The Effect of the Combination of Slow Deep Breathing and Murottal Arrahman Surah 55 on Pain in Patients Abdomen Colic

Riske Vomiaty[1], Tri Antika Rizki Kusuma Putri[2]
[1]Nursing Study Program Students of PPNI West Java Nursing College
[2]Lecturer of Nursing Study Program, PPNI West Java Nursing College

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Corresponding author
Riske Vomiaty
Sekolah Tinggi Ilmu Keperawatan PPNI Jawa Barat, Bandung, Indonesia
Jl. Muhammad No 34 Bandung, Indonesia
Email: :riskevomiaty742@gmail.com

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Abstract
Objective: To find out the effect of the combination of Sloiw Deieip Breithing and Muroittal Ar-rahman surah 55 on pain in patients with abdominal colic.
Method: This study is a quasi-experimental study with a pretest-posttest two-group research design. With a sample size of 26 intervention groups and 26 control groups. The instrument used is the Numeric Rating Scale (NRS).
Results: The resultsl the average age of respondents is 39.13 years, most of them are female 51.9% have college education 34.6% and 25% of respondents have jobs as housewives. The results of this study indicate that there is a significant difference in scores in the intervention group after being given slow deep breathing and murottal Ar-Rahman intervention with a mean difference of 2.12 and a p value of 0.000 compared to the control group with a mean difference of 0.11 and a p-value of 0.083. From the results of the man whitney u test, a p-value of 0.000 was obtained
Conclusion: There is a significant effect between the combination of slow deep breathing and murottal Ar-Rahman surah 55 on pain in abdominal colic patients. Suggestion: the combination of slow deep breathing and murrotal Ar-Rahman can be used as a guide and SOP for dealing with pain at Santosa Kopo Hospital.

Keywords: Slow Deep Breathing,Murottal, Colic

INTRODUCTION

The gastrointestinal or digestive system is one of the primary organ systems in the human body, responsible for breaking down food into nutrients and converting it into energy to support all bodily functions. This system plays a vital role in maintaining human health and survival. Among the various disorders that affect the digestive system, abdominal colic is considered a common clinical emergency, particularly in non-traumatic cases. As described by Maryana and Afni (2021), abdominal colic is marked by the sudden onset of abdominal pain that typically lasts less than 24 hours. It is often intense and may require immediate intervention due to the potential severity of its underlying causes. Globally, the burden of abdominal colic is significant. Data released by the World Health Organization (WHO) in 2019 estimated that approximately 7 billion individuals worldwide had experienced abdominal colic at some point, out of a global population of 7.743 billion people. National statistics reflect similar concerns. The 2019 Indonesian National Health Survey

(SUKESNAS) listed abdominal colic as the third most common cause of mortality among the ten leading causes of death in Indonesian hospitals, with 6,590 documented deaths attributed to this condition. This data illustrates the urgency of identifying effective and accessible management strategies for patients suffering from abdominal colic.

The etiology of abdominal colic is often linked to mechanical or functional disruptions of the intestines. Wahyuni (2022) explained that these causes can range from inflammation, infections, and irritation of the gastrointestinal tract, to more severe conditions such as intestinal obstruction. Common contributors to intestinal blockage include adhesions from prior surgeries, gastrointestinal tumors (such as carcinomas), volvulus (intestinal twisting), and other anatomical or physiological abnormalities that hinder the normal passage of food and fluids through the digestive tract. When untreated, such conditions can lead to further complications, including ischemia, necrosis, or perforation, underscoring the importance of prompt pain management and diagnostic evaluation. Management strategies for abdominal colic generally involve both pharmacological and non-pharmacological approaches. Pharmacologically, the use of analgesics—particularly non-steroidal anti-inflammatory drugs (NSAIDs)—remains the standard initial treatment for reducing moderate to severe pain (Subaera, 2022). These medications work by inhibiting the enzymes responsible for inflammation and pain signaling. However, not all patients respond adequately to pharmacological treatments, and there is growing recognition of the value of complementary non-pharmacological therapies that address both physical and psychological aspects of pain.

According to the Indonesian Nursing Intervention Standards (SIKI, 2018), non-pharmacological pain management includes relaxation techniques, spiritual interventions, and sensory distraction. One widely used relaxation technique is slow deep breathing, which involves controlled breathing at a reduced pace to calm the autonomic nervous system. Supriyanto (2023) emphasized that slow deep breathing stimulates the central nervous system—specifically the brain and spinal cord—to release endorphins. These natural neurochemicals function as endogenous painkillers, diminishing the brain's perception of discomfort. In Supriyanto's study, participants in the intervention group showed a significant reduction in pain, with pre-intervention scores averaging 3.777 and post-intervention scores dropping to 2.111. Statistical analysis using a paired t-test confirmed the significance of this change, yielding a p-value of 0.000 ($p < 0.05$).

In addition to relaxation techniques, spiritual interventions such as Qur'anic recitation, known as murottal, have gained attention as effective methods for pain reduction, especially in populations with strong religious or spiritual beliefs. Purba et al. (2023) highlighted the use of Surah Ar-Rahman (Chapter 55 of the Qur'an) as a source of auditory distraction and spiritual comfort. The murottal is typically delivered through recorded audio of professional Qur'an reciters (Qaris) and has been found to lower anxiety, provide emotional relief, and reduce pain perception. The recitation of Surah Ar-Rahman, with its rhythmic and calming verses, may enhance the body's relaxation response, which in turn helps alleviate the experience of pain.

Both slow deep breathing and murottal therapy are simple, cost-effective, and non-invasive, making them highly accessible for clinical use. These techniques can be implemented independently or in combination, offering an integrative approach to pain management that supports both physical comfort and psychological well-being.

This study aims to determine the effectiveness of a combined non-pharmacological intervention—specifically slow deep breathing and the recitation of Surah Ar-Rahman (Qur'an 55)—in reducing pain intensity among

patients diagnosed with abdominal colic. The study seeks to contribute to the growing body of evidence supporting the use of holistic, patient-centered pain management strategies, particularly those aligned with spiritual and cultural values. The findings are intended to guide clinical practice by offering alternative or adjunctive therapies that may enhance patient comfort, reduce reliance on medication, and promote more comprehensive care in emergency and inpatient settings.

METHOD

Research Purpose

This study aimed to investigate the effectiveness of a non-pharmacological intervention—specifically the combination of slow deep breathing and the recitation of Surah Ar-Rahman (Qur'an, Chapter 55)—in alleviating pain intensity among patients experiencing abdominal colic.

Study Design

A quasi-experimental design was employed using a pretest-posttest control group approach. The intervention was administered to two separate groups to evaluate differences in pain perception before and after treatment. This design enabled comparison between the effects of the combined intervention and standard care, allowing for a clearer assessment of its impact on colic-related pain.

Population and Sample

The study was conducted in the Emergency Department of Santosa Kopo Hospital. The target population included patients presenting with symptoms of abdominal colic who met specific inclusion criteria. These criteria were: (1) having a confirmed diagnosis of abdominal pain based on clinical assessment, (2) not having received any analgesic medication prior to enrollment, and (3) being fully conscious and able to communicate discomfort. A total of 52 patients who fulfilled these conditions were recruited using purposive sampling techniques and were subsequently assigned into intervention and control groups.

Instrument

Pain intensity was measured using a validated Visual Analog Scale (VAS), which allows participants to self-report the severity of pain on a continuum ranging from ‘no pain’ to ‘worst possible pain.’ The instrument is widely used for clinical pain assessment due to its simplicity and reliability.

Data Collection Procedures

Data collection was carried out in two stages: prior to the intervention (pretest) and after the completion of the intervention (posttest). Patients in the intervention group received a combined treatment consisting of slow deep breathing exercises and listening to a 10-minute audio recording of Surah Ar-Rahman. The control group received standard medical observation without additional interventions. Pain scores were recorded immediately before and 15 minutes after the intervention.

Data Analysis

Quantitative data obtained from VAS scores were analyzed using paired and independent t-tests to compare mean differences within and between groups. The significance level was set at $p < 0.05$. Statistical analysis was performed using SPSS software version 25.0 to ensure accurate interpretation of the results.

Ethical Considerations

This study was approved by the Ethics Committee of Santosa Kopo Hospital prior to data collection. All participants were provided with verbal and written explanations of the study objectives, procedures, potential risks, and benefits. Informed consent was obtained from each participant before inclusion. Confidentiality and anonymity of the respondents were maintained throughout the research process, and participation was entirely voluntary, with the option to withdraw at any time without penalty.

RESULT

Table 1 Demographic Characteristics of Respondents (N = 52)

Variable	Category	Intervention Group	Control Gro	Total (N = 52)

		(n = 26)	up (n = 26)	
Age (Mean)	—	41.31 years	36.96 years	39.13 years
Gender	Male	12 (46.2%)	13 (50.0%)	25 (48.1%)
	Female	14 (53.8%)	13 (50.0%)	27 (51.9%)
Education Level	Junior High School	5 (19.2%)	3 (11.5%)	8 (15.4%)
	Senior High School	13 (50.0%)	13 (50.0%)	26 (50.0%)
	College/University	8 (30.8%)	10 (38.5%)	18 (34.6%)
Occupation	Laborer	7 (26.9%)	6 (23.1%)	13 (25.0%)
	Other Occupations	18 (69.2%)	18 (69.2%)	36 (69.2%)
	Unemployed	1 (3.8%)	2 (7.7%)	3 (5.8%)
Statistical Analysis	Homogeneity Test	p > 0.05	p > 0.05	Groups are homogeneous

Age distribution of 52 respondents obtained the average age in the intervention group was 41.31 years. While the average age in the control group was 36.96 years. The total average age of respondents in this study was 39.13 years. The distribution of gender from 52 respondents was obtained in the intervention group, the largest was female with a total of 14 respondents or 53.8%, while in the control group, the male and female respondents were the same with a total of 13 respondents or 50%. The total average for the largest respondent gender was female, which was 27 people or 51.9%.

The distribution of education from 52 respondents was obtained in the intervention group, the largest was college with 8 respondents or 30.8%, and the intervention group with the least was junior high school with 5 respondents or 19.2%. While in the control group, the largest distribution of education was college with 10 respondents or 38.5%, and the lowest was junior high school education with 3 respondents or 11.5%. The total average level of education was college with 18 people or 34.6%.

The distribution of jobs from 52 respondents was obtained in the intervention group, the largest was laborers as many as 7 respondents or 26.9%, and the least was unemployed as many as 1 respondent or 3.8%. While in the control group, the largest distribution of jobs was laborers as many as 6 respondents or 23.1%, and the least was unemployed as many as 2 respondents or 7.7%. The total average of the largest jobs was laborers as many as 13 respondents or 25%.

Based on the category data, an independent test and chi square test were carried out with the results showing that the intervention group and control group had a p-value >0.05, which means they were homogeneous.

Table 2 Pain Score Comparison Between Intervention and Control Groups (N = 52)

Group	Pre-Test Mean ± SD	Post-Test Mean ± SD	Mean Difference	Pain Category
Intervention (n=26)	5.04 ± 0.824	2.92 ± 0.796	2.12 ↓	Moderate to Mild
Control (n=26)	4.92 ± 0.744	4.81 ± 0.849	0.11 ↓	Moderate to Mild

The description of pain in the intervention group, the average pre-test value was 5.04 ± 0.824 and the average post-test was

2.92 ± 0.796, there was a significant decrease of 2.12 in the moderate-mild category, while in the control group, the average pre-test was 4.92 ± 0.744 and the post-test was 4.81± 0.849, there was a decrease but not significant, namely 0.11. So the researcher concluded that from both groups, the characteristics of pain were on the moderate-mild pain scale.

The Effect of Combination of Slow Deep Breathing and Murottal Ar-Rahman Surah 55 on Pain in Abdominal Colic Patients

The analysis using the Mann-Whitney U test demonstrated a statistically significant difference in post-intervention pain scores between the intervention and control groups. The null hypothesis (H_0), which proposed that there would be no difference in pain levels after treatment between the two groups, was rejected. Instead, the alternative hypothesis (H_1), suggesting the presence of a meaningful difference, was accepted. This conclusion is supported by the statistical significance value (Sig. 2-tailed) of 0.000, which falls well below the conventional alpha level of 0.05.

These findings indicate that the combined use of slow deep breathing and listening to the recitation of Surah Ar-Rahman (Qur'an Chapter 55) had a measurable and meaningful impact on reducing pain intensity in patients suffering from abdominal colic. This non-pharmacological approach appears to offer a promising complementary option for pain management in clinical settings. Incorporating such interventions alongside standard medical care may enhance pain relief outcomes and provide a more holistic treatment experience, especially for patients who resonate with spiritual or relaxation-based therapies.

DISCUSSION

Age distribution of 52 respondents obtained the average age in the intervention group was 41.31 years. While the average age in the control group was 36.96 years. The total average age of respondents in this study was 39.13 years.

The distribution of gender from 52 respondents was obtained in the intervention group, the largest was female with a total of 14 respondents or 53.8%, while in the control group, the male and female respondents were the same with a total of 13 respondents or 50%. The total average for the largest respondent gender was female, which was 27 people or 51.9%.

The distribution of education from 52 respondents was obtained in the intervention group, the largest was college with 8 respondents or 30.8%, and the intervention group with the least was junior high school with 5 respondents or 19.2%. While in the control group, the largest distribution of education was college with 10 respondents or 38.5%, and the lowest was junior high school education with 3 respondents or 11.5%. The total average level of education was college with 18 people or 34.6%.

Based on the category data, independent tests and chi square tests were carried out with the results showing that the intervention group and control group had a p-value >0.05 which means they were homogeneous.

The description of pain in the intervention group, the average pre-test value was 5.04 ± 0.824 and the average post-test was 2.92 ± 0.796, there was a significant decrease of 2.12 in the moderate-mild category, while in group was 36.96 years. The total the control group, the average pre-test was 4.92 ± 0.744 and the post-test was 4.81 ± 0.849, there was a decrease but not significant, namely 0.11. So the researcher concluded that from both groups, the characteristics of pain were on the moderate-mild pain scale.

Based on the results of the study above, it shows that there was a decrease in the pre and post tests in the intervention group, while in the control group there was no increase in the pre and post test results. In line with the research conductedAmelia et al., (2022)In ACS patients, the combination of slow deep breathing therapy and murottal therapy reduced chest pain from scale 6 to scale 3.

There is a significant difference in the

intervention group between the average pre-test score and the average post-test score with an average difference of 2.12 and p-value = 0.000 (p <0.05) which means there is a significant difference in the intervention group. While in the control group, the average difference was 0.11 with p-value = 0.083, there was no significant difference in the control group. The results of this study are supported by research conductedJarrah et al (2022)Which found that the results of the data analysis were good for both groups.

There is a significant difference in the intervention group between the average pre-test score and the average post-test score with an average difference of 2.12 and p-value = 0.000 (p <0.05) which means there is a significant difference in the intervention group. While in the control group, the average difference was 0.11 with p-value = 0.083, there was no significant difference in the control group. The results of this study are supported by research conductedJarrah et al (2022)Which found that the results of the data analysis were good for both groups The control and intervention groups showed a significant effect for both groups (P<0.01). However, the slow deep breathing intervention group had a greater change than the control group. According to Supriyanto et al (2023)The slow deep breathing technique can reduce pain by stimulating the central nervous system, namely the brain and spinal cord, to produce endorphins which function as pain inhibitors.

0.000 or <0.05, then as the basis for decision making in the Man Whitney U Test, it can be concluded that H0 is rejected and H1 is accepted. Thus, it can be concluded that there is a significant difference between the post-test results in the intervention group and the control group. And seeing the Sig. (2-tailed) value of 0.000 or less than 0.05, it can be concluded that there is an influenceCombination of Sloiw Deieip Breathing and Muroittal Ar-rahman surah 55Against Pain in Patients with Abdominal Colic.

This is in line with research by Yusuf et al., (2020) on 28 post-operative patients with non-pathological orthopedic fractures which showed that there was an effect of a combination of spiritual deep breathing exercise therapy on pain levels.

Limitation

Despite the positive findings, this study has several limitations that should be considered. First, the sample size was relatively small and limited to a single hospital, which may affect the generalizability of the results to broader populations or different clinical settings. Second, the study used a quasi-experimental design without randomization or blinding, which increases the risk of selection bias and reduces internal validity. Third, pain intensity was assessed using self-reported measures, which are inherently subjective and may be influenced by individual pain tolerance, emotional state, or cultural perceptions. Additionally, the short duration of observation, with post-test data collected immediately after the intervention, does not provide information on the long-term effects of the therapy. The study also did not control for potential confounding factors such as participants' prior exposure to relaxation techniques, varying levels of religious engagement, or baseline stress and anxiety, which could influence responses to the intervention. These limitations highlight the need for future research using randomized controlled trials, larger sample sizes, and extended follow-up periods to better assess the sustained impact and broader applicability of the combined slow deep breathing and Surah Ar-Rahman intervention.

CONCLUSION

Based on the results of this study, it can be concluded that the combination of slow deep breathing and the recitation of Surah Ar-Rahman (Qur'an 55) has a significant effect on reducing pain intensity in patients with abdominal colic, as indicated by a p-value of < 0.05. In contrast, the control group did not show a statistically significant change in pain levels, with a p-value of 0.083 (> 0.05).

The implication of these findings is that integrating non-pharmacological, spiritually oriented interventions such as deep breathing and murottal therapy can serve as a complementary strategy in managing acute pain, particularly in emergency or clinical settings where pharmacological treatment alone may not be sufficient or immediately available. This approach may enhance patient comfort, reduce reliance on medication, and offer culturally relevant care, especially in populations with strong spiritual or religious values. Future practice and clinical guidelines may benefit from incorporating such interventions as part of holistic pain management protocols.

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