THE EFFECT OF BENSON RELAXATION TECHNIQUE IN REDUCING PAIN INTENSITY AMONG CLIENT WITH POST CESAREAN SECTION

Tetti Solehati[1]; Yeni Rustina[2]

[1]Faculty of NursingUnpad Bandung- Indonesia, tsh_tetti@yahoo.com
[2]Faculty of Nursing Universitas Indonesia, Jakarta- Indonesia

Abstract

Background: Post cesarean section client is suffered of pain due to operative trauma and after pain. The sensation of the pain state can be reduced by pain management. It is not only pharmacological remedy but also non pharmacological treatment. Benson Relaxation Technique is one way non pharmacological suitable to reduce pain intensity clients but there are limited studies on its postoperative cesarean section administration

Objective: This study aims to determine the effect of Benson Relaxation Technique in reducing pain intensity among client with post cesarean section.

Methods: Design of the study was quasi experiment with pre and post test design. A prospective, not blind, randomized assign, two groups parallel study were conducted in Cibabat hospital Cimahi as intervention group (IG) and Sartika Asih hospital as control group (CG). Post cesarean section women with quota sampling based who met study inclusion criteria were consecutively assigned into either experimental (n=30) or control groups (n=30). Women in the experimental group received intervention Benson relaxation and those in the control group received the regular care from the health worker as room procedure. The outcome pain severity was measured by visual analogue scale. Those instruments were applied before and after intervention.

Results: The result of the study showed that the mean of pain score before intervention at CG was 4.43 cm. It was decreased to 4.40 cm (1 min), 4.27 cm (12 h), 4.10 cm (24 h), 4.00 cm (36 h), 3.93 cm (48 h), 3.83 cm (60 h), 3.67 cm (72 h), 3.51 cm (84 h). Meanwhile, the IG was 4.97 cm. It was decreased to 4.90 cm (1 min), 4.23 cm (12 h),, 3.57 cm (24 h),, 3.03 cm (36 h),, 2.77 cm (48h),, 2.73 cm (60 h),, 2.67 cm (72 h), 2.63 cm (84 h). The study found a significantly different comparing of pain intensity before and after intervention at CG and IG (p = 0.001), but IG undergone reduce pain more than CG

Conclusion: The Benson relaxation can reduce the pain intensity state among client with cesarean section.

Keyword: Benson Relaxation Technique, pain, post cesarean section

1. BACKGROUND

Surgery is an actual or potential action that threatens the integrity of the person, such as bio-psycho-social-spiritual, and may cause discomfort such as pain response. The experience of pain is associated with many immediate and long-term negative outcomes[1]. Experience of pain a person is a combination of physiological and psychological and it is not persistent tissue damage[2,3]. Pain is the main reason for someone to seek medical assistance. Pain indicate greater pain sensitivity among females compared males[4]. Surgery procedures can induce pain, one of them are an act of Caesarean section. There are several reasons this surgery performed, a study found that the cause of action Caesarean section performed by pregnant woman is the baby's weight more than normal, fetal distress, dystocia, placenta previa, placenta abrusio, decreased fetal percentage is still high, and malposition[5,6,7.] Besides there is willingness to perform caesarean section at patient request in the absence of an obstetric indication[8,28,29].

According to a research[9] found that 75% of surgical patients experience moderate to severe pain after surgery. The duration of the pain can last for 24 to 48 hours, but can last longer depending on how the client can withstand and respond to pain. According to a study[10] showed that women experience higher levels of pain intensity during the first 24 hours post-Caesarean section. There were no differences in pain intensity between the client elective Caesarean section and emergency Caesarean section[10].

Recently many methods being developed to address the problem of pain in clients with severe post Caesarean section, either by pharmacological approaches and non-pharmacological. One way non pharmacological suitable to reduce pain intensity clients is relaxation[11]. Relaxation aims to reduce anxiety, decrease muscle tension and bone, as well as indirectly to relieve pain and reduce tension related to the body's physiological[11,12,13]. Several studies have shown that the relaxation effective in reducing pain[11,13,14,15,16,17,18,19'27,30]. One relaxation technique is simple, easy to learn and implementation, and does not require much cost is Benson relaxation techniques[20], this relaxation is a combination between relaxation response techniques with individual belief system / faith factor (focused on a particular form of expression of the names of God, or the word has a calming sense to the client it self) repeatedly spoken with a regular rhythm with resignation.

From the preliminary study conducted by researchers in the postpartum hospital Cibabat Cimahi, many patients underwent a continuing pain. A data through client interviews in 5 people

post Caesarean section is obtained that all clients feel pain on the first day after surgery. The pain was on a scale of 6-7 and they ask for pain-killer, 3 of 5 people said that the client was tortured by the pain. Three clients said that he was told by the nurses if there is pain they should take a deep breathing, but were not given training how it is.

In connection with the problems mentioned above, and it has never done the research on the effect of Benson relaxation therapy to decrease pain intensity clients post Caesarean section in the hospital, the researchers are interested in studying the client's level of pain reduction post Caesarean section using Benson relaxation techniques, because this technique is relatively simple, does not require a fee, and does not take a lot of time.

2. METHODS

The principle of the study protocol was approved by the Ethic Committee both hospitals and a written informed consent was obtained from each patient. The study design used a quasi experiment by design premises pretest and posttest with control group design. Benson intervention group given relaxation is called the intervention group (respondents in the Cibabat hospital, whereas those who were not given the intervention Benson relaxation is called the control group (respondents in the Sartika Asih hospital). The experimental group was given the intervention Benson relaxation two hours after the operation, after the effects of anesthesia is lost and clients have conscious. Prior to the intervention Benson relaxation, the participants were trained how to use a visual analogue scale (VAS ranged 0-10), the patients' pain scores were measured for pre intervention. Then, the participants were given intervention the Benson relaxation. They were sugested to take a particular form of expression in the names of God, or the word that has a calming sense to the participans it self, repeatedly spoken with a regular rhythm with resignation, they were sugested to take deep breath through a nose and exhale with the lips while said of the names of God, or the word that has a calming sense in their heart. After intervension, the patients' pain scores were measured. Benson Relaxation method and measure pain was presented to IG and this method continued after surgery for 10 minutes to 4 days (84 hours). The first day of the two-hour post surgery (before and after intervention Benson Benson relaxation) and the following 12 hours. Then the second day, third, and fourth after postoperative every 12 hours namely at 6 am and 6 pm. As for the CG, were not given the intervention Benson relaxation but get the regular care from the health worker as room procedure. Measurement of pain in the control group is done as the intervention group for four days every 12 hours as IG.

Sample size using quota sampling. Base on standard deviation of previous study about relaxation, SD=1.30, at a significant 1% (Z1- α/2= 2,58), power 95% (Z1 – β or Z95% = 1, 64), µ1 (mean before intervention)=4,50, µ2 (mean after intervention)=3,41, the sample size was 24 subjects. The sample size was raised to 30 patients to anticipate the drop-out. Thus, the total sample size to be 30 (30 samples in each group) was selected for the study. The patients were randomly assigned into two groups of 30 by a table of random numbers. The sample was recruted who met the inclusion criteria (first birth by cesarean section, using ketoprofen therapy, using spinal anesthesia, awareness compos mentis, never got Benson relaxation exercises yet). The exclusion criteria is cesarean section repetted, sub conscious. Data collection tool divided into two instruments: first was instrument a questionnaire concerning demographic characteristics of respondents and second instrument was using scale VAS pain questionnaires[9]. Data was collected from April-June 2008. The Statistical Package for Social Sciences version 10.0 (SPSS Inc. Chicago, IL, USA) was employed to analyze data. Kolmogorov-smirnov z test was performed on the data to assess distribution normality. The analyses were performed based on chi square, independent t tests, dependent t tests, repeated measure ANOVA, and multiple linear regression.

3. RESULT

Table 1. Distribution of the respondents and homogeneity between the control and intervention groups

No	Characteristic	CG (n=30)		IG (n=30)		Total		Homogeneity	Pain intensity	
		Σ	%	Σ	%	Σ	%	P value	Mean	P value
1.	Age							0.75		0.39
	≤ 35 years	23	76.70	25	83.30	48	80.00		4.77	
	> 35 years	7	23.30	5	16.70	12	20.00		4.42	
2	Education							0.80		0.00
	Basic	13	43.30	15	50.00	28	46.70		5.61	
	Advanced	17	56.70	15	50.00	32	53.30		3.91	
3.	Occupation							0.79		0.38
	Have a job	11	36.70	13	43.30	24	40.00		4.88	
	Do not have a job	19	63.30	17	56.70	36	60.00		4.58	
4.	Parity							0.12		0.01
	Primiparity	16	53.30	9	30.00	25	41.70		5.16	
	Multiparity	14	46.70	21	70.00	35	58.30		4.37	
5.	Nature							0.78		0.93
	Emergency	22	73.30	20	66.70	42	70.00		4.69	
	Elective	8	26.70	10	33.30	18	30.00		4.72	

According to Table 1, it showed that it can be concluded that all the variables of respondent characteristics between CG and IG was equivalent homogeneous (P> 0.05, α = 0.05). There were two variables that has significant difference of pain intensity namely education and parity.

Table 2 Distribution of the average of pain intensity before and after the intervention period.

	Pain Pre inter-venton	Pain 1 min	Pain 12 hour	Pain 24 hour	Pain 36 hour	Pain 48 hour	Pain 60 hour	Pain 72 hour	Pain 84 hour	Pv*	Dif
Mean±SD CG	4.43± 1.28	4.40± 1.23	4.27± 1.26	4.10± 1.03	4.00± 0.98	3.93± 0.94	3.83± 0.99	3.67± 0.84	3.51± 0.97	0.001	0.93
Mean±SD IG	4.97± 1.19	4.90± 1.24	4.23± 1.04	3.57± 1.01	3.03± 0.96	2.77± 0.86	2.73± 0.83	2.67± 0.76	2.63± 0.69	0.001	2.34
Pv**	0.10										

Control Group=CG; Intervention group= IG; diff = Differences the average of pain after-before intervention, Pv* after-before intervention, Pv** between CG and IG

The average of pain intensity in the CG before the intervention was 4.43 cm down to 3.51 cm after the intervention period (84 hour), the difference in pain intensity difference was 0.93. In the IG, the average of pain intensity before being given Benson relaxation was 4.97 cm down to 2.63 cm after the intervention period (84 hour), the difference in pain intensity was 2.34 cm. There was a significant differences in average pain intensity both CG and IG before and after the intervention period (p < 0.005, α = 0.05).

Based on the bivariate analysis showed that from the six variables, there were four variables eligible for entry into a multiple linear regression model, namely: intervention group (P = 0.00), age (P = 0.00), education (P = 0017) and parity (P = 0.002). As for the variable nature and the occupation has a value P value> 0.25 so it does not get into the multivariate analysis. Further analysis using a backward method where the variable has a value P value> 0.05 was excluded from the model. Thus, to obtain a model as in table 3 below:

Table 3 the first step analysis of the modeling process multiple linear regression to the decrease in pain intensity after a given Benson relaxation in Cibabat and Sartika Asih hospital, April-June 2008 (n = 60)

Independent Variable	coefficient B	SE	coefficient Beta	P v
Constant Intervention group	1.89	0.27		0.00
(Benson)	1.32	0.12	0.75	0.00
Age	-0.01	0.01	-0.12	0.17
Education	-0.11	0.15	-0.06	0.44
Parity	-0.19	0.07	-0.23	0.01

The analysis was conducted in two stages: the first stage of the education variable (P = 0:44) was excluded from the model, then in the second stage variables of age (P = 0:17) was excluded from the model. The analysis can be seen in table 4 below.

Table 4 Distribution of the pure effect of Benson relaxation techniques to decrease pain intensity (By education, age, parity, nature Caesarean section, and occupation, in June 2008 (n = 60)

Independent Variable	coefficient B	SE	coefficient Beta	P v
Constant Intervention	1.43	0.13		0.00
group (Benson)	1.37	0.12	0.78	0.00
Parity	-0.28	0.06	-0.33	0.00

Table 4 showed that the variables that most influence on the determination of the pain intensity is a intervention group (intervention Benson) the Beta coefficient = 0.78 and P value = 0.00 (α 0.05). Variable intervention group (intervention Benson) is positive, while the variable parity is negativ. From the table 5:12 obtained regression equations obtained are as follows:

> Decrease in pain intensity = 1.43 + 1.37 intervention group -0.28 primiparity

In the equations model, it can be estimated that:
1. Decreasing value variation in pain intensity after provide the Benson relaxation intervention will be increased by 1.37 cm after controlled by parity variable,
2. In pregnant multiparity the pain intensity will decrease by 0.28 cm comparing by the variable primiparitas after controlled by intervention group (intervention Benson).

4. DISCUSSION
4.1. Relationship between Characteristics of Respondents with Clients Pain Intensity Post Caesarean section.

In this study was found that age was not associated with pain intensity. It is consistent to the opinion[21] who says that age were not significant factors regarding pain.

The results of this study found an association of education on pain intensity levels. Lack of knowledge about something, it will cause people to have a positive attitude towards it. The level of education is related with knowledge, one about how to cope with post-Caesarean section pain. This is consistent with the opinion[22] on the theory of transcultural environmental. In this case, education is one of the factors that can influence a person's behavior.

In this study there was no relationship between employment[21] and pain intensity but found there was relationship of parity to the intensity of pain. Parity effect in receive and treat pain due to parity-related coping strategies in dealing with the experience of the pain experience. In primiparity pregnant, the possibility has been no experience of labor pain and how to cope than those whose mother's multiparity. This is in accordance with statement[23] which says that the experience of pain before will affect the client's pain response.

In this study there was no significant correlation between the natures of Caesarean section with pain intensity. This is consistent with research[10] where the study found no differences between elective Caesarean section with emergencies within the

pain level. In this study the characteristics of the age, nature, and the work does not affect the intensity of pain, it may happen that the pain has a different meaning for each person. Pain has an important protective function by giving a warning that no damage is happening[11.] In addition it is likely that the intensity of pain experienced by clients affected by other factors such as environment and culture. At both hospitals where research, state data showed a calm and comfortable environment. Environment will affect the perception of pain. Besides the possibility of pain intensity is influenced by cultural factors. According to statement[23] culture has a role in tolerating pain. This aspect is very big impact on the psychological perception of pain. In research[9] found that cultural factors influence the perception of pain.

4.2. The difference in Average Pain Intensity of the Respondents.

The result showed that the average pain intensity immediately after Caesarean section before the intervention period were included into the category of moderate pain in the CG (4.43 cm) and severe pain in IG (4.97 cm). During this period, no significant difference obtained average pain intensity in both groups (p value = 0.10). This is in accordance with statement[24] that the post-Caesarean section pain is moderate or severe pain. Likewise, a study[9] found that 75% of surgical patients experience moderate to severe pain after surgery.

In the study of both hospital showed that the intervention given to the mother post-Caesarean section pain intensity have a reduction effect on the client where there is a significant difference in decreasing mean pain intensity after the intervention given either CG or IG. Average pain intensity immediately after the Caesarean section after the intervention period were included into the category of moderate pain (3.51 cm) in CG and mild pain (2.63 cm) in IG.

The average pain of the mothers in the CG was significantly different between before and after the intervention. This might be due to maternal post Caesarean section can adapt to pain as the wound healing process. On the condition of the wound is still wet, the tissue has not fused so that severe pain is felt. Once the wound is dry and tissue connection happens then reduced pain. While in IG, pain reduction is resulting from the provision of Benson relaxation intervention. It can be seen from the decrease in pain intensity significantly more, namely 2.34 cm in the group given relaxation Benson intervention compared with the control group only 0.93 cm. In the study[13,17] found that this relaxation technique effective in reducing pain. The results are reinforced by research.[14,19,20, 25,26,36,37, 38]

In multivariate analysis using multiple linear regression was found that the intervention Benson relaxation greatest effect on reduction of pain intensity clients post Caesarean section (P = 0.01). According to study[20,31,32,33,34,35] that Benson relaxation has a healing effect to decrease anxiety level, cognitive and somatic anxiety, mood disturbance, body discomfort, and to a level capable of relieving the pain.

The results found that Benson relaxation techniques proved to be the greatest influence on the decrease in pain intensity. Benson relaxation techniques is a simple and inexpensive

technique[20,35], nurses can use to help patients manage pain. Thus, the researchers suggest, especially the maternity nursing services are expected to use the technique of Benson relaxation as one of the standard operating procedures non-pharmacological pain management in maternal post Caesarean section, as well as Benson relaxation training can be used as training material for nurses / midwives in the maternity room.

This study had limitation. It was the small sample size. By increase in sample size, the possibility of a markedly deviant sample diminishes. The large samples provide the ground for counterbalancing the atypical values[36]

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