

## *The Voice of the Qur'an's Potential in Pain Management : A Review Study*

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**Abstract:** Pain is multidimensional. Pharmacological therapy is still not optimal and has unwanted side effects. Therefore, a safe, effective, and comprehensive non-pharmacological therapy is needed to compensate for the lack of pharmacological therapy. Listening to the recitation of the Quran in several studies has been shown to have a relaxing effect in various situations. The study aims to see whether listening to the Quran as a type of non-pharmacological therapy will help people overcome pain. Method used is comprehensive search on multiple databases (Clinical Key, Cochrane Lab, Medline, Host EBSCO, ProQuest, Science Direct, and Springer Link) using the term "Quran, Holy Quran, Koran, Quran, Pain, Pain Management, and endorphins.". There were 209 articles found, and after several screening stages, 9 articles met the inclusion and exclusion criteria. The level of evidence and the Cochrane Collaboration's tool for assessing the risk of bias was used to assess the article's quality. The result is listening to The Qur'an has been shown to reduce pain in post-surgery, blood sampling, wound care, dysmenorrhea, and childbirth. Some studies are still lacking evidence and are biased. Listening to the Quran is highly recommended for use as a health service.

**Keywords:** Pain, Pain Management, Quran, Spirituality.

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### INTRODUCTION

Pain is a common health issue that many people experience worldwide. According to the National Centre for Health Statistics (NCHS), 20.4 percent of adults in the United States suffer from chronic pain (Wachholtz et al., 2007). According to a survey done in 16 European countries, 19% of the population suffers from moderate to severe chronic pain (Julianto & Etsem, 2011). Meanwhile, 7.1 percent (Malaysia) to 61 percent (Cambodia and Northern Iraq) of Asians are in pain (Ghiasi & Keramat, 2018).

Successful pain management affects many aspects of a person's life. Pain has an impact on daily activities, including work, resulting in lower productivity and income and job loss. It is why the expense of managing pain is higher than the expense of treating heart disease or cancer. The cost of pain management in the United States is estimated to be between \$ 560 and \$635 billion per year (Shekah et al., 2013).

Acute pain, like chronic pain, requires immediate attention. Failure to treat acute pain can lead to the release of stress hormones, disrupt many-body systems and organs, and hinder the healing process. (Abdullah & Omar, 2011). The main focus of pain relievers is on the physical aspect so that they pay less attention to other dimensions such as emotional and spiritual. The International Association for the Study of Pain (IASP) defines pain as a negative sensory and emotional experience caused by actual or potential tissue injury. The facts show that 21% of 4839 people in 300 European countries suffer from depression due to pain (Wachholtz et al., 2007). This situation shows the importance of paying attention to pain management's emotional and spiritual aspects (Urden et al., 2014).

Spiritual coping strategies in various ways, including physiology, psychology, neurology, and emotion, influence pain (Wachholtz et al., 2007). Listening to the recitation of the Quran is a type of

spiritual coping that has a calming effect. Listening to the Quran can increase emotional and mental activity related to religiosity (Julianto & Etsem, 2011).

Previous systematic reviews have shown that listening to the Quran can overcome anxiety in various situations (Ghiasi & Keramat, 2018). Two things underlie the physiological process of listening to the Quran, namely the sound and the meaning of reading the Qur'an. The sound of reading the Quran still influences even though its meaning is not understood (Frih et al., 2017)

Several studies on brain wave images show that the sound of reading the Quran has the potential to reduce pain. According to research, when someone listens to the Quran, alpha waves are shown to be dominating. Alpha waves are brain waves that originate in the occipital lobe and occur when a person is relaxed (Abdullah & Omar, 2011; Shekah et al., 2013).

The author has not found a systematic review of the effect of listening to the Quran on pain in various conditions. Similar systematic reviews include spiritual-religious interventions on pain (Vasigh et al., 2018) and the effect of the Quran on mental and physiological health (Yektakooshali et al., 2019). This systematic review examines several scientific pieces of literature to identify the potential of listening to the voice of the Quranas a non-pharmacological therapy for pain management

## **METHOD**

PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) is the subject of this systematic study (Borji & Tarjoman, 2020). This systematic review identified the effectiveness of listening to the Quran in dealing with pain.

### **Literature Search and Selection Strategy**

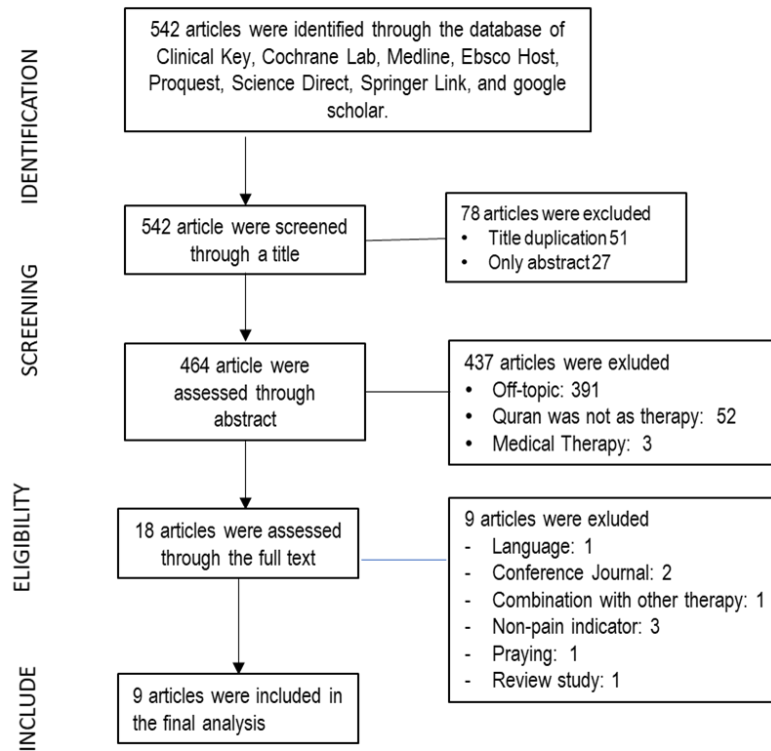
The article search strategy uses the PRISMA method. In a systematic review, researchers utilized the PICO technique (Problem, Intervention, Comparison, Outcome) (Methley et al., 2014; Wieseler & McGauran, 2010) to examine the following questions: "What is the potential of listening to Quran reading as pain management?".

Article search activity in April 2021 focuses on articles published between 2010 and 2020. The electronic data sources used were clinical Key, Cochrane Lab, Medline, Ebsco Host, Proquest, Science Direct, Springer Link, and Google Scholar. In addition, we looked through the list of study references obtained during our search for further relevant articles. The articles included in this systematic review must match the following essential criteria, as established by the PICO:

- Participants (P): people who are in pain
- Intervention (I): listening to the Quran recited
- Comparison (C): pain-relieving treatments
- Outcome (O): pain score and pain-related hormones

This analysis excluded all secondary literature (literature reviews, dissertations, theses, editorials, research protocols, and clinical guidelines) and non-English and Indonesian languages. The search phrases for the articles were Holy Quran, Quran recitation, Pain, Pain Management, and endorphins. Combining these keywords with the Boolean operators "AND" and "OR" results in "(Quran OR Holy Quran OR Quran OR Quran Recitation) AND (Pain OR Pain Management OR Endorphin)." Mendeley's bibliography software facilitates the process of storing, categorizing, and maintaining all references.

Clinical Key discovered 74 articles, Cochrane Lab 14, Medline 7, ProQuest 43 articles, Science Direct 25 articles, SpringerLink 181 items, and Google Scholar 198 articles in a literature search using keywords. The flow chart in Figure 1 illustrates the article selection process.



**Figure 1. Article Selection Flowchart**

Table 1 shows that nine articles meet the inclusion and exclusion criteria

**Tabel 1. List of selected articles**

No	Title	Author, year	Design
1	<i>Al Qur'an Surah Arrahman Recital Therapy Increase <math>\beta</math>-Endorphin Levels and Reduce Childbirth Pain</i>	Wahida S, M Nooryanto, Sri Andarini, 2015	Pre-experiment
2	<i>Effectiveness of Murottal Therapy In Decreasing Pain Level Of Cancer Patients</i>	Amin Rosandi Suwardi, Desi Ariyana Rahayu, 2019	Quasi-experiment
3	<i>Effect of the sound of the holy quran on the physiological responses and pain caused by blood sampling from the heels of hospitalized neonates at the neonatal intensive care unit</i>	Maryam Marofi, Fatemeh Abedini, Maryam Shirazi, Zohreh Badiei, Zahra Baghersad, Farzaneh Nikobakht, 2018	True-experiment
4	<i>Comparison Of Influence Of Listening Mozart Music With Murottal Al Quran On Pain in Hypertension Patients</i>	Ikit Netra Wirakhmi, Tin Utami, Iwan Purnawan, 2018	Quasi-ekperiment,
5	<i>Effect of the Quran sound on labor pain and other maternal and neonatal factors in nulliparous women</i>	Roghayeh Bayrami, Hossein Ebrahimipour, 2014	Quasi-experiment
6	<i>The Effect of Murottal Qur ' an on Menstrual Pain in Nursing Student of Universitas Nahdlatul Ulama Surabaya</i>	Yurike Septianingrum, Nety Mawarda Hatmanti, Andikawati Fitriasari, 2019	True-experiment
7	<i>Therapy Acupressure And Murottal Al-Quran On The Pain Intensity And Endorphin Urine</i>	Enggal Hadi Kurniyawan, Joni Haryanto, Sriyono, Kholid Rosyidi, Alfid Tri Afandi, 2018	Quasi-experiment
8	<i>The Effect Of Murottal Al-Qur'an Therapy Towards Reducing Pain Intensity In Maternal In The Active Phase I Of The Maternal General Hospital In Solok Selatan 2017</i>	Faridah BD, Yefrida, Silvia Masmura. 2017	Pre- experiment
9	<i>Effect of Quran Recital on Additional Opioid Requirement in Post-Cesarean Section</i>	Silvi Winasty, Indriasari, Nurita Dian Kestriani, 2019	Randomized Control Trials

**Data Extraction and Quality Assessment**

Author, year, study objectives, research design, research location, participants, pain score tool, research results, and degree of evidence were retrieved from selected papers. The degree of evidence and the risk of bias are two factors used to evaluate the articles' quality. Table 2 shows the results of the data extraction.

Joanna Briggs Institute Levels guide the measurement of the level of evidence article (Joanna Briggs Institute, 2014). According to the findings, three true experiments (1c) (Marofi et al., 2018; Septianingrum et al., 2019; Winasty et al., 2019), and two pre-experiments (2d) examined (BD et al., 2017; Wahida et al., 2015). Table 1 shows the level of evidence used in this study.

Joanna Briggs Institute Levels guide the measurement of the level of evidence article (Joanna Briggs Institute, 2014). According to the findings, three true experiments (1c) (Marofi et al., 2018; Septianingrum et al., 2019; Winasty et al., 2019), four quasi-experiments (2c) (Bayrami & Ebrahimipour, 2014a; Kurniyawan et al., 2018; Suwardi & Rahayu, 2019; Wirakhmi et al., 2018), and two pre-experiments (2d) were found among the nine publications examined (Faridah et al., 2017; Wahida et al., 2015). An article's level of evidence describes a ranking based on the best possible evidence available in that article (The Joanna Briggs Institute, 2014). Table 2 shows the level of evidence used in this study.

The risk of bias assessment is used to estimate the quality of a research publication based on possible research process mistakes. Bias in research can lead to outcomes that are under or overstated. As a result, the study's findings are false and unreliable. The Cochrane Collaboration's technique for assessing the risk of bias was used to determine the risk of bias in this study (Higgins et al., 2011). According to the findings, only two studies had a low probability of bias (Kurniyawan et al., 2018; Suwardi & Rahayu, 2019) because they used randomization to determine group allocation and blinding techniques in collecting data. Figure 2 shows the risk of measurement bias in the selected articles.

Wahida, et al., 2015	-	-	-	-	+	?	+
Rosandi, et al, 2019	-	-	-	-	+	?	+
Marofi, et al 2018	+	+	+	-	+	?	+
Wirakhmi, et al 2018	-	-	-	-	+	?	+
Bayrami, et al, 2014	+	-	-	-	+	?	+
Septianingrum, et al, 2019	+	-	-	-	+	?	+
Kurniyawan, et al 2018	-	-	-	-	+	?	+
Faridah BD et al 2017	-	-	-	-	+	?	+
Winasti, S et al, 2019	+	+	+	+	+	?	+

**Key:**  
 (+) low risk of bias  
 (-) high risk of bias  
 (?) unclear risk of bias

**Figure 2. Risk of Bias Assessments for Selected Studies**

**Table 2. Results of Data Extraction from Selected Studies.**

Author, Year	Aim	Design	Partisipan, Location	Model Intervention	Pain Instrument	Key findings	Level of Evidence
Wahida, et al, 2015	This research aims to prove that Al Qur'an surah Arrahman recital therapy may increase the $\beta$ -endorphin level and reduce childbirth pain intensity on active phase in the first stage.	Pre-experiment	30, the mother gave birth during the active phase, Indonesia	For 25 minutes, use earbuds to listen to the recitation of Surah Arrahman from the Al-Quran.	<ul style="list-style-type: none"> <li>• Pain intensity: Bourbannis Scale</li> <li>• Betha endorphin: ELISA technique was used to test 2 ml of blood.</li> </ul>	<p><b>Pain intensity:</b> The mean pain score between pre (<math>6.80 \pm 1.52</math>) and post (<math>3.37 \pm 1.79</math>) was significantly decrease (p-value 0.001), according to a paired T-test.</p> <p><b>Betha endorphin:</b> A paired T-test revealed a significant increase in beta-endorphin levels (p-value 0.001) between pre (<math>1053,6 \pm 606,32\text{ng/L}</math>) and post (<math>1813,5 \pm 546,78\text{ng/L}</math>)</p>	2d
Rosandi, A., et al., 2019	to see if classical music and the sound of reading the Quran will help cancer patients feel less pain.	Quasi-eksperiment	75 cancer patients were divided into 3 groups: classical music (25), Quran recitation (25), and controls (25).	The treatment group (classical music and the Al Quran) had therapy twice a day for 21 days. Each session lasts 15 minutes and has a decibel level of 50. The control group, on the other hand, received simply normal treatment. Mozart's Piano Sonata No. 11 in A Major, K.331 is used in classical music. While Sheikh Mishary Rasyid's letter Ar-Rahman is used by the Quran's voice,	Numeric Rating Scale  Prior to the first intervention, pain measurements were taken. While post-intervention pain was measured on day 21, after the completion of the intervention.	In the Al-Quran group, the Wilcoxon test revealed a substantial decrease in mean pain (p-value 0.0001). from 5.8 to 3.84 (after). Classical music groups experienced the same fate. From 5.40 (before) to 4.72 (after), the level of pain dropped significantly (p-value.0001)  There was no significant difference (p-value = 0.083) between the mean pain scores before (4.68) and after (4.68) in the control group (4.80).	2c
Marofi M et al, 2018	Determine how listening to the Quran recital affects physiological responses and pain levels.	True Experiment	72 infants receiving venous blood samples from the heel of the foot in Neonatal Intensive Care. A total of 72	From 3 minutes before blood sampling to 3 minutes after, the intervention group listened to the Quran's voice. The control group was given milk half an hour before the surgery	The neonatal infant pain scale (NIPS) was used to assess the severity of the pain (0-7 Likert scale).	The independent t-test revealed no difference in mean pain between the two groups 3 minutes before blood sample (p-value = 0.34) or during blood sampling (p-value = 0.09). In the third minute after taking blood samples, a significant difference in mean pain (p-value = 0.01) was discovered. The intervention group's mean	1c

Author, Year	Aim	Design	Partisipan, Location	Model Intervention	Pain Instrument	Key findings	Level of Evidence
			participants were divided into two groups (control and treatment), each with 36 participants. Iran	and was positioned supine. Surah Al Quran is Ar Rahman, which was read and played on an MP3 player by Abd Al Baset. The MP3 player is 1 meter away from the neonatal bed, and the volume is 65 decibels.	Pain was measured three times: three minutes before the action; during the action, and three minutes after the action.	pain score (0.8±0.1) was lower than the control group's (2.2±0.5).	
Ikit Netra W, et al., 2018	determine the effectiveness of listening to classical music against the sound of the Quran in decreasing pain in hypertensive individuals (	Quasi eksperiment	Thirty persons with primary hypertension were divided between two groups of 15 people each (classical music and the Quran's speech). Indonesia.	Each group received a 15-minute therapy through the use of headphones. Mozart is used in classical music, while the Surah Ar Rahman is used in the Quran's Voice.	Before and after treatment, pain was assessed using the Visual Analog Scale.	In the classical music group, the Wilcoxon test revealed no significant difference (p-value 0.051) in median pain before the intervention (2; 0-4) and after the intervention (1; 0-3). Meanwhile, the median pain score in the Al-Quran reading group reduced dramatically (p-value <0.0001) from 2 (0-4) to 2 (0-3)	2c
Bayrami R, Ebrahimipour H. 2014	Determine the impact of listening to the Quran being recited on the intensity of labor pain in the first stage.	Quasi eksperiment.	60 pregnant women were chosen at random and divided into control and treatment groups, each with 30 participants. Iran	The treatment group listened to the Quran's Surat Arrahman (Qori Abdul Baset) read twice for 30 minutes each, once at a 4-6 cm opening and once at a 7-10 cm opening. The control group was instructed to remain in as comfortable a position as possible.	The Numeric Rating Scale was used to assess pain, which was done every 30 minutes for two hours. Pain was measured at 4 cm, 6 cm, 7 cm, and 10 cm openings.	The control group's mean pain (9.1±22.6) and the treatment group's mean pain (4.1±4.6) in the first measurement (opening 4 cm) did not differ significantly (p-value = 0.4), according to an independent t-test. At 6 cm (5.30.71 vs. 8.1±0.93, p-value 0.001), 7 cm (6.64±0.81 vs. 8.6±0.99; p-value 0.001), and 10 cm (6.2±1.005, p-value 0.001), the pain intensity of the treatment group was lower than that of the control group.	2c
Yurike Septianingrum, et al. 2019	Determine the impact of listening to the Quran on menstrual pain.	True eksperiment	32 nursing students were chosen at random and divided into	The intervention group was given 15 minutes to listen to the Qur'an read from the letter Ar Rahman. Respondents in	Before and after therapy, pain scores were assessed using the Visual	Both groups (intervention and control) had the same pain score before treatment (p-value = 0.532), according to the Man Whitney test. Meanwhile, the two groups' pain scores were significantly different after	1c

Author, Year	Aim	Design	Partisipan, Location	Model Intervention	Pain Instrument	Key findings	Level of Evidence
			two groups (intervention and control), each with 16 participants. Indonesia	the control group utilized deep breathing techniques for 15 minutes.	Analog Scale (VAS).	therapy (p-value = 0.006). The intervention group's pain score was lower (2.52±2.01) than the control group's (5.05±1.48).	
Enggal Hadi Kurniyawan, Joni Haryanto, Sriyono, Kholid Rosyidi, Alfid Tri Afandi, 2018	The aim of this study was to see how acupressure and the sound of the Quran affected pain intensity and endorphin levels in patients who had undergone ORIF.	Quasi experiment	Based on the intervention, the 28 postoperative ORIF patients were divided into four groups: acupressure, murorottal, combination acupressure-murorottal, and controls. Each group is made up of seven members. Indonesia	Acupressure, listening to the Quran recitation, and a combination of acupressure and reading the Quran were used to treat the three intervention groups. The control group, on the other hand, just received regular therapeutic services.	A numeric rating scale was used to assess the severity of pain. While urine samples were used to test endorphins using the ELISA technique.	The mean pain in the three intervention groups (acupressure, Al-Quran, and acupressure-Al-Quran combination) decreased significantly (p-value 0.001) before and after therapy, according to a paired t-test. Meanwhile, the pain intensity in the control group did not change substantially (p-value = 0.231). The acupressure group (p-value = 0.816), the sound of the Quran (p-value = 0.876), the combination of Quran-acupressure (p-value = 0.648), and the control group (p-value = 0.473) all had no change in endorphin levels before and after treatment. The ANOVA test revealed a significant difference in pain scores between the control group and the intervention group (p-value = 0.0001). While the post hoc test revealed no significant differences in pain intensity between the three treatments groups (p-value > 0.05), The ANOVA test on endorphin levels revealed no significant differences between the four groups (p-value = 0.974).	2c
Faridah BD, Yefrida, Silvia Masmura, 2017	Identifying the impact of Sound Al-Qur'an therapy on the intensity of labor pain during the active phase's first stage.	Pre eksperiment	13 women gave delivery during the active phase of stage 1. Indonesia	During the active period of the first stage of labor, participants listened to the voice of the Quran.	Before and after treatment, pain is measured using the facial pain rating scale.	The Wilcoxon test revealed a substantial reduction in pain intensity (p value = 0.0001) from 8.3 (pre-treatment) to 6.6 (post-treatment).	2d
Silvi Winasty, Indriasari, Nurita Dian Kestriani, 2019	The aim of this study was to see if reciting the Quran affected the requirement	Randomized Controlled Trial	32 post-SC women were chosen at	Patients in the intervention group wore headphones and listened	Total opioid dose used for pain treatment	The Mann Whitney test revealed a significant difference in opioid demands (p value = 0.001), with the intervention group's	1c

Author, Year	Aim	Design	Partisipan, Location	Model Intervention	Pain Instrument	Key findings	Level of Evidence
	for opioids in the first 24 hours following SC.		random and divided into two groups of 16 each (intervention and control). Indonesia	to the Quran from the time they were anesthetized until the surgery was completed. The control group used headphones only during the anesthetic process and until the surgery was completed.	for 24 hours after surgery	need (25 mcg) being lower than the control group's (100 mcg).	



## RESULTS

A search for articles published in the last 11 years (2010-2020) found nine articles that met the inclusion and exclusion criteria. The total number of respondents in the nine studies was 372 people. Most of the respondents (80.6%) were in the adolescent to adult range (Bayrami & Ebrahimipour, 2014a; Faridah et al., 2017; Kurniyawan et al., 2018; Septianingrum et al., 2019; Suwardi & Rahayu, 2019; Wahida et al., 2015; Winasty et al., 2019; Wirakhmi et al., 2018). Meanwhile, the remaining 19.4% were neonates with an average age of 5 days (Marofi et al., 2018).

Some of the findings from this systematic review include the causes of pain, pain measurement tools, implementation of therapy, and effectiveness in reducing pain.

### Causes of Pain

The causes of pain in a systematic review generally consist of physiological processes, pathological conditions, and treatment procedures. Dysmenorrhea (Septianingrum et al., 2019) and the labor process (Bayrami & Ebrahimipour, 2014a; Faridah et al., 2017; Wahida et al., 2015) are physiological processes that cause pain. Pathological conditions that trigger pain include cancer (Suwardi & Rahayu, 2019) and hypertension (Wirakhmi et al., 2018). Procedures such as blood sampling (Marofi et al., 2018), Sectio Caesaria (SC) (Winasty et al., 2019), post-surgical care, and wounds (Kurniyawan et al., 2018) are pain triggers.

### Pain Indicator

Indicators of successful pain management include pain scores, levels of endorphins, and doses of opioid analgesics. The Bourbonnais Pain Scale (Wahida et al., 2015), numeric rating scale (Bayrami & Ebrahimipour, 2014a; Kurniyawan et al., 2018; Suwardi & Rahayu, 2019), visual analog scale (Septianingrum et al., 2019; Wirakhmi et al., 2018), and face pain scales were all utilized to measure pain (Faridah et al., 2017). Beta endorphins indicate hormones related to pain (Kurniyawan et al., 2018; Wahida et al., 2015). Opioids (fentanyl) are an analgesic group as an indicator of successful pain management (Winasty et al., 2019).

### Implementation Of Therapy

Three studies examine the effect of listening to the Quran on labor pain persalinan (Bayrami & Ebrahimipour, 2014a; Faridah et al., 2017; Wahida et al., 2015). The active phase is the time for therapy in the three studies using the same letter of Al Quran, namely Ar Rahman. The therapy given in Bayrami & Ebrahimipour, (2014) study was twice, namely when the cervix was opened 4-6 cm and 7-10 cm. Listening to the Al Quran for each session is 30 minutes each using headphones. Respondents in the study of Faridah et al., (2017) received therapy during the active phase, but there were no data regarding the frequency and duration of listening to the Quran. The therapy administration in Wahida et al., (2015) was for 25 minutes. This study uses two pain indicators, namely the Bourbonnais pain scale and beta-endorphins.

Penelitian Septianingrum et al., (2019) bertujuan untuk mengidentifikasi efektivitas mendengarkan Al Quran dalam menurunkan nyeri dismenore. Pemberian terapi mendengarkan Al Quran Surat Ar Rahman yang dikombinasikan dengan nafas dalam selama 15 menit. Pengukuran nyeri dilakukan sebelum dan sesudah terapi dengan menggunakan visual analog scale Hal ini sama dengan Wirakhmi et al., (2018) yang meneliti pengaruh mendengarkan Al Quran terhadap penurunan nyeri pada orang hipertensi.

Cancer patients in the Suwardi & Rahayu (2019) listened to the Al-Quran Surah Arrahman twice a day for 21 days. Pain measurement using Numeric Rating Scale before and after therapy. Pain measurements were carried out twice before therapy (pre) and the third week after the therapy series was completed (post).

Research by Kurniyawan et al. (2018) aims to determine how listening to the Quran affects pain during postoperative wound care. This study used Surat Ar Rahman but did not explain when and how much therapy took place. In addition to pain intensity, this study used urinary endorphins levels as an indicator of the effectiveness of pain treatment.

Subsequent research was conducted by Marofi et al., (2018) and aimed to see the effect of listening to the Quran on pain during blood sampling of neonates in the neonatal intensive care unit (NICU). Respondents listened to Sura Ar Rahman three minutes before up to three minutes after taking blood samples and giving therapy using an MP4 player with a distance of 1 meter from the bed with a sound intensity of 65 decibels. Pain measurements were carried out three times, namely before, during, and after therapy using the neonatal infant pain scale.

Respondents in the study of Winasty et al., (2019) listen to the Quran during the surgical process, from the beginning of anesthesia to the completion of the surgery. The number of doses of opioid analgesics (fentanyl) during the first 24 hours postoperatively is an indicator of the effectiveness of therapy.

### **Effectiveness on Pain**

Listening to the Quran can reduce pain during the active phase of childbirth. There was a significant difference in the mean pain score in the active phase of childbirth between the treatment group and the control group ( $6.46 + 0.781$  vs.  $8.6 + 0.99$ ;  $p$ -value = 0.001) (Bayrami & Ebrahimipour, 2014a). The research of Faridah et al., (2017) showed a significant decrease ( $p$ -value = 0.001) the average pain score in the active phase of childbirth was 1.7 from  $8,307 + 1.6$  (pre) to  $6,616 + 1,709$  (post). Listening to the Quran in Wahida et al.'s (2015) research, besides being proven to be able to significantly reduce pain scores ( $p$ -value = 0.001), also increased beta-endorphin levels ( $p$ -value = 0.001). The mean levels of beta-endorphins increased from  $1053.6 \pm 606.32$  mg/L to  $1813.5 \pm 546.78$  mg/L.

Listening to the Quran was able to significantly reduce pain due to dysmenorrhea, cancer, and hypertension ( $p$ -value < 0.05). The mean score of pain due to dysmenorrhea in the intervention group ( $2.83 + 2.23$ ) was significantly lower than the control group ( $5.05 + 1.48$ ) ( $p$ -value = 0.006) (Septianingrum et al., 2019). A significant decrease in the mean pain ( $p$ -value = 0.0001) occurred in cancer patients who listened to the Quran from  $5.8 + 0.764$  (pre) to  $3.84 + 0.84$  (post) (Suwardi & Rahayu, 2019). The same thing is found in the study of Wirakhmi et al., (2018) on people with hypertension. The study showed a significant decrease ( $p$ -value = 0.002) in pain scores after 15 minutes of listening to the Quran.

Listening to the Quran in subsequent studies was able to reduce pain intensity during blood sampling (Marofi et al., 2018) and postoperative wound care (Kurniyawan et al., 2018) and reduce the need for opioid doses after SC surgery (Winasty et al., 2019). The mean postoperative wound care pain decreased significantly ( $p$ -value = 0.001) in the group who listened to the Quran (Kurniyawan et al., 2018). Neonates who listened to the Quran while taking blood samples had a significantly lower mean pain score ( $0.8 + 0.1$ ) compared to the control group ( $2.2 + 0.5$ ) significantly ( $p$ -value = 0.01). The research of Winasty et al., (2019) showed that the mean dose of opioid analgesic drugs in post-SC patients who listened to the Quran was significantly ( $p$ -value 0.001) lower (21.87 mcg) compared to the control group (107.81 mcg).

### **DISCUSSION**

The International Association for the Study of Pain (IASP) defines pain as an unpleasant sensory and emotional experience linked to existing or potential tissue damage. Pain can be split into two categories: acute pain and chronic pain. Acute pain is self-limiting, meaning that it will fade away as the organ or tissue heals. This discomfort lasts a few days or weeks. Chronic pain is defined as lasting more than three months and does not go away. This type of pain is difficult to understand since it is influenced by biological, psychological, and social factors (Tanra et al., 2019). According to the study's definition of pain, acute pain includes discomfort induced by, among other things, the birthing process (Bayrami & Ebrahimipour, 2014; Faridah et al., 2017; Wahida et al., 2015) surgical wound care (Kurniyawan et al.,

2018); blood sample (Marofi et al., 2018; and SC (Winasty et al., 2019). Pain induced by cancer (Suwardi & Rahayu, 2019) and hypertension (Wirakhmi et al., 2018), on the other hand, is classified as chronic pain (Bayrami & Ebrahimipour, 2014).

All studies reveal that listening to the Quran recitation can significantly relieve pain in various situations. Several studies have attempted to compare the effects of listening to the Quran to other interventions such as deep breathing, classical music, and acupuncture. A study comparing the effectiveness of deep breathing techniques and listening to the Quran on menstruation pain revealed that the severity of pain was lower in the group that listened to the Quran recitation than in the deep breathing group (Septianingrum et al., 2019). When the study was conducted in hypertensive patients, the outcomes were the same (Wirakhmi et al., 2018). In the meantime, both therapies (Quran recitation and classical music) were found to significantly reduce pain intensity in cancer patients (Suwardi & Rahayu, 2019). A comparison of the effectiveness of listening to the Quran and acupuncture on pain during Open Reduction and Internal Fixation (ORIF) surgical wound care was also conducted (Kurniyawan et al., 2018). Both therapies were able to significantly lower pain intensity as a result. There is, however, no statistical test that can compare the effectiveness of the two therapies. Listening to the Quran reduced the need for extra opioids (fentanyl) in the first 24 hours after surgery, in addition to lowering pain (Winasty et al., 2019). According to the evidence provided above, listening to the Quran in a clinical setting helps relieve pain in various situations (Sadeghi, 2011; Taghiabad et al., 2015).

The relaxing effect of listening to the Qur'an's sound in lessening pain is due to the calming effect of listening to it. The dominance of  $\delta$  (delta) waves (> 25%) is shown in a study of brain waves while listening to the Quran (Abdurrochman et al., 2007). Because these  $\delta$  waves are similar to brain waves during sleep, listening to the Quran is also a sleep disorder treatment. The brain waves generated by the sound of the Quran, aside from delta, are alpha and theta. These two waves indicate that individuals are in a relaxed condition. Other research has found that listening to the Quran while awake increases the strength of theta waves in most parts of the brain and alpha waves in the frontal area. Someone was listening to the Quran while unconscious can boost delta waves in the front and middle lobes of the brain (Abdurrochman et al., 2007).

This relaxed state can stimulate the release of endorphins while listening to the Quran. Listening to the Quran has been shown in studies to raise endorphin levels and lessen pain severity significantly (Wahida et al., 2015). Endorphin hormones are structurally similar to morphine, attaching to brain cells and other receptor cells. This hormone is essential in dealing with anxiety and other unpleasant feelings like pain (Rokade, 2011; Ghiasi & Keramat, 2018; K. Johnson et al., 2018)

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When listening to the Quran, reduced anxiety and stress might also produce decreased pain intensity. Anxiety and stress cause the hormone cortisol to be released, which enhances pain sensitivity. Previous research has shown that listening to the Quran while relaxing can help to reduce anxiety and stress levels (Rokade, 2011; Alivian et al., 2019)

According to the level of evidence, three of the nine publications assessed were true-experimental, four were quasi-experimental, and just two were pre-experimental. True-experimental research includes a control group and a randomized process to determine the respondent group. A one-blind Randomized Control Trial study is one of them (Winasty et al., 2019). One of the approaches to reduce bias in the study is to utilize randomization and blinding in selecting respondents. The lower the study's bias, the greater the study's quality

The risk assessment of bias in the nine studies used the Cochrane Bias Tools (Higgins et al., 2011). Although most of the studies in this analysis had a high risk of bias, listening to the Quran has a high recommendation level, according to the Joanna Briggs Institute Levels of Evidence and Grades of Recommendation (The Joanna Briggs Institute, 2014). The suggestion level determines how much

potential a study finding has for service application. The feasibility, appropriateness, meaningfulness, and efficacy components make up the recommendation level. Listening to the Qur'an recitation has a high level of practicality for various reasons, including the fact that it is very cheap, requires minimal equipment, and can be done by anybody without particular expertise (Purnawan et al., 2021).

Listening to the Quran has a high level of compliance as well. Listening to the Quran is a highly encouraged form of prayer for Muslims. As a result, all Muslim circles approve of this activity. Listening to the Qur'an can be done in a variety of situations, including good health, sickness, happiness, and sadness. Listening to the Quran has much spiritual significance as a spiritual activity. There has been no research so far that demonstrates that listening to the Quran has any negative consequences. In terms of efficacy, all of the research in this study suggests that listening to the Quran reduces pain severity in various conditions (Mahjoob et al., 2016; Saged et al., 2018).

According to this study's findings, some studies still have a tiny sample size and a low level of evidence. Based on this, a more significant sample and a research design with a high degree of evidence can conduct the same study.

## CONCLUSION

According to this systematic review, listening to the Quran has a considerable effect in reducing pain in diverse conditions. The effectiveness of listening to the Quran in reducing pain can be observed in its ability to significantly boost endorphin levels and using pain measurement indicators such as the visual analog scale and numeric rating scale. Although specific studies have a low level of evidence and a high risk of bias, the study's findings are highly recommended. It demonstrates that listening to the Quran recited is a feasible alternative for health care.

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