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THE EFFECTS OF WOMAN-CENTERED CARE ON VITAL SIGNS, ANXIETY AND COMFORT LEVELS: A RANDOMIZED CONTROLLED TRIAL

KADIN MERKEZLİ BAKIMIN YAŞAM BULGULARI, KAYGI VE KONFOR DÜZEYLERİNE ETKİSİ: RANDOMİZE KONTROLLÜ ÇALIŞMA

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ABSTRACT

Objective: The aim of the study was to evaluate the effects of the woman-centered care given in the early postpartum period on vital signs, anxiety and comfort levels.

Method: The study is a single-blind, randomized controlled trial. 120 women were assigned to each of the experimental and control groups by the permutation block randomization method. Woman-centered care was given to the experimental group and standard care to the control group. Descriptive statistics, Chi-square, Mann Whitney-U, Kruskal Wallis, Wilcoxon Ranks Tests were used in the analyses. A value of $p<0.05$ was considered significant.

Results: Socio-demographic and obstetric characteristics were similar in both groups ($p>0.05$). There was a difference between posttest mean scores from the State, Trait Anxiety, and Postpartum Comfort Scales of the experimental and control groups ($p=0.001$; $p=0.002$; $p=0.001$). A difference was also identified between pretest and posttest total mean scores from the State, Trait Anxiety, and Postpartum Comfort Scales of the experimental group ($p=0.001$).

Conclusion: In the early postpartum period, the recipients of woman-centered care were found to have lower state and trait anxiety levels and higher comfort levels compared to the recipients of standard care. It was determined that the pulse and systolic blood pressure were lower in women with low anxiety levels receiving woman-centered care.

Key Words: Postpartum, Woman-Centered Care, Standard Care, Vital Signs, Comfort, Anxiety

ÖZ

Amaç: Araştırmada erken postpartum dönemde verilen kadın merkezli bakımın kadınların yaşam bulguları, kaygı ve konfor düzeyleri üzerine etkisinin değerlendirilmesi amaçlandı.

Yöntem: Araştırma tek körlü randomize kontrollü bir çalışmadır. Deney ve kontrol gruplarının her birine permütasyon blok randomizasyon yöntemiyle 120 kadın atandı. Deney grubuna kadın merkezli bakım, kontrol grubuna standart bakım verildi. Analizlerde tanımlayıcı istatistikler, Ki-kare, Mann Whitney-U, Kruskal Wallis, Wilcoxon Ranks Testleri kullanıldı. $p<0.05$ değeri anlamlı kabul edildi.

Bulgular: Sosyo-demografik ve obstetrik özellikler açısından iki grupta benzerdi ($p>0.05$). Deney ve kontrol grubunun Durumluk, Sürekli Kaygı ve Postpartum Konfor Ölçeği son test puan ortalamaları arasında fark saptandı ($p=0.001$; $p=0.002$; $p=0.001$). Deney grubunun Durumluk, Sürekli Kaygı ve Postpartum Konfor Ölçeği ön testleri ile son testlerinin toplam puan ortalamaları arasında fark bulundu ($p=0.001$).

Sonuç: Erken postpartum dönemde kadın merkezli bakım alanların standart bakım alanlara göre durumluluk ve sürekli kaygı düzeylerinin daha düşük, konfor düzeylerinin ise daha yüksek olduğu saptandı. Kaygı düzeyi düşük olan, kadın merkezli bakım alan kadınların nabız hızının ve sistolik kan basıncının daha düşük olduğu belirlendi.

Anahtar Kelimeler: Postpartum, Kadın Merkezli Bakım, Standart Bakım, Yaşam Bulguları, Konfor, Kaygı

INTRODUCTION

Woman-centered care refers to individualized care behaviors in which power and responsibilities are shared between a midwife/nurse and a woman [1]. In addition, woman-centered care is accepted as an indicator of quality in maternity services. Every woman has a unique experience in the postpartum period. And in this experience, each woman's individual unique needs should be considered during provision of healthcare services [2]. In the woman-centered approach, priority is given to enabling women to participate in discussions about their own care and increasing their ability to make informed choices. Thus, the woman is at the center of care and the appropriate care initiative is decided by considering her individual health needs, values and beliefs [3].

Woman-centered care has been reported to be associated with reduced likelihood of medical intervention and increased maternal satisfaction with postpartum care experiences [1-6]. Woman-centered care also plays a role in improving the psychosocial outcomes of the mother. It can lead to improved psychosocial outcomes of mothers by providing women with stronger emotional support, security and a sense of control over their care [5]. In particular, the postpartum period is a period of biopsychosocial change and adjustment to motherhood. To facilitate adaptation to this period and ensure comfort; it is important to provide care interventions specific to each woman, such as the mother's early initiation and maintenance of breastfeeding, ensuring mother-infant bonding, accelerating the healing process, and preventing complications.

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It is of great importance to collect data that will reveal individual needs in the postpartum period, and to implement planned interventions to increase comfort and reduce anxiety [7]. In the woman-centered care concept, woman-specific individual care is provided, which led to the need to evaluate the effectiveness of woman-centered care on anxiety and comfort levels.

The aim of the study was to evaluate vital signs, anxiety and comfort levels of women who received woman-centered care in the early postpartum period. The hypotheses of the study are listed below:

H1a: There is a statistically significant difference in vital signs between women receiving woman-centered care and women receiving standard care in the early postpartum period.

H1b: There is a statistically significant difference in anxiety levels between women receiving woman-centered care and women receiving standard care in the early postpartum period.

H1c: There is a statistically significant difference in comfort levels between women receiving woman-centered care and women receiving standard care in the early postpartum period.

H0a: There isn't a statistically significant difference in vital signs between women receiving woman-centered care and women receiving standard care in the early postpartum period.

H0b: There isn't a statistically significant difference in anxiety levels between women receiving woman-centered care and women receiving standard care in the early postpartum period.

H0c: There isn't a statistically significant difference in comfort levels between women receiving woman-centered care and women receiving standard care in the early postpartum period.

METHOD

Type of the Study

The study was conducted as a single-blind and block randomized controlled trial in a tertiary hospital in Turkey between February 2019 and February 2020. The study has registration number from ClinicalTrials.gov (Registration number: NCT05253664). According to the CONSORT statement guideline, the research report was prepared.

Sample size and randomization

The population of the study consisted of women who had a cesarean section in the maternity service of a tertiary hospital in Turkey. In the province where the hospital is located, 6072 births, approximately 3670 of which were cesarean section, took place in 2018 [8]. Therefore, it took one year to obtain the data of the study. The sample of the study was calculated by Power analysis, which was performed on the basis of a previous study using the Postpartum comfort scale [9]. As a result of power analysis; the number of samples determined for α:0.05 and 1-β= 0.95 for each group was calculated as a minimum of 105. Considering the possibility of loss or separation of selected samples during the conduct of the study, 240 women who met the inclusion criteria were assigned to the experimental (E) (120) and control (C) (120) groups using the permutation block randomization method. A total of 20 blocks and 12 women per block (6 women for group E and 6 women for group C) were calculated for the two groups. 20 random numbers between 1 and 20 were generated in Microsoft Office Excel 2016 program. The assignment process first started with block no.17 and finally finished with block no.3. A total of 240 women were equally placed, with 120 women in each group (at a 1:1 allocation ratio).

One of the researchers created the permutation block assignment sequence, while the other researcher assigned women to the experimental and control groups according to the predetermined block assignment sequence, applied the interventions and recorded the data. Due to the nature of the study, it was conducted as a single-blind randomized controlled trial.

Participants

Inclusion criteria were giving birth to a singleton healthy baby at term by cesarean section in the hospital where the study was conducted, being in the postpartum early period of first 24 hours, having no chronic disease or mental health problems, having no complications and her baby having no complications, being over 18 years of age, ability to read, write and speak in Turkish, volunteering to participate in the study, remaining in the study until the end of the research process. Women who didn't meet the inclusion criteria were excluded from the study.

Data Collection Tools

Data were obtained by using the "Introductory Information Form", "State-Trait Anxiety Scale", "Postpartum Comfort Scale" and measuring vital signs (blood pressure, pulse, body temperature).

Introductory Information Form: In this form prepared by the researchers, the socio-demographic and obstetric characteristics of the mothers were questioned [2, 10].

The State, Trait Anxiety Inventory: The inventory was developed in 1970 [11] and its Turkish validity and reliability were established in 1985 [12]. It consists of two subscales, being state and trait anxiety subscales, and 40 items. The State Anxiety Inventory (SAI) determines how an individual feels at a certain moment and under certain conditions, and the Trait Anxiety Inventory (TAI), on the other hand, generally determines how one feels. High scores indicate a high level of anxiety. Cronbach's Alpha values for the State Anxiety and Trait Anxiety have been reported as 0.83-0.92 and 0.83-0.87, respectively [12]. In the current study, the Cronbach's Alpha values for SAI and TAI were 0.77-0.89 and 0.86-0.87, respectively.

The Postpartum Comfort Scale (PPCS): It is a five-point Likert-type scale developed by Karakaplan and Yıldız (2010) that evaluates the physical, psychological, sociocultural and environmental comfort of mothers who had cesarean section and normal spontaneous delivery. The lowest and the highest scores that can be obtained from the 34-item scale are 34 and 170, respectively. Cronbach's Alpha value of the scale has been reported to be 0.78 [13], and in the current study, Cronbach's Alpha value of the scale was 0.89.

Vital Signs: Systolic-diastolic blood pressure and pulse of all women were measured from the cubital fossa area using a digital sphygmomanometer. Body temperature was measured from the forehead using a non-contact thermometer. In order to ensure consistency in the measurement of vital signs, measurements were conducted on the women using the same devices. The first measurement of the vital signs of the women in both the experimental and control groups was recorded when they agreed to participate in the study (at 2th hours postpartum). The vital signs of the women in both groups were recorded by observing the frequency of follow-up that should be observed in the postpartum period (if the vital signs are normal; every 30 minutes during 2 to 4 hrs postpartum, every hour during 4 to 6 hrs postpartum, every 2 hours during 6 to 10 hrs postpartum and every 4 hours during 10 to 24 hrs postpartum) [10,14-16]. The last measurements were taken at 20th hrs postpartum.

Interventions

A total of 240 women were included in the study, with 120 women equally assigned to the experimental and control groups. Woman-centered care was given to the experimental group and standard care to the control group. At the time of the study, 8 women (experimental: 6, control: 2) were discharged early, 11 women (experimental: 4, control: 7) did not want to continue the study, and the babies of 3 women were admitted to the neonatal intensive care unit due to complications (experimental:1 control:2) so these women were excluded from the study. The study was completed with 218 mothers, with 109 women in each of the experimental and control groups (Figure 1). The women in the experimental and control groups were unaware of the group they were in. Each woman in the experimental

group was given woman-centered care as from 2 hours postpartum and this process continued until 24 hours postpartum.

Vital signs (systolic-diastolic blood pressure, pulse, body temperature) of women assigned either to the experimental group or the control group were measured at 2 hrs postpartum. The State, Trait Anxiety, and Postpartum Comfort Scales were pretested. The women in the control group were given standard care. Standard care is the healthcare service provided to all postpartum women, determined according to the hospital's guidelines and protocols. The standard care provided by the hospital covers the basic postpartum care components. These components are nutrition of the newborn and protection of maternal and newborn health. Standard care was provided by staff in the hospital's maternity service. While the postpartum care needs of all women in the standard care group were addressed similarly, each woman in the experimental group was placed in the center of care and their needs were evaluated individually with a holistic approach.

A dynamic interaction was ensured between the researcher and the women in the experimental group who received woman-centered care. In the processes of determining and meeting the care needs of women in the early postpartum period, both the women and the researcher took equal responsibilities and the common goal of achieving safe results was shared. In this context, each woman was responsible for explaining herself, her own health behaviors, her own needs and values. The researcher was responsible for being accessible to women throughout the research. Continuity of care was provided by the same researcher by giving one-on-one care. The focus was not only on the physical parameters of women, but also on their social, emotional, physical, spiritual and cultural needs, expectations and conditions. Special care was provided to each woman. Thus, it was aimed to make women autonomous in joint decision making and postpartum period. In this study, woman-centered care was provided by considering cultural characteristics and making individual-specific plans with a holistic approach, evidence-based initiatives and researcher-team cooperation in such a way as to ensure that women and researchers assume responsibilities equally. Clinical guidelines were used while providing woman-centered care [14-17].

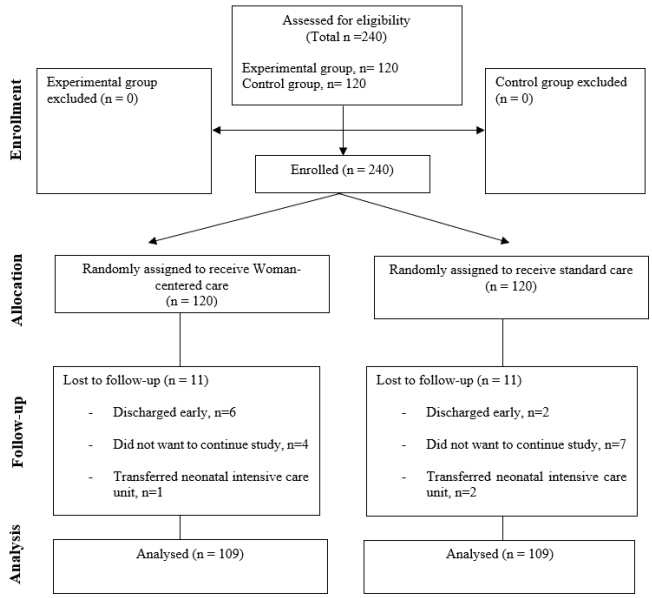

Figure 1. Follow diagram of study

Statistical Analysis

SPSS (Statistical Package for Social Science, IBM SPSS) 22.0 software package was used for data analysis.

Descriptive statistics were used to evaluate the data. Kolmogorov-Smirnov test was employed to check whether research data followed normal distribution.

Chi-Square, Mann-Whitney U, Kruskal-Wallis, Wilcoxon Ranks Tests were applied according to the variables. A value of $p<0.05$ was considered significant.

Ethical Aspect of the Study

To conduct the study, permission for using the scale, ethics committee approval (Decision No: GO 2019/18), and written permission from the institution were obtained. The research was carried out in accordance with the declaration of Helsinki. Informed volunteer consents were obtained from women participating in the study.

RESULTS

Experimental and control groups were similar in terms of socio-demographic and obstetric characteristics ($p>0.05$) (Table 1).

Table 1. Comparison of socio-demographic and obstetric characteristics of women (n=218)

Characteristics	Experimental (n=109)		Control (n=109)		X^2	*p*
	n	%	n	%		
Educational Level						
Primary education	54	49.5	49	45.0		
High School	31	28.4	32	29.4	0.566	0.753
University and higher education	24	22.0	28	25.6		
Family Type						
Nuclear	81	74.3	90	82.6	2.197	0.138
Wider	28	25.7	19	17.4		
Employment Status						
Employee	15	13.8	17	15.6	0.147	0.702
Unemployed	94	86.2	92	84.4		
Income Status						
Income less than expenditure	39	35.8	42	38.5		
Income equal to expenditure	44	40.4	46	42.2	0.687	0.709
Income more than expenditure	26	23.9	21	19.3		
Residence						
Provincial center	61	56.0	63	57.8		
District	26	23.9	34	31.2	4.040	0.133
Village	22	20.2	12	11.0		
Planning of Pregnancy						
Planned	88	80.7	84	77.1	0.441	0.507
Unplanned	21	19.3	25	22.9		
Characteristics	**Mean±SD**		**Mean±SD**		**Z**	**p**
Age	27.57±5.73		26.79±4.42		5621.00	0.492
Number of Pregnancies	2.18±0.99		2.42±1.29		5443.00	0.263
Number of births	1.95±0.85		2.06±0.10		5636.00	0.649

X^2=Chi-Square Test, Z= Mann-Whitney U Test

Pretest mean scores from the State, Trait Anxiety, and Postpartum Comfort Scales were similar between the experimental and control groups ($p=0.112$; $p=0.522$; $p=0.134$). There was a statistically significant difference between posttest mean scores from the State, Trait Anxiety, and Postpartum Comfort Scales of the experimental and control groups ($p=0.001$; $p=0.002$; $p=0.001$). The experimental and control groups were similar in terms of vital signs (body temperature, pulse, systolic-diastolic blood pressure) at 2 hrs postpartum. While there was a statistically significant difference between the experimental and control groups in terms of pulse ($p=0.001$) and systolic blood pressure ($p=0.033$) at 20 hrs postpartum, no statistically

significant difference was identified between the experimental and control groups in terms of body temperature (p=0.353) and diastolic blood pressure (p=0.178). While a statistically significant difference (p=0.001) was established between pretest and posttest total mean scores from the State, Trait Anxiety and Postpartum Comfort Scales of the women in the experimental group, there was no statistically significant difference (p=0.748; p=0.085) between total mean scores from the State and Trait Anxiety scale, excluding the Postpartum Comfort Scale (p=0.017), of the women in the control group. While a statistically significant difference was found between body temperature (p=0.019), pulse (p=0.001) and systolic blood pressure (p=0.001) at 2 hrs postpartum and those at 20 hrs postpartum of the women in the experimental group, no difference was found in terms of diastolic blood pressure (p=0.089). There was no statistical difference between vital signs (body temperature, pulse, systolic-diastolic blood pressure) at 2 hrs postpartum and 20 hrs postpartum of the women in the control group (Table 2).

Table 2. Intra-group and Intergroup Comparisons of Mean Scores from State, Trait Anxiety, Postpartum Comfort Scales and Vital Signs of the Experimental and the Control Groups (n=218)

Characteristics	Experimental (n=109) Mean±SD	Control (n=109) Mean±SD	Statistical Significance Z*	*p*
State Anxiety Inventory				
Pretest total score from the State Anxiety Inventory	41.597±5.885	39.743±8.391	-1.588	0.112
Posttest total score from the State Anxiety Inventory	35.853±7.149	39.807±8.172	-3.702	**0.001**
Z	-7.988	-0.321		
p	**0.001**	0.748		
Trait Anxiety Inventory				
Pretest total score from the Trait Anxiety Inventory	38.541±8.509	39.202±8.132	-0.640	0.522
Posttest total score from the Trait Anxiety Inventory	35.211±7.860	38.110±7.831	-3.072	**0.002**
Z	-3.705	-1.720		
p	**0.001**	0.085		
Postpartum Comfort Scale				
Pretest total score from the Scale	114.743±15.676	110.642±19.069	-1.499	0.134
Posttest total score from the Scale	128.725±13.997	114.505±17.984	-5.695	**0.001**
Z	-8.490	-2.397		
p	**0.001**	**0.017**		
Body temperature (at 2 hrs postpartum)	36.976±0.553	36.842±0.514	5128.50	0.080
Body temperature (at 20 hrs postpartum)	36.855±0.292	36.860±0.451	5510.50	0.353
Z	-2.342	-0.905		
p	**0.019**	0.365		
Pulse (at 2 hrs postpartum)	81.404±8.140	80.816±9.960	5646.50	0.527
Pulse (at 20 hrs postpartum)	76.367±7.371	80.312±8.628	4375.00	**0.001**
Z	-5.078	-0.222		
p	**0.001**	0.824		
Blood Pressure- Systolic (at 2 hrs postpartum)	120.743±12.164	118.275±12.448	5247.00	0.136
Blood Pressure- Systolic (at 20 hrs postpartum)	115.468±12.101	118.945±11.971	4948.50	**0.033**
Z	-3.291	-0.342		
p	**0.001**	0.732		
Blood Pressure- Diastolic (at 2 hrs postpartum)	78.220±10.029	77.028±10.245	5523.50	0.370
Blood Pressure- Diastolic (at 20 hrs postpartum)	76.110±11.338	78.229±11.122	5313.50	0.178
Z	-1.701	-1.101		
p	0.089	0.271		

Z=Wilcoxon Ranks Test, Z=Mann-Whitney U test*

No statistically significant difference was identified between the vital signs at 2 hrs postpartum and the posttest mean scores from the State, Trait Anxiety and Postpartum Comfort Scales of the women in both the experimental and control groups. While a statistically significant difference was identified between pulses and systolic blood pressures at 20 hrs postpartum of the women in the experimental group and the posttest mean scores from the State (p=0.022; p=0.043) and Trait (p=0.042; p=0.024) Anxiety Scales, there was no significant difference between their body temperatures (p=0.609; p=0.632) and diastolic blood pressures (p=0.120; p=0.227). No statistically significant difference was identified between the vital signs at 20 hrs postpartum and the posttest mean scores from the Postpartum Comfort Scale of the women in both the experimental and control groups.

There was no statistical difference between vital signs at 20 hrs postpartum and the posttest mean scores from the State and Trait Anxiety Scales of the women in the control group (p=0.743; p=0.188; p=0.343; p=0.432) (Table 3).

The interventions applied in this study have no side effects or negative effects on the women in both the experimental and control groups.

DISCUSSION

With woman-centered care, individualized education, counseling, continuity and support in postpartum care can be provided to women [18]. In this study, the effect of woman-centered care on anxiety and comfort levels in the early postpartum period was evaluated. It was observed that the state anxiety levels of women who received woman-centered care decreased from moderate to mild compared to those who received standard care. The level of trait anxiety in these women remained at a mild level.

Table 3. Comparison of Vital Signs and Posttest Mean Scores from the State, Trait Anxiety Scales and the Postpartum Comfort Scale of the Experimental and Control Groups (n=218)

Characteristics	State Anxiety Inventory		Trait Anxiety Inventory		Postpartum Comfort Scale	
	W	p	W	p	W	p
Experimental						
Body temperature (at 2 hrs postpartum)	2.002	0.157	0.366	0.545	0.003	0.956
Body temperature (at 20 hrs postpartum)	0.262	0.609	0.229	0.632	1.430	0.232
Pulse (at 2 hrs postpartum)	31.065	0.463	36.739	0.220	31.346	0.449
Pulse (at 20 hrs postpartum)	39.929	**0.022**	37.222	**0.042**	32.144	0.123
Blood Pressure- Systolic (at 2 hrs postpartum)	37.824	0.432	33.863	0.617	45.778	0.153
Blood Pressure- Systolic (at 20 hrs postpartum)	50.535	**0.043**	53.309	**0.024**	42.573	0.177
Blood Pressure- Diastolic (at 2 hrs postpartum)	24.954	0.808	28.040	0.667	33.959	0.373
Blood Pressure- Diastolic (at 20 hrs postpartum)	44.999	0.120	40.899	0.227	42.136	0.190
Control						
Body temperature (at 2 hrs postpartum)	0.713	0.399	0.087	0.768	0.009	0.923
Body temperature (at 20 hrs postpartum)	0.033	0.855	0.005	0.942	0.409	0.522
Pulse (at 2 hrs postpartum)	31.889	0.522	29.568	0.639	30.695	0.582
Pulse (at 20 hrs postpartum)	33.282	0.188	29.606	0.332	21.864	0.744
Blood Pressure- Systolic (at 2 hrs postpartum)	30.586	0.763	36.015	0.515	44.730	0.179
Blood Pressure- Systolic (at 20 hrs postpartum)	43.025	0.343	44.405	0.291	48.122	0.177
Blood Pressure- Diastolic (at 2 hrs postpartum)	28.814	0.629	37.458	0.233	42.542	0.101
Blood Pressure- Diastolic (at 20 hrs postpartum)	34.761	0.432	33.869	0.474	36.458	0.355

W=Kruskal-Wallis

However, their mild anxiety levels decreased from upper levels to lower levels and their comfort levels also increased. In addition, state and trait anxiety levels decreased and comfort levels increased after the woman-centered care intervention compared to those before the intervention. The state and trait anxiety levels of women who received standard care were unchanged after the standard care intervention compared to those before the intervention, but their comfort levels increased. A study by Marín-Morales et al. reported that the women included in the study received professional supportive care, had a safe hospital environment, and the social support they needed, and stated that women had satisfactory perceptions about their birth experience, resulting in lower state and trait anxiety levels in the early postpartum period [19]. Another study examining state and trait anxiety levels found that state and trait anxiety levels were higher in the early postpartum period compared to pregnancy period [20]. A study conducted on women who experienced a flood disaster determined that the level of anxiety was lower in women for whom continuous care model was used compared to those for whom standard care model was used [21]. A systematic review study reported that individualized care increases comfort levels and generates high levels of satisfaction [22]. A study conducted in Iraq concluded that the standard care provided to women in the early postpartum period was both insufficient and deficient, and the comfort level was not evaluated either [23]. Another study in which care (individual care plans) based on the comfort theory was provided determined that the comfort levels of the patients increased because enough time was allocated to the patients compared to the recipients of routine care and a dynamic interaction was ensured [9]. Problems (pain, fatigue, inability to feed orally, negative effects of anesthesia, sleep problems, etc.), which may negatively affect the anxiety and comfort levels of women, are commonly seen in women after cesarean delivery. The results of previous studies in the literature suggest that providing postpartum care that puts women in the center and meets their individual needs reduces women's anxiety levels and increases their comfort levels. Similarly, in the current study, anxiety levels of women decreased. In addition, although the comfort level of the recipients of standard care increased, the recipients of woman-centered care were found to have a higher comfort level.

The women who received a woman-centered care intervention had lower pulse and systolic blood pressure at 20 hrs postpartum compared to the recipients of standard care intervention, and their body temperature and diastolic blood pressure values were unchanged. Moreover, their body temperature, pulse and systolic blood pressure decreased after the woman-centered care intervention compared to those before the intervention, while their diastolic blood pressure was not affected by such intervention. There was no change in the vital signs after the intervention of the women who received standard care intervention compared to those before the intervention. A study in which reference intervals specific to the postpartum period were determined for vital signs stated that the shock index (the ratio of pulse to systolic blood pressure) of women who had no postpartum hemorrhage in the early postpartum period was in the range of 0.46 to 1.07 [24]. In another study, ACOG (2019) highlighted striking changes in postpartum pulse (<90) and systolic blood pressure (120-139 mmHg) and concluded that there might be 5-10% reduction in pulse within 24 hours postpartum and in systolic blood pressure within 48 hours postpartum [25]. Another study reported that diastolic blood pressure decreased more than systolic blood pressure, with body temperature rising to 37.2 0C (99F) in the first 24 hours postpartum and coming back to normal within the next 12 hours [26]. In another study, it was stated that there may be a slight increase in body temperature in the first 24 hours postpartum, and the body temperature of the women included in the study was demonstrated to be within normal limits (36.5 0C-37.5 0C). In the same study, systolic and diastolic blood pressure values of women were also found to be within normal limits [27]. This is in good agreement with the results of the current study in that the vital signs were within normal limits for both the recipients of woman-centered care and of standard care. In addition, it was observed that the pulse and systolic blood pressure values were consistent with the decrease in the postpartum period.

Of the women who received a woman-centered care intervention, those who had low state and trait anxiety levels were also found to have low pulse and systolic blood pressure. However, low State and Trait Anxiety levels did not affect body temperature and diastolic blood pressure. In addition, the state and trait anxiety levels of women who had standard care intervention did not affect their vital signs. Comfort level did not affect vital signs in both care intervention groups. A study reported that body temperature, pulse, systolic-diastolic blood pressure values were within normal limits in the presence of a high level of postpartum anxiety and a low level of comfort (sadness, insomnia and fatigue) [27]. A population-based study determined that the majority of women without anxiety symptoms did not experience hypertension, while the majority of women with anxiety symptoms had hypertension [28]. Another study found that pulse and systolic blood pressure values were also high in women with high psychological stress levels in the postpartum period [29]. In the current study, although pulse and systolic blood pressure of the recipients of woman-centered care with low anxiety levels were lower and their body temperature and diastolic blood pressure were not affected, their vital signs were within normal limits. It was determined that mothers who received woman-centered care in the early postpartum period had lower levels of state and trait anxiety and higher levels of comfort compared to those who received standard care. It was determined that the pulse and systolic blood pressure were lower in women with low anxiety levels and receiving woman-centered care. With woman-centered care, both the quality of care provided and the level of comfort increase, as one-on-one care is provided to mothers. In clinics with a low number of births per year (less than 6000 per year), we recommend that women in the postpartum period who undergo physiological and psychological changes should be given woman-centered care.

Limitations and Strengths

There is only one public hospital providing health care services in the province where the study was conducted. The fact that there is only one hospital in the province provides access to all women. This is the strength of the research. It also took longer than planned to collect data as the Covid-19 outbreak broke out while the study was being conducted. The study used woman-centered care and applied care only to postpartum women. In addition, the anxiety and comfort levels of these women and their vital signs were evaluated. It would be beneficial to present the care that should be given in cases specific to other life cycles of the woman as a woman-centered care.

CONCLUSION

It was determined that mothers who received woman-centered care in the early postpartum period had lower levels of state and trait anxiety, and higher levels of comfort compared to those who received standard care. It was determined that the pulse and systolic blood pressure were lower in women with low anxiety levels and receiving woman-centered care. Women-centered care is recommended in clinics with an annual number of births below 6000. Since one-on-one care is provided to mothers with woman-centered care, both the quality of care provided and the level of comfort increase. In clinics with a low number of deliveries per year, we recommend that women who have undergone both physiological and psychological changes should be given woman-centered care in the postpartum period.

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