

# Comparison of primipara women's pre-pregnancy, pregnancy, and postpartum sexual lives

## Primipar kadınların gebelik öncesi, gebelik ve doğum sonrası cinsel yaşamlarının karşılaştırılması

Rukiye Türk Delibalta <sup>1</sup>, Hasan Çılgın <sup>2</sup>

<sup>1</sup> Kars Kafkas University, School of Health Sciences, Department of Women Healthy, Kars, Turkey

<sup>2</sup> Kafkas University, Medicine Faculty, Department of Obstetrics and Gynecology, Kars, Turkey

ORCID ID of the author(s)

RT: 0000-0002-1424-1564

HÇ: 0000-0002-7279-5995

### Abstract

**Aim:** Sexual dysfunction can affect women's quality of life and marriage. This study compared the sexual lives of primipara women before, during pregnancy and in the postpartum period.

**Methods:** This descriptive follow-up research comprised 100 primipara women who agreed to participate in the study. Data were collected using the survey form and the Arizona Sexual Experiences Scale. Number, percentage, means, standard deviation, median, minimum, maximum values and Friedman analysis were used to analyze the data.

**Results:** Women's sexual desire and orgasm level before pregnancy were significantly better than their postpartum orgasm level. Our study results showed that the level of sexual arousal and lubrication before pregnancy was significantly better than that after birth. We also determined that women's postpartum orgasm satisfaction was significantly less than their pre-pregnancy and pregnancy orgasm satisfaction. Based on Arizona Sexual Experiences Scale average, the sexual dysfunction of women before pregnancy was significantly less than during the pregnancy and postpartum periods and the pregnancy period was better than the postpartum period ( $P<0.001$ ).

**Conclusion:** This study has reported that sexual dysfunction in women is less during pre-pregnancy; however, it increases during pregnancy and the postpartum period.

**Keywords:** Primipara, Pre-Pregnancy period, Pregnancy period, Postpartum period, Sexual dysfunction

### Öz

**Amaç:** Bu çalışmada, primipar kadınların gebelik öncesi, gebelik ve doğum sonrası cinsel yaşamlarının karşılaştırılması amacıyla yapılmıştır.

**Yöntemler:** Tanımlayıcı izlem araştırması olarak yapılan araştırmanın örneklemini araştırmaya katılmayı kabul eden 100 primipar kadın oluşturmuştur. Araştırmanın verileri; anket formu ve Arizona Sexual Experiences Scale kullanılarak toplanmıştır. Verilerin analizinde sayı, yüzde, ortalama, standart sapma, medyan, minimum, maksimum değerleri ve friedman analizi kullanılmıştır.

**Bulgular:** Çalışmamızda, kadınların gebelik öncesi cinsel istek ve orgazm düzeyi doğum sonrası orgazm düzeyinden anlamlı derecede daha iyi olduğu belirlenmiştir. Çalışmamızda, gebelik öncesi cinsel uyarılma ve lubrikasyon, düzeyinin doğum sonrası cinsel uyarılma ve lubrikasyon düzeyinden anlamlı derecede daha iyi düzeyde olduğu belirlenmiştir. Çalışmamızda kadınların doğum sonu orgazm tatmininin, gebelik öncesi ve gebelik dönemi orgazm tatmininden anlamlı derecede daha kötü düzeyde olduğu belirlenmiştir. Arizona Cinsel Yaşantılar Ölçeği ortalamasına baktığımızda, kadınların gebelik öncesi dönemde cinsel disfonksiyonlarının gebelik ve doğum sonu dönemden, gebelik döneminin ise, doğum sonu dönemden anlamlı düzeyde daha iyi olduğu belirlenmiştir ( $P<0.001$ ).

**Sonuç:** Kadınların gebelik öncesi dönemde daha az olmak üzere cinsel disfonksiyonun gebelik ve doğum sonu dönemlerde artarak devam ettiği belirlenmiştir.

**Anahtar kelimeler:** Primipar, Gebelik öncesi dönem, Gebelik dönemi, Doğum sonrası dönem, Cinsel disfonksiyon

Corresponding author / Sorumlu yazar:  
Rukiye Türk  
Address / Adres: Kars Kafkas Üniversitesi Sağlık Bilimleri Fakültesi, Sağlık Kadın Bölümü, 36100, Kars, Türkiye  
E-mail: rahsantur@gmail.com

Ethics Committee Approval: Approval was obtained from the Ethics Committee of the Faculty of Health Sciences of Kafkas University (number: 81829502.903/48, date: 29.03.2019). All procedures in this study involving human participants were performed in accordance with the 1964 Helsinki Declaration and its later amendments.

Etik Kurul Onayı: Onay Kafkas Üniversitesi Sağlık Bilimleri Fakültesi Etik Kurulu'ndan (sayı: 81829502.903 / 48, tarih: 29.03.2019) alınmıştır. İnsan katılımcıların katıldığı çalışmalarda tüm prosedürler, 1964 Helsinki Deklarasyonu ve daha sonra yapılan değişiklikler uyarınca gerçekleştirilmiştir.

Conflict of Interest: No conflict of interest was declared by the authors.

Çıkar Çatışması: Yazarlar çıkar çatışması bildirmemişlerdir.

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

Finansal Destek: Yazarlar bu çalışma için finansal destek almadıklarını beyan etmişlerdir.

Published: 11/29/2020  
Yayın Tarihi: 29.11.2020

Copyright © 2020 The Author(s)  
Published by JOSAM

This is an open access article distributed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivatives License 4.0 (CC BY-NC-ND 4.0) where it is permissible to download, share, remix, transform, and build upon the work provided it is properly cited. The work cannot be used commercially without permission from the journal.



## Introduction

An individual's sexuality is determined before birth and shaped by many factors. These include the communities they live in, their values, beliefs, emotions, personalities, likes and dislikes, attitudes, behaviors, and physical appearance. It includes not only genitals, but one's whole body and mind [1,2]. Sexuality is influenced by the interaction of psychological, social, economic, political, cultural, legal, historical, religious, biological, and spiritual factors [3]. Sexual dysfunction is an important health problem that can be seen in every society [4]. Studies throughout the world and Turkey show a high prevalence of sexual dysfunction with rates between 22% and 93%, although it varies depending on the ages of the women [5,6].

Pregnancy, especially a first pregnancy, is one of the most important events in a woman's life [7,8]. The physical and emotional changes during this time, which are influenced by social and cultural factors, affect the woman's sex life and sexuality. These factors would include a couple's reaction to pregnancy, the idea of being a family, the sexual identity of women, their changed roles as wives and mothers, and various cultural norms and economic factors [7,9].

Pregnancy is also one of the most common periods in which women experience sexual dysfunction [10]. During this time, a woman may experience various physical ailments and her sexual interest and libido may decline. She may also fear that sexual activity could harm the baby. All these can affect a couple's sexual relationship.

The postpartum period is when couples adapt to their parenting roles and changes in the anatomy and hormones of the female reproductive organs. During this time, couples return to their sexual activities [11,12]. One study reported that active sexual intercourse in the postpartum period usually begins after the second week when the risk of bleeding and infection is reduced [13]. Sexual intercourse can resume six weeks after birth when uterine involution occurs, the woman returns to her normal physiology, the tissue repair of her episiotomy is completed, and lochia has ceased [14].

Studies have shown that most women experience a significant increase in sexual health-related problems during the postpartum period [15,16]. At the same time, it has been noted that health care professionals have difficulty assessing and diagnosing sexual dysfunction. This may be due to their own biases, lack of knowledge of sexuality, and their personal beliefs and attitudes [17]. Therefore, this study was conducted to compare the sexual life of primipara women before pregnancy, during pregnancy and the postpartum period. It is thought that the results will contribute to the development of more specialized training and counseling education. Such training would thus enable health professionals to offer up-to-date information regarding sexual health with a goal towards improving women's quality of life.

## Materials and methods

### Design

This study was conducted as a descriptive follow-up study.

### Population

The population of the study included primipara women who visited the Obstetrics Clinic of Kafkas University Health Research and Practice Center. Power analysis performed at 0.05 revealed a sample size of 86 individuals. This research was completed with a total of 100 primipara women who were followed up in the second trimester and two months after birth.

### Data collection tools and features

After reviewing the literature, data were collected using the survey form [18,19] prepared by the researcher, and the Arizona Sexual Experiences Scale (ASES).

### Survey form

The survey form created by the researchers consisted of questions regarding the demographic, obstetric and sex life characteristics of women.

### The Arizona Sexual Experiences Scale

The Arizona Sexual Experience Scale is a measurement tool for assessing sexual dysfunctions. This scale, developed by McGahuey et al. [20], was adapted to Turkish by Soykan [21]. It has separate forms for men and women. The form for women was used in this study. The scale is a 5-Item, 6-grade Likert type, self-assessment scale. It determines sex drive, arousal, vaginal wetness, the capacity to have orgasm and the sense of satisfaction as a result of orgasm. The lowest score that participants can obtain from the scale is 5 and the highest is 30. In Soykan's study, the cut-off score of the scale was determined as 11 (sensitivity = 100%, specificity = 52%). The sum of the points obtained from the scale items constitutes the total scale score. Low scores from the scale indicate that sexual response is strong, easy, and satisfying, while high scores indicate sexual dysfunction. In Soykan's study, the Cronbach alpha value of the scale was 0.90 and the test-retest reliability was 0.88 [21]. In this study, the Turkish version of the ASES was used. In our study, Cronbach alpha values of ASES for pre-pregnancy, pregnancy and postpartum periods were high, between 0.840 and 0.895.

### Type of collection

The survey form and ASES were filled out by the primipara who came for their first prenatal checkup. These forms assessed the study participants' pre-pregnancy sexual activity. In order to evaluate sexual life during pregnancy, the ASES form was completed by women between 13-28 weeks of gestation. Two months after birth, postpartum questionnaire and ASES were filled out by women through home visits.

### Ethical principles of research

Prior to beginning the research, approval number 81829502.903/48 dated 29.03.2019 was obtained from the Ethics Committee of the Faculty of Health Sciences of Kafkas University, and the necessary permission from the relevant institution was received. Adhering to the principles of "Informed Consent", "Confidentiality and Protection of Privacy", and "Respect for Autonomy", the purpose of the research was carefully explained to the women. The women who chose to participate voluntarily in the research were assured that all data and information obtained would be kept confidential [22].

### Statistical analysis

The data were analyzed with the IBM SPSS Statistics 23 package program. In the analysis of the data, number and percentage were used for numerical variables, and mean,

standard deviation, median, minimum, and maximum values were used for categorical variables. For numerical variables, the Kolmogorov Smirnov normality test was applied, and it was determined that the data did not show normal distribution. Therefore, the differences between more than two dependent variables were analyzed using Friedman's analysis.  $P < 0.05$  indicated statistical significance.

### Results

The research was eventually completed with 100 primipara women. The mean age of the women and their partners were 27 and 30 years, respectively. Among all, 74% of women had been married for 1-3 years; the majority of women and their spouses had a university education. Forty percent of the women were working, and 47.5% of these women were teachers. The majority of their spouses were also working, and 36.4% of them were employed as teachers/government employees. The income of 69% of the women covered their expenses; 50% had extended families and 50% had nuclear families (Table 1).

Table 1: Distribution of socio-demographic characteristics of women

Characteristics	n	%
Age (M=27 SD=4.987)		
18-29	74	74.0
30-49	26	26.0
Age of Spouse (M=30.68 SD=5.337)		
20-30	55	55.0
31-51	45	45.0
Length of Marriage		
Less than 1 Year	8	8.0
1-3 Year	74	74.0
More than 3 years	18	18.0
Education		
Primary school	7	7.0
Middle School	10	10.0
High school	33	33.0
University	46	46.0
Graduate	4	4.0
Spouse's Education		
Primary school	4	4.0
Middle School	9	9.0
High school	24	24.0
University	59	59.0
Graduate	4	4.0
Employment Status		
Working	40	40.0
Not Working	60	60.0
Profession (n=40)		
Teacher	19	47.5
Public Official	11	27.5
Nurse-Midwives	5	12.5
*Other	5	12.5
Spouse's Employment Status		
Working	99	99.0
Not Working	1	1.0
Spouse's Profession (n=99)		
Military /Staff-Police	25	25.3
Teacher/ Public Official	36	36.4
Self-employed / Worker	24	24.2
**Other	14	14.1
Income Level		
Income Less than Expenses	13	13.0
Income Expenses	69	69.0
Income More Than Expenses	18	18.0
Family Type		
Extended family	50	50.0
Nuclear family	50	50.0

\* Occupational health and safety (1), Call center employee (1), Accountant (1), Psychologist (1), Secretary (1), \*\* Doctor (3), Tradesman (1), Income specialist (1), Security officer (1), Store Manager (1), Engineer (6) Technician (2)

Our study determined that 20% of women had experienced dyspareunia before pregnancy, 30% during pregnancy and 64% during the postpartum period. It was found that 60% of these women had not applied to any health care facility when they had problems with their sexual lives, because all considered it shameful or sinful to talk about these problems. About 80% of study participants had sought solutions to their sexual issues but had used the internet for answers (Table 2).

Table 2: Distribution of characteristics of women

Characteristics	n	%
Dyspareunia Problem in Pre-pregnancy Period		
Yes	20	20.0
No	80	80.0
Dyspareunia Problem in Pregnancy		
Yes	30	30.0
No	70	70.0
Postpartum Dyspareunia Problem		
Yes	64	64.0
No	36	36.0
Applying to a Health Institution for Sexuality Problems		
Yes	40	40.0
No	60	60.0
Reasons for Not Applying to a Health Institution for Sexuality Problems		
Talk of sexuality is shameful or sinful	60	100
Behavior Seeking Solution to Sexuality Problems		
Yes	80	80.0
No	20	20.0
Where Women Sought Solutions for Sexuality Problems		
Checked the Internet	80	100
Baby Breastfeeding Status		
Yes	100	100.0
Baby Slept in Separate Bed in Parents' Bedroom after Birth		
Yes	100	100.0
Reason for Baby Sleeping in a Separate Bed in Parents' Bedroom after Birth		
Fear that something could happen to baby during sleep	94	94.0
If the baby sleeps with the mother, she gets used to her smell, and refuses to sleep in its own bed	4	4.0
Sleeps more comfortably in its own bed	2	2.0
Postpartum Sexual Life Start Time		
40-50 Days	71	71.0
51-75 Days	29	29.0
Religious Belief on Postpartum Sexual Life Start Time		
Yes	65	65.0
No	35	35.0
Which Religious Opinion		
Based on religious belief, postpartum sexual intercourse starts after 40 days	65	100
Current Use of Any Method to Prevent Pregnancy		
Yes	43	43.0
No	57	57.0
Which Family Planning Method Used		
Withdrawal Method	39	90.7
Condom	4	9.3

In our study, women's average sexual desire score before pregnancy was 2.71, which was significantly less during pregnancy (3.28) and the postpartum period (3.55). In addition, the average sexual desire score during pregnancy (3.28) was significantly less than the average sexual desire score during the postpartum period (3.55) ( $P < 0.001$ ). In our study, the average score of sexual arousal before pregnancy (3.08) was significantly less than the average score of sexual arousal after birth (3.32) ( $P < 0.001$ ). We determined that the average score of pre-pregnancy lubrication was significantly lower (2.80) than the mean of postpartum lubrication (3.09) ( $P < 0.001$ ). The average pre-pregnancy orgasm score (2.98) was less than the average pregnancy orgasm score (3.25), and the postpartum orgasm score (3.33). However, the average pre-pregnancy orgasm score (2.98) was significantly less than the postpartum orgasm score (3.33) ( $P < 0.001$ ). The average of the orgasm satisfaction score during the postpartum period (2.94) was significantly higher than the average of orgasm satisfaction before pregnancy (2.41) and the average of orgasm satisfaction during pregnancy (2.61) ( $P < 0.001$ ). In addition, the study results showed that the mean ASES was significantly lower in the pre-pregnancy period (13.98) than during pregnancy (15.29) and in the postpartum period (16.23). At the same time, it was determined that the mean ASES score during pregnancy (15.29) was significantly less than the mean of the ASES score during the postpartum period (16.23) ( $P < 0.001$ ) (Table 3) (Figure 1).

Table 3: Examination of differences between Arizona Sexual Experience Scale and lower dimensions according to women's pre-pregnancy, pregnancy and postpartum period

	Prepregnancy		During Pregnancy		Postpartum Period		P-value
	Mean(SD)	Median (Min.-Max.)	Mean(SD)	Median (Min.-Max.)	Mean(SD)	Median (Min.-Max.)	
Desire	2.71(1.15)	3(1-6)	3.28(1.42)	3(1-6)	3.55(1.00)	3(1-6)	<0.001* difference: 1-2.3 2-3
Arousal	3.08(0.92)	3(1-5)	3.18(1.00)	3(1-6)	3.32(0.92)	3(1-5)	0.007* difference: 1-3
Lubrication	2.80(0.95)	3(1-5)	2.97(1.00)	3(1-6)	3.09(0.91)	3(1-5)	<0.001* difference: 1-3
Orgasm	2.98(1.06)	3(1-6)	3.25(1.15)	3(1-6)	3.33(1.14)	3(1-6)	<0.001* difference: 1-3
Satisfaction	2.41(1.02)	2(1-6)	2.61(1.02)	3(1-5)	2.94(1.00)	3(1-5)	<0.001* difference: 3-1.2
Total	13.98(3.99)	15(5-24)	15.29(4.74)	15(5-29)	16.23(3.91)	16.5(8-26)	<0.001* difference: 1-2.3 2-3

SD: Standard deviation, \*:P<0.05 (Statistically significant)

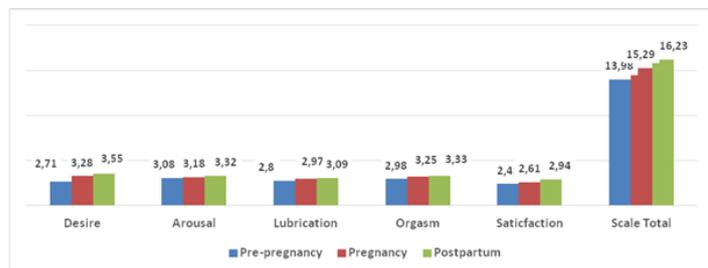


Figure 1: Examination of differences between Arizona Sexual Experience Scale and lower dimensions according to women's pre-pregnancy, pregnancy, and postpartum period

## Discussion

Sexual health, which also includes reproductive health, is considered an important part of general health. Sexual dysfunctions are among the major health problems found in all societies [4]. The World Health Organization has recommended that a research must be conducted on sexual health, because of its importance, independent of reproductive health because lack of awareness about sexual health is the underlying cause of many dysfunctions and diseases worldwide [23]. Female sexual dysfunction is a very common problem in 40-45% of women [24]. Hobbs and his colleagues noted that in order to appropriately evaluate pregnancy and postpartum processes, a woman's sexual history (pre-pregnancy period) should be disclosed [25]. This study therefore aimed to determine the problems that women experience during the pre-pregnancy, pregnancy, and postpartum periods.

Sexual dysfunction may lead to a general feeling of dissatisfaction with one's life and a decreased quality of life. It may also negatively affect women's physical, psychological, social and emotional health [26,27]. Studies have determined that between 28.6% and 48.3% of women have experienced sexual dysfunction [28,29]. Results of some studies have reported that most women who report a decline in sexual function during pregnancy continue to experience a decline in the postpartum period [30,31]. In contrast, other studies have determined that although sexual activity increased in the postpartum period compared to the pregnancy period, this increase remained lower than in the prenatal period [16,32].

Incidence data has shown that one of the most common sexual dysfunctions in women was sexual desire disorder [33]. Our study found that the women's level of sexual desire before

pregnancy was significantly higher than during pregnancy and postpartum, and the level of sexual desire during pregnancy was significantly higher than postpartum levels. While one study showed similarity with ours in finding women's level of sexual desire before pregnancy higher than postpartum levels, it differs in reporting that sexual desire during pregnancy was less than during the postpartum period [34].

Many women experience low arousal as a result of decreased blood fluidity related to genital temperature and vaginal lubricity [35,36]. Incidence data has determined that another common sexual dysfunction in women is sexual arousal disorder [33]. A study found that 40.4% of women experienced sexual arousal disorder during the postpartum period [37]. In our study, the women's level of sexual arousal before pregnancy was significantly higher than the level of sexual arousal after childbirth. Another study also found that sexual arousal was higher in the pre-pregnancy period than in other periods [34]. This study finding is in accordance with our study.

However, in our study, the level of pre-pregnancy lubrication was significantly better than the level of postpartum lubrication. One study found that 39.2% of women experienced a lubrication problem during the postpartum period [38]. Another study determined that women had a better level of lubrication in the postpartum period than in the pre-pregnancy and pregnancy periods [34].

A study found that women experience more orgasm disorders during pregnancy than prior to pregnancy [38]. In a different study, women's pre-pregnancy orgasm level was determined to be better than during pregnancy and postpartum. These study findings correspond to ours [34]. Our study found women's pre-pregnancy orgasm level to be higher than their pregnancy and postpartum orgasm levels, but their pre-pregnancy orgasm level was significantly better than their postpartum orgasm level. Studies have shown that orgasm satisfaction was 76-79% before pregnancy, 75-84% during the second trimester and 40-41% during the third trimester [16,39,40]. One study determined that women had problems with orgasm satisfaction during the postpartum period [41]. In our study, it was determined that women's postpartum orgasm satisfaction was significantly less than their pre-pregnancy and pregnancy orgasm satisfaction. In a different study, which had similar results to ours, women's pre-pregnancy orgasm satisfaction was better than their postnatal orgasm satisfaction [34].

Based on the Arizona Sexual Experiences Scale average, the sexual dysfunction scores of our study participants before pregnancy were significantly less than during the pregnancy and postpartum periods. Sexual dysfunction during pregnancy was significantly less than postpartum dysfunction. The score of 11 scale cut-off of ASES used in our study shows that the women in our study experienced sexual dysfunction prior to pregnancy. This indicates that women continue to experience sexual dysfunction during pregnancy and postpartum. Some studies have reported that women have decreased sexual function during pregnancy compared to the pre-pregnancy period [34,38]. Other studies have shown that this decline in sexual activity during pregnancy continues for several months after birth [16,32]. These results are comparable our study.

Certain studies have reported that 14-27% of women had dyspareunia [42,43]. In a study, some women experience dyspareunia in the postpartum period because of the reduced vaginal lubrication resulting from decreased estrogen levels [44,45]. Our study determined that 20% of women experienced dyspareunia before pregnancy, 30% during pregnancy and 93.9% during the postpartum period. Another study reported that women's complaints of dyspareunia decreased significantly in the postpartum period, compared to pre-pregnancy and pregnancy periods [34]. The most difficult aspects of the study were in the follow up of women from the pre-pregnancy period to the postpartum period and in covering the economic costs of the study by the researchers. The limitation of the research was that it cannot be generalized to all of Turkey since it was conducted in Kars province in eastern Turkey.

### Conclusion

In conclusion, the studies have reported that women experience sexual dysfunction during the pre-pregnancy, post-pregnancy, and postpartum periods. It has been determined that sexual dysfunction can be found in women prior to pregnancy, but it increases during pregnancy and postpartum periods. Therefore, it is significant that all health professionals, especially nurses, be able to identify the problems related to women's sexuality in the pre-pregnancy and postpartum periods and direct them to the proper health units for treatment.

### References

- Taylor TF. The origins of human sexual culture. *Journal of Psychology&Human Sexuality*. 2007;18(2):69-105. doi: 10.1300/J056v18n02\_03.
- Moseley A. *Philosophy from A to Z*. 2. Printing. Istanbul: NTV Publications; 2010. pp.55-8.
- Bozdemir N, Özcan S. Sexuality and sexual health overview. *Turkish Journal of Family Medicine and Primary Care*. 2011;5(4):37-46.
- Karakoyunlu F, Oncel S. Example of the nursing care process in women's sexual dysfunctions. *Ataturk Univ J Nurs Stud*. 2009;12(3):8-10.
- Fiskin G, Beji N. Valuation of sexual function and role of nurse. i.u. florence nightingale faculty of nursing, department of women's health and diseases nursing. *Androl Bull*. 2010;73-6.
- Oberg K, Fugl-Meyer AR, Fugl-Meyer KS. On categorization and quantification of women's sexual dysfunctions: an epidemiological approach. *Int J Impot Res*. 2004; 6:261-69.
- Golbasi Z, Tugut, N Erenel A, Eroglu K. Sexual dysfunction, prevalence and related factors in married women admitted to gynecology polyclinic. *Repub Med J*. 2014;36:1-10. doi: 10.7197/cmj.v36i1.1008002434.
- Yarali S. Sexual dysfunction in married women and investigation of quality of sexual life. Department of Public Health Nursing [Master's Thesis]. Erzurum, Turkey, 2013.
- Gökylidiz S, Beji NK. The moneffects of pregnancy on sexual life. *Journal of Sex & Marital Therapy*. 2005;31(3):201-15.
- Inescu C. Sexual functions and sexual dysfunctions. *Clinical Psychiatry*. 2004;3:3-13.
- Arslan F, Uzun I. Examination of nursing postnatal training and counseling services. *Turkey Clinics J Med Sci*. 2008;28:736-742.
- Rogers RG, Leeman LM, Migliaccio L, Albers LL. Does the severity of spontaneous genital tract trauma affect postpartum pelvic floor function?. *Int Urogynecol J Pelvic Floor Dysfunct*. 2008;19(3):429-35. doi: 10.1007/s00192-007-0458-x.
- Blackburn ST. *Maternal, fetal & neonatal physiology: A clinical perspective*. 2 Ed., Saunders, New York. Nd; 2003, pp. 158-79.
- Doganer, G, Bekar M. Determining the problems of women having vaginal delivery in the early postpartum period for the care of her and newborn. *Health and Society*. 2006;16(4):60-70.
- Eryilmaz HY, Abali S, Dondar C, Kurnaz E. Sexual functions of women in postpartum period and affecting factors. 4th International Congress of Reproductive Health Book, Bilkent Hotel and Conference Center, Ankara, Turkey; 20-23 April, 2005, pp. 198,
- Barrett G, Pendry E, Peacock J, Victor C, Thakar R, Manyonda I. Women's sexual health after childbirth. *An International Journal of Obstetrics & Gynaecology*. 2000;107(2):186-95. doi: 10.1111/j.1471-0528.2000.tb11689.x.
- Demireloz Akyuz M, Ceber Turfan E, Cetintas Oner S, Sakar T, Mamik Aktay D. Sexual functions in pregnancy: different situations in near geography: a case study on Turkey, Iran and Greece. *The Journal of Maternal-Fetal & Neonatal Medicine*. 2020;33(2):222-9. doi: 10.1080/14767058.2018.1488164.
- Akyüz EO. Postnatal sexual problems and investigation of affecting factors. Published Master Thesis. Adnan Menderes University Institute of Health Sciences Health and Obstetrics Nursing, Aydin, Turkey, 2009.
- Yoruk F, Karacam Z. The effectiveness of PLISSIT model in solving sexual problems of postpartum women. Published Master's Thesis, Institute of Adnan Menderes University of Health Sciences Health and Obstetrics Nursing, Aydin, Turkey in 2014.
- McGahuey AC, Gelenberg AJ, Laukes CA, Moreno FA, Delgado PL. The Arizona Sexual Experience Scale (ASEX): Reliability and validity. *Journal of Sex & Marital Therapy*. 2000;26:25-40. doi: 10.1080/009262300278623.
- Soykan A. The reliability and validity of arizona sexual experiences scale in Turkish ESRD patients undergoing hemodialysis. *International Journal of Impotence Research*. 2004;16:531-4.
- Bayk A. Cs in nursing research. (In) the first of nursing research, process and methods. the Focus Offset, Istanbul, Turkey; 2004,pp:27-48.

- Kaviani M, Rahnavard T, Azima S, Emamghoreishi M, Asadi N, Sayadi M. The effect of education on sexual health of women with hypoactive sexual desire disorder: a randomized controlled trial. *Int J Community Based Nurs Midwifery*. 2014; 2(2):94.
- Yeniel AO, Petri E. Pregnancy, childbirth and sexual function: perceptions and facts. *Int Urogynecol J*. 2014; 25(1):5-14. doi: 10.1007/s00192-013-2118-7.
- Hobbs K, Bramwell R & May K. Sexuality, sexual behaviour and pregnancy. *Sexual and Marital Therapy*. 1999;4:371-83.
- Fan D, Li S, Wang W, Tian G, Liu L, Wu S, et al. Sexual dysfunction and mode of delivery in chinese primiparous women: a systematic review and meta-analysis. *BMC Pregnancy and Childbirth*. 2017;17:408. doi: 10.1186/s12884-017-1583-2.
- Banaei M, Tork Zahrani S, Pormehr-Yabandeh A, Ozgoli G, Azad M. Investigating the impact of counseling based on PLISSIT model on sexual intimacy and satisfaction of breastfeeding women. *Int J Pharm Res Allied Sci*. 2016;5(3):489-99.
- Demir O, Parlakay N, Gök G, Esen AA. Sexual dysfunction in female hospital workers. *Andrology*. 2007;33(2):156-60.
- Ege E, Akın B, Yaralı Arslan, S, Bilgili N. Prevalence and risk factors of sexual dysfunction in healthy women. *TÜBAV Journal of Science*. 2010;3(1):137-44.
- Brtnicka H, Weiss P, Zverina J. Human sexuality during pregnancy and the postpartum period. *Bratislava Medical Journal* 2009;110:427-31.
- Johnson CE. Sexual health during pregnancy and the postpartum. *Journal of Sexual Medicine*. 2011;8:1267-84. doi: 10.1111/j.1743-6109.2011.02223.x.
- Trutnovsky G, Haas J, Lang U, Petru E. Women's perception of sexuality during pregnancy and after birth. *Australian and New Zealand Journal of Obstetrics and Gynaecology*. 2006;46:282-7.
- McCabe MP, Sharlip ID, Lewis R, Atalla E, Balon R, Fisher A, et al. Incidence and prevalence of sexual dysfunction in women and men: a consensus statement from the fourth international consultation on sexual medicine 2015. *J Sex Med*. 2015;13(2):144-52. doi: 10.1016/j.jsxm.2015.12.034.
- Yıldız H. The relation between pre-pregnancy sexuality and sexual function during pregnancy and the postpartum period: a prospective study. *Journal of Sex & Marital Therapy*. 2015;41(1):49-59. doi: 10.1080/0092623X.2013.811452.
- Komurcu N, Demirci N, Yıldız H, Gün C. Sexuality in Turkish journals of nursing: a literature review. *J Train Res Nurs*. 2014;11(1):9-17.
- Sadi Z, Aksu H. Sexual life of partners during pregnancy and affecting factors. *Anatolian J Nurs Health Sci*. 2016;19(2).
- Banael M, Mordil A, Dashti S. Sexual dysfunction and its associated factors after delivery: longitudinal study in iranian women. *Mater Sociomed*. 2018;30(3):198-203. doi: 10.5455/msm.2018.30.198-203.
- Erenel AS, Eroglu K, Vural G & Dilbaz B. A pilot study: in what ways do women in turkey experience a change in their sexuality during pregnancy. *Sexuality and Disability*. 2011;29:207-16. doi: 10.1007/s11195-011-9200-1.
- Glazener CM. Sexual function after childbirth: women's experiences, persistent morbidity and lack of professional recognition. *British J Obstet Gynaecol*. 1997;104(3):330-5. doi: 10.1111/j.1471-0528.1997.tb11463.x.
- Xu XY, Yao ZW, Wang HY, Zhou Q, Zhang W. Women's postpartum sexuality and delivery types. *Zhonghua Fu Chan Ke Za Zhi*. 2003;38(4):219-22.
- Türk R, Erkaya R. An evaluation of the postpartum sexual lives of primiparous women. *International Refereed Journal of Nursing Researches; T January / February / March / April 2019 Winter Spring Semester, Issue: 15*. doi: 10.17371/UHD.2019.1.10.
- Safarnejad MR. Female sexual dysfunction in a populationbased study in iran: prevalence and associated risk factors. *Int J Impot Res*. 2006;18:382. doi: 10.1038/sj.ijir.3901440.
- Johnson SD, Phelps DL, Cottler LB. The association of sexual dysfunction and substance use among a community epidemiological sample. *Arch Sex Behav*. 2004 33:55. doi: 10.1023/B:ASEB.0000007462.97961.5a.
- Wouda JC, Hartman PM, Bakker RM, Bakker JO, van de Wiel HBM & Schultz WCMW. Vaginal plethysmography in women with dyspareunia. *The Journal of Sex Research*. 1998;35:141-7. doi: 10.1080/00224499809551927.
- Brauer M, ter Kuile MM, Janssen SA, Laanc E. The effect of painrelated fear on sexual arousal in women with superficial dyspareunia. *European Journal of Pain*. 2007;11:788-98. doi: 10.1016/j.ejpain.2006.12.006.

This paper has been checked for language accuracy by JOSAM editors.  
The National Library of Medicine (NLM) citation style guide has been used in this paper.