ORIGINAL RESEARCH ARTICLE

Effect of nursıng support gıven to pregnant women on labor paın and bırth expectancy

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Abstract

Nurses support pregnant women in coping with their labor pain. The aim of the quasi-experimental correlational design study was to identify the effect of the nursing support provided on labor pain and birth expectations to primiparous pregnant women. This study was carried out with an intervention (n=51) and control group (n=51) of primiparous women who were in their 37-41 weeks of pregnancy. In the first stage of labor (latent phase-active phase) (3-7 cm dilatation), the following procedures were applied respectively. Focusing, imagery, massage, sacral pressure, and breathing-relaxation-pushing exercises were explained to the pregnant women in the intervention group by the researcher and the exercises were practised one-on-one with them. The control group only received standard care in the ward without any intervention. The population of the study consisted of 102 pregnant women aged 18 years and above who had a vaginal delivery between February 15- August 15, 2018.The data of the study were collected using the Pregnancy Diagnosis Form, the Visual Analog Scale (VAS) (labor VAS1, post-natal VAS2) to determine the pain level of the participants, and WIJMA Labor Expectancy/Experience Questionnaire Version B to determine their expectations. SPSS 22.0 for Windows was used for the data analysis while frequency and percentage distribution, arithmetic means were calculated. Mann-Whitney U test, Kruskal- Wallis test, Spearman correlation analysis were performed. . The statistical significance level was accepted as $p<0.05$. The socio-demographic and obstetric characteristics of the pregnant women in the study were similar. VAS1 was 6.0±1.3 in the intervention group and 6.4±.1 in the control group. VAS2 was 0.9±0,8 in the intervention group and 1.31±1,029 in the control group. Wijma Delivery Expectancy/Experience Questionnaire (W-DEQ) Version B was found to be7.3±14.9 in the intervention group and 117.1±23.9 in the control group. The study results showed that the pregnant women in the intervention group described their labor more positively, that the postpartum perceived pain, fear levels of pregnant women who received nursing support were lowerthanthosewhoreceivedstandardcare. *(Afr J Reprod Health 2021; 25[6]: 110-120).*

Keywords: Labor pain, labor expectancy, nurse, primiparous

Résumé

Les infirmières aident les femmes enceintes à faire face aux douleurs de l'accouchement. Le but de l'étude de conception corrélationnelle quasi-expérimentale était d'identifier l'effet du soutien infirmier fourni sur la douleur du travail et les attentes de naissance chez les femmes enceintes primipares. Cette étude a été réalisée avec une intervention (n=51) et un groupe témoin (n=51) de femmes primipares qui étaient dans leurs 37-41 semaines de grossesse. Au cours de la première étape du travail (phase latente-phase active) (dilatation de 3 à 7 cm), les procédures suivantes ont été appliquées respectivement. Des exercices de mise au point, d'imagerie, de massage, de pression sacrée et de respiration-relaxation-poussée ont été expliqués aux femmes enceintes du groupe d'intervention par le chercheur et les exercices ont été pratiqués en tête-à-tête avec elles. Le groupe témoin n'a reçu que des soins standard dans le service sans aucune intervention. La population de l'étude était composée de 102 femmes enceintes âgées de 18 ans et plus qui ont accouché par voie vaginale entre le 15 février et le 15 août 2018. Les données de l'étude ont été recueillies à l'aide du formulaire de diagnostic de grossesse, l'échelle visuelle analogique (EVA) (travail VAS1, post-natal VAS2) pour déterminer le niveau de douleur des participants, et WIJMA Labor Expectancy/Experience Questionnaire Version B pour déterminer leurs attentes. SPSS 22.0 pour Windows a été utilisé pour l'analyse des données tandis que la fréquence et la distribution en pourcentage, les moyennes arithmétiques ont été calculées. Un test de Mann-Whitney U, un test de Kruskal-Wallis et une analyse de corrélation de Spearman ont été effectués. . Le niveau de signification statistique a été accepté comme $p<0,05$. Les caractéristiques sociodémographiques et obstétricales des femmes enceintes de l'étude étaient similaires. L'EVA1 était de 6,0 ± 1,3 dans le groupe d'intervention et de 6,4 ± 0,1 dans le groupe témoin. L'EVA2 était de 0,9±0,8 dans le groupe d'intervention et de 1,31±1 029 dans le groupe témoin. La version B du questionnaire Wijma sur les attentes/expériences en matière d'accouchement (W-DEQ) s'est avérée être 7,3 ± 14,9 dans le groupe d'intervention et 117,1 ± 23,9 dans le groupe témoin. Les résultats de l'étude ont montré que les femmes enceintes du groupe d'intervention décrivaient leur travail de manière plus positive, que les niveaux de douleur et de peur ressentis après l'accouchement chez les femmes enceintes qui recevaient un soutien infirmier étaient inférieurs à ceux qui recevaient des soins standard. *(Afr J Reprod Health 2021; 25[6]: 110-120).*

Mots-clés: Douleur du travail, espérance de travail, infirmière, primipare

Introduction

Although pregnancy is a physiological event, it is affected by physical, psychological and other factors[1,2]. Especially family members who are going to be parents for the first time are concerned about pregnancy, labor and postnatal period. With the support to be given to pregnant women, their families during pregnancy, expectant mothers, fathers have an opportunity to learn parentage, adapt to the process and make various plans preparations[3].

Some variables negatively affect the readiness of pregnant women for labor. For example, fear of birth is the most important factor affecting women negatively[4]. Fear and uneasiness lead up to the development of a cycle, which is described as a fear-tension-pain syndrome, causing stress in pregnant women[5]. Non-pharmacological methods that are applied by well-equipped nurses help pregnant women cope with the fear of birth by decreasing pain perception and give pregnant women a pleasant birth experience[6-9].

In the literature, only one of the nursing support practices such as breathing exercise or sacral compression is given to pregnant women[5,7,8]. In our study, all the training and practices (the exercises of focusing, imagery, massage, sacral pressure, breathing-relaxation-pushing) that could be performed within the scope of nursing were applied to each patient individually therefore it took a long time. The W-DEQ- version B and VAS were used to evaluate the effect of all nursing supports on birth pain and birth expectancy.

Methods

Study design

A quasi-experimental design was used in the study aiming to determine the effect of nursing support given to primiparous pregnant women on their labor pain and birth expectancy.

Setting and participiants

The study consisted of 102 pregnant women aged 18 years and above who had a vaginal delivery between February 15- August 15, 2018, at the maternity ward of Akşehir State Hospital in Konya.

In this respect, 119 pregnant women whose age, social status, obstetric characteristics, pain levels were similar were selected using a simple random sampling method. A total of 17 women, 12 from the intervention and 5 from the control group, were excluded from the study since they gave birth with caesarean section.

In our study, the power analysis was performed by using the G*Power 3.1.9.2 program. For a 95% confidence interval (significance level 0.05), an effect size of 0.5, a power of 0.80, the number of pregnant women in each group was calculated to be a minimum of 51. Taking into account the factors such as unexpected deaths of the pregnant women and missing or faulty conditions, the sample contained 112 pregnant women with each of the intervention and control groups consisting of 56 pregnant women, with a tolerance of 10%. The sample number for the study was increased by another 10% of the calculated sample number, considering the fact that there would be cases that could have a cesarean indication despite the decision for vaginal delivery in the pregnant women selected by simple random sampling.

Participant selection criteria

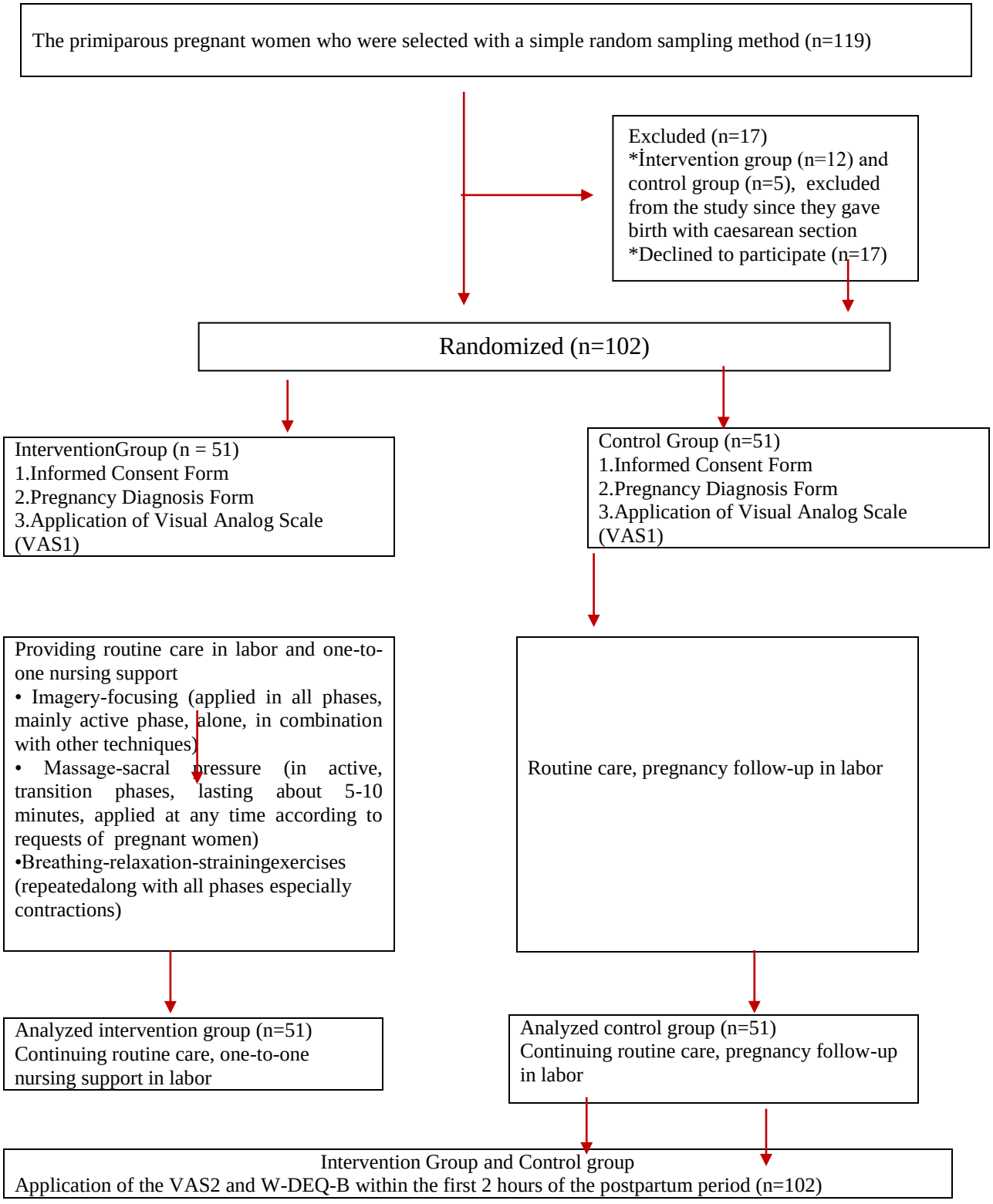
The primiparous pregnant women, without pregnancy complications, systemic disease, cesarean indication, risky pregnancy, and had single fetus, aged 18 and above, 3-7 cm dilatation, were expected to have vaginal labor, did not use any analgesic, were volunteered to participate in the study, were included in the study. Pregnant women who did not meet these criteria were excluded.

Data collection

Pregnancy diagnosis form

It consisted of 11 questions to determine socio-demographic characteristics of pregnant women and their spouses, and 8 questions to determine their obstetric history. The form has been completed through a face-to-face interview technique at the first interaction after each pregnant woman in the intervention and control group was admitted to the maternity ward.

Flow Diagram of the Study



Visual analog scale (VAS)

It is a measurement tool that is widely used in the determination of pain intensity and subjectively evaluates the sense of pain. It is scored according to the verbal expressions and facial expressions ofpregnant women. On the scale, the score of "0" indicates no pain, while the score of "10" indicates themost severe pain[10,11]. Itwasappliedto each pregnant woman in our study at the first interaction (VAS1) and within the first 2 hours of postpartum (VAS2).

Wijma delivery expectancy/experience questionnaire (W-DEQ) version B

The (W-DEQ)-Version B is a highly valid and reliable scale that can be applied to evaluate the level of fear of birth. The scale consists of 33 questions including various feelings and thoughts. It is a 6-point Likert-type scale, 1 is extremely likely and 6 is never. The minimum score that can be obtained from the scale is 33 while the maximum score is 198. A higher score indicates a higher fear of birth[12]. The validity and reliability analysis of the Turkish version of the scale was performed by Emine Uçar.The questions of 2, 3, 6, 7, 8, 11, 12, 15, 19, 20, 24, 25, 27, 31 are reverse scored. Scores obtained from the WDEQ are classified under 4 categories as low level of fear of birth (<37), moderate level of fear of birth (>38-65), severe level of fear of birth (66-84) and clinical level of fear of birth (≥85).13 This scale was applied to the pregnant women in the intervention and control groups of our study within the first 2 hours of postpartum. While the Cronbach Alpha coefficient was found to be 0.88 in one of the studies[12], it was found to be 0.968 in ourstudy.

Non-pharmacologicalmethodsappliedto the intervention group:

Effective methods for coping with birth pain which can be applied within nursing care standards, which do not include medical intervention, and are easy to apply in delivery room conditions, were explained to pregnant women and then applied to them by there searcher. The interventions were applied when labor began. Pregnant women were in the first stage of labor (latentphase-activephase) (3-7 cm dilatation). Imagery-focusing (applied in all phases, mainly active phase, alone, in combination with other techniques), massage-sacral pressure (in active, transition phases, lasting about 5-10 minutes, applied at any time according to requests of pregnant women), breathing-relaxation-pushing exercises (repeated along with all phases especially contractions).

Intervention applied to the control group:

In the first stage of labor (latentphase-activephase) (3-7 cm dilatation), the following procedures were applied respectively. The ICF, Pregnancy Diagnosis Form and VAS1 were applied to the pregnant women who were admitted to the maternity ward and met inclusion criteria. No supportive treatment was applied to them other than routine care. W-DEQ-B Scale and VAS2 were administered to them within the first two hours after delivery.

Hypotheses of the study

H_1: Nursing support given to primiparous pregnant women in labor has a significant effect on labor pain.
H_2: Nursing support given to primiparous pregnant women in labor has a significant effect on birth expectancy.
H_3: There is a significant relationship between birth pain and birth expectancy in primiparous pregnant women in labor.

Data analysis

Non-parametric tests were used since data did not show normal distribution. Frequency-percentage distributions, Fisher'sexact, Chi-square, arithmetic mean, frequency-percentage, Mann-Whitney U, Kruskal-Wallis, correlation analysis were performed. Data were evaluated by SPSS 22.0 program for Windows. $p<0.05$ was accepted as statistically significant.

Results

There was no statistically significant difference between the VAS1 and VAS2 values and the ages, education level, employment status, family types, income status and insurance of the pregnant women in the intervention and control groups

(p>0.05). There was a statistically significant difference found between the W-DEQ-B

Table 1: Distribution of the socio-demographic and obstetric characteristics of the pregnant women (n=102)

Socio-DemographicCharacteristics	Intervention (n=51)		Control (n=51)		Total (n=102)			
	Number (n)	Percentage (%)	Number (n)	Percentage (%)	Number (n)	Percentage (%)	X^2	P
Age								
18-21	32	62.7	28	54.9	60	58.8		
22-25	14	27.5	18	35.3	32	31.4	1.37[a]	0.764
26-29	4	7.8	3	5.9	7	6.9		
30-34	1	2.0	2	3.9	3	2.9		
EducationalStatus								
Primary School	0	0	3	5.9	3	2.9		
Secondary	19	37.3	22	43.1	41	40.2		
School							5.61[a]	0.176
High School	30	58.8	23	45.1	53	52.0		
Undergraduate	2	4.0	3	5.9	5	4.9		
Profession								
Housewife	48	94.1	49	96.1	97	95.1		
Employed	1	2.0	0	0	1	1.0	0.00[a]	1.000
Other	2	3.9	2	3.9	4	3.9		
Duration of Marriage								
0-5 years	51	100	50	98.0	101	99.0	0.00[a]	1.000
6-10 years	0	0	1	2.0	1	1.0		
ObstetricCharacteristics	**Number (n)**	**Percentage (%)**	**Number (n)**	**Percentage (%)**	**Number (n)**	**Percentage (%)**	**X^2**	**P**
Gestationalweek								
37. week	5	9.8	8	15.7	13	12.7		
38. week	23	45.1	14	27.5	37	36.3		
39. week	16	31.4	20	39.2	36	35.3	4.326[b]	0.364
40. week	6	11.8	6	11.8	12	11.8		
41. week	1	2.0	3	5.9	4	3.9		
ExperiencingProblemsduringPregnancy								
Yes								
No								
	7	13.7	8	15.7	15	14.7	0.078[b]	0.780
	44	86.3	43	84.3	87	85.3		
Receiving Training/Information aboutPregnancyandLabor								
Yes								
No								
	19	37.3	8	15.7	27	26.5	6.095[b]	0.014
	32	62.7	43	84.3	75	73.5		
OpinionsandExpectationsaboutLabor*								
Pain								
Happiness								
Loneliness	29	56.9	36	70.6	65	63.7		
Fear	41	80.4	31	60.8	72	70.6		
Courage	7	13.7	5	9.8	12	11.8	-	-
Danger	22	43.1	25	49.0	47	46.1		
Confidence	2	3.9	1	2.0	3	2.9		
	4	7.8	5	9.8	9	8.8		
	2	3.9	0	0	2	2.0		

*Multipleoptionsareselected.
[a]Fisher'sExact Test, [b]PearsonChi-Square Test

and the education levels and employment status of the pregnant women in the control group (p<0.05). W-DEQ-B values of university graduates were found to be lower than others. There was a statistically significant difference found between the W-DEQ-B values and the insurance status of the pregnant women in the intervention group (p<0.05) (Table 2). There was

no statistically significant difference in the VAS1 values between the intervention and control groups (p>0.05) which

Table 2: Comparison of Socio-Demographical Characteristics of Pregnants with VAS1, VAS2 andW-DEQ-Bvalues

		VAS1									
		Intervention(n=51)					**Control(n=51)**				
		n	**x̄**	**SD**	**KW/U**	**P**	**n**	**x̄**	**SD**	**KW/U**	**P**
Age	18-21	32	6,06	1,413			28	6,25	1,236		
	22-25	14	5,79	1,251	4,695*	0,196	18	6,72	0,958	2,289*	0,515
	26-29	4	7,00	1,414			3	6,67	1,528		
	30-34	1	4,00	-			2	6,00	1,414		
	Primary	-	-	-			3	7,67	,577		
Education	Secondary	19	5,47	1,645			22	6,68	,945		
Level	High School	30	6,27	1,112	5,687*	0,128	23	6,04	1,261	6,978*	0,073
	University	1	8,00	-			3	6,33	1,155		
Employment	Employed	3	6,33	0,577	62,500**	0,697	2	7,00	0,000	34,000**	0,452
Status	Unemployed	48	6,00	1,429			49	6,41	1,171		
Family Type	Extended	12	5,42	1,929	171,000**	0,152	15	6,40	1,454	261,000**	0,847
	Nuclear	39	6,21	1,151			36	6,44	1,027		
Monthly	0-1000 TL	2	5,00	1,414			2	6,50	0,707		
Income	1000-3000 TL	45	6,00	1,414			46	6,39	1,183		
	3000 TL and above	4	6,75	0,957	2,206*	0,332	3	7,00	1,000	0,760*	0,684
Insurance	Social Security Institution	34	5,97	1,359			35	6,43	1,243		
	Pension Fund	3	6,67	1,528			1	6,00	-		
	PensionFundfor Self-employed	5	6,20	1,304	4,414*	0,353	5	6,60	1,342	1,732*	0,785
	Green Card	7	5,43	1,618			7	6,14	0,690		
	Self paid	2	7,50	0,707			3	7,00	1,000		
		VAS2									
		Intervention(n=51)					**Control (n=51)**				
		n	**x̄**	**SD**	**KW/U**	**P**	**n**	**x̄**	**SD**	**KW/U**	**P**
Age	18-21	32	0,91	0,777			28	1,25	0,967		
	22-25	14	0,93	0,997	2,562*	0,464	18	1,28	1,179	1,638*	0,651
	26-29	4	1,25	0,500			3	2,00	1,000		
	30-34	1	0,00	-			2	1,50	0,707		
	Primary	-	-	-			3	2,00	1,000		
Education	Secondary	19	1,16	0,958	4,348*	0,226	22	1,55	1,101	3,929*	0,269
Level	High School	30	0,73	0,691			23	1,04	,928		
	University	1	1,00	-			3	1,00	1,000		
Employment	Employed	3	1,00	1,000	67,000**	0,830	2	1,00	1,414	41,500**	0,705
Status	Unemployed	48	0,92	0,821			49	1,33	1,029		
Family Type	Extended	12	1,33	0,888	152,500**	0,052	15	1,27	1,100	263,000**	0,880
	Nuclear	39	0,79	0,767			36	1,33	1,014		
Monthly	0-1000 TL	2	1,00	0,000			2	0,50	0,707		
Income	1000-3000 TL	45	0,96	0,852			46	1,33	1,012		
	3000 TL and above	4	0,50	0,577	1,174*	0,556	3	1,67	1,528	1,709*	0,425
Insurance	Social Security Institution	34	0,88	0,769			35	1,34	1,083		
	Pension Fund	3	0,67	0,577			1	0,00	-		
	Pension Fund for Self-employed	5	1,80	1,095	5,746*	0,219	5	1,80	0,447	5,048*	0,282
	Green Card										
	Self paid										

		7	0,57	0,535			7	0,86	0,900		
		2	1,00	1,414			3	1,67	1,155		
		W-DEQ-B									
		Intervention(n=51)					**Control(n=51)**				
		n	**x̄**	**SD**	**KW/U**	**P**	**n**	**x̄**	**SD**	**KW/U**	**P**
Age	18-21	32	77,75	14,032			28	122,39	20,813		
	22-25	14	76,35	13,316	5,116*	0,164	18	115,94	26,739	7,301*	0,063
	26-29	4	66,75	7,274			3	97,66	18,929		
	30-34	1	123,0	-			2	84,00	9,899		
	Primary	-	-	-			3	134,66	18,556		
Education	Secondary	19	78,68	17,870			22	126,50	24,365		
Level	High School	30	76,76	13,482	0,316*	0,957	23	110,00	19,593	15,006*	0,002
	University	1	70,00	-			3	86,00	11,532		
Employment	Employed	3	65,00	14,000	37,000	0,161	2	79,50	3,535	4,500**	0,031
Status	Unemployed	48	78,16	14,759	**		49	118,69	23,199		
FamilyType	Extended	12	82,33	13,540	164,500*	0,123	15	121,53	18,058	246,000**	0,620
	Nuclear	39	75,87	15,148	*		36	115,33	26,091		
MonthlyIncom	0-1000 TL	2	81,50	2,121			2	114,50	45,961		
e	1000-3000	45	77,46	15,517			46	119,82	20,427		
	TL				0,562*	0,755				4,185*	0,123
	3000 TL and above	4	74,50	12,288			3	78,00	38,509		
Insurance	Social Security Institution	34	73,82	13,426			35	115,40	20,630		
	Pension Fund	3	76,33	13,650			1	40,00	-		
	Pension Fund for Self-employed	5	89,60	10,014	9,995*	0,041	5	121,60	27,291	6,032*	0,197
	Green Card										
	Self paid	7	89,00	17,953			7	129,57	23,165		
		2	68,50	13,435			3	127,00	17,320		

*Kruskal Wallis, **Mann-Whitney U

Table 3: Comparison of the VAS1, VAS2 ve W-DEQ-B Values of Control and Intervention Groups (n=102)

	Intervention (n=51)		**Control (n=51)**		**Total (n=102)**	
	x̄	**SD**	**x̄**	**SD**	**U**	**P**
VAS1	6.02	1.393	6.43	1.153	1087.000*	0.142
VAS2	0.92	0.821	1.31	1.029	1021.500*	0.050
W-DEQ-B	77.3922	14.91319	117.156	23.99948	225.500*	0.000

*Mann-Whitney U test

Table 4: Distribution of the Scores on the W-DEQ-B According to Fear of Labor(n=102)

W-DEQ-B Scores	**Intervention (n=51)**		**Control (n=51)**		**Total (n=102)**	
	Number (n)	**Percentage (%)**	**Number (n)**	**Percentage (%)**	**Number (n)**	**Percentage (%)**
38-65(moderate level)	13	25.5	1	2.0	14	13.7
66-84(severe level)	22	43.1	4	7.8	26	25.5
≥85 (clinical level)	16	31.4	46	90.2	62	60.8
Total	51	100	51	100	102	100

means that the pain values of the pregnant women in both groups were similar to each other. A statistically significant difference was found between the intervention and control groups of their VAS2 values (p=0.05). Accordingly, the mean VAS2 of the intervention group was lower than the control group (Table 3).

Discussion

All of the non-pharmacological methods (focusing, imagery, massage, sacral pressure, and breathing-relaxation-pushing) used in pain control during birth, which the nurse could give without the need of a certificate, were applied to each patient by only

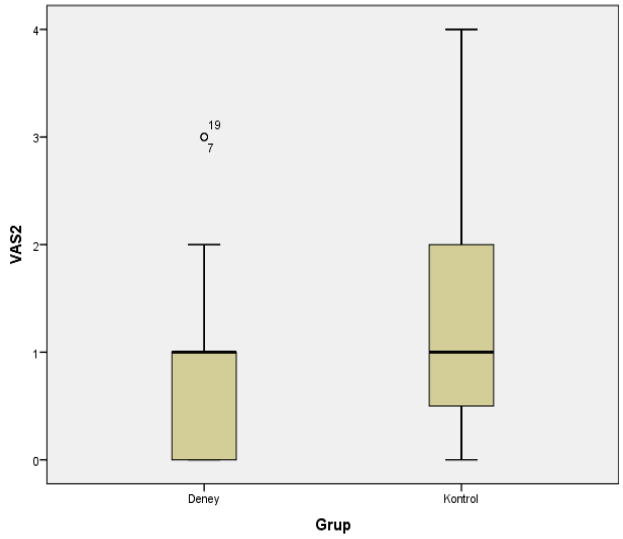


Figure 1: Distribution of mean VAS2 Values according to the control and ıntervention groups

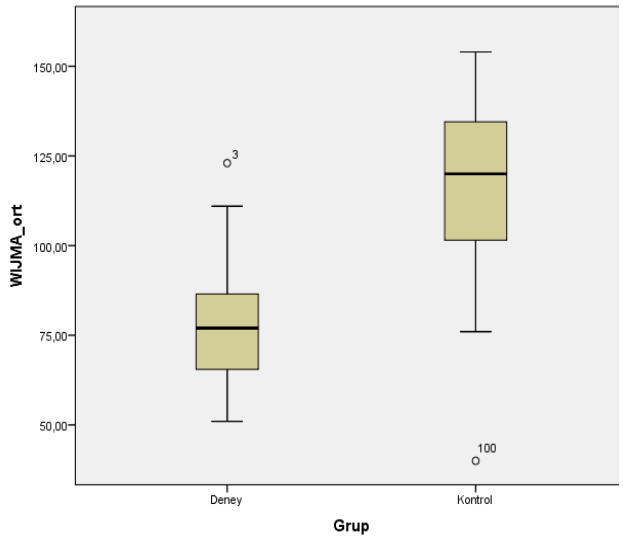


Figure 2: Distribution of mean W-DEQ-B values according to the Control and ıntervention groups

one nurse on different days. Follow-up of the control and intervention group pregnant women which coincided on the same day were carried out in different labor rooms. In the intervention group, focusing, imaging and relaxation methods were explained to the pregnant woman, who was in the active phase, for about 5 minutes, and she was encouraged to practice. In order for the pregnant woman to relax and to be calm at every stage of labor, a 5-10 minute massage was applied to her shoulders, back, waist, abdomen and legs with small touches, effleurage and anatripsology. Massage and sacral pressure were applied at more frequent intervals to the pregnant women, whose contractions became more frequent and had increased pain, especially to the ones in the transitional phase (8-10 cm dilation). All the breathing and pushing techniques were shown in practice to them who was at the end of the latent phase, and the techniques were performed together. In line with the advancing phases and changing needs, breathing exercises were repeated with them at every stage of the process.

It is a quasi-experimental study using VAS to evaluate the pain levels of pregnant women and W-DEQ-B scales to determine their expectation levels.We have observed that nursing support is an effective practice in alleviating labor pain, and it is also safe and applicable due to the high level of birth satisfaction of pregnant women.

In Nigeria, the mean pain score of pregnant women has been found to be severe (VAS>7.1), moderate (VAS 3.1-7), low (VAS≤3) for 50%, 48%,1.5%, respectively[14]. In our study, pregnant women with low pain expectations before labor had less pain during labor[15]. There was no significant difference between pain scores in labor VAS1 values of the groups (p> 0.05). It is an expected result that the pain levels the pregnant women felt were close since the socio-demographic characteristics and obstetric characteristics (Table 1) of them in both groups were similar and they would have experienced labor for the first time. In our study, a statistically significant relationship was found between the intervention and control group in regards to VAS2 values (p=0.05). It was determined that nursing support given to pregnant women in the intervention group reduced postpartum pain perception, thus pregnant women in the intervention group had more positive birth experiences (Figure 1). This finding confirmed the hypothesis of H_1 (Nursing support given to primiparous pregnant women in labor has a significant effect on labor pain).

In the literature, there are studies stating that most women experience a clinical level of fear of birth[12,16]. In another study, it was determined that pregnant women had moderate

levels of anxiety and fear of birth (63.83±20.172) and the inadequacy of training given to them about birth was emphasized[17].In our study, the mean scores of the pregnant women on the W-DEQ-B were lower in the intervention group (Table 4). The pregnant women who received one-to-one nursing support during labor were less likely to have fear of birth (Figure 2). This finding confirmed the hypothesis of H_2 (Nursing support given to primiparous pregnant women in labor has a significant effect on birth expectancy). It was thought that the fact that we had a sample consisting of only primiparous pregnant women was effective in the high mean scores of W-DEQ-B in our study. Most of the pregnant women in the intervention group (43.1%) had severe levels of fear of birth while almost all pregnant women in the control group (90.2%) experienced clinical levels of fear of birth(Table 4). It is noteworthy that the scale used in some of the previous studies in which fear of birth data was obtained at lower rates than our study had a different scale (W-DEQ-A), and that the rate of receiving prenatal education in the studies was high. This result emphasizes that prenatal education given to pregnant women is important in eliminating the fear of birth. It has been reported that the fear-pain-strain cycle can be prevented and fear of birth can be alleviated through the training to be provided in the antenatal period[18]. Having an only sample of primiparous pregnant women was thought to be effective in the high W-DEQ-B mean scores in our study. Studies have shown that support given during labor or at the time of birth has positive effects on the fear of birth[19-21].

It has been determined that providing information to pregnant women about the birth process positively affects their levels of satisfaction[22].In a study conducted in Iran, the effectiveness of midwives' psychoeducational intervention (aiming to improve the fear of birth feelings-anticipation) on reducing the fear of birth and self-efficacy in primiparous pregnant women who were afraid of giving birth was investigated and the intervention group was found to have a significant decrease in fear of birth and increased birth self-efficacy[23].When the VAS1 and VAS2 values in our study were compared, a significant positive correlation was found ($p<0.05$) and the postpartum pain levels of intervention and control group were found to be lower than prenatal pain levels. According to the assessment of labor as a whole, mean scores of pregnant women who defined labor as wonderful were higher in the intervention group. Labor pain had a significant effect on pregnant women in both groups. However, although they were afraid of the pain, they evaluated birth positively due to prenatal

nursing support. In our study, the intervention group participants had less postpartum pain and fear. This result confirmed hypothesis H_3 (There is a significant relationship between labor pain and birth expectancy in primiparous pregnant women in labor). It was thought that with the appropriate counselling services and support, the anxiety of pregnant women about birth can be reduced, their self-confidence can be increased, and their anxiety and fear about birth and postpartum can be overcome.

Supportive care and nonpharmacological methods applied during the intrapartum period ensure that pregnant women experience less pain[8,10]. Massage applied to pregnant women during labor is a method that supports vaginal labor[24,25]. A study found that warm therapy and massage applied to pregnant women at the first interaction with them and postpartum did not change mean pain scores[8]. In a randomized controlled study conducted in our country, it was concluded that sacral massage applied during childbirth reduced labor pain, decreased anxiety levels, positively increased birth satisfaction and perception, and had no fetal side effects[26].In our study, non-pharmacological methods such as focusing, imagery, massage, sacral pressure, breathing-relaxation-pushing exercises were applied to the pregnant women in the intervention group one-on-one during labor. The reasons such as pregnant women not experiencing birth before, not receiving training on labor pain, not preparing for birth consciously and not having sufficient information about birth caused them to have fear of birth and high W-DEQ-B scores were attributed to these reasons.

Ethical consideration

Ethical approval (Date: 01.12.2017, No: 2017/12-306) was obtained from the Non-Interventional Clinical Research Ethics Committee of theMedicine Faculty of Afyon Kocatepe University.

Limitations

The pregnant women at the beginning of the latent phase could not be included in the study because pregnant women with 3-7 cm dilatation were accepted for labor in the hospital where the study was conducted.

Conclusion

It was determined that nursing support given to primiparous pregnant women in labor decreased the perception of postpartum pain.The mean W-DEQ-B scores of the pregnant women in the intervention group were low. It was concluded that pregnant women in the intervention group had better birth experiences and less fear of birth. Our findings support the idea that the nursing support given to women in labor reduces fear of birth, ensures active participation of women in labor, and positively affects women's birth experience. The nurses are recommended to support the pregnant woman to cope with labor pains during labor.

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Contribution of authors

All the authors were involved in the writing and review of the manuscript. All the authors approved the final version of this manuscript.

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