

*Review article*

Finger Grip Relaxation Technique to Reduce Pain Scale in Post *Appendectomy* Surgery Patients: *Literature Review*

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Abstract

Introduction: Appendectomy is an abdominal opening performed to remove the inflamed appendix. Post-appendectomy surgery will cause pain. Finger grip relaxation is one of the non-pharmacological methods that can reduce pain. This study conducted to determine how the finger grip relaxation technique affects the level of pain experienced by clients after appendectomy surgery.

Method: Selected articles from the literature are reviewed and used in this study.

Results: The use of finger grip relaxation techniques has been shown to be effective in reducing pain in post-appendectomy patients.

Conclusion: The finger grip relaxation technique can help reduce pain intensity in patients who have undergone appendicitis surgery. Therefore, this technique can reduce physical and emotional tension, and the reflex points on the hands allow the body to feel relaxed.

Keywords: Appendectomy; Relaxation of finger grasping; Pain

Received April 17, 2025; Received in revised form May 29, 2025; Accepted September 19, 2025; Available online October 25, 2025

INTRODUCTION

Appendicitis is an inflammation that occurs in the intestines or what is called an appendectomy. The appendix is a small, thin, pouch-shaped organ, measuring 5 to 10 cm long, which is connected to the large intestine (Meilicha and Syahfitri, 2020) . An appendectomy is an invasive procedure performed by opening the lining of the abdominal wall and cutting the inflamed appendix to treat appendicitis problems (Nurani and Khomsah, 2023) .

World Health Organization (WHO) data states that the incidence of appendicitis in 2014 was the eighth cause of death worldwide, and it is estimated that in 2020 it will be the fifth cause of death worldwide. The incidence of appendicitis in Asia and Africa in 2014 was 4.8% and 2.6% of the total population, respectively. In Indonesia, appendicitis occurs in around 7% of the total population, around 179,000 people (Safariah, 2022) .

According to data from the Indonesian Ministry of Health in 2018, the number of appendicitis operations in Indonesia reached 591,819 people and increased to 596,132 people in 2019. The number of appendicitis operations in Indonesia according to data released by the Indonesian Ministry of Health in 2019 was 596,132 people and increased in 2020 to 621,435 people. Cases of appendicitis in Central Java in 2018, the number of cases obtained was 5,980 cases and 177 of them caused the most deaths according to Arifuddin et al., 2017 in (Lulu Nabillah Pratiwi and Ika Silvitasari, 2023) .

Postoperative Appendicitis will cause pain. Inadequate pain management has a dangerous effect, in addition to disturbing discomfort, pain that does not subside can affect the pulmonary, cardiovascular, gastrointestinal, endocrine, and immunological systems. In conditions like this, sometimes the patient's stress response to trauma can increase (Hanani and Rahmawati, 2021) .

Pain management is one of the methods used in the health sector to overcome pain, including through relaxation. According to Smeltzer, Brenda, & Bare, 2013, relaxation is a non-pharmacological pain management action that includes diaphragmatic breathing exercises, progressive relaxation techniques, guided imagery, and meditation. Another form of relaxation that has never been presented is finger-

holding relaxation. Finger-holding relaxation is a very simple and easy relaxation technique for anyone to do that is related to the fingers and the flow of energy in our bodies (Hanani and Rahmawati, 2021) .

Several studies have shown the success of finger grip relaxation therapy interventions to reduce pain levels in patients suffering from various disorders, one of which is post-operative patients. Research by Tarwiyah et al., (2022) found that finger grip relaxation has the ability to reduce pain after surgery with a p-value of less than 0.05. In addition, the findings of Rasyid et al. (2019) who examined the effect of finger grip relaxation on reducing pain after appendectomy. The results showed that nine respondents (25.0%) experienced moderate and severe pain controlled before the application of finger grip relaxation. A total of 11 respondents (30.6%) said that they experienced mild pain after receiving finger grip relaxation (Retnaningrum and Rivani, 2024) .

Based on the explanation that has been put forward above, the author is very interested in reviewing several related articles about finger grip relaxation techniques in post-appendectomy patients with this non-pharmacological technique as one way to reduce the scale of pain after surgery.

METHOD

The method used in writing a *literature review* begins with selecting a topic, then determining *keywords* for searching journals using Indonesian, namely collecting and analyzing the best research articles on the application of finger grip relaxation through a data approach (*data base*). *Google Scholar* 11 Indonesian journals and 2 English journals were selected based on inclusion criteria. The inclusion criteria in this *literature review* are finger grip relaxation techniques to reduce pain scale in post-appendectomy patients. The search for this article is limited to the year from 2019 to 2024 but the latest publication is recommended. Data analysis was carried out by discussing and summarizing *the literature* then comparing several *literatures* and then presented in the discussion. The keywords used are " Appendectomy; finger grip relaxation; pain" . The criteria in *the literature review* are Finger grip relaxation techniques to reduce pain scale in post-appendectomy patients.

Table 1. Literature Search Strategy

Search Engine	Google Scholar
Search Results	219 Journals
Full Text 2019-2024	18 Journal
Eligible according to the inclusion and exclusion criteria	11 Journals
Results	11 Journals

RESULTS

The finger grip relaxation technique is one of the nursing care, namely in this case the nurse teaches the patient how to use the finger grip technique to reduce the pain scale in post-appendectomy patients and can also relax the body and improve emotional aspects (Siti Nurlestari and Ruran, 2022) .

Based on the author's interest in *reviewing* with the title of finger grip relaxation technique to reduce pain scale in post-appendectomy patients. Based on the results of journal research through *the Online Data Base* , there are several articles that have met the requirements or met the Inclusion and Exclusion criteria, then from the article a systematic article review was carried out. The extracted data can be seen in Table 2.

Table 2. Extraction Results

No	Author And Year	Title	Research Methods	Results
1	(Mohamed Elghareeb Allam et al., 2023)	Impact of the Finger Handheld Relaxation Technique on Pain Intensity and Stress among Post Appendectomy Patients	Quasi-experimental & control group	The current study revealed that after the application of finger grip relaxation technique, the pain intensity was reduced which ranged from none (0) to unbearable pain in the study compared to (15%) in the control group and (25%) experiencing severe pain in the study.
2	(Selia et al., 2023)	Application Of Finger Grip Relaxation Technique on Pain Scale in Post Appendectomy Surgery Patients in the Surgery Room of General Ahmad Yani General Hospital,	Descriptive	The application proved that the pain scale in subject I (Ms. K) before the application of finger grip was 5 (five) and the pain scale after finger grip was applied for 3 days decreased to 1 (mild pain scale).

Metro				
3	(Sulistiawan et al., 2022)	Effectiveness Of Finger Grip Therapy on Pain Intensity in Post Appendectomy Surgery Patients	Quantitative	There is a significant influence between the provision of finger grip therapy on the intensity of pain in post-appendectomy patients, where the group given finger grip intervention was better at reducing pain levels than the group not given finger grip therapy.
4	(Ahmad Safaruddin and Kardi, 2022)	The Effect of Finger Grasp Relaxation Technique on Pain Levels of Post-Appendectomy Patients in the Melati Room of Kendari City Hospital in 2020	Practical	The results of this study are that the intensity of pain before the finger grip relaxation technique intervention, most respondents experienced moderate pain, as many as 21 respondents (65.6%) and after the finger grip relaxation technique intervention, most respondents experienced moderate pain, as many as 19 respondents (59.4%). Meanwhile, the results of the paired t-test obtained a p-value of 0.000.
5	(AZ et al., 2022)	Finger Hands Relaxation Technique Against Pain Scale of Post-Operative Patients	Quasi Experiment	Based on the results of research on post-operative patient pain scale shows the scale pain before the intervention was given a mean value of 5.50. The pain scale after When finger grip relaxation was performed, an average value of 4.00 was obtained. This means that there is an influence of the pain scale before and after finger grip relaxation was performed on the pain scale. post-operative patients.
6	(Yaumi, 2021)	Application of Finger Grasp Therapy on Pain Scale in Post Appendectomy Surgery Patients at PKU Muhammadiyah Karanganyar Hospital	Descriptive	Obtained from the observation results before the finger grip therapy using the NRS instrument, Mrs. S was 6 (Moderate Pain) and after the finger grip therapy the pain scale became 3.
7	(Hasaini, 2020)	Effectiveness of Finger Grasp Relaxation on Reducing Pain in Post-Appendectomy Patients in the Operating Room (Al-Muizz) of Ratu Zalecha Martapura Hospital in 2019	Experimental	The level of pain before the finger grip relaxation was given was categorized as moderate pain, and after it was given it was categorized as mild pain.
8	(Wati and Ernawati, 2020)	Reducing the Pain Scale of Post-Op Appendectomy Patients Using the Technique Finger Grip Relaxation	Descriptive	Results obtained research shows a decrease pain scale before and after intervention providing relaxation techniques finger grip. The pain scale of both study subjects cases can be seen by identification pain. Both case study subjects experienced decline after intervention with the difference in the decrease is a pain scale of 1 from the first day to the third day after intervention delivery. Case study subjects first on day 1 of therapy The patient said the pain scale was 4, but After 3 days the case study subject experienced pain reduction with pain scale 2. The subject of the second case study on day 1 giving therapy said the pain scale was 5, but after 3 days the subject of the case study both experienced a decrease in pain with pain scale 3.
9	(Norma et al., 2020)	The Effect of Finger Grip Relaxation Technique On Pain Scale Reduction in Post-Operative Clients Appendicitis	Quasi Experiment (pseud experiment)	Based on the results of data analysis using relaxation techniques clasped fingers show that there is an influence of pain intensity between before the technique is carried out finger grip relaxation and after hand-held relaxation technique is performed fingers. The results of the post-test showed there is a decrease in pain intensity after performing relaxation techniques hold fingers.

10	(Aswad, 2020)	Finger Hold Relaxation for Reduction of Post-Operative Patient Appendectomy	Quasy experiment	These results prove that the Finger Hold relaxation technique is needed to reduce the pain felt by post-appendectomy patients.
11	(Dikson et al., 2019)	The Effect of Finger Grasp Relaxation Technique on Changes Pain Scale in Post Appendectomy Patients in the Dahlia Room, Rsud Dr. Tc Hillers Maumere	Quantitative	Wilcoxon Analysis Test Results Pain Scale before and after relaxation procedures grasp the finger obtained that there is an effect of finger grip relaxation technique to changes in pain scale in patients post op appendectomy in the dahlia room of RSUD. Based on the research results in the table from 20 respondents can be seen that Most of the respondents experienced mild pain after the technique is performed finger grip relaxation, namely 12 respondents (60%).

DISCUSSION

Some actions that can be carried out by nurses to help post-operative clients are by using pain management to eliminate or reduce the scale of pain and increase comfort. Techniques that can be done in pain management to reduce pain, one of which is by applying the finger grip relaxation technique to reduce the scale of pain in post-appendectomy surgery.

Research on finger hold relaxation techniques was conducted to reduce pain intensity after surgery. The finger hold technique is also called *finger hold*. The finger hold technique, which is easy to use by anyone who is in contact with the fingers, includes breathing relaxation in a relatively short time. The decrease in pain levels is because the finger hold relaxation technique is one of the relaxation techniques that uses fingers that makes respondents experience a decrease in pain after being carried out, because this technique provides an action to free the mind and body from stress tension so that it can increase tolerance to pain (Hasaini, 2020).

Holding fingers while regulating breathing (relaxation) for approximately 3-5 minutes can reduce physical and emotional tension, because holding fingers will warm the points of exit and entry of energy meridians (emergency channels) located on our fingers. Reflexology points on the hands will provide reflex (spontaneous) stimulation when gripped. This stimulation will flow electrical waves to the brain which will be received and processed quickly, then forwarded to the nerves in the organs of the body that are experiencing disorders, so that blockages in the energy pathways become smooth.

Research conducted by (Selia et al., 2023) on post-appendectomy patients in the Surgery Room of General Ahmad Yani Metro Hospital showed that the implementation of finger grip relaxation techniques had an effect on reducing post-appendectomy incision pain.

The author's view based on research from the 11 journals above agrees that the finger grip relaxation technique can reduce pain intensity. The finger grip relaxation technique is easy to use by anyone with the flow of body energy and fingers. Finger grip relaxation can control and restore emotions allowing the body to relax. The finger grip relaxation technique is done repeatedly when the patient feels pain. This is because the finger-holding relaxation technique is a very simple and easy technique to do by anyone, which is related to the fingers and the flow of energy in our bodies. Holding fingers while taking a deep breath (relaxation) can reduce and heal physical and emotional tension (Aswad, 2020)

CONCLUSION

Based on the journal that has been reviewed above, it can be concluded that the finger grip relaxation technique can help reduce pain intensity in patients who have undergone appendicitis surgery. Therefore this technique can reduce physical and emotional tension, and the reflex points on the hands allow the body to feel relaxed.

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