EFFECTIVENESS OF FINGER GRIP RELAXATION ON POST SECTIO CAESAREA PAIN: A LITERATURE REVIEW

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ABSTRACT

Sectio Caesarea is an act of opening the abdominal wall and uterine wall to give birth to the fetus. This process causes pain from the surgical incision. Finger grip relaxation therapy is an alternative to reduce post-Sectio Caesarea pain. The purpose of this literature study is to determine the effectiveness of finger-held relaxation therapy for pain in post-sectio caesarea patients. The literature study method uses a narrative review with a quantitative descriptive approach. Article searches used the Garuda, PubMed and ScienceDirect databases, with inclusion criteria: research published in 2018-2022, using Indonesian and English, original research, and full text available. Screening results based on keywords and inclusion criteria obtained nine articles for further analysis. Of the 9 articles analyzed, all stated that finger grip relaxation can reduce pain intensity in post-caesarean section patients. Finger grip relaxation is expected to be used as an alternative to reduce pain intensity in post-section caesaria patients.

Keywords : Pain; finger grip relaxation, sectio caesarea

INTRODUCTION

The birth process is a process of opening and thinning the cervix, when the birth process occurs, the fetus and amniotic fluid will be pushed through the birth canal naturally, but sometimes the delivery process does not go fluently where the fetus cannot be born, so a Caesarean section is needed (Dwijayanti et al., 2013). Pregnancy and childbirth are physiological processes, but pathological conditions or complications may arise from the time of pregnancy to the time of delivery. The most common complications during pregnancy and childbirth are bleeding, infection, eclampsia, and prolonged labor, all of which require health services from professional staff and maximum utilization of health resources. Many factors influence the occurrence of complications, namely: age, parity, education, antenatal care, facilities and amenities, socio-economic and birth attendants which can trigger an increase in maternal mortality rate (MMR) and infant mortality rate (IMR) (Wahyuni, R dan Rohani, 2019). A section is a required medical procedure for moms who are unable to give birth vaginally because of their own health issues or the state of the fetus. It also serves as a preventative measure against difficulties during the delivery process. A caesarean section is a surgical birthing technique in which the uterus and abdominal wall are opened, the vaginal wall is closed, or a hysterotomy is performed to remove the fetus from the womb. (Prawirohardjo, 2016).

According to RIKESDAS data for 2013 from 33 provinces in Indonesia, in the last five years, the number of sectio caesarea reached 22.8% of all deliveries. The risk factors for Sectio Caesarea in mothers during childbirth are 13.4%, premature rupture of membranes 5.49%, preeclampsia 5.14%, bleeding, 4.40%, closed birth canal, and uterine tears 2.3% (Suryawinata et al., 2019).

The impact felt by the mother after sectio caesarea includes post-surgical pain. Post-surgical pain causes physical and psychological reactions in postpartum mothers as impaired mobilization, lazy
activities, difficulty sleeping, no appetite, and unwillingness to care for the baby to control pain is needed so that the mother can adapt well to post-sectio caesarea pain (Laila et al., 2021). Delivery by sectio caesarea causes more or less intense pain (27.3%) compared to vaginal delivery (9%) (Utami, 2018). The action of Sectio Caesaria can cause pain and cause damage to tissue cells due to surgery. The use of anesthesia can reduce pain during surgery (Yuliana, 2019).

Both pharmaceutical and non-pharmacological methods are used in pain management. Since non-pharmacological therapy employs a physiological mechanism rather than a pharmacological one, it is safer to utilize for pain management because it does not have the same side effects as medication (Yuliana, 2019). The finger grasp method is one non-pharmacological way to lessen discomfort following a cesarean surgery. The finger grip relaxation technique is a basic method that helps with stress and emotion management. It involves breathing while holding each finger (Laila et al., 2021). The purpose of this literature review is to find out the effectiveness of finger grip relaxation techniques for pain in Post Caesarean Section mothers.

**METHOD**

The method of this literature study is a narrative review that aims to identify several studies that describe problems this is considered interesting. In the narrative review method, the repeater will study the problem but does not arrive at a comprehensive understanding of the state of knowledge related to the problem. The steps in this literature review were conducting a literature search, identifying keywords, reviewing abstracts and articles, and documenting findings (Demiris et al., 2019). The databases used are Garuda, PubMed, and ScienceDirect, with keywords: pain, finger grip relaxation, and sectio caesarea. Inclusion criteria in this literature review are articles relevant to the topic, and primary articles in the formed of experimental, or correlational, full text, using English and Indonesian and published maximum in the last ten years (2012-2021) and the exclusion criteria for research articles which are literature studies. The process of searching for articles can be seen in figure 1:

**Figur 1 Article search results**
RESULTS AND DISCUSSION

Results
After searching for articles through the selected database, the results were obtained from a total of 215 articles, than after the selection process was carried out on the articles the total number of articles selected was nine articles. The following details of the search results for the articles are presented in table form below
<table>
<thead>
<tr>
<th>Article Title, Author, and Year</th>
<th>Objective</th>
<th>Metode</th>
<th>Samples and sampling techniques</th>
<th>Intervensi</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Impact of Finger Grip Relaxation Technique on Pain Levels in Post-Section Caesarea Patients at Poso Regional General Hospital’s Obstetrics Department (Djala &amp; Tahulending, 2018)</td>
<td>To ascertain how finger grip relaxation techniques affect post-section patients' pain thresholds</td>
<td>Quasy Eksperimen</td>
<td>16</td>
<td>Finger grip relaxation technique therapy is carried out with a duration of 15 minutes, 10 minutes and repeated 3 times.</td>
<td>The level of pain changed both before and after the relaxing technique was used. After performing statistical tests with the Wilcoxon Signed Rank Test at a significance threshold of 95% (p = 0.05), finger grasping in the case group can be recognized.</td>
</tr>
<tr>
<td>Finger Hold Technique for Reducing Pain in Sectio Caesarea After Surgery, Days 1–7 (Utami, 2018)</td>
<td>Determine the impact of the Finger Hold Method on post-operative mother days 1 through 7 in minimizing sectio caesarean pain.</td>
<td>Quasy Eksperimen</td>
<td>A total of 38 post-sectional moms were split into two groups: the treatment group and the control group.</td>
<td>Give the intervention group a finger grip relaxation exercise, conduct a pre-test on both the intervention and control groups, and then have both groups complete a post-test.</td>
<td>post sectio caesarea mothers in the experimental group as many as 3 (15.79%) mothers experienced mild pain in the pretest, and 16 mothers (84.21%) experienced moderate pain. Once given treatment later done posttest, 15 mothers (78.95%) had no pain and 4 mothers (21.05%) experienced mild pain.</td>
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<tr>
<td>The Effect of Finger Relaxation Technique on Post-Operative Pain Level Reduction in Patients with Sectio Caesarea (Tyas, 2020)</td>
<td>To ascertain whether hand-held relaxation methods can help post-sectional cesarean patients in Pariaman Regional Hospital's obstetric care rooms reduce their pain in 2019.</td>
<td>a quasi-experimental study using a pretest-posttest methodology with two groups</td>
<td>20 post sectio mother treatments and 20 non-treatment</td>
<td>Hand-held relaxation techniques were given to the intervention group performed by the husband</td>
<td>There was a decrease in the level of pain in post-cesarean section mothers after holding finger relaxation and there was an effect of finger-hold relaxation on reducing pain levels in post-caesarean section (p-value 0.001).</td>
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<tr>
<td>The Impact of Finger Relaxation Methods in Mitigating Post-Operative Sectio Caesarea Pain (Yulyana et al., 2020)</td>
<td>observe the impact of a hand-held finger relaxation technique on the mother's pain following a cesarean section in the Orchid RSUD in Mukomuko, Bengkulu.</td>
<td>Two group pretest and posttest designs in a quasi-experimental design.</td>
<td>36 post sectio mother of 18 respondents in each group of intervention and comparison</td>
<td>Finger grip relaxation techniques were given to the intervention group</td>
<td>Prior to intervention, the intervention group's mean pain scale was 6.44. Following the intervention, the intervention group's mean pain score was 3.39. In the intervention group, there was a statistically significant difference in pain reduction from before and after the intervention.</td>
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<tr>
<td>The Impact of Finger Relaxation on Pain Scales in Mothers Who Have Undergone Sections (Yayutrisnawati et al., 2018)</td>
<td>In order to ascertain how much pain a post-section patient in the Baitunnisa 2 room of RSI Sultan Agung Semarang experiences after practicing finger-hand relaxation.</td>
<td>quasi-control experiments conducted before and after the test.</td>
<td>49 post sectio mother</td>
<td>Performed on postoperative laparotomy patients on the first day, by relaxing the fingers for 15 minutes and measuring the pain scale with the NRS (Numeric Rating Scale)</td>
<td>Prior to the intervention, the intervention group's mean pain scale was 6.44; following the intervention, it was 3.39. The analysis's findings after using the Wilcoxon statistical test revealed that, with a p value of 0.000 &lt; 0.05 and a Z value count of 6,260, the patients who felt the most pain before finger grip relaxation were those who suffered moderate pain (71.4%), while those who felt the most pain after finger grip relaxation were those who experienced mild pain (63.3%). In post-sectional mothers, there is a correlation between the pain scale and the relaxing of the finger grip.</td>
</tr>
<tr>
<td>Effectivines Finger Hands Relaxation Tecniques On Post Sectio Caesarea Pain at Ajibarang Hospital (Haniyah et al., 2020)</td>
<td>To determine the effectiveness of lavender aromatherapy techniques and finger grip relaxation techniques for pain in postoperative sectio patients Caesarean</td>
<td>Quasi eksperiment with pretest-posttest design</td>
<td>33 post mothers were divided into 2 groups, 11 respondents got relaxation</td>
<td>11 respondents as the control group.</td>
<td>Pain in post sectio caesaria mothers before finger holding relaxation intervention averaged 7.09 and after intervention an average of 5.63 and there was an effect of finger grip relaxation on decreasing post caesarean pain</td>
</tr>
</tbody>
</table>
Finger Hands Relaxation Technique By Husband Influence On Post Section Pain Caesarea
(Saputra et al., 2019)

To ascertain whether hand-held finger relaxation methods have any impact on the discomfort experienced during Sectio Caesarea (SC) surgery.

Quasi experiment with pretestposttest with control group 58 mothers post section caesarea, consisting of 29 people control group and 29 intervention groups

Finger grip relaxation technique was given to the intervention group by the husband

On control group average pain scale 5.00 with an SD of 0.76, in pain scale intervention group 5.59 with an SD of 0.56. Change in average pain scale after administration intervention I in the control group 4.47 with an SD of 0.67 and on intervention group 4.00. Change in average scale pain after being given intervention II on control group 4.12 with an SD of 0.79 and in the group intervention 3.38 with SD 0.75.

Difference in the average pain scale after giving intervention I to the group control 0.53 with SD 0.62 and in the intervention group 1.59 with SD 0.71. Average difference pain scale after giving intervention II in the control group 0.87 with an SD of 0.75 and in the group intervention 2.21 with SD 0.75. There is the influence of finger grip relaxation techniques done by the husband for pain in post op patients with Sectio Caesaria (p value 0.001).

Post pain reduction variation SC of 54%. The regression equation is

\[ \text{Decreased post SC pain} = 2.13 - 1.09 \text{finger grip intervention} + 0.46 \text{pain before intervention} \]

Providing technique finger grip relaxation performed by 2 husbands in post op SC patients
### The Effectiveness of Citronella Lemongrass (Cymbopogon Citratus) with Finger Holding Relaxation Techniques on Reducing Pain After Sectio Caesarea

(Putri et al., 2019)

| To assess the degree of discomfort experienced by postpartum moms using a hand-held relaxation technique and lemongrass aromatherapy (cymbopogon citratus) | Quality experiment with pre-test and post test non-equivalent control group design | 54 mothers post sectio caesaria were devided in to 3 group | Finger holding technique with a combination of lemongrass aromatherapy (cymbopogon citratus), lavender aromatherapy. | Results of the Wilcoxon test ranged from 3.17 to 2.11 for experimental group 1, 3.22 to 2.44 for experimental group 2, and 3.33 to 3.28 for the control group. Proceed with the Kruskal-Walsh test; a result of 16.22 with a p-value of 0.000 (p-value <0.05) was achieved. |

### The Effect of hand-held relaxation techniques on pain intensity in postcesarean section patients at Arifin Ahmad Hospital, Riau Province

(Laila et al., 2021)

| To ascertain how a portable relaxation technique affected the post-cesarean section patients' level of discomfort in the Arifin Achmad Hospital's Camar I Room in the Province of Riau. | Pre-experimental study used one group pretest-posttest design. | 20 mothers post sectio caesaria | Relaxation of finger grip after getting analgesic therapy | Prior to and following the finger grip relaxation exercise, there was a reduction in pain intensity (mean 6.05) and 1.5 after the session. The Wilcoxon test results indicated that finger grip relaxation had an impact on the degree of pain in moms following a section (p-value 0.001). |
Discussion
Childbirth is a process of opening and thinning of the cervix when labor occurs, the fetus and amniotic fluid will push into the birth canal naturally, but not all labor processes go smoothly, including the fetus cannot be born vaginally, so Sectio Caesar is required. Factors that cause cesarean section include: the mother has history of sectio caesarea, labor dystocia, obstruction of the birth canal, and abnormal presentation. Sectio Caesar is a labor process where delivery is not through the vagina but through an incision in the abdominal wall (Dwijayanti et al., 2013).
Sectio caesarea is a surgical procedure that can cause tissue damage and cause pain in the abdominal area. Operative pain is acute pain that has a rapid onset. Postoperative pain indicates damage or injury has occurred with mild to severe intensity. Treatment for pain management is pharmacological and non-pharmacological. Non-pharmacological pain management is safer because it does not cause side effects like drugs. However, non-pharmacological therapy uses physiological processes. Non-pharmacological pain management includes finger grips, hypnosis, acupressure, yoga, biological feedback (biofeedback), therapeutic touch, aromatherapy, use of herbs or steam, hot compresses, listening to music, and others (Sandy et al., 2015).
The finger grip technique is part of the Jin Shin Jyutsu technique, namely Japanese acupressure. Finger gripping is an art form that uses the simple touch of the hands and breathing to balance the energy in the body. Each finger has its relationship with everyday attitudes. All nine articles show that the finger grip technique's effectiveness reduces pain in post sectio caesarea patients. Of the nine articles, six only examined the effectiveness of finger grip relaxation techniques on reducing post-cesarean pain, two collaborated finger grip relaxation techniques with the husband's finger grip techniques, and one collaborated finger grip relaxation techniques with aromatherapy.
After relaxing the finger grips for 15 minutes, the pain scale was measured using the Numeric Rating Scale (NRS) and analyzed using the Wilcoxon statistical test, which showed that there was an effect of finger grip relaxation on the pain scale in post sectio caesarea mothers (Yayutrisnawati et al., 2018). Finger holding technique by holding fingers starting from the thumb to the other five fingers within 3 minutes of each finger, then asked to take a deep breath, exhale slowly and release it regularly, exhale slowly while releasing all feelings -negative feelings, problems that are bothering the mind and imagine the disturbing emotions coming out of the mind. The finger grip relaxation action is carried out 3 times a day or when pain is felt and to carry out Numeric Rating Scale measurements, namely before and after finger grip relaxation (Haniyah et al., 2020).
Relaxation techniques for mothers after cesarean section surgery can be done with the help of their husbands. The results of the study showed that there was a difference between the usual finger grip technique and the finger grip technique assisted by the husband, there was a decrease in pain intensity from a value of 4.1 to 3.4 (Saputra et al., 2019). Husbands can play a role in implementing finger-held relaxation. Relaxation of the finger grip which was carried out simultaneously with the administration of citronella aromatherapy (Cymbopogon nardus) was effective in reducing the level of pain in post-section caesarea mothers with a p-value of 0.001 (Putri et al., 2019). Lemongrass leaves are useful for controlling emotions and the body, and relaxation of the fingers will produce impulses that are sent through the afferent nerve fibers which result in the gate closing so that the pain stimulus is inhibited and reduced. Impulses in the form of touch, pressure, and finger grip on the palm will stimulate substantial gelatinosa inhibitory neurons inhibiting transmitter cells from transmitting pain impulses to the brain (closing the gate). This process causes the activity of nerves (A and C) which are small and unmyelinated (carrying post sectio caesarea pain impulses) unable to transmit pain impulses to the brain. If no pain information is conveyed through the ascending nerves to the brain, then no pain is felt (Laila et al., 2021).

Holding your fingers while taking deep breaths can reduce or heal physical or emotional tension, warm the points of entry and exit of energy on the meridians (energy pathways in the body) located on the fingers so that they can have a spontaneous, stimulating effect when done grip, the stimulus will flow to the brain, proceed to the nerves of the body organs that are experiencing interference, so it is hoped that the blockage in the energy pathway will run smoothly and the pain will decrease. (Ucik Indrawati, 2020).
CONCLUSION AND RECOMMENDATION

Of the nine articles analyzed, all stated that holding finger relaxation could reduce the pain scale in post-section cesarean mothers. It is hoped this finger-hold relaxation can be used as an alternative to reduce looking for post-section cesarean mothers.

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