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Evaluation Of Primiparae Women In Terms Of Depression And Sexual Function After Normal Birth And Post-Caesarean Section

Primipar Kadınların Normal Doğum Ve Sezaryen Sonrası Depresyon Ve Cinsel İşlev Açısından Değerlendirilmesi

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Abstract

Objective: Within the scope of this research, the effect of the mode of delivery on women in terms of depression and sexual function was investigated in primiparous women.
Method: This study was conductedbetween October 2021 and March 2022at Health Sciences University, Istanbul Training and Research Hospital, Gynecology and Obstetrics Clinic.A total of 219 primiparous pregnant women who met the inclusion and exclusion criteria in the prenatal, early postpartum (6th week), and late postpartum (12th week) periods were enrolled. The Edinburgh Postpartum Depression Scale (EPDS) and Female Sexual Functioning Inventory (FSFI) questionnaires were performed in different periods and compared according to the delivery types.
Results: Statistically significant differences were found between sexual function levels of individuals with CS delivery type according to prenatal depression score ($p<0.05$). Sexual function levels of those with prenatal EPDS scores less than 13 were found to be significantly higher in all three periods. In the evaluation of individuals with CS, it was observed that the sexual function level of individuals without depression symptoms was better than individuals with depression symptoms.Regardless of the type of birth, sexual function differs statistically for the three periods according to the dimensions of the satisfaction sub-dimension and the variables of smoking, educational status, income level, and who initiated the sexual intercourse ($p<0.05$).According to the first postpartum sexual intercourse week, prenatal and postnatal early-period sexual desire levels were found to be higher in those whose first week of sexual intercourse was less than 6 weeks ($p<0.05$).
Conclusion: The levels of arousal, lubrication, orgasm, and satisfaction in the early postpartum period were significantly lower in those who gave birth normally, and the levels of desire and pain were significantly lower in the early postpartum period in those who gave birth with cesarean section. Depression had a negative effect on sexual function.

Keywords: Primiparous, Normal delivery, Cesarean section, Depression, Sexual Function.

Özet

Amaç: Bu araştırma kapsamında primipar kadınlarda doğum şeklinin depresyon ve cinsel işlev açısından kadın üzerindeki etkisi araştırıldı.
Yöntem: Bu çalışma Ekim 2021-Mart 2022 tarihleri arasında Sağlık Bilimleri Üniversitesi İstanbul Eğitim ve Araştırma Hastanesi Kadın Hastalıkları ve Doğum Kliniği'nde gerçekleştirildi. Prenatal, erken postpartum (6. hafta) ve geç postpartum (12. hafta) dönemlerde dahil etme ve dışlama kriterlerini karşılayan toplam 219 primipar gebe çalışmaya alındı. Edinburgh Doğum Sonrası Depresyon Ölçeği (EPDS) ve Kadın Cinsel İşlev Envanteri (FSFI) anketleri farklı dönemlerde uygulandı ve doğum şekillerine göre karşılaştırıldı.

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Bulgular: CS doğum şekline sahip bireylerin cinsel işlev düzeyleri arasında doğum öncesi depresyon puanlarına göre istatistiksel olarak anlamlı fark bulundu ($p<0.05$). Doğum öncesi EPDS puanı 13'ün altında olanların cinsel işlev düzeyleri her üç dönemde de anlamlı olarak yüksek bulundu. CS'li bireylerin değerlendirilmesinde, depresyon belirtileri olmayan bireylerin cinsel işlev düzeylerinin, depresyon belirtileri olan bireylere göre daha iyi olduğu görülmüştür. Doyum alt boyutunun boyutları ile sigara içme, eğitim durumu, gelir düzeyi, cinsel ilişkiye giren kişi değişkenlerine göre doğum şekline bakılmaksızın cinsel işlev üç dönem için istatistiksel olarak farklılık göstermektedir ($p<0,05$). Doğum sonrası ilk cinsel ilişki haftasına göre doğum öncesi ve doğum sonrası erken dönem cinsel istek düzeyleri, ilk cinsel ilişki haftası 6 haftadan az olanlarda daha yüksek bulundu ($p<0,05$).

Sonuç: Normal doğum yapanlarda erken postpartum dönemdeki uyarılma, kayganlık, orgazm ve doyum düzeyleri, sezaryen ile doğum yapanlarda erken postpartum dönemde istek ve ağrı düzeyleri anlamlı olarak daha düşüktü. Depresyonun cinsel işlev üzerinde olumsuz bir etkisi oldu.

Anahtar Kelimeler: Primipar, Normal doğum, Sezaryen, Depresyon, Cinsel İşlev.

INTRODUCTION

Depression in the postpartum period affects approximately 8-15% of women. Postpartum depression is similar to depression that occurs at other times in life and can only be distinguished by its timing of onset. What makes postpartum depression a particular concern is its possible harmful long-term effects on child development. The Edinburgh postpartum depression scale was originally developed as a screening tool and focused on the cognitive andfunctional effects of depression in order to facilitate the detection of women with postpartum depression in the months immediately after delivery (1). The scale cannot be used as a stand-alone diagnostic tool, but a score of ≥13 is a high predictor of postpartum depression, with 88% sensitivity and 92.5% specificity (2). Studies have compared the rates of postpartum depression in women who gave birth by cesarean section and women who gave birth vaginally, and no significant relationship was found between vaginal delivery and cesarean delivery (3).

Sexual function and subsequent satisfaction are important events in a woman's life. Sexual dysfunction refers to difficulties during sexuality that prevent an individual from being satisfied with sexual activity. The American Urological Disease Foundation has confirmed four types of female sexual dysfunction: low libido, problems with sexual arousal, inability to reach orgasm, and dyspareunia (4). Although female sexual dysfunction is a common problem, few studies investigate female sexual problems. It is worth noting that many biological and psychosocial changes can occur during pregnancy and the postpartum period, but unfortunately, not all women adapt well to these changes. Some women prefer cesarean section to vaginal delivery because they believe they will have less dyspareunia in the postpartum period. However, there are still doubts that the mode of delivery is related to female sexual function. Despite all the controversy and the importance of the issue, insufficient research has been done so far to identify the problem more accurately (5).

Normal birth and cesarean section are different birth techniques that have been compared for years. In our study, primiparous women were evaluated with the 'Edinburgh postpartum depression scale' at prenatal, postpartum 6th, and 12th weeks in order to understand whether there is a tendency to postpartum depression with normal delivery and cesarean section. Simultaneously, to evaluate sexual function in the same primiparous women, the 'Female Sexual Function Index (FSFI)' test was performed at prenatal, postpartum 6th, and 12th weeks. In light of these data, the effect of the mode of delivery on women in terms of depression and sexual function was investigated in primiparous women.

METHOD

This study was conductedbetween October 2021 and March 2022at Health Sciences University, Istanbul Training and Research Hospital, Gynecology and Obstetrics Clinic.A total of 219 primiparous pregnant women who met the inclusion and exclusion criteria in the prenatal, early postpartum (6th week), and late postpartum (12th week) periods were enrolled. The Edinburgh Postpartum Depression Scale (EPDS) and Female Sexual Functioning Inventory (FSFI) questionnaires were performed in different periods and compared according to the delivery types.

These 219 primiparous pregnancies consist of 3 different groups as the mode of delivery. Of these, 120 gave birth with NSD+MLE, 5 with Interventional delivery, and 95 with Cesarean section.

All procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and with the Helsinki Declaration of 1975, as revised in 2008. Ethics committee approval was granted from our institution on 08.10.2021 with protocol number 2933, and informed consent was obtained from all participants.

Statistical Analysis

Patient data collected within the scope of the study were analyzed with the IBM Statistical Package for the Social Sciences (SPSS) for Windows 23.0 (IBM Corp., Armonk, NY) package program. Frequency and percentage for categorical dataand mean and standard deviation for continuous data were given as descriptive values. For comparisons between groups, the “Independent Sample T–test” was used for two groups, and the “Pearson Chi-Square Test” was used for the comparison of categorical variables. The results were considered statistically significant when the p-value was less than 0.05.

RESULTS

Of the 219 patients who participated in our study, 54.34% had a normal delivery, 43.38% had a cesarean section, and 2.28% had a normal delivery with an intervention. The mean age of the patients was 25.22±4.78, the mean height was 1.61±.06, the mean weight was 73.08±6.33, and the mean BMI was 28.37±2.66. 94.98% of the patients do not smoke, and 96.8% do not have any disease. The patients have no previous operations. While 31.96% of the patients are illiterate, 20.55% are primary school graduates, 41.55% are secondary school graduates, and 5.94% are university graduates. Most of the patients are housewives (83.56%), and 83.56% have a low-income level. The mean age at which the patients had first sexual intercourse was 22.73±4.57, the mean age of menarche was 11.95±.99, and 92.24% of the patients had regular menstrual cycles. Most of the sexual intercourse of 95.43% of the patients is initiated by their spouse. The mean week of the first postpartum sexual intercourse was 5.79±.74; It was found to be 5.57±.77 weeks in those who gave birth with NSD+MLE and 6.06±.60 weeks in those who gave birth with CS.

Statistically significant differences were found between sexual function levels of individuals with CS delivery type according to prenatal depression score ($p<0.05$). Sexual function levels of those with prenatal EPDS scores less than 13 were significantly higher in all three periods. In the evaluation of individuals with CS, it was observed that the sexual function level of individuals without depression symptoms was better than individuals with depression symptoms (Table 1).

Table 1. Comparison of Pregnant Women in terms of Sexual Function Sub-Dimensions by Delivery Type

	Delivery Type											
	NSD			p	CS			p	NSD (interventional)			p
	Ort.	s.s.	Medyan		Ort.	s.s.	Medyan		Ort.	s.s.	Medyan	
Request-T1	4,17	±,58	4,20[a]	**<0,001**	4,12	±,69	4,20[a]	**<0,001**	4,44	±,33	4,20[a]	0,114
Request-T2	3,92	±,52	4,20[b]		3,77	±,63	4,20[b]		3,24	±,33	3,00[b]	
Request-T3	4,05	±,51	4,20[a]		4,16	±,53	4,20[a]		4,32	±,50	4,20[a]	
Arousal-T1	4,97	±,41	5,10[a]	**<0,001**	4,93	±,40	5,10[a]	**<0,001**	5,16	±,13	5,10[a]	>0,05
Arousal-T2	3,34	±,49	3,30[b]		3,41	±1,67	3,90[b]		,00	±,00	,00	
Arousal-T3	4,63	±,45	4,50[c]		4,58	±,49	4,50[c]		4,98	±,27	5,10[a]	
Lubrication-T1	4,90	±,43	5,10[a]	**<0,001**	4,91	±,41	5,10[a]	**<0,001**	5,04	±,44	5,10[a]	>0,05
Lubrication-T2	3,43	±,47	3,30[b]		3,56	±1,66	3,90[b]		,00	±,00	,00	
Lubrication-T3	4,63	±,44	4,50[c]		4,69	±,44	4,80[c]		5,04	±,39	5,10[a]	
Orgasm_T1	4,96	±,43	5,20[a]	**<0,001**	4,87	±,43	5,20[a]	**<0,001**	5,12	±,33	5,20[a]	>0,05
Orgasm_T2	3,03	±,42	4,00[b]		3,36	±1,74	4,00[b]		,00	±,00	,00	
Orgasm_T3	4,67	±,51	4,80[c]		4,63	±,42	4,80[c]		5,20	±,28	5,20[a]	
Satisfaction-T1	4,90	±,51	5,20[a]	**<0,001**	4,94	±,45	5,20[a]	**<0,001**	5,04	±,22	5,20[a]	>0,05
Satisfaction-T2	3,06	±,45	4,00[b]		3,34	±1,74	4,00[b]		,00	±,00	,00	
Satisfaction-T3	4,64	±,49	4,80[c]		4,64	±,41	4,40[c]		5,20	±,49	5,20[a]	
Pain-T1	4,29	±,74	4,40[a]	**<0,001**	4,11	±,60	4,40[a]	**<0,001**	4,64	±,46	4,80[a]	0,342
Pain-T2	3,04	±,51	2,80[b]		2,66	±1,54	3,60[b]		,00	±,00	,00	
Pain-T3	3,94	±,59	4,00[c]		4,21	±,57	4,40[a]		3,44	±,46	3,60[a]	

Friedman Test, Posthoc[a,b,c]

When the sexual function sub-dimensions of pregnant women were compared according to delivery types, the difference in three periods of all sub-dimensions in individuals who gave birth with NSD and CS was statistically significant ($p<0.05$). In both delivery types, the levels of the early postpartum FSFI subgroups were found to be low. While the levels of arousal, lubrication, orgasm, and satisfaction in the early postpartum period were significantly lower in those who gave birth with NSD, the desire and pain levels were significantly lower in the early postpartum period in those who gave birth with CS.

When the mode of delivery was NSD, the levels of sexual function sub-dimensions were compared according to the prenatal depression score. As a result of the analysis, sub-dimensions of the prenatal, postnatal early and late period sexual function scale differ statistically according to the prenatal EPDS groups ($p<0.05$). Prenatal, postpartum, early and late period desire, arousal, orgasm, satisfaction, and pain levels of those not depressed were significantly higher than those with prenatal depression. While lubrication was high in all three periods only in those with prenatal depression, the opposite is true for other variables (Table 2).

When the mode of delivery was CS, the levels of sexual function sub-dimensions were compared according to the prenatal depression score. As a result of the analysis, sub-dimensions of the prenatal, postnatal, early, and late period sexual function scale differ statistically according to the prenatal EPDS groups ($p<0.05$). Prenatal, postpartum, early, and late period desire, arousal, orgasm, satisfaction, and pain levels of those not depressed were significantly higher than those with prenatal depression. While lubrication was found to be high in all three periods only in those with prenatal depression, the opposite is true for other variables.

Table 1. Comparison of Sexual Function Sub-Dimensions According to Prenatal Depression Score when Delivery Type is NSD

EPDS Before Delviery		Before Delivery			p	After Delivery (early)			p	After Delivery (late)			p
		Mean	SD	M		Mean	SD	M		Mean	SS	M	
Request	<13	4,33	±,39	4,20	**<0,001**	4,03	±,41	4,20	**<0,001**	4,17	±,45	4,20	**<0,001**
	>13	3,21	±,63	3,00		3,07	±,47	3,00		3,42	±,41	3,60	
Arousal	<13	5,11	±,19	5,10	**<0,001**	3,65	±,84	3,60	**<0,001**	4,74	±,40	4,80	**<0,001**
	>13	4,11	±,25	4,20		3,10	±,47	3,10		4,04	±,22	3,90	
Lubrication	<13	4,02	±,34	4,10	**<0,001**	3,20	±,84	3,30	**<0,001**	4,04	±,37	3,90	**<0,001**
	>13	4,30	±,15	4,20		3,85	±,34	3,90		4,74	±,34	4,60	
Orgasm	<13	5,10	±,26	5,20	**<0,001**	3,86	±,95	4,00	**<0,001**	4,79	±,43	4,80	**<0,001**
	>13	4,12	±,24	4,00		3,11	±,33	3,00		4,05	±,53	4,00	
Satisfaction	<13	5,06	±,34	5,20	**<0,001**	3,90	±,97	4,00	**<0,001**	4,74	±,46	4,80	**<0,001**
	>13	3,95	±,31	4,00		3,04	±,35	3,00		4,14	±,42	4,00	
Pain	<13	4,53	±,48	4,40	**<0,001**	3,60	±,78	3,40	**<0,001**	4,04	±,53	4,00	**<0,001**
	>13	2,87	±,32	2,80		2,85	±,34	2,80		3,18	±,30	3,20	

Mann Whitney U Testi

Regardless of the type of birth, sexual function differs statistically for the three periods according to the dimensions of the satisfaction sub-dimension and the variables of smoking, educational status, income level, and who initiated the sexual intercourse ($p<0.05$).

According to the first postpartum sexual intercourse week, prenatal and postnatal early-period sexual desire levels were higher in those whose first week of sexual intercourse was less than 6 weeks ($p<0.05$).

DISCUSSION

In this study, we aimed to compare primiparous women in terms of postpartum depression and sexual function. 219 primiparous pregnant women met the inclusion and exclusion criteria of the Health Sciences University Istanbul Training and Research Hospital Gynecology and Obstetrics Clinic. Edinburgh Postpartum Depression Scale (EPDS) and Female Sexual Functioning Scale (FSFI) questionnaires were applied to the patients by conducting 3 interviews at the last antenatal control before birth, in the early postpartum (6th week), and in the late postpartum (12th week). In the first interview, in addition to these questionnaires, patients were asked to fill out a voluntary research form containing questions that would provide us with information about their sociodemographic characteristics and sexual functions.

There were only 5 observations in the NSD (interventional delivery) group, which was not included in the comparisons since it would not be statistically healthy compared with other groups. Only the intervention group was included in the dependent groups because there is a case of comparing 5 observations among themselves in terms of time.

It was observed that individuals who gave birth with intervention did not have sexual intercourse within the first 6 weeks. In a study conducted to investigate the effect of delivery type of primiparous women on sexual function in our country, the first sexual intercourse week of those who gave birth with NSD (+MLE) was 5.2±1.2, while the first sexual intercourse week of those who gave birth with CS was 5.0±1.1. (194). In this study, almost all women (99.1%) reported having their first sexual intercourse within the first 6 weeks.

Among the women in our study, individuals whose sexual intercourse is frequently initiated by their spouses have a higher risk of depression and low sexual function levels. Sexual function scores of individuals whose sexual intercourse is frequently initiated by themselves

are high, and sexual dysfunction was not detected in any of them. This data, which we found in our study, in which we investigated the effects of birth patterns on depression and sexual function, seems significant. Ifmore comprehensive studies support it, it is thought to contribute to the literature.

A study conducted by Salgın et al. in our country showed that the mode of delivery did not make a significant difference in terms of PPD (6). Similarly, in a comprehensive study conducted in China, no significant relationship was found between the mode of delivery and PPD (7). Studies on whether sexual function will be affected by birth patterns show that; the mode of delivery had no significant effect on sexual function (8). In the NSD, NSD (with intervention), and CS groups, early postnatal EPDS measurements were significantly higher than prenatal and postnatal late-period measurements. In all three delivery types, early postpartum FSFI level was found to be significantly lower than the other groups. In addition, all three births have the highest FSFI level in the prenatal period. While arousal, lubrication, orgasm, and satisfaction levels were significantly lower in the NSD group in the early postpartum period, the desire and pain levels were significantly lower in the CS group in the early postpartum period. As understood from here, cesarean section,rather than protecting individuals in terms of sexual function, reduces the desire for sexual function as a result of the difficulties created by the previous operation and the recovery period of the operation. However, individuals feel more pain due to the effects of the previous operation.

Sexual function levels of women with a low risk of prenatal depression were significantly higher than depressed individuals in all delivery typesThe sexual function levels of women with depression during pregnancy, at 6 months postpartum, and 12 months postpartum were found to be low in the FSFI questionnaire (9). There is a striking finding in the evaluation of individuals according to FSFI subgroups according to EPDS level. Although the scores obtained in the subgroups of desire, arousal, orgasm, satisfaction, and pain in the early postpartum FSFI results of individuals with low risk of depression were higher than the other group,early postpartum lubrication levels of depressed individuals were found to be significantly higher than the other group. Based on this result, although we know that there is no organic disorder related to vaginal wetting among the groups, we find the level of sexual function to be low in depressed individuals. In light of the existing studies supporting our result, we can say that depression has a negative effect on sexual function (10).

The sexual function levels of women who had their first postpartum sexual intercourse before the 6th week were found to be high. Likewise, when this comparison is made for FSFI subgroups,prenatal and postpartum early sexual desire levels of those who had their first postpartum sexual intercourse before the 6th week were found to be higher than the other group. For other FSFI subgroups, this comparison did not yield any significant results. This situation shows us that; Sexual desire plays a decisive role in initiating intercourse, individuals with high sexual desire started sexual intercourse earlier and sexual desire levels were found to be high in the early postpartum period.

CONCLUSION

The levels of arousal, lubrication, orgasm, and satisfaction in the early postpartum period were significantly lower in those who gave birth normally, and the levels of desire and pain were significantly lower in the early postpartum period in those who gave birth with cesarean section. As understood from here, cesarean section,rather than protecting individuals in terms of sexual function, reduces the desire for sexual function as a result of the difficulties created by the previous operation and the recovery period of the operation. However, individuals feel more pain due to the effects of the previous operation. Based on this result, although there is

no organic disorder related to vaginal wetting among the groups, we find the level of sexual function to be low in individuals with a high risk of depression. In light of the existing studies supporting our result, we can say that depression has a negative effect on sexual function.

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Competing Interests: The authors declare that they have no competing interests.

Ethical Declaration: All procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and with the Helsinki Declaration of 1975, as revised in 2008.Ethics committee approval was granted from our institution on 08.10.2021 with protocol number 2933, and informed consent was obtained from all participants.

Author Contributions

Working Concept / Design	**:** MHA, AGZ
Data collecting	**:** MHA, AGZ
Data Analysis / Interpretation	**:** MHA, AGZ
Writing Draft	**:** MHA, AGZ
Technical Support / Material Support	**:** MHA, AGZ
Critical review of content	**:** MHA, AGZ
Literature Review	**:** MHA, AGZ

Note 1: This article is extracted from my master thesis dissertationen titled 'Evaluation Of Primiparae Women In Terms Of Depression And Sexual Function After Normal Bırth And Post-Caesarean Section', supervised by Dr. Ali Galip Zebitay (Master Thesis, İstanbul Training and Research Hospital, İstanbul, Turkey, 2022).

Note 2: This article is the revised and developed version 'Evaluation Of Primiparal Women In Terms Of Depression And Sexual Function After Normal Birth And Post-Caesarean Section.', orally delivered at theInternational Medical and Health Sciences Research Congress (UTSAK).

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