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## **A REVIEW ON THE EFFECTIVENESS OF MASSAGE THERAPY IN PAIN MANAGEMENT AND TREATMENT**

***Sarah O. Dingding, Sophia Alexandra D. Valdez, Nicee Willaine R. Ong, Jorsia M. Macantan, Jamaerah Cuabo Abas, Maria Fe Querubin, Erwin M. Faller\****

*Pharmacy Department, San Pedro College, Davao City, Philippines*

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### **ABSTRACT**

Pain is defined as a personal and unpleasant sensation affiliated with actual or potential tissue damage. Influenced by different levels of biological, psychological, and social conditions, it is a sensory and emotional experience that affects the holistic being and causes much agony and disability. Acute pain occurs in a sudden and sharp outburst that is resolved in less than six months, while chronic pain is characterized by persistent pain lasting over six months following its initial onset. Often mistreated or undertreated, patients diagnosed with this type of affliction commonly experience fatigue, sleeping disorders, depression, and declining physiological and cognitive activity. The management of pain frequently requires a multidisciplinary approach, including medications, psychological support, and rehabilitation, to address the several aspects that factor into the patient's pain experience. Massage therapy may be a substantial method of mitigating chronic pain. With the primary objective of reducing pain and agony while amending physiological and cognitive functioning, it clinically contributes to the betterment of the patient's subjective and objective well-being. This paper aims to review the effectiveness of massage therapy in pain management and treatment by presenting different massage techniques and their corresponding outcomes in patients.

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### **1. INTRODUCTION**

In a national health survey for United States adults conducted in 2019, 20.4% experienced chronic pain, and 7.4% had chronic pain severe enough to limit everyday work and activities [1]. With this, there has been a significant increase in the prescription and use of narcotics or opioids, which bind to receptors in the brain and block pain sensory neurons [2]. Unfortunately, opioid addiction has been deemed a national crisis in the United States, with an estimated 2.7 million Americans aged 12 and above diagnosed with an opioid-use disorder in 2020 [3]. Narcotics and opioid regimens do not have a one-size-fits-all approach [4]. Therefore, through careful consultation with physicians and other pain medication specialists, narcotics and opioid use can be carefully managed, and other options may be discussed.

With new and promising studies popping up, patients and medical practitioners alike are now more open to alternative pain management and treatment solutions. Massage therapy is now at the forefront of these promising alternatives as the pandemic has exacerbated the rise of opioid abuse-related incidents [3]. Its role in integrative health care has been solidified, with significant evidence supporting its effectiveness in chronic pain management, acute medical conditions, behavioral health treatment, rehabilitation, and physical training [5].

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### **2. METHODOLOGY**

In this Journal review paper related to the effectiveness of Massage Therapy in Pain Management and Treatment, data were searched and collected. The review was conducted utilizing journal databases such as Pubmed, Centers for Disease Control and Prevention publications, Atrainceu, amtamassage, AAFF Foundation, doi org, acpjournals, National Library of Medicine, Google Scholar, and etc. The articles and journals were reviewed and discussed. The search terms included: Massage Therapy, Pain Management, Diseases Treated by massage, Back Pain massage, Massage Therapy Treatment, etc. There was no limitation in the year of studies; the articles and journals were discussed and reviewed by the authors. The upper tabs were the results of the journals, while the lower parts were the discussion where the other details of the study were written [6].

### 3. RESULT AND DISCUSSION

**Table 1**

Authors	Type of Massage	Therapeutic Evidence
Adams, R., White, B., & Beckett, C.	Reflexology, Acupressure, Swedish effleurage	A study has shown a strong relationship between pain reduction and statistically significant variations in pain scores before and after massage therapy. Overall pain level, relaxation, and sleep ability were the most significant areas of impact on participants' quality of life.[7].
Kumar, S., Beaton, K., & Hughes, T.	Acupressure, Swedish massage, Rolfing, reflexology, shiatsu, Thai massage, myofascial release, Bowen therapy.	Massage therapy has mixed evidence of effectiveness when compared to acupuncture, exercise and education, and relaxation. Nevertheless, there are contradicting results when comparing massage therapy to other manual methods for the treatment of nonspecific low back pain. [8].
Lovas, J., Tran, Y., Middleton, J. et al	Swedish massage therapy, guided imagery relaxation	After five weeks, the massage group showed substantial reductions in chronic pain and exhaustion. This result supports the claim that massage was just as beneficial as an active control condition like GI in relieving pain and fatigue. [9].
Allen L.	Swedish massage from the cervical to the lumbar area, deep myofascial release strokes and the use of muscle stripping.	There are 9 out of 10 self-reported pain and activities of daily life assessments showed improvement. Improvements in his capacity to walk and the changing degrees of pain were the most noticeable differences. [10].
Suresh, S., Wang, S., Porfyris, S., Kamasinski-Sol, R., & Steinhorn, D.M.	Compression, Fascial Glide, Petrissage, Tapotement, Effleurage, Trigger Point Therapy	Data shows significant improvement in patients' range of motion, muscle tension, muscle spasm, edema and mood after massage therapy. The results obtained also suggest that massage therapy may be effective in reducing pain-related symptoms in outpatient pediatric patients suffering from chronic pain syndromes [11].
Furlan AD, Giraldo M, Baskwill A, Irvin E, Imamura M	Thai massage, reflexology, Sham therapy.	The results for long-term follow-up are mixed, with some comparisons indicating that massage is superior to the control groups. Researcher's rated the evidence's quality as "poor" to "very low,". [12].
Lee, S.-H., Kim, J.-Y., Yeo, S., Kim, S.-H., & Lim, S.	Body massage, aroma massage, foot reflexology,	Foot reflexology appears to be the most effective type of massage when it comes to alleviating pain in cancer patients, a study has found. Massage effectively alleviated cancer pain in all forms of cancer investigated, according to researchers at the University of British Columbia in Canada. [13].

Qureshi, A.R., Jamal, M.K., Rahman, E., Paul, D.A., Oghli, Y.S., Mulaffer, M.T., Qureshi, D., Danish, M.A., & Rana, A.Q.	Therapeutic Thai Massage, Anma Massage	Pain perception is reduced with tactile stimulation and release of anti-nociceptive molecules in the body. Anma massage is shown to reduce muscle stiffness, rigidity, difficult movement, and shoulder pain in patients suffering from Parkinson's Disease [14].
Crawford, C., Boyd, C., Paat, C. F., Price, A., Xenakis, L., Yang, E., & Zhang, W.	Myofascial release therapy, traditional Thai massage, and ischemic compression	Massage treatment has been shown to improve a variety of patient-reported functional outcomes in people with physical and psychological disabilities. [15].
Yong Hong Cheng, Gui Cheng Huang	Tuina	Massage therapy (MT) had moderate evidence for immediate pain relief. MT had no better results when compared to acupuncture, traction, and other manual therapies. There was insufficient evidence of MT for neck pain in follow-up studies.[16].
Znidarsic J, DO, Kirksey KN, PhD, Dombrowski SM, PhD, Tang A, MS, Lopez R, MS, Blonsky H, MAS, Todorov I, MD, et. al.	Acupuncture, Acupressure, Massage Therapy	There were significant improvements in physical functioning, anxiety, depression, fatigue, social roles, pain interference, and sleep disturbance among patients with chronic pain. Average opioid use also decreased non significantly [17].
Najafi, S. S., Rast,F.Momennasab, M., Ghazinoor, M.,Dehghanrad, F.&Mousavizadeh, S. A.	Thai massage, full body massage	Cardiothoracic surgery patients' companions can help reduce the intensity of pain in post-CABG patients with adequate massage therapy training, a study has found.[18].
Chang, M.-Y., Wang, S.-Y., & Chen, C.-H.	Abdominal Effleurage, Sacral Pressure, Shoulder and Back Kneading	Massage assumes psychosocial support by helping women feel in control of their bodies during labor. Evidence also provides that massage maintains a sense of body boundary integrity during all three phases of labor. [19].
Yuan, SL, Matsutani, LA, Marques, AP	Myofascial release, Connective tissue massage, Manual lymphatic drainage, Shiatsu	Results reveal that myofascial release has a large, positive effect on pain and medium effects on anxiety and depression, as well as improves fatigue, stiffness and quality of life. Connective tissue massage along with manual lymphatic drainage improves stiffness. Shiatsu improves pain, pressure, pain threshold, fatigue, and sleep. Overall, most styles of massage therapy improved the quality of life of fibromyalgia patients [20].
Nicole L Nelson , James R Churilla	Massage therapy, swedish massage	The study found low to moderate-quality evidence that massage therapy is superior to nonactive interventions for lowering pain and enhancing function. A 2013 meta-analysis of two randomized controlled studies showed short-term pain reduction and physical function gains. A 2006 randomized controlled investigation with 68 knee osteoarthritis patients who received Swedish massage for eight weeks showed pain and function benefits [21].

Gentile D, Boselli D, Yaguda S, Greiner R, Bailey-Dorton C.	Oncology Massage, Healing Touch	According to the pre and post-therapy pain scores of 407 patients, 233 of which received Healing therapy while 174 received Oncology massage, both interventions caused a significant pain improvement. The mean difference for both treatments in pain reduction was 2.4 [22].
Anna-Kaisa Niemi	Massage therapy	In a 2017 meta-analysis of 34 randomized controlled trials of massage therapy for premature newborns, 20 studies (1,250 infants) investigated the effect of massage on weight gain. The unknown is how massage causes weight gain. Some studies show massage may provide further benefits, but the evidence is insufficient to infer this [23].
Vickers AJ , Vertosick EA , Lewith G , et al.	Acupuncture	Acupuncture was found to be superior compared to sham and no acupuncture control for nonspecific musculoskeletal pain, osteoarthritis, chronic headache, and shoulder pain. Results also show that the effects of acupuncture persist over time with an approximately 15% decrease after a year of treatment [24].
Heather Greenlee ND, PhD, DuPont-Reyes MPH, MPhil, Lynda G. Balneaves RN, PhD, Linda E. Carlson PhD, et. al.	Massage therapy	In 2017, the Society for Integrative Oncology produced guidelines on the evidence-based use of integrative therapies during and after breast cancer treatment, suggesting massage therapy to alleviate post-treatment depression in breast cancer survivors (grade B). The findings of six trials support this recommendation [25].
Coulter ID , Crawford C , Hurwitz EL , et al.	Mobilization and manipulation therapies	From 51 trials included in the systematic review, the standardized mean difference for a reduction of pain was -0.28 and within 7 trials of 923 patients, the reduction in disability was SMD=-0.33 for manipulation or mobilization treatments compared with other active therapies. Results show that manipulation significantly reduced pain and disability while mobilization interventions significantly reduced pain but not disability [26].
Chou R, Deyo R, Friedly J, Skelly A, Hashimoto R, Weimer M, Fu R, Dana T, Kraegel P, Griffin J, Grusing S, Brodt ED.	Massage therapy	The Agency for Healthcare Research and Quality reviewed 20 papers comparing massage to standard care or alternative therapy for low-back pain in 2016. It found weak evidence that massage helped persistent low-back pain. The agency also reviewed six studies on different types of massage and found insufficient data to identify which was most beneficial [27].
Andrea D Furlan I, Mario Giraldo, Amanda Baskwill, Emma Irvin, Marta Imamura, Amir Qaseem, MD, PhD, MHA, et. al.	Massage therapy	According to a 2015 Cochrane review, massage may temporarily relieve low-back discomfort. In 2017, the American College of Physicians recommended massage therapy for acute/subacute low-back pain, but not chronic low-back pain [28].
Miernik, M., Więckiewicz, M., Paradowska-Stolarz, A., & Więckiewicz, W.	Effleurage, Kneading, Friction, Petrissage, Trigger Point Therapy	Massage warms up muscles and facilitates improved local blood and lymph flow to increase blood level in small vessels. Muscle tension, sensitivity, and tissue swelling are reduced, recovery around the muscle tissue is faster, range of motion is improved, tension headaches and pain of masseter and temporal muscles lessened, and the muscle equilibrium between right and left masseter muscle is restored. Functional movements of the organ of mastication also display significant improvement [29].

Aleksander Chaibi, Peter J Tuchin, Michael Bjørn Russell Svenja Happe , Andreas Peikert , Rudolf Siegert , Stefan Evers	Traditional massage, physiotherapy, chiropractic spinal manipulative therapy	Massage treatment may be as helpful in the prevention of migraines as propranolol and topiramate. Results also conclude a decrease in the incidence of migraines [30].
Starkweather, A.	Tuina Massage	Tuina massage reduces the level of peripheral nociceptor C-fiber activity, influences tissue temperature, levels of chemical mediators in circulation, brainwave activity in specific regions of the brain that regulate self-awareness and arousal, and decreases peripheral C-fiber activity [31].
Dicks, K. & Rizek, P.	Static Contact, Superficial Effleurage, Broad- Contact Compression, Passive Range of Motion, Passive Stretch, Superficial Lymph Drainage	Results reveal that relaxation massage techniques helped provide restorative sleep and reduce anxiety for the patient. Relief was also granted between acute and severe symptomatic episodes of erythromelalgia and the massage techniques mitigated its painful symptoms [32].
Jane, S-W., Wilkie, D., Liao, M-N., Beaton, R., & Lin, Y-C	Swedish Massage, Light Touch Massage, Foot Massage	Data demonstrates significant improvements in pain intensity, nausea or vomiting, fatigue, distressing symptoms, anxiety, depression, and self-reports of relaxation. There is also an immediate positive influence in the reduction of pain, anxiety, and fatigue levels after massage therapy [33].
Cherkin, PhD, D., Sherman, PhD, K., Deyo, MD, MPH, R., & Shekelle, MD, PhD, P.	Acupuncture, Massage Therapy	Massage is effective for chronic back pain, but not acupuncture or spinal manipulation, a study has shown. Acupuncture and spinal manipulation may reduce the costs of care after an initial course of therapy. All treatments appear to be reasonably safe and are effective in relieving pain [34].
Li, Y., Wang, F., Feng, C., Yang, X., & Sun, Y.	Massage Therapy	Fibromyalgia (FM) is a complex clinical syndrome marked by chronic widespread pain and a slew of other symptoms such as anxiety, depression, sleep disturbance, stiffness, and a variety of psychiatric symptoms. Results show that massage therapy for 5 weeks had a positive effect on pain, anxiety, and depression in patients with FM [35].
Falkensteiner, M., Mantovan, F., Muller, I., & Them, C.	Massage Therapy	Massage therapy is regarded as a cost-efficient, noninvasive intervention that influences and contributes to the reduction of pain, anxiety, and depression in seriously ill cancer patients. Despite the differences in population characteristics, four out of six studies found similar results in terms of reducing pain [36].
Pasyar, PhD, N., Rambod, PhD, M., & Kahkhaee, MS, F. R.	Foot Massage, Massage Therapy	Massage therapy reduced pain intensity and anxiety in patients undergoing tibial shaft fracture surgery, according to the findings. Massage is recommended as a noninvasive and acceptable intervention in orthopedic surgery [37].
Huntley, A., Lafferty, D., & Hodgson, N.	Reflexology, Swedish Massage	Swedish Massage Therapy and Reflexology were well tolerated and resulted in measurable outcomes improvements in breast cancer patients. Both interventions both resulted in significant increases in salivary cortisol and pain, as well as mood improvements [38].
Barreto, D., & Batista, M.	Swedish Massage, Massage Therapy	Swedish massage is beneficial for a variety of populations and can be used as a therapy. It is highly recommended for use in disease prevention. Massage therapy, on the other hand, is not completely risk-free and should be performed by a professional with extreme caution [39].

Azima, S., Bakhshayesh, H. R., Kaviani, M., Abbasnia, K., & Sayadi, M.	Massage Therapy	Massage therapy and isometric exercises appear to be effective in reducing some symptoms of dysmenorrhea, a study has found. Pain intensity had reduced significantly in both the massage and exercise groups, with the massage group experiencing the greatest reduction [40].
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Massage therapy is one of the most commonly prescribed complementary and integrative medicine (CIM) therapies by doctors, and it is seen to be the most effective and least hazardous. The fact that patients from diverse hospital units experienced relaxation with massage therapy, while having a wide range of pre-massage pain levels, demonstrates the possibility for massage to help recovery for hospitalized patients. This observation was echoed by both patients and nurses in their remarks. This study found that implementing massage therapy into the acute care setting improves the patient's ability to cope with the physically and psychologically demanding components of their health condition. The study showed that pain, relaxation, sleep, emotions, recovery, and finally the healing process are all interconnected [7].

- 1) Low back pain is one of the most frequent musculoskeletal illnesses in today's culture, and it's a leading cause of medical visits. Low back pain has a wide range of effects on a person's life, including physical, social, psychological, and financial elements. Massage therapy may be considered a feasible therapeutic option if financial considerations are taken into account, as there have been no known side effects or adverse occurrences as a result of it [7].
- 2) The loss of sensory input and motor function caused by a spinal cord injury (SCI) is commonly accompanied by unpleasant secondary disorders such as chronic pain and chronic fatigue, all of which have a major detrimental impact on quality of life. Chronic pain and tiredness are both prevalent and can be debilitating. According to the Gate Control Theory, tactile stimulation can reduce pain by lowering nociception by releasing gamma-amino butyric acid in small fibers in the spinal cord [8].
- 3) This case study focuses on doing massage therapy that was recommended for a 63-year-old former construction worker who was suffering from persistent low-back discomfort. His goal was to cut back on pain medication. The subject's posture and stride did not alter, but he felt generally more at ease conducting daily chores and being pleased to discover treatment after years of suffering and limited abilities. His capability to sit and stand for extended amounts of time improved, whereas he previously had to get up and down frequently due to discomfort if he stayed in either posture for too long. During the study, no special strength tests were performed, and he continues to avoid lifting large objects. Massage therapy is a viable treatment for chronic low-back pain in individuals with a variety of diseases, any of which could be causing the problem. More research is needed to assess the usefulness of massage therapy as a less invasive, more affordable version to more invasive therapies and, where appropriate, as a complement to normal medical care [9].
- 4) The prevention of analgesic tolerance and reliance can be achieved through the application of nonpharmacological approaches in reducing somatic and psychological symptoms. In this case study, massage therapy is utilized as adjuvant therapy in the management of chronic pain in the pediatric patient population. Data with pre- and post-massage ratings were collected from outpatient pediatric patients with diagnoses of headaches, peripheral neuropathy, abdominal pain, back pain, ear pain, CRPS type 1, fibromyalgia, ilioinguinal neuralgia, joint arthralgia, and sickle cell disease-related pain. The evaluation of the overall response to the massage therapy intervention reveals reductions in patient ratings of distress, pain, tension, discomfort, and upset mood [10].
- 5) Massage is not thought to be an effective treatment for lower back pain by researchers. Only in the short term did massage improve pain outcomes in acute, subacute, and chronic LBP patients. When compared to inactive controls, participants with subacute and chronic LBP showed functional improvement, but only for the short term. Massage had relatively modest negative consequences [11].
- 6) Cancer pain causes psychological distress in terms of physical pain. Changes in skin, bone, nerve, and other tissues caused by direct tumor involvement or metastases, treatment effects (e.g. diagnostic procedures, surgery, chemotherapy, radiation therapy), or a combination of these cause cancer pain. The first comprehensive evaluation and meta-analysis of massage therapy's effects across all cancer types. Massage therapy significantly reduced cancer pain in 12 studies, according to researchers. Another researcher found that massage was useful for treating cancer side symptoms such as pain, nausea, anxiety, sadness, anger, stress, and exhaustion in a systematic review of all cancer types (without meta-analysis). This survey took place in November 2008, while the subsequent one took place in August 2013. During this time, two noteworthy RCT studies were published. 8,9 The current study looked through Korean and Chinese databases and found three Korean papers. According to the research, massage proved effective in alleviating cancer pain. Current study, on the other hand, used meta-analyses and statistical analysis to show that massage is significantly effective in alleviating cancer pain [12].
- 7) Parkinson's disease (PD) is a neurodegenerative disorder of the nervous system resulting from the loss of dopaminergic neurons in the substantia nigra pars compacta. One of the most common and crippling symptoms is pain, with descriptions of musculoskeletal, radicular-neuropathic, dystonic pain, and akathisia having been reported by patients in both the earlier and later stages of the disease. Treatments often revolve mainly around the control and reduction of symptoms as PD currently has no cure. Hence, massage therapy may be incorporated into acute healthcare settings as a widespread adjunct therapy utilized by patients with Parkinson's Disease owing to the evidence of decreased pain levels [13].
- 8) Massage treatment may be useful for treating various pain and function-related outcomes in pain populations, according to this systematic review and meta-analysis. Further study is needed to properly promote massage therapy for pain patients; in particular, future research should take into account this review's definition of massage therapy. The safety of massage therapy, research hurdles, ways to solve

identified research gaps, and critical next actions for introducing massage therapy as a viable pain management alternative are all explored [14].

- 9) The findings only indicated that MT could be more effective than normal care. We also compared MT to active therapies such as acupuncture, traction, traditional Chinese medicine, physical therapy, exercise, and other manual therapies to see if MT was a better treatment for neck discomfort. Although the meta-analysis revealed that MT has superior immediate effects than traditional Chinese medicine, there were few studies that were eligible. Traditional Chinese medicine treatment takes longer; for neck pain, 3 to 4 weeks of traditional Chinese medicine treatment may be sufficient [15].
- 10) The Joint Commission has provided a guide for evidence-based, non-opioid treatment alternatives for chronic pain treatment. According to this study, a combination of these nonpharmacological treatment options, even with varying compositions and intensity, all beneficially complement the current management of patients with chronic pain. The mean pain intensity on the Likert scale decreased from 6.2 to 5.2 based on the value reported for patients with chronic pain and depression after being randomly assigned to integrative medical group activities [16].
- 11) After Coronary Artery Bypass Graft Surgery (CABG), pain in the mid sternotomy incision site is a typical condition that causes sleep disturbances, delayed wound healing, and increased analgesic drug use. Massage therapy, which is typically administered by healthcare professionals, is a non-pharmacological approach to pain management. The goal of this study was to see how massage therapy performed by a patient's companion affected the intensity of pain in post-CABG patients. Massage treatment administered by a patient's companion who had been educated by a nurse was an excellent pain management method in post-CABG patients. This may also encourage the patient's family to participate in the care process [17].
- 12) A controlled study centering on the effects of massage therapy as an intervention for pain management during labor gathered subjective assessments of the childbirth experience. Findings express that along with fatigue and fear, pain during labor increases quickly as it progresses. Appropriate contact modalities may assist in relieving pain as the patient may tend to seek soothing contact and prevent intrusive touch. A proposed gating mechanism theory at the spinal cord also states that an increase in small-diameter nerve fiber activity opens the gate and transmits pain impulses to the spinal cord and brain. Meanwhile, activating the large diameter fibers with massage and pressure activity closes the gate and inhibits the transmission of pain. Therefore, the pressure from a massage blocks pain impulses to the brain by increasing A-fibre transmission and stimulating the local release of endorphins [18].
- 13) The aim of the study is to evaluate the effectiveness of massage in improving symptoms and health-related factors affecting the quality of life of patients with fibromyalgia. The meta-analysis from 145 participants presented that in contrast to the placebo, myofascial release had large, positive effects on pain while having medium effects on anxiety and depression by the end of treatment [19].
- 14) Massage therapy is becoming increasingly popular as a treatment for osteoarthritis and rheumatoid arthritis. No systematic reviews of the effects of massage treatment on these conditions have been conducted to date. The primary objective of this review was to analyze and integrate the available evidence addressing the impact of massage therapy as a stand-alone treatment on pain and functional outcomes in patients with osteoarthritis or rheumatoid arthritis [20].
- 15) This analysis compared the effectiveness of Healing Touch and Oncology Massage on the pain of a breast cancer subgroup. Both Healing Touch and Oncology Massage showed clinically significant improvements in pain. However, more studies are needed to explore attitudes toward treatment status on modality self-selection and the potential influence of cancer stage [21].
- 16) 10% of U.S. babies are preterm. Some NICUs use massage therapy to help premature babies. This article reviews randomized controlled trials of neonatal massage. Most studies on massage's influence on premature babies' weight gain show a positive effect. Massage increases neonates' vagal tone, which may promote weight gain. More research is needed to understand how massage helps preterm babies acquire weight. Further research is required to confirm advantages in developmental scores, stress behavior, immune system, pain tolerance, and hospital discharge. Infant massage needs more study, especially randomized controlled studies [22].
- 17) Data for this study was obtained from study authors and entered into an individual patient data meta-analysis with pain and function as the main outcome measures. Data from a total of 20,827 patients from 39 trials was utilized. The study concluded that acupuncture was effective for treating chronic musculoskeletal, headache, and osteoarthritis pain. The effects of acupuncture treatment also persist over time and cannot be attributed to placebo effects [23].
- 18) We looked at RCTs that support the highest-graded recommendations for integrative therapies throughout breast cancer patient experience and treatment side effects. Breast cancer patients often experience anxiety, stress, sadness, and mood disorders. Massage boosts mood, and acupressure and electroacupuncture lower CINV. Given the evidence of benefit and minimal risk, these therapies can be incorporated into inpatient care, especially with poor symptom control. Integrative approaches modify symptom management like many traditional treatments. A patient-centered trial and evaluation procedure may be needed based on recommendations and patient preferences. Patients employ many more integrative therapies without evidence besides those in this study that obtained a C or D. More research is needed to help people and health care providers avoid harm. Meanwhile, clinicians and patients should be cautious with medicines that have a C or D grade and fully understand the risks and benefits of use [24].
- 19) The goal of this study was to better understand the effectiveness of mobilization and manipulation techniques for treating chronic non-specific low back pain. Both treatments appear to be safe alternatives to opioid treatments. However, manipulation therapy appears to produce a larger effect than mobilization [25].

- 20) Using predetermined criteria, we selected systematic reviews of randomized trials of pharmacological (acetaminophen, nonsteroidal anti-inflammatory drugs [NSAIDs], opioids, skeletal muscle relaxants, benzodiazepines, antidepressants, anti-seizure medications, and systemic corticosteroids) and nonpharmacological (psychological therapies, multidisciplinary rehabilitation, spinal manipulation, acupuncture, massage, exercise and related therapies, and varicose vein injection). In addition, we included randomized trials not included in systematic reviews. The quality of the included studies was evaluated, data were retrieved, and conclusions were qualitatively summarized based on the body of evidence [26].
- 21) Low back pain is a common and costly musculoskeletal problem. 75% to 80% of people experience it. Massage reduces pain and speeds recovery. This update contained 25 trials and 3096 individuals. Nonprofits provided the most money. Adults with subacute or chronic LBP participated in one study (CLBP). A mechanical device was used for massage in three trials, while hands were used in the rest. Performance and measurement bias was most common in this research since it's hard to blind participants, massage therapists, and outcome monitors. We evaluated the evidence from "poor" to "very low" due to bias and imprecision [27].
- 22) The study shows massage therapy's efficacy in treating myofascial pain syndrome in stomatognathic muscles. Myofascial pain (MFP), a noninflammatory muscle disorder, causes head pain. Massage therapy reduces pain and restores muscular length and flexibility. Manual treatment reduces pain by activating a pain-gate and descending pain suppression mechanism. Massage reduces tension and anxiety and improves mood [28].
- 23) 15% of people have migraines. Some people cannot tolerate migraine medication due to side effects or prefer not to be treated. Alternative treatments include non-pharmaceutical methods. We reviewed RCTs of manual migraine therapy. Massage therapy, physiotherapy, relaxation, and chiropractic spinal manipulative therapy may prevent migraines and propranolol and topiramate. The RCTs studied showed methodological problems. Therefore, well-conducted RCTs on manual migraine therapies are needed [29].
- 24) Tuina Massage uses wobbling, rubbing, vibrating, squeezing, knocking, and articular movement for pain-alleviation, depression, chronic inflammation, and mechanical damage. Massage therapy modulates tissue temperature, chemical mediator levels, brainwave activity in self-awareness and arousal management, and peripheral C-fiber activity. Massage modulates peripheral and central pain pathways, according to research. [30].
- 25) Erythromelalgia causes temperature-dependent redness, discomfort, and warmth. Pain can interfere with daily life and the workplace, leading to isolation, sadness, and anxiety. Massage therapy increases relaxation, reduces stress and muscle tension, and improves vital sleep patterns [31].
- 26) Cancer patients often experience pain. Opioid painkillers can cause dangerous side effects. Massage therapy is used in primary carcinoma treatment for its physical, physiological, and psychological effects. Swedish massage, which includes effleurage, petrissage, friction, tapotement, and vibration, modifies skin and muscle blood flow and oxygenation. Pressure may stimulate vagal activity, lowering stress hormones and arousal. Autonomic nervous system parasympathetic reaction induces calm [32].
- 27) Many people experience pain and anxiety as a result of hospitalization. Touch is becoming increasingly important in hospitals for hospitalized patients. This study shows a strong correlation between pain reduction and statistically significant differences in pain scores before and after massage therapy. It is a hopeful sign that safe, skilled touch is being recognized as a mechanism of healing for patients in the acute care setting [33].
- 28) There are few treatments for back pain backed up by solid scientific evidence. Conventional treatments have had limited success, and more patients are turning to alternative therapies. This study assesses the effectiveness, safety, and costs of a number of complementary and alternative medical therapies for treating back pain [34].
- 29) 5 weeks of massage therapy significantly improved pain, anxiety, and depression in fibromyalgia patients, a systematic review of studies has found. The review was consistent with previous studies that supported the use of massage for the treatment of chronic pain and other symptoms associated with Fibromyalgia [35].
- 30) Informing is extremely crucial when treating various symptoms of people who will be receiving palliative care. Massage therapy is especially valuable to patients who have a limited social network. Patients who have little physical contact, affection, or security may respond better to massage therapy [36].
- 31) Massage therapy reduces pain intensity and anxiety in patients undergoing tibial shaft fracture surgery and is also a noninvasive and acceptable intervention in orthopedic surgery. The results of a pre-post design randomized clinical trial were published in the British Journal of Sports Medicine [37].
- 32) A pilot study has shown the feasibility of providing manual treatments for cancer in nursing homes. The majority of the effect sizes observed were in the medium range. When compared to Swedish Massage, reflexology appeared to provide a slight advantage in terms of outcomes. This may be because acupressure points during Reflexology treatments may be stimulated [38].
- 33) Swedish massage is the systematic application of manual pressure and movement of soft tissue with rhythmic pressure and stroking to attain or maintain health. Multiple research has demonstrated its numerous benefits. The purpose of this study was to identify the findings of previous studies that evaluated the advantages of Swedish massage for diverse demographics [39].



- 34) The goal of this study was to compare the effects of massage and isometric exercises on primary dysmenorrhea. Only the massage group experienced a significant reduction in anxiety level after the third cycle. According to the current findings, massage therapy appears to be effective in reducing some symptoms [40].

#### 4. CONCLUSION

A Journal on the Effectiveness of Massage Therapy in Pain Management and Treatment data offered in this study is an overview of available studies on the effectiveness of massage. Massage treatment for short-term and long-term pain, evidence in a summary of systematic reviews included in this study. Most massages are thought to be safe. If you have a significant medical condition, see your doctor before obtaining one. You might want to ask your doctor for massage therapist suggestions so you can discover someone who suits your requirements. To properly define the scope of massage treatment, more study on the long-term benefits, cost-effectiveness, and practicality is necessary. This review emphasizes the amount and rapid increase of massage-related research, which reflects rising interest in massage's efficacy as a therapeutic method. This rising body of research should help practitioners offer massage as a treatment option. While various indications for massage treatment have yet to be shown in the scientific literature, massage therapy may still be advised based on its outstanding safety profile and anecdotal evidence. Clinicians are urged to engage with professional massage practitioners in the context of integrative medicine in order to provide the best care for their patients.

#### REFERENCES

- [1] Zelaya CE, Dahlhamer JM, Lucas JW, Connor EM. (2020). Chronic pain and high-impact chronic pain among U.S. adults, 2019. NCHS Data Brief, no 390. Hyattsville, MD: National Center for Health Statistics.
- [2] Pharmacokinetics and -dynamics of Opioids | ATrain Education. (2020). ATrain Education |. Retrieved May 10, 2022, from <https://www.atrainceu.com/content/4-pharmacokinetics-and-dynamics-opioids>
- [3] Shryer, D. (2022, May 1). The Rise of Massage Therapy in Pain Management. American Massage Therapy Association. Retrieved May 10, 2022, from <https://www.amtamassage.org/publications/massage-therapy-journal/massage-therapy-in-pain-management/>
- [4] Pain Management & Opioid Use. Aafp.org. (2022). Retrieved 10 May 2022, from <https://www.aafp.org/family-physician/patient-care/care-resources/pain-management.html>.
- [5] Massage Therapy and Pain Relief | AMTA. American Massage Therapy Association. (2022). Retrieved 10 May 2022, from <https://www.amtamassage.org/resources/massage-and-health/pain-relief/>.
- [6] How To Write a Methodology for a Publishable Journal Article. (n.d.). Proof Reading Service. Retrieved May 13, 2022, from <https://www.proof-reading-service.com/>
- [7] Adams, R., White, B., & Beckett, C. (2010). The effects of massage therapy on pain management in the acute care setting. *International journal of therapeutic massage & bodywork*, 3(1), 4–11.
- [8] Kumar, S., Beaton, K., & Hughes, T. (2013). The effectiveness of massage therapy for the treatment of nonspecific low back pain: a systematic review of systematic reviews. *International journal of general medicine*, 6, 733–741. <https://doi.org/10.2147/IJGM.S50243>
- [9] Lovas, J., Tran, Y., Middleton, J. et al. Managing pain and fatigue in people with spinal cord injury: a randomized controlled trial feasibility study examining the efficacy of massage therapy. *Spinal Cord* 55, 162–166 (2017). <https://doi.org/10.1038/sc.2016.156>
- [10] Allen L. (2016). Case Study: The Use of Massage Therapy to Relieve Chronic Low-Back Pain. *International journal of therapeutic massage & bodywork*, 9(3), 27–30. <https://doi.org/10.3822/ijtmb.v9i3.267>
- [11] Suresh, S., Wang, S., Porfyrus, S., Kamasinski-Sol, R. and Steinhorn, D.M. (2008), Massage therapy in outpatient pediatric chronic pain patients: do they facilitate significant reductions in levels of distress, pain, tension, discomfort, and mood alterations?. *Pediatric Anesthesia*, 18: 884-887. <https://doi.org/10.1111/j.1460-9592.2008.02638.x>
- [12] Furlan AD, Giraldo M, Baskwill A, Irvin E, Imamura M. Massage for low-back pain. *Cochrane Database of Systematic Reviews* 2015, Issue 9. Art. No.: CD001929. DOI: 10.1002/14651858.CD001929.pub3. Accessed 10 May 2022.
- [13] Lee, S.-H., Kim, J.-Y., Yeo, S., Kim, S.-H., & Lim, S. (2015). Meta-Analysis of Massage Therapy on Cancer Pain. *Integrative Cancer Therapies*, 297–304. <https://doi.org/10.1177/1534735415572885>
- [14] Qureshi, A.R., Jamal, M.K., Rahman, E., Paul, D.A., Oghli, Y.S., Mulaffer, M.T., Qureshi, D., Danish, M.A. and Rana, A.Q. (2021), Non-pharmacological therapies for pain management in Parkinson's disease: A systematic review. *Acta Neurol Scand*, 144: 115-131. <https://doi.org/10.1111/ane.13435>
- [15] Crawford, C., Boyd, C., Paat, C. F., Price, A., Xenakis, L., Yang, E., & Zhang, W. (2016). The Impact of Massage Therapy on Function in Pain Populations—A Systematic Review and Meta-Analysis of Randomized Controlled Trials: Part I, Patients Experiencing Pain in the General Population. *Pain Medicine*, 17(7), 1353–1375. <https://doi.org/10.1093/pm/pnw099>

- [16] Yong Hong Cheng, Gui Cheng Huang, "Efficacy of Massage Therapy on Pain and Dysfunction in Patients with Neck Pain: A Systematic Review and Meta-Analysis", *Evidence-Based Complementary and Alternative Medicine*, vol. 2014, Article ID 204360, 13 pages, 2014. <https://doi.org/10.1155/2014/204360>
- [17] Znidarsic J, DO, Kirksey KN, PhD, Dombrowski SM, PhD, Tang A, MS, Lopez R, MS, Blonsky H, MAS, Todorov I, MD, Schneeberger D, PhD, Doyle J, MCS, Libertini L, Starkey J, LAC, Segall T LMT, Bang A, DC, Barringer K, LISW, Judi B, CYTERYT 500, Ehrman JPM MEd, RCHES, Roizen MF, MD, Golubić M, MD, PhD, "Living Well with Chronic Pain: Integrative Pain Management via Shared Medical Appointments." *Pain Medicine*, Volume 22, Issue 1, January 2021;181–190.
- [18] Najafi, S. S., Rast, F., Momennasab, M., Ghazinoor, M., Dehghanrad, F., & Mousavizadeh, S. A. (2014). The effect of massage therapy by patients' companions on severity of pain in the patients undergoing post coronary artery bypass graft surgery: a single-blind randomized clinical trial. *International journal of community based nursing and midwifery*, 2(3), 128–135.
- [19] Chang, M.-Y., Wang, S.-Y. and Chen, C.-H. (2002), Effects of massage on pain and anxiety during labour: a randomized controlled trial in Taiwan. *Journal of Advanced Nursing*, 38: 68-73. <https://doi.org/10.1046/j.1365-2648.2002.02147.x>
- [20] Yuan, S. L., Matsutani, L. A., & Marques, A. P. (2015). Effectiveness of different styles of massage therapy in fibromyalgia: a systematic review and meta-analysis. *Manual therapy*, 20(2), 257–264. <https://doi.org/10.1016/j.math.2014.09.003>
- [21] Nelson, N. L., & Churilla, J. R. (2017). Massage Therapy for Pain and Function in Patients With Arthritis: A Systematic Review of Randomized Controlled Trials. *American journal of physical medicine & rehabilitation*, 96(9), 665–672.
- [22] Gentile, D., Boselli, D., Yaguda, S., Greiner, R., & Bailey-Dorton, C. (2021). Pain Improvement After Healing Touch and Massage in Breast Cancer: an Observational Retrospective Study. *International journal of therapeutic massage & bodywork*, 14(1), 12–20.
- [23] Niemi A. K. (2017). Review of Randomized Controlled Trials of Massage in Preterm Infants. *Children (Basel, Switzerland)*, 4(4), 21. <https://doi.org/10.3390/children4040021>
- [24] Vickers, A. J., Vertosick, E. A., Lewith, G., MacPherson, H., Foster, N. E., Sherman, K. J., Irnich, D., Witt, C. M., & Linde, K. (2017, December 2). Acupuncture for chronic pain: Update of an individual patient data meta-analysis. *The Journal of Pain*. Retrieved May 13, 2022, from <https://www.sciencedirect.com/science/article/abs/pii/S1526590017307800>
- [25] Greenlee, H., DuPont-Reyes, M. J., Balneaves, L. G., Carlson, L. E., Cohen, M. R., Deng, G., Johnson, J. A., Mumber, M., Seely, D., Zick, S. M., Boyce, L. M., & Tripathy, D. (2017). Clinical practice guidelines on the evidence-based use of integrative therapies during and after breast cancer treatment. *CA: a cancer journal for clinicians*, 67(3), 194–232. <https://doi.org/10.3322/caac.21397>
- [26] Coulter, I. D., Crawford, C., Hurwitz, E. L., Vernon, H., Khorsan, R., Suttrop Booth, M., & Herman, P. M. (2018). Manipulation and mobilization for treating chronic low back pain: a systematic review and meta-analysis. *The spine journal : official journal of the North American Spine Society*, 18(5), 866–879. <https://doi.org/10.1016/j.spinee.2018.01.013>
- [27] Chou R, Deyo R, Friedly J, Skelly A, Hashimoto R, Weimer M, Fu R, Dana T, Kraegel P, Griffin J, Grusing S, Brodt E. (2016, February). Noninvasive Treatments for Low Back Pain. Comparative Effectiveness Review No. 169. (Prepared by the Pacific Northwest Evidence-based Practice Center under Contract No. 290-2012-00014-I.) AHRQ Publication No. 16-EHC004-EF. Rockville, MD: Agency for Healthcare Research and Quality
- [28] Amir Qaseem, Timothy J. Wilt, Robert M. McLean, et al; for the Clinical Guidelines Committee of the American College of Physicians .. Noninvasive Treatments for Acute, Subacute, and Chronic Low Back Pain: A Clinical Practice Guideline From the American College of Physicians. *Ann Intern Med*.2017;166:514-530. [Epub 14 February 2017]. doi:10.7326/M16-2367
- [29] Miernik M, Wieckiewicz M, Paradowska A, Wieckiewicz W. (2012, September). Massage therapy in myofascial TMD pain management. *Advances in Clinical and Experimental Medicine: Official Organ Wroclaw Medical University*. 21(5):681-685. PMID: 23356206.
- [30] Chaibi, A., Tuchin, P. J., & Russell, M. B. (2011). Manual therapies for migraine: a systematic review. *The journal of headache and pain*, 12(2), 127–133. <https://doi.org/10.1007/s10194-011-0296-6>
- [31] Starkweather, Angela. (2018). Massage Therapy in the Management of Pain. *Topics in Pain Management*. 34. 1-8. 10.1097/01.TPM.0000546415.43374.e5.
- [32] Dicks, Krista & Rizek, Philippe. (2010). Massage Therapy Techniques as Pain Management for Erythromelalgia: A Case Report. *International journal of therapeutic massage & bodywork*. 3. 5-9. 10.3822/ijtmb.v3i4.83.
- [33] Jane, Sui-Whi & Wilkie, Diana & Liao, Mei-Nan & Beaton, Randal & Lin, Yung-Chang. (2013). Effects of Massage Therapy on the Relief of Cancer Pain.10.1007/978-94-007-5833-9\_3.

- [34] Cherkin, PhD, D., Sherman, PhD, K., Deyo, MD, MPH, R., & Shekelle, MD, PhD, P. (2003, June 3). A Review of the Evidence for the Effectiveness, Safety, and Cost of Acupuncture, Massage Therapy, and Spinal Manipulation for Back Pain | *Annals of Internal Medicine*. ACP Journals. Retrieved May 10, 2022, from <https://www.acpjournals.org/doi/abs/10.7326/0003-4819-138-11-200306030-00011>
- [35] Li, Y., Wang, F., Feng, C., Yang, X., & Sun, Y. (2014, February 20). Massage Therapy for Fibromyalgia: A Systematic Review and Meta-Analysis of Randomized Controlled Trials. *Plos One*. Retrieved May 10, 2022, from <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0089304>
- [36] Falkensteiner, M., Mantovan, F., Muller, I., & Them, C. (2011, June 21). Review Article : The Use of Massage Therapy for Reducing Pain, Anxiety, and Depression in Oncological Palliative Care Patients: A. International Scholarly Research Network. Retrieved May 11, 2022, from <https://downloads.hindawi.com/archive/2011/929868.pdf>
- [37] Pasyar, PhD, N., Rambod, PhD, M., & Kahkhaee, MS, F. R. (2018, December). The Effect of Foot Massage on Pain Intensity and Anxiety in Patients Having Undergone a Tibial Shaft Fracture Surgery: A Randomized Clinical Trial. *Journal of Orthopaedic trauma*. Retrieved May 11, 2022, from [https://journals.lww.com/jorthotrauma/Abstract/2018/12000/The\\_Effect\\_of\\_Foot\\_Massage\\_on\\_Pain\\_Intensity\\_and.13.aspx](https://journals.lww.com/jorthotrauma/Abstract/2018/12000/The_Effect_of_Foot_Massage_on_Pain_Intensity_and.13.aspx)
- [38] Huntley, A., Lafferty, D., & Hodgson, N. (2012, July 24). Reflexology versus Swedish Massage to Reduce Physiologic Stress and Pain and Improve Mood in Nursing Home Residents with Cancer: A Pilot Trial. *Hindawi*. Retrieved May 11, 2022, from <https://www.hindawi.com/journals/ecam/2012/456897/>
- [39] Barreto, D., & Batista, M. (2017, March 01). Swedish Massage: A Systematic Review of its Physical and Psychological Benefits. *Europe PMC*. Retrieved May 11, 2022, from <https://europepmc.org/article/med/28659510>
- [40] Azima, S., Bakhshayesh, H. R., Kaviani, M., Abbasnia, K., & Sayadi, M. (2015, December). Comparison of the Effect of Massage Therapy and Isometric Exercises on Primary Dysmenorrhea: A Randomized Controlled Clinical Trial. *ScienceDirect*. Retrieved May 11, 2022, from <https://www.sciencedirect.com/science/article/abs/pii/S1083318815000339>
- [41] K, Ng & Cohen, Marc. (2011). The Effectiveness of Massage Therapy A Summary of Evidence-Based Research. Retrieved on May 13, 2022 from [https://www.researchgate.net/publication/229429563\\_The\\_Effectiveness\\_of\\_Massage\\_Therapy\\_A\\_Summary\\_of\\_Evidence-Based\\_Research](https://www.researchgate.net/publication/229429563_The_Effectiveness_of_Massage_Therapy_A_Summary_of_Evidence-Based_Research)
- [42] Is Pregnancy Massage Safe and Beneficial? (2007, January 1). *WebMD*. Retrieved May 13, 2022, from <https://www.webmd.com/baby/pregnancy-and-massage>
- [43] Silver, N. (2019, November 14). How Often Should You Get a Massage? *Healthline*. Retrieved May 13, 2022, from <https://www.healthline.com/health/pain-relief/how-often-should-you-get-a-massage#when-to-see-a-doctor>
- [44] Silver, N. (2019, November 14). How Often Should You Get a Massage? *Healthline*. Retrieved May 13, 2022, from <https://www.healthline.com/health/pain-relief/how-often-should-you-get-a-massage#when-to-see-a-doctor>
- [45] Lyle, L. (2004, April 19). Improper Massages Can Do More Harm Than Good. *Wave3*. Retrieved May 13, 2022, from <https://www.wave3.com/story/1796607/improper-massages-can-do-more-harm-than-good/>
- [46] European Pain Federation. (2021, September 30). What is the definition of pain? <https://europeanpainfederation.eu/history/what-is-pain/>
- [47] Vania Apkarian, Marwan N. Baliki, Paul Y. Geha. (2009). Towards a theory of chronic pain. *Progress in Neurobiology*. Volume 87, Issue 2. Pages 81-97. ISSN 0301-0082. <https://doi.org/10.1016/j.pneurobio.2008.09.018>.
- [48] Cathy M. Russo, MD and William G. Brose, MD. (1998, February). Chronic Pain: Annual Review of Medicine. Volume 49:1, 123-133. <https://doi.org/10.1146/annurev.med.49.1.123>
- [49] Michael A Ashburn, Peter S Staats (1999). Management of chronic pain. *The Lancet*. Volume 353, Issue 9167. Pages 1865-1869. ISSN 0140-6736. [https://doi.org/10.1016/S0140-6736\(99\)04088-X](https://doi.org/10.1016/S0140-6736(99)04088-X).