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The Effect of Birth Types on Postpartum Comfort Level in Pregnant Women

Gebe Kadınların Postpartum Konfor Düzeyi Üzerine Doğum Şekillerinin Etkisi

ABSTRACT

Objective:

It is known that the birth type has important effects on women's postpartum comfort level. The aim of this study is to determine the effects of birth types on postpartum comfort levels, and to determine whether any of these birth types is superior to the others.

Material and Methods:

The data for this descriptive study were obtained through a public hospital and a social media platform for 150 women (50 with vaginal birth, 50 with cesarean section, and 50 with vaginal birth after cesarean) between November 2017 and February 2018. The data were collected using a Personal Information Form and the Postpartum Comfort Scale. The data were analyzed via frequency, mean, standard deviation, chi square, Cronbach Alpha analysis, multivariate linear regression, and t test.

Results:

The women with vaginal birth after cesarean had significantly higher mean scores of Postpartum Comfort Scale total and subscales compared to women with vaginal birth or cesarean section ($p<0.001$). This study indicated that women with vaginal birth after cesarean had the highest postpartum comfort levels compared to vaginal birth or cesarean section.

Conclusion:

It was determined that the postpartum comfort levels of women, who had a vaginal delivery after cesarean section, were higher than women who had a vaginal birth or cesarean section.

Key Words:

Cesarean birth, Postpartum comfort, Vaginal birth, Vaginal birth after cesarean

ÖZ

Amaç:

Doğum şeklinin kadınların doğum sonu konfor düzeyi üzerinde önemli etkileri olduğu bilinmektedir. Bu çalışmanın amacı, doğum şekillerinin doğum sonu konfor düzeyi üzerine etkisini belirlemek ve bu doğum şekillerinin herhangi birinin etkisinin diğerine göre üstün olup olmadığını incelemektir.

Gereç ve Yöntemler:
Tanımlayıcı tipteki bu çalışmanın verileri Kasım 2017-Şubat 2018 tarihleri arasında bir devlet hastanesi ve bir sosyal medya platformu üzerinden Kişisel Bilgi Formu ve Doğum Sonu Konfor Ölçeği kullanılarak 150 kadından (50 vajinal doğum, 50 sezaryen ve 50 sezaryen sonrası vajinal doğum) elde edilmiştir. Veriler frekans, ortalama, standart sapma, ki-kare, Cronbach alpha analizi, çok değişkenli doğrusal regresyon ve t testi ile analiz edilmiştir.

Bulgular:
Sezaryen sonrası vajinal doğum yapan kadınların doğum sonu konfor ölçeği toplam ve alt ölçek puan ortalamaları vajinal doğum veya sezaryen olan kadınlara göre anlamlı olarak daha yüksekti ($p<0.001$). Bu çalışma, vajinal doğum veya sezaryen ile karşılaştırıldığında sezaryen sonrası vajinal doğum yapan kadınların en yüksek doğum sonrası konfor seviyelerine sahip olduğunu göstermiştir.

Sonuç:
Bu çalışmada, sezaryen sonrası vajinal doğum yapan kadınların doğum sonu konfor düzeylerinin vajinal doğum veya sezaryen olan kadınlara göre daha yüksek olduğu belirlendi.

Anahtar Sözcükler:
Sezaryen doğum, Doğum sonu konfor, Vajinal doğum, Sezaryen sonrası vajinal doğum

INTRODUCTION

It is known that women experience many physical and psychological problems together in the postpartum period such as pain, fatigue, breast problems such as engorgement, mastitis, small and inverted nipple at an early phase, infection, stress incontinence, constipation, feeling of inadequacy in self and newborn care (1-7). Postpartum comfort means woman's quality of life regarding these problems. Birth type is known to affect a woman's adaptation to the postpartum period; the problems that women experience in the postpartum period may vary according to the birth type (8,9). It is known that Comfort Theory is used in the evaluation and development of postpartum comfort (10). The theoretical structure of this theory is based on the concept of holism and human needs. Kolcaba states that when basic human needs, which are biological, psychological and social needs, are met, the comfort of the individual will be in relief phase (10). Lima et al., (2017) summarized the compliance of comfort theory for postpartum women in three aspects. First, it was observed that Kolcaba's comfort theory supports the systematization of nursing care for a postpartum woman with acute pain related to harmful physical agents (operative wound) characterized by verbal report of pain. Moreover, this theory takes into account sleep deprivation related to maternal practices that do not favor sleep characterized by anxiety, tiredness and sleepiness during the day. The comfort theory is appropriate for evaluating psychological problems as well as physical problems of postpartum women. Finally, this theory emphasizes that impaired comfort characterized by anxiety, fear, and reports of feeling uncomfortable is important in the postpartum women (11).

It is known that women who experience caesarean section have many more major and minor problems after vaginal birth (VB) and therefore their comforts are negatively affected (12,13). In a study conducted in Taiwan, it was determined that following CS compared to VB, women's discharge period is longer and their urinary tract infection and surgical wound complications are at a higher level (14). Besides, current studies revealed that women who experience CS compared to VB have higher levels of after pain, a lower level of physical activity, a lower level of success in breastfeeding in the first hour, and a lower level of newborn and maternal attachment (15-18). Likewise, the studies conducted in Turkey revealed that women who experience CS compared to VB experience a higher level of after pain, that the lactation process is delayed, and women have a lower level of breastfeeding success and a lower level of breastfeeding self-sufficiency (19-21). Postpartum comfort is crucial in detecting and efficiently managing these problems that occur in the postpartum period.

Although we did not find any study on examining postpartum comfort in the international literature review, we identified six studies in this field in Turkey were carried out. The first study reported that postpartum comfort levels were higher in women with VB than in those with CS under general and regional anesthesia (22). Çapık et al., (2014) detected that the physical and sociocultural comfort and postpartum comfort levels were higher in women with VB compared to those with CS (8). With regards to CS, another study found that general anesthesia had a negative impact on postpartum comfort and adaptation compared to regional anesthesia (23). Akgün (2016) found that the physical and psychospiritual comfort levels of women with VB were higher than those of women with CS (24). In contrast, only one study reported no difference between the postpartum comfort levels of different birth types (25).

Based on recent studies, the comfort levels of women with VB are generally higher than those of women with CS; however, to our knowledge, there has been no study investigating the comfort levels of women following vaginal birth after cesarean (VBAC). Therefore, the aim of the current study is to determine the effects of birth types on postpartum comfort levels, and to determine whether one method is superior to the others.

MATERIAL and METHODS

Study Design

This descriptive study was conducted between November 2017 and February 2018 through Akdeniz University Hospital Gynecology and Postpartum Services and a social media platform with members throughout Turkey .

Ethics Approval

This study was approved by the Akdeniz University Clinical Research Ethics Committee (No: 565, Date: 20.09.2017), and application approval was obtained from the institution. Approval was also obtained from the administrators of the social media platform used in this study. The participants were informed about the purpose of the study prior to providing informed consent with forms prepared according to the Helsinki Declaration.

Population and Sample

In the calculation of the sample size, initially the parameters of the power, confidence interval, effect size of the study was determined. In this study, the confidence interval was determined as 95 %, the power of the research as 80% and effect size as 0.8 in the calculation of the sample size. In line with these values, the priori calculated sample size, performed using G Power 3.1 packaged software was determined as 150. The previous studies were also considered in the calculation of the sample size (8,25). This study included a total of 150 women (50 with VB, 50 with CS, and 50 with VBAC).

Inclusion and exclusion criteria of the study were determined as follows. All of the participants who agreed to participate in the study were literate, gave birth to a single baby after 37 gestational weeks, had a healthy baby, and were in the postpartum period. Women were excluded from the study, if they gave birth before 37 weeks, or if had complications associated with themselves and/or their babies at birth or during the postpartum period.

Data Collection

Data of women who underwent VB and CS were collected by face-to-face interviews in postpartum clinics within 24-48 hours after birth. It is known that an average of 650 women give birth annually, including VB and CS in Akdeniz University Hospital. During the data collection process, 120 women were invited to the study, but 20 women refused to participate because of afterpain, because they looked after their baby or did not feel well. The data collection process was completed when 50 VB and 50 CS women who agreed to participate in the study were reached according to the sample size calculation.

Since the study was conducted in a country with a low level of VBAC and VBAC did not become widespread in public hospitals, the data of these women were obtained through social media. Data for women with VBAC were gathered through an online survey developed with the 'Survey monkey' program on social media. The data regarding VBAC group were collected from a single social media site. The participants were members of a social media platform called "VBAC (Turkey's first and only mothers' group)" having more than 40.000 members. In this social media group, there were women who wanted to do VBAC or had experience with VBAC. These women shared their experiences about pregnancy and childbirth experiences with each other. This study was announced on social media platform. In the announcement made on social media, it was especially emphasized that this study is aimed at women in the first 24-48 hours following VBAC.

Variables and Assessment Tools

Data were collected using the Personel Information Form and Postpartum Comfort Scale. The personal information form was prepared based on the relevant literature by the researchers.

The Personal Information Form

The form consisted of 20 questions, including sociodemographic (such as age, gender, educational status, employment status, income status) and obstetric characteristics (such as number of pregnancies, number of deliveries, number of living children, miscarriage, curettage, pregnancy intendedness, place of last birth, evaluation of the last birth and suggestion of the last birth type to other pregnant women) of women. Also, this form includes six questions to examine the environmental comfort of women in the postpartum period.

Postpartum Comfort Scale

The "Postpartum Comfort Scale (PCS)" consists of 34 items and was developed by Karakaplan and Yıldız (2010) using a Turkish version of General Comfort Scale (22). As a result of factor analysis, subscales of the PCS include physical, psychospiritual, and sociocultural comforts. The environmental comfort subscale of the PCS was removed from this scale by the original author of this scale. However, the original author suggested that this subscale can be used as binary data (yes-no) if requested by the researchers. In this study, items related to environmental comfort were used as binary data (yes-no) in line with the author's suggestion. The PCS scale is a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The lowest possible score is 34, and the highest possible score is 170. The mean score is obtained by dividing the total score by the total number of items, and it ranges from 1 to 5. Higher PCS scores indicate increased postpartum comfort level. The Cronbach's Alpha value of the scale was 0.78, and the scale was found to be reliable in terms of internal consistency (22). In current study, the PCS Cronbach Alpha value was 0.90.

Data Analysis

All of the data were evaluated using the Statistical Package for Social Sciences (SPSS 23.0) for Windows. An expert statistician contributed to the data analysis. The scale scores were normally distributed according to Kurtosis and Skewness Coefficients. The frequency, mean, standard deviation, and chi square were used for descriptive analyses; the Cronbach Alpha analysis was used to determine the reliability of the scale items; and multivariate linear regression and t test were used to compare the mean scale scores with other parameters. $p<0.05$ were considered significant.

RESULTS

There was no significant difference among the groups in terms of distribution of sociodemographic characteristics ($p>0.05$) (Table I). However, related to obstetric characteristics, there was a significant difference among the groups in terms of number of pregnancies, deliveries, and living children. This difference is most likely due to the fact that the women in the VBAC group in this study had to have had at least two deliveries in order for VBAC to occur (Table I).

Table I. Distribution of descriptive and obstetric characteristics according to birth type (N=150)

	CS* n=50 (%)	VB** n=50 (%)	VBAC*** n=50 (%)	Total n=150 (%)
Age				
20-25	10 (20)	6 (12)	4 (8)	20 (13.3)
26-30	18 (36)	19 (38)	21 (42)	58 (38.7)
31-35	15 (30)	16 (32)	22 (44)	53 (35.3)
36 and ↑	7 (14)	9 (18)	3 (6)	19 (12.7)
		χ^2=7.611, p=0.268		
Age $\overline{X}$±SD (min-max)	30.40±5.47 (21-47)	30.72±4.87 (20-43)	30.54±3.73 (23-40)	30.55±4.71 (20-47)
		F=0.057, p=0.944		
Education Level				
Primary school to High school	12 (24)	12 (24)	17 (34)	41 (27.3)
Graduate degree or higher	38 (76)	38 (76)	33 (66)	109 (72.7)
		χ^2=1.678, p=0.432		
Employment Status				
Employed	24 (48)	29 (58)	20 (40)	73 (48.7)
Unemployed	26 (52)	21 (42)	30 (60)	77 (51.3)
		χ^2=3.256, p=0.196		
Income Status				
Income is less than expense	10 (20)	7 (14)	7 (14)	24 (16)
Income is equal to expense	29 (58)	29 (58)	32 (64)	90 (60)
Income is greater than expense	11 (22)	14 (28)	11 (22)	36 (24)
		χ^2=1.450, p=0.835		
Number of Pregnancies				
1	20 (40)	22 (44)	0 (0)	42 (28)
2	15 (30)	17 (34)	36 (72)	68 (45.3)
3 or more	15 (30)	11 (22)	14 (28)	25 (16.7)
		χ^2=33.716, **p<0.001**		
Number of Deliveries				
1	30 (60)	29 (58)	0 (0)	59 (39.3)
2	16 (32)	16 (32)	45 (90)	77 (51.3)
3 or more	4 (8)	5 (10)	5 (10)	14 (9.4)
		χ^2=51.512, **p<0.001**		
Number of Living Children				
1	30 (60)	30 (60)	1 (2)	61 (40.7)
2	17 (34)	15 (30)	44 (88)	76 (50.7)
3 or more	3 (6)	5 (10)	5 (10)	13 (8.7)
		χ^2=48.900 **p<0.001**		
Miscarriage				
Yes	15 (30)	7 (14)	10 (20)	32 (21.3)
No	35 (70)	43 (86)	40 (80)	118 (78.7)
		χ^2=3.893, p=0.143		
Curettage				
Yes	9 (18)	6 (12)	6 (12)	21 (14)
No	41 (82)	44 (88)	44 (88)	129 (86)
		χ^2=0.997, p=0.608		
Pregnancy intendedness				
Planned pregnancy	39 (78)	34 (68)	39 (78)	112 (74.7)
Unplanned pregnancy	9 (18)	13 (26)	11 (22)	33 (22)
Unwanted pregnancy	2 (4)	3 (6)	0 (0)	5 (3.3)
		χ^2=3.974, p=0.410		
Place of Last Birth				
Private Hospital	35 (70)	40 (80)	43 (86)	118 (78.7)
Public Hospital	15 (30)	10 (20)	7 (14)	32 (21.3)
		χ^2=3.893, p=0.143		

*CS: Cesarean Section, **VB: Vaginal Birth, ***VBAC: Vaginal Birth After Cesarean

A total of 60.7% of women identified their last birth as an "easy birth," and 64% would 'probably' suggest their birth type to other pregnant women. There was a significant difference among the groups in terms of 'easiness' of last birth (x^2=6.929, p=0.031) and suggestion of the last birth type to other pregnant women (x^2=80.441, p<0.001). The VBAC group had significantly more positive evaluations of their births than the other groups. The women in the VBAC group perceived their birth type as an easy birth with the highest rate (70%) and stated with the highest rate (92%) that they would suggest their birth type to other pregnant women (Table II).

According to the multiple linear regression analysis conducted by considering CS point averages as fixed, compared to CS the postpartum comfort scale total scores of women who gave VB (Beta=0.372, t=4.465, p<0.001) and VBAC (Beta=0.548, t=6.571, p<0.001) respectively. Birth type explains 24% of this variability (Adjusted R2=0.224) in the postpartum comfort scale total score (F=22.515, p<0.001). It was found that in physical comfort subscale, women who gave VB (Beta=0.424, t=5.060, p<0.001) and VBAC (Beta=0.513, t=6.127, p<0.001) respectively had higher comfort levels compared to CS. Birth type explains 21.5 % (Adjusted R2=0.215) of this change in the physical comfort subscale score (F=21.429, p<0.001). Regarding psychospiritual comfort, which is another sub-dimension, the comfort levels of women who gave VB (Beta=0.195, t=2.245, p=0.026) and VBAC (Beta=0.470, t=5.401, p<0.001) were found to be higher than caesarean respectively and it may be asserted that 15.6 % (Adjusted R2=0.156) of this difference stems from birth type (F=14.726, p<0.001). Finally, for sociocultural comfort subscale, when the point average of women who have experienced CS is kept fixed as in the other sub-dimensions, it is found that women who give VB (Beta=0.252, t=2.828, p<0.001) and VBAC (Beta=0.400, t=4.488, p<0.001) respectively have higher comfort levels compared to CS and 11.1% (Adjusted R2=0.111) of this difference is explained with birth type (F=10.299, p<0.001) (Table III).

Table II. Women's difficulty perception of the last birth and their suggestion to other pregnant women

	CS* n=50 (%)	VB** n=50 (%)	VBAC*** n=50 (%)	Total n=150 (%)
Evaluation of the Last Birth				
Easy	23 (46)	33 (66)	35 (70)	91 (60.7)
Hard	27 (54)	17 (34)	15 (30)	59 (39.3)
		χ^2=6.929, **p=0.031**		
Suggestion of the Last Birth Type to Other Pregnant Women				
Yes	8 (16)	42 (84)	46 (92)	96 (64)
No	33 (66)	4 (8)	1 (2)	38 (25.3)
Partly	9 (18)	4 (8)	3 (6)	16 (10.7)
		χ^2=80.441, **p<0.001**		

*CS: Cesarean Section, **VB: Vaginal Birth, ***VBAC: Vaginal Birth After Cesarean

Table III. Regression results of the mean PCS total score and the mean subscale scores according to birth type

	Unstandardized Coefficients Beta	Std. Error	Standardized Coefficients Beta	t	Sig.
PCS Total Score (F=22.515, Adjusted R^2= 0.224, **p=0.000)**					
CS*(Constant)	109.020	2.331		46.770	**0.000**
VB**	14.720	3.296	0.372	4.465	**0.000**
VBAC***	21.660	3.296	0.548	6.571	**0.000**
Physical Comfort Subscale Score (F=21.429, Adjusted R^2= 0.215, **p<0.001)**					
CS*(Constant)	40.760	1.246		32.702	**0.000**
VB**	8.920	1.763	0.424	5.060	**0.000**
VBAC***	10.800	1.763	0.513	6.127	**0.000**
Psychospiritual Comfort Subscale Score (F=14.726, Adjusted R^2= 0.156, **p<0.001)**					
CS*(Constant)	39.180	.636		61.580	**0.000**
VB**	2.020	.900	0.195	2.245	**0.026**
VBAC***	4.860	.900	0.470	5.401	**0.000**
Sociocultural Comfort Subscale Score (F=10.299, Adjusted R^2= 0.111, **p<0.001)**					
CS*(Constant)	29.080	.945		30.764	**0.000**
VB**	3.780	1.337	0.252	2.828	**0.005**
VBAC***	6.000	1.337	0.400	4.488	**0.000**

*CS: Cesarean Section, **VB: Vaginal Birth, ***VBAC: Vaginal Birth After Cesarean

There were no significant differences among groups in terms of finding the room quiet, the temperature adequate, the bed comfortable, and feeling safe in the postpartum period (respectively, p=0.092, p=0.318, p=0.268, p=0.168). However, there were significant differences among groups in terms of room ventilation and opportunity for relatives/friends to visit in the postpartum period (respectively, p=0.004 and p=0.014). These environmental comfort levels were higher in women with VBAC and VB compared to women with CS (Table IV).

Table IV. Distribution of responses of women to environmental comfort variables according to birth type

Postpartum	CS* n=50 (%)	VB** n=50 (%)	VBAC*** n=50 (%)
Finding the room quiet	38 (76)	42 (84)	46 (92)
		χ^2=4.762, p=0.092	
Finding the room temperature adequate	46 (92)	44 (88)	41 (82)
		χ^2=2.290, p=0.318	
Finding the room ventilation adequate	30 (60)	32 (64)	44 (88)
		χ^2=11.063, **p=0.004**	
Finding the bed comfortable	36 (72)	36 (72)	42 (84)
		χ^2=2.632, p=0.268	
Feeling safe	40 (80)	40 (80)	46 (92)
		χ^2=3.571, p=0.168	
Opportunity for relatives/friends to visit after birth	45 (90)	40 (80)	49 (98)
		χ^2=8.535, **p=0.014**	

*CS: Cesarean Section, **VB: Vaginal Birth, ***VBAC: Vaginal Birth After Cesarean

DISCUSSION

This study is unique in investigating the effects of birth types, including VB, CS, and VBAC, on postpartum comfort. In current study, postpartum comfort level was highest in VBAC, followed by VB and finally CS. One study has supported that birth types affect postpartum comfort levels, and that the postpartum comfort levels of women with VB are higher than those of women with CS (26). This study included women who underwent VBAC; these women are able to compare factors affecting postpartum comfort with their prior experiences with CS and VB. It has been reported that women delivering via VBAC experience less pain and less postpartum complications, such as delayed mobilization, constipation, and engorgement (27). Previous studies have also shown that mother-baby interaction and bonding are achieved in a shorter period with VBAC compared to CS, and that this enhanced the adaptation to maternity and the postpartum period (27-29). The results of qualitative studies emphasize that women with VBAC have a readiness for with VBAC have a readiness for with VBAC had a readiness for delivery and postpartum satisfaction experiences (27,29,30).

Results of the current study revealed a significant difference in terms of the mean physical comfort scores and the physical comfort level of the three groups. The VBAC group had the highest scores, followed by the VB group, and finally, the CS group. The first subscale of comfort theory (physical comfort associated with bodily perceptions) consists of physiological factors such as rest and relaxation, which are known to affect an individual's physical condition, responses to disease, nutrition and homeostasis, and bowel function continuity (10). The results of the current study were similar to those of other Turkish studies, in particular, that the physical comfort levels of women with VB were higher than those of women with CS (8,9). Women experiencing VBAC and VB are known to mobilize faster and be more independent than women with CS. Further, women undergoing VBAC and VB also experience less postpartum complications than those with CS. That women who have experienced VB have these problems, which affect physical comfort in a less ratio and severity compared to women who have experienced CS is also supported by international literature. It was also found that women who experience VB have less severe afterpain, less risk of surgical complication, less gastrointestinal problems, higher level of physical activity and that they get discharged in a shorter span of time compared to CS (14,16,17). The results of current study support the literature, which suggests that these factors improve postpartum comfort.

The psychospiritual comfort sub-dimension of the scale involves postpartum woman's psychological well-being, positive relationship with the newborn and perceived social support. In this study, women's psychospiritual comfort levels were respectively found to be the highest for VBAC, VB and CS. Similarly, the qualitative studies on the experiences of women after VBAC indicate that women psychologically feel better and stronger and that newborn-maternal relationship is more positive compared to CS (27-30). Additionally, in a current study, it was found that women's maternal well-being level is affected by the birth type in the postpartum period, that the well-being level of women who experience VB is higher than that of those who experience CS and that the risk of postpartum depression is less for women who experience VB (31). It is observed that women who gave VB have a more positive birth experience and that their perceptions regarding

the care provided by healthcare professionals, themselves and the newborn is more positive (32-34).

In the current study, there was a significant difference among birth types in terms of environmental comfort (i.e., room ventilation and opportunities for relatives/friends to visit). Women with VBAC reported that they were more satisfied with these parameters compared to those with VB and CS. Environmental comfort is the last subscale of postpartum comfort. It positively contributes to the recovery process and makes women feel good, which can be considered a sign of postpartum healthcare and social support (10). It was reported that the environmental comfort level of women with VB was higher than that of women with CS, whereas no difference was detected in the environmental comfort levels among women with different birth types (9,25). However, these studies had no data associated with the type of hospital where the deliveries took place. In our current study, the majority of women gave birth in private hospitals. We suggest that the difference in the women's perceptions about environmental comfort in our current study is due to the more flexible visiting hours and special care for room ventilation in private hospitals.

Limitations

The current study has several limitations. According to our data analysis, the PCS scale was divided into three factors, and the items on the environmental comfort scale were included in the sociocultural subscale. Therefore, the PCS could only measure environmental comfort in a limited sense. Data collection on the online platform has enabled access to women with higher education levels. Therefore, the findings of the study can be generalized to women with a high level of education. Also in the current study, we did not examine the postpartum comfort levels of women with or without episiotomy in VB and VBAC, because vaginal births mostly involve intervention and the rate of episiotomy in our country is 87.5% (35). Moreover, we did not examine the anesthesia type in CS. Further, the evaluation of hospital type (i.e., public and private) on comfort level may not be accurate, as the majority of participants gave birth in private hospitals.

CONCLUSION

Current study indicates that women with VBAC had higher postpartum comfort levels than those experiencing VB and CS. The highest postpartum comfort level achieved in the VBAC group is an important finding for healthcare professionals. It should be suggested that women's postpartum comfort should be periodically evaluated, and that regulations should be made based on the results. Measurement tools used in the current study should be used for this purpose. We also propose that future studies compare the postpartum comfort levels of women from different sampling groups (e.g., public hospitals). In addition, qualitative studies investigating postpartum comfort levels are also recommended.

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Informed Consent:

Approval was also obtained from the administrators of the social media platform used in this study. The participants were informed about the purpose of the study prior to providing informed consent with forms prepared according to the Helsinki Declaration.

Author Contributions:

Concept - İB, MA; Design - İB, HY, MA, AA; Supervision - İB, HY; Resources - İB, HY, MA, AA; Materials - İB, HY, MA, AA; Data Collection - MA, AA; Analysis and Interpretation - AA, İB; Literature Search - İB, HY, MA, AA; Writing Manuscript - MA, AA; Critical Review - İB, HY.

Conflict of Interest:

The authors have no conflict of interest to declare.

Financial Disclosure:

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Presented Congress:

Only, a brief abstract of this study was presented verbally at 1st International 3rd National Childbirth Education and Educators Congress on 18-21 October 2018 in Turkey.

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