the issue (7).

The primary target of antenatal and postnatal follow-up is to ensure that woman continues her physically and psychologically healthy life with her fetus or infant. For this purpose, systematic and multidisciplinary birth education programs are offered during the 2nd and 3rd trimesters of pregnancy in our tertiary hospital. During this 4 – week period, introductory information is provided by doctors and nurses about diet, exercise, sexual life and encouragement to vaginal delivery and breastfeeding (Table 1). Adequate knowledge about the upcoming period during pregnancy may relieve anxiety and maintain a healthy life.

The main purpose of this study is to determine the effect of breastfeeding, mode of delivery and birth education program on postpartum depression and sexual dysfunction during early postpartum months in the Eastern Black Sea Region. Secondly, we investigate the relation of the birth education program with mode of delivery and breastfeeding.

Materials and Methods

This is a cross-sectional cohort study of postpartum women admitted to Giresun University Maternal and Children Disease’s Education and Training Hospital for their infants between June 2019 and December 2019. The postpartum women 3 months after birth were scanned by the Edinburgh Postpartum Depression Scale, Female Sexual Function Index (FSFI) Scale. Obstetric and socio-demographic features were asked through a short self-developed survey including daily life style and breastfeeding.

Inclusion criteria were as follows; mothers at age between 18 and 45 years who performed live birth deliveries under hospital conditions without intrapartum complications. Exclusion criteria were as follows; mothers who have preterm births, twin births or infants with congenital anomalies, deliveries at the age <18, prior history of major depressive disorder, substance abuse and single mothers. Also, mothers and infants with medical problems which required prolonged hospitalization (preeclampsia, postpartum hemorrhage etc) were excluded from the study.

Maternal socio-demographic features included maternal age (yrs), gravidity, and mode of delivery, education level, family income and maternal chronic disorders such as presence of diabetes, obesity or cardiac problems prior to pregnancy. Presence and frequency of breast feeding, use of additional infant formula, and the frequency of participation to the birth preparation program were interrogated. Diet style, amount of daily exercise, age at first sexual intercourse, smoking were questioned (Appendix 1).

The likert type validated Edinburgh Postpartum Depression Scale, which was prepared for screening purposes to determine the risk of depression in postpartum women, consists of 10 items (8). Women with a scale score of 13 and above are considered to be at risk of depression with 61.5% sensitivity and 77.4% specificity in a Turkish validation study (9).

The validated FSFI is a self-report Likert type 19-item scale that measures sexual functions including six sexual domains: sexual desire, lubrication, orgasm, arousal, pain and satisfaction at the last 4 week period (10). The FSFI score ranges between 2.0 and 36.0. The sexual function is good as it scores and cut-off value of the scale was accepted as 23 during the analysis of data. The widely used scale was translated into Turkish and its validity was provided (11).

The primary outcomes were the factors affecting the postpartum EPDS and FSFI mean score. Secondary outcomes were the relation of the birth education program with the mode of delivery and the breastfeeding.
Statistical Analysis: Statistical analyses were performed by using IBM SPSS Statistics version 11. Two group comparisons were performed by Student t test. Chi-square test was used to determine relationships between categorical variables. The p value <0.05 was considered as statistically significant.

Results

96 patients were initially asked to participate in the study, however 7 of them were excluded because 5 diagnosed with depression and 2 diagnosed with anxiety before pregnancy (Figure 1). A total of 89 postpartum women between the ages of 18-43 and without a history of previously diagnosed psychiatric disorders admitted to the study. In the demographic analysis, the mean maternal age was 27.8 ± 5.1 yrs, with the age of first sexual intercourse 23.2 ± 3.6. Of those, 40.4% women were high school graduates and 44.9% women were middle income (minimum 2000 TL). Only 4 (4.5%) of them had a prior history of chronic co-morbid diseases without requirement of prolonged hospitalization and using related medication, these were hypothyroidism, migraine, hypertension and diabetes mellitus. 15 (16.9%) of postpartum women were cigarette smokers (Table 2).

45/89 (50.6%) of postpartum women completed the birth education program which is organised as 4 periods once a week during their antenatal period. While 49 (55.1%) of postpartum women gave birth vaginally; 40 (44.9%) of them had caesarean section. 63 (70.8%) infants received only breastfeeding. Very few like 13 (14.6%) of women were on diet, while 24 (27%) of them were doing exercise (Table 2).

The EPDS mean score was 6.57 ± 7.2 in those who attended the birth education program and 9.70 ± 8.3 in those who did not. Statistically significantly higher score were found in non attendant group (p<0.05). The FSFI mean score in the group of women participating to the program was 26.6 ± 11.4, whereas this score remains 19.4 ± 18 in the non-participating group during the postpartum period. Accordingly, the FSFI score comparisons demonstrated significantly higher postpartum sexual function in patients participating to the birth education program (p<0.05).

The mode of delivery, including caesarean delivery and spontaneous vaginal delivery was compared. There was no statistically significant difference between caesarean delivery and spontaneous vaginal delivery in terms of postpartum depression risk and female sexual function. According to the status of breastfeeding, there was no statistically significant difference in terms of postpartum depression risk and sexual function. The EPDS and the FSFI mean scores are in Table 3.

Additionally, as secondary outcomes we assessed the relation of the birth education program with the mode of delivery and breastfeeding. 64.4% of postpartum women who delivered vaginally participated to the birth preparation program, whereas only 35.6% of women who delivered with caesarean section participated to the same program. Although p value is 0.056, we may interpret that it has possible trend towards significance. Secondly, when we compared the status of breastfeeding with participation in the birth education program, there was no statistically significance (p=0.4) (Table 4).

Discussion

The postpartum period is influenced by physical, psychological and hormonal alterations; social and cultural structures are also play role in postpartum depression and sexual dysfunction (11). Even though physically low-self-image, hormonal mood instability and psychologically parental relationship are the factors creating the postpartum depression risk and sexual dysfunction in this period; the mode of delivery, breastfeeding and the participation to the birth education program may also have an impact. In the present study, the findings showed that a significantly lower risk of postpartum depression and sexual dysfunction in the birth preparation group. However, the other factors such as breastfeeding and the mode of delivery did not play a role in depression risk or sexuality in this period.

Various emotional or social risk factors may play role in the ethology of postpartum depression such as previous psychiatric disorders, single mother, congenital anomalies (12). Meky et al. studied the prevalence of postpartum depression related with

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Table 1. The subjects in birth education program

| Season 1 | Season 2 | Season 3 | Season 4 |
|----------|----------|----------|----------|
| The anatomy and function of the reproductive organs | Antenatal exercises and yoga | The signs and stages of labor | Postpartum contraception methods |
| The growth of fetus | Perineal massage for vaginal route delivery | Breath exercises | Antenatal and postpartum sexual life |
| General knowledge about antenatal period | Diet during pregnancy | Pain relief techniques | Breastfeeding and neonatal care |

Table 2. Maternal socio-demographic features

|                      | N   | Minimum | Maximum | Mean  | Std. Deviation |
|----------------------|-----|---------|---------|-------|----------------|
| Age (yrs)            | 89  | 18      | 43      | 27.84 | 5.07           |
| First sexual intercourse (yrs) | 89  | 15      | 37      | 23.21 | 3.61           |
|                      |     | Frequency | Percent (%) |     |                |
| The mode of delivery | Vaginal | 49 | 55.1 |     |                |
|                      | Caesarean | 40 | 44.9 |     |                |
| Breastfeeding        | Yes  | 63 | 70.8 |     |                |
|                      | No   | 22 | 24.7 |     |                |
|                      | With formula | 4 | 4.5 |     |                |
| Birth education program | Yes  | 45 | 50.6 |     |                |
|                      | No   | 44 | 49.4 |     |                |
| Education level      | Primary | 3 | 3.4 |     |                |
|                      | Secondary | 25 | 28.1 |     |                |
|                      | High school | 36 | 40.4 |     |                |
|                      | University | 23 | 25.8 |     |                |
|                      | Postgraduate | 2 | 2.2 |     |                |
| Economic income      | Low   | 39 | 43.8 |     |                |
|                      | Moderate | 40 | 44.9 |     |                |
|                      | High   | 10 | 11.2 |     |                |
| Smoking              | Yes   | 15 | 16.9 |     |                |
|                      | No    | 74 | 83.1 |     |                |
| Chronic Disease      | Yes   | 4  | 4.5  |     |                |
|                      | No    | 85 | 95.5 |     |                |
| Diet                 | Yes   | 13 | 14.6 |     |                |
|                      | No    | 76 | 85.4 |     |                |
| Exercise             | Yes   | 24 | 27   |     |                |
|                      | No    | 65 | 73   |     |                |

mode of delivery in 370 women and found that postpartum depression risk in vaginal delivery group was significantly lower than that of both elective and emergency caesarean sections (13). On the contrary, Faisal-Cury et al. compared uncomplicated vaginal deliveries (without lacerations), complicated vaginal deliveries (with second or third degree lacerations) and caesarean sections among 482 women and concluded that there was no greater difference in terms of the risk of postpartum depression in the medium and long term (14). Similarly, our results did not differ in the risk of postpartum depression depending on the mode of delivery. Figueiredo et al. indicated that breastfeeding regulates the sleep and wake patterns for mother.
and infant; it helps emotional attachment. They also demonstrated that breastfeeding is useful to reduce cortisol response to stress in women and to decrease the risk of postpartum depression (15). However, in this study, we did not demonstrate the protection of breastfeeding from postpartum depression.

Akca et al. reported that systematic birth preparation program promotes better communication between patient and health care providers and increases the postpartum women satisfaction with childbirth (16). There are also a few studies that offer mindfulness as an alternative program during postpartum period (17). In this study, we demonstrated that both EPDS and FSFI scores are better in postpartum women who participated to the antenatal birth education program. Thus, this kind of programs should be encouraged during antenatal period.

### Table 3. EPDS and FSFI mean scores according to the mode of delivery, breastfeeding and participation to the birth education program

| The mode of delivery | N   | Mean | Std. deviation | p value |
|----------------------|-----|------|----------------|---------|
| **EPDS**             |     |      |                |         |
| Vaginal route        | 49  | 7.08 | 7.68           | >0.05   |
| Caesarean            | 40  | 9.40 | 7.98           |         |
| **FSFI**             |     |      |                |         |
| Vaginal route        | 49  | 23.26| 14.07          | >0.05   |
| Caesarean            | 40  | 22.80| 17.05          |         |
| **Breastfeeding**    |     |      |                |         |
| EPDS                 |     |      |                |         |
| Yes                  | 63  | 9.00 | 8.54           | >0.05   |
| No                   | 22  | 6.32 | 5.93           |         |
| FSFI                 |     |      |                |         |
| Yes                  | 63  | 23.83| 17.04          | >0.05   |
| No                   | 22  | 22.01| 10.007         |         |
| **Birth education program** | | | | |
| EPDS                 |     |      |                |         |
| Yes                  | 45  | 6.58 | 7.18           | <0.05   |
| No                   | 44  | 9.70 | 8.28           |         |
| FSFI                 |     |      |                |         |
| Yes                  | 45  | 26.65| 11.37          | <0.05   |
| No                   | 44  | 19.37| 18.03          |         |

### Table 4. The impact of birth education program on the mode of delivery and breastfeeding

| The mode of delivery | Vaginal | Caesarean | Total | p value |
|----------------------|---------|-----------|-------|---------|
| Birth education program | Yes    | 29       | 16    | 45      |
|                       | No      | 20       | 24    | 44      | 0.056 |
| Total                | 49      | 40       | 89    |         |
| Breastfeeding        | Yes     | 31       | 13    | 45      |
|                       | No      | 32       | 9     | 44      |
| Total                | 63      | 22       | 89    |         |

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Appendix 1. Self-developed questionnaire

1- Maternal age
2- Age at first sexual intercourse
3- The participation to the birth education program: Yes / No
4- The mode of delivery: Vaginal route / Caesarean
5- How do you feed your infant? Breastfeeding / Breastfeeding and infant formula together / Only infant formula
6- Education level: primary school / secondary school / high school / university / postgraduate
7- Economic income: Low (<2000 TL) / Moderate (2000-5000 TL) / High (>5000 TL)
8- Smoking: Yes / No
9- Chronic disease: Yes / No; if yes, please specify ............
10- Do you perform a diet? Yes / No
11- Exercise: Yes / No

Postpartum sexual dysfunction including dyspareunia can vary in 41–83% of women 2–3 months after birth (18). Physicians usually neglect to inform the patient about the postpartum sexual life. Some postpartum women may be anxious about becoming pregnant again and this concern can cause sexual dysfunction (18). Detailed information about hormonal changes and postpartum contraception methods should be given during pregnancy. Barrett et al. showed that although 69% of women were informed about timing of safe sexual intercourse by their physician, only 18% of them were told about changes in postpartum sexual function (19). In contrast, some of the health care providers are supplying proper sexual health training in birth preparation education program. In our tertiary hospital, there is birth education program for pregnant women who desire to participate and this program includes a daily section about safe sexual intercourse after birth. In this study, postpartum sexual function was found statistically significant higher in patients participating to the birth education program.

There are some studies in the literature that whether vaginal or cesarean delivery result in better postpartum sexual function. Hannah et al. indicated that the outcomes at 3 months after vaginal or cesarean delivery were same in sexual function (20). However, their study contained both nulliparous and multiparous postpartum women; thus the heterogeneity hides the reliable effect of the mode of deliveries on sexual function. Barrett et al. reported that cesarean delivery seems to reduce the dyspareunia till postpartum 6th month, but the mode of delivery does not differ sexual function in later times (21). Similarly, our results did not associate the mode of delivery with sexual function.

Breastfeeding changes hormonal levels in postpartum period. As prolactin increases, decreased levels of androgens and estrogens due to the ovarian suppression may cause sexual dysfunction. Oppositely, the elevated oxytocin may stimulate sexual arousal and milk extraction may occur after orgasm during postpartum period (22). Avery et al. demonstrated that breastfeeding had a slightly negative effect on physiologic features of sexuality and partner relationship (23). In this study, the presence of breastfeeding did not change the sexual function index. However, we offer to give breastfeeding education starting from pregnancy and to inform women about these postpartum sexual changes.

Strengthens of the present study is the exclusion criteria such as preterm births and twin births which are the factors increasing the risk of postpartum depression. Currently, both the American Academy of Pediatrics and the American College of Obstetrics and Gynecology recommend screening all postpartum women who gave preterm birth (1).

One of the limitations of the present study is to have a low sample size. The other limitation is the social and cultural factors which play important role during postpartum period should be more detailed in further studies. Additionally, poor social support and society’s dominant culture should be considered (12).

This study has shown that systematic and multidisciplinary developed birth education program reduces the possibility of postpartum depression and improves the level of sexual function. Both obstetricians and paediatricians in antenatal and postnatal settings are major health care professions to prevent and/or detect the risk of postpartum depression. Obstetricians should provide support to pregnant women about healthy sexual life through the birth education programs starting from antenatal period.

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References

1. Levinson M, Parvez B, Aboudi D, Shah S. Impact of maternal stressors and neonatal
clinical factors on post-partum depression screening scores. J Matern Fetal Neonatal Med 2020; 1-9.

2. Dennis CL, Dowswell T. Psychosocial and psychological interventions for preventing postpartum depression. Cochrane Database Syst Rev 2013; (2): CD001134.

3. Leigh B, Milgrom J. Risk factors for antenatal depression, postnatal depression and parenting stress. BMC Psychiatry 2008; 8: 24.

4. Marian F Earls, Committee on Psychosocial Aspects of, and P. Family Health American Academy of, Incorporating recognition and management of perinatal and postpartum depression into pediatric practice. Pediatrics 2010; 126(5): 1032-1039.

5. Liberto TL. Screening for depression and help-seeking in postpartum women during well-baby pediatric visits: an integrated review. J Pediatr Health Care 2012; 26(2): 109-117.

6. Lagert L, Weyers S, Van Kerrebroeck H, Elaut E. Postpartum dyspareunia and sexual functioning: a prospective cohort study. Eur J Contracept Reprod Health Care 2017; 22(3): 200-206.

7. Pancholy A.B., et al., Resident education and training in female sexuality: results of a national survey. J Sex Med 2011; 8(2): 361-366.

8. Cox, J., Thirty years with the Edinburgh Postnatal Depression Scale: voices from the past and recommendations for the future. Br J Psychiatry 2019; 214(3): 127-129.

9. Aydin, N., et al., Validation of the Turkish version of the Edinburgh Postnatal Depression Scale among women within their first postpartum year. Soc Psychiatry Psychiatr Epidemiol 2004; 39(6): 483-486.

10. Rosen R., et al., The Female Sexual Function Index (FSFI): a multidimensional self-report instrument for the assessment of female sexual function. J Sex Marital Ther 2000; 26(2): 191-208.

11. Corbacioglu, A., et al., The role of pregnancy awareness on female sexual function in early gestation. J Sex Med 2012; 9(7): 1897-1903.

12. Evagorou O, A. Arvanitii, Samakouri M, Cross-Cultural Approach of Postpartum Depression: Manifestation, Practices Applied, Risk Factors and Therapeutic Interventions. Psychiatr Q 2016; 87(1): 129-54.

13. Meky HK, Shaaban M M, Ahmed MR, Mohammed TY. Prevalence of postpartum depression regarding mode of delivery: a cross-sectional study. J Matern Fetal Neonatal Med 2019; 1-8.

14. Faisal-Cury, A. and P.R. Menezes, Type of delivery is not associated with maternal depression. Arch Womens Ment Health 2019; 22(5): 631-635.

15. Figueiredo B, Dias C.C, Brandào S, Canário C, Nunes-Costa R. Breastfeeding and postpartum depression: state of the art review. J Pediatr (Rio J) 2013; 89(4): 332-338.

16. Akca A., Corbacioglu Esmer A, Ozuyrek ES, Aydin A, Korkmaz N, Gorgen H, et al. The influence of the systematic birth preparation program on childbirth satisfaction. Arch Gynecol Obstet 2017; 295(5): 1127-1133.

17. Sacristan-Martin O, Santed M.A, Garcia-Campayo J, Duncan LG, Bardacke N, Fernandez-Alonso C, et al. A mindfulness and compassion-based program applied to pregnant women and their partners to decrease depression symptoms during pregnancy and postpartum: study protocol for a randomized controlled trial. Trials 2019; 20(1): 654.

18. Leeman L.M. and Rogers R.G. Sex after childbirth: postpartum sexual function. Obstet Gynecol 2012. 119(3): 647-55.

19. Barrett G, Pendry E, Peacock J, Victor C, Thakar R, Manyonda I. Women’s sexual health after childbirth. BJOG 2000; 107(2): 186-195.

20. Hannah ME, Hannah WJ, Hodnett ED, Chalmers B, Kung R, Willan A, et al. Outcomes at 3 months after planned cesarean vs planned vaginal delivery for breech presentation at term: the international randomized Term Breech Trial. JAMA 2002. 287(14): 1822-1831.

21. Barrett, G., et al., Cesarean section and postnatal sexual health. Birth 2005; 32(4): 306-311.

22. Converv K.M. and D.J.. Spatz, Sexuality & breastfeeding: what do you know? MCN Am J Matern Child Nurs, 2009. 34(4): 218-223.

23. Avery MD, Duckett L, Frantzich CR. The experience of sexuality during breastfeeding among primiparous women. J Midwifery Womens Health 2000; 45(3): 227-237.