

Original Research Article

The relationship of the application of guided imagery therapy techniques towards pain intensity of maternal post caesarian section operation in postnatal care at the maternity hospital in the city of Padang

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ABSTRACT

Background: Most of the maternity mothers experience discomfort disorders due to the pain felt by the mother after caesarean section surgery. The pain causes disruption of the mother's activities after giving birth, the mother has difficulty breastfeeding her baby, and has difficulty doing physical activities. The pain results from surgical wounds on the abdominal wall and uterine wall of the mother. The pain experienced by each mother is different, ranging from low pain levels to severe pain levels.

Methods: This type of comparative analytic research with a cross sectional study approach with one group pretest and posttest design. As many as 30 samples of post caesarean section delivery mothers were taken by purposive sampling technique. Marginal homogeneity test was used for research analysis.

Results: The study showed that there was a decrease in the level of post-partum labor pain before and after the intervention of guided imagery therapy. Before the intervention, most of the respondents (46.7%) had moderate pain levels (4-6), after giving the intervention some respondents (43.3%) had mild pain levels. Statistical test showed a significant relationship with a significance value of 0.000 (p value <0.05).

Conclusions: Giving guided imagery therapy to post caesarean section delivery mothers is able to reduce the level of pain that the mother experiences without causing additional risk for the mother. This therapy provides a sense of comfort and relaxation for the mother through the imagination generated by the mother in her mind so that it diverts and reduces the pain that the mother is experiencing.

Keywords: Guided imagery, Maternity post caesarean section, Pain level

INTRODUCTION

Data from the World Health Organization (WHO) shows that delivery by caesarean section (SC) without any medical indications increases because it is considered to have a small and not heavy risk of complications. Vaginal delivery is considered a difficult labour process and tends to be dangerous for the mother-to-be and her baby, so caesarean section is preferred and chosen by the mother and family as an alternative delivery even though

caesarean delivery is performed through major surgery on the abdominal wall and uterine wall.¹ Most post-SC patients do not have a medical indication (history of disease and obstetric history) to perform CS surgery, 7% of CS deliveries are carried out in a planned manner. The trend of caesarean section deliveries is increasing in several developing countries in the world, one of which is in Indonesia, an increase in deliveries by caesarean section by 10%, from 7% in 2007 to 17% in 2017. The caesarean delivery rate is 23.8% in west Sumatra (23%).²

One of the effects of caesarean delivery is pain that is felt after surgery which interferes with patient comfort.³ Pain is a personal experience, subjective, different from one person to another and can also be different in the same person at different times.⁴ Pain can be defined as an unpleasant sensory and emotional experience resulting from actual or potential tissue damage. The pain felt by the mother after surgery usually interferes with the activities/comfort of the mother, therefore it is necessary to have maternal care that can relieve the pain that the mother feels. Pain management can be done by pharmacological and non-pharmacological (complementary). The pharmacology method is by administering analgesic drugs while complementary treatment can be done by giving relaxation therapy, acupuncture, guided imagery.⁵

Guided imagery is a multi-affective, non-pharmacological pain relief system that causes a fight or flight response to pain.⁴ Guided imagery is a cognitive behavioral relaxation technique in which the patient is guided to imagine something beautiful or a beautiful experience so as to give a feeling of being free mentally and physically from tension or stress that makes the individual have a sense of control over the pain he feels. This technique relies on the patient's imagination, the power of imagination is considered by some theorists to be the psychological effect of images that relieve pain by changing the cause of the pain point. Imagination has been shown to significantly relieve pain.⁴ Guided imagery is able to generate confidence and optimism, eliminate fear, tension, pain, increase endorphins, besides that this therapy does not require costs, is easy to do and does not cause side effects.⁶

The purpose of this study was to determine the relationship between the application of guided imagery therapy with the level of pain in post-SC maternity mothers during postnatal care at a maternity hospital in the city of Padang.

METHODS

This type of comparative analytic research. Cross sectional research approach with one group pretest and posttest design.⁷ The study population was all mothers who gave birth by sectionn caesarean at the maternity hospital in the city of Padang in 2020. The sample was taken using a purposive sampling technique, totaling 30 samples.

Inclusion criteria

Mothers who gave birth after SC 1 x 24 hours, were willing to be respondents, patients complained of pain.

Exclusion criteria

Patients uncooperative and unwilling to be a respondent.

The data collection technique used observation sheets and guided imagery SOPs.

Data analysis was carried out univariate and bivariate. Univariate analysis included respondent characteristics based on the frequency distribution of age and education, mean and standard deviation before and after being given guided imagery intervention. Bivariate analysis using marginal homogeneity test.

RESULTS

The results from Table 1 show the average age of the mother giving birth post caesarean section 30.33 ± 4.96 (age range 19-39 years). Most respondents (60.0%) had high school education and most respondents (73.3%) had multiparity parity.

Table 1: Characteristics of respondents.

Variables	Mean (SD)	N (%)
Age	30.33 (4.96)	-
<21 years old	-	1 (3.3)
21-35 years old	-	24 (80.0)
>35 years old	-	5 (16.7)
Education	-	-
SD	-	-
Junior high school	-	5 (16.7)
senior High School	-	18 (60.0)
College	-	7 (23.3)
Parity	-	-
Primipara	-	8 (26.7)
Multipara	-	22 (73.3)

The results of Table 2 show that before the intervention most of the respondents (46.7%) had moderate pain levels (4-6), after giving the intervention some respondents (43.3%) had mild pain levels.

Table 2: Distribution of respondents based on pain levels before and after intervention.

Pain level	Before intervention N (%)	After intervention N (%)	Difference N (%)
0 (no pain)	-	2 (6.7)	2 (6.7)
1-3 (mild- pain)	5 (16.7)	13 (43.3)	8 (26.66)
4-6 (moderate- pain)	14 (46.7)	12 (40)	2 (6.7)
7-9 (severe- pain)	11 (36.7)	3 (10)	8 (26.66)

The results of Table 3 show that most of the respondents (64.3%) experienced changes in pain levels before and after the intervention from moderate to low pain levels.

The marginal homogeneity test statistic test showed a probability value of 0.000 (p value <0.05), this indicates that there was a significant relationship between the

application of guided imagery therapy techniques to the level of pain in post caesarean section.

Table 3: The relationship between the application of guided imagery therapy techniques on the pain level of maternal maternity post caesarean section.

Pain level before therapy	Pain level after therapy				P value
	No pain N (%)	Low N (%)	Moderate N (%)	Severe N (%)	
Low	2 (40)	3 (60)	0 (0)	0 (0)	0.000
Moderate	0 (0)	9 (64.3)	5 (35.7)	0 (0)	
Severe	0 (0)	1 (9.1)	7 (63.6)	3 (27.3)	
Total	2 (6.7)	13 (43.3)	12 (40)	3 (10)	

DISCUSSION

The results showed that before the intervention, most of the respondents (46.7%) had moderate pain levels, after the intervention, some respondents (43.3%) had mild pain levels. Most of the respondents (64.3%) experienced a change in the level of pain before and after the intervention from moderate pain level to low pain level. Statistical test showed a significant relationship with a significance value of 0.000 (p value <0.05).

The natural pain experienced by post-section mothers is caused by incisions in the abdominal wall and abdominal wall. Caesarean section surgery causes tissue and cell damage which results in the release of substances that cause pain such as bradykinin, lactic acid and prostaglandins. These substances cause nociceptive impulses and lower the pain threshold, thereby sensitizing pain receptors. Surgery also causes nerve tissue to break, creating areas that are hypersensitive to pressure and norepinephrine, especially proximal to the injured area. Guided imagery is a multi-affective, non-pharmacological pain relief system that causes a fight or flight response to pain.⁴ Guided imagery invites respondents to imagine fun things and is invited to imagine.⁸ Positive imagination mechanism can weaken the psychoneuroimmunology that affects the stress response, this is related to the Gate Control theory which states that “only one impulse can travel up the spinal cord to the brain at a time” and if this is filled with other thoughts then the sensation of pain cannot be sent to the brain therefore the pain can be reduced.⁹ The procedure for taking research materials/data using SOPs and filling out observation sheets, which takes about ±5 minutes and is followed by guided imagery for 15-20 minutes.

The way guided imagery works on our bodies is by influencing the autonomic nervous system. Respondents are encouraged to breathe deeply, slowly the respondent's body will feel relaxed. Feeling relaxed will be transmitted to the hypothalamus to produce corticotropin releasing factor (CRF). Furthermore, CRF stimulates the pituitary gland to increase the production of Proopiod

melanocortin (POMC) which causes increased production of enkephalin by the adrenal medulla. The pituitary gland also produces endorphins neurotransmitters that are believed to affect the mood to relax.¹⁰

This study is in line with that conducted by Rompas, before the deep breathing relaxation technique and guided imagery were carried out, the respondent's pain scale was mostly on the moderate and severe pain scale, after the deep breathing relaxation technique and guided imagery were carried out, there was a change in the pain scale, changed into a light scale, with a p value of 0.000 (p value <0.05).¹¹ Research conducted by Prijatni et al the difference in pain in post caesarean section patients before and after guided imagery showed significant results with a p value of 0.000.¹²

CONCLUSION

There is a change in the level of pain before and after the intervention from moderate pain to low pain levels in postpartum mothers after caesarean section. There is a significant relationship between the provisions of guided imagery therapy on the intensity of pain in post-caesarean section in maternity hospitals in the city of Padang.

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