

Use of Quranotherapy, a modality of transcendental meditation, for pain management in children

Uso de la Coranoterapia, una modalidad de meditación trascendental, para el manejo del dolor en niños

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Dear Editor:

Pain is a significant public health problem that affects all populations and has significant financial, physical and psychological impact ^[1]. Pain is the most common complaint reported by children who access the emergency departments. Chronic pain, defined as persistent or recurring pain or pain lasting longer than 3 months, is also a common problem in childhood and adolescence ^[2]. Although the prevalence of chronic pain varies by pain type, approximately 1 in 5 children and adolescents experience chronic pain, with girls often experiencing a higher prevalence than boys overall and in headache, back pain, and other pain ^[2].

Pain management in children requires pharmacological and non-pharmacological therapies ^[3]. Parents reported using more physical and psychological therapies than pharmacological therapies to manage their child's pain ^[4]. Non-pharmacological therapies used for pain management in infants and children can be categorized as physical, cognitive behavioral, mind-body and nutritional therapies ^{[3][5]} (Table 1). Mind-body therapies can be used in children with both acute and chronic pain to improve pain management and quality of life ^[1]. Herein, we discuss use of Quranotherapy (or Quranic therapy), a modality of mind-body therapies, for pain management in children to attract attention to the importance of non-pharmacological therapies, overlooked by many health professionals.

Mind-body therapies are defined as practices that focus on the interactions among the brain, mind, body, and behavior, with the intent to use the mind to affect physical functioning and promote overall health. Meditation, one of the mind-body therapies, is the act of giving your attention to only one thing, either as a religious activity or as a way of becoming calm and relaxed ^[6]. Transcendental meditation is a brand name for a method of making the mind calm and becoming relaxed by silently repeating a special word or series of words many times ^[6]. Quranotherapy, a modality of transcendental meditation, involves reciting, reading and listening to the Quran to improve physical, social, mental, spiritual and/or religious health ^[7]. Transcendental meditation technique is intended to reduce physiologic arousal and increase alertness, achieved through an "adaptive efficiency of physiologic processes rather than reduction of somatic arousal during stress" ^[8].

Meditation and mindfulness techniques have been shown to produce benefits for pain, anxiety, depressive, and other negative affects, behavioral and emotional symptoms, and somatic functioning ^[9]. These techniques produce neurobiological changes in the brain and physiologic improvements in body function that have been shown to be enduring for patients who continue to practice these techniques. Moreover, no significant adverse effects have been identified ^[9].

Quranotherapy has been found to be beneficial in relieving pain in children with various disorders. Ahmed et al. ^[9] evaluated the effect of yoga, progressive relaxation program, and Quranotherapy on pain severity in children with sickle cell disease. Quranotherapy

Table 1. Non-pharmacological Therapies for Pain Management in Infants and Children.

Non-pharmacological Therapies for Pain Management	
<p>Physical Therapies</p> <ul style="list-style-type: none"> • Aquatherapy (hydrotherapy or water therapy). • Cryotherapy, cold and heat application, heel warming. • Massage, acupressure, rubbing, muscle relaxation. • Positioning, holding, embracing, rocking with or without simulated. • Sucking, non-nutritive sucking, pacifier use. • Swaddling, tucking, facilitated tucking. • Touch, therapeutic touch, stroking, soothing. • Transcutaneous electrical nerve stimulation. <p>Mind-body Therapies</p> <ul style="list-style-type: none"> • Acupuncture. • Aromatherapies such as oils, volatile and familiar or unfamiliar odor. • Arts such as dance, poetry, and theater. • Biofeedback. • Homeopathy. • Hypnosis. • Laughter therapy. • Meditations such as imagery with or without guided, breathing exercises, music therapy, prayer, religious-spiritual interventions, and Quranotherapy. • Mindfulness. • Reiki. • Relaxation. • Yoga. 	<p>Cognitive Behavioral Therapies</p> <ul style="list-style-type: none"> • Animal-assisted therapy. • Bibliotherapy. • Day-dreaming, rest, sleep. • Distraction techniques such as clown, toy, cartoon, video and virtual reality distraction. • Environmental modifications such as a quiet environment, decreasing environmental stimuli, dim lights, limiting visitors to decrease noise, and music. • Kangaroo-mother care, skin-to-skin contact, co-bedding. • Mirror therapy. • Normalizing life such as school attendance, sleep hygiene, social, sports, and exercise. • Parent, non-parent (or carer) involvement or presence. • Parental education. • Post-application rewarding. • Providing preprocess information. • Speaking, mother's voice, simulated mother's voice. • Therapeutic play (or play therapy). • Video therapy. <p>Nutritional Therapies</p> <ul style="list-style-type: none"> • Breastfeeding, milk. • Glucose, sucrose, sweet solution. • Tea. • Vitamin. • Water, fluid intake.

was the most effective in reduction on the severity of pain marked immediately and after three months of application [9]. Mahmoud Farrag et al. [10] studied non-pharmacological strategies including “rewarding a child for his brave behaviors”, “steps in the sky”, “frog breathing”, and “Quranotherapy” among children on dialysis. Quranotherapy was the most effective for mitigating pain and anxiety among children in the intervention group [10]. Quranotherapy was found effective in reducing postoperative pain in children [11].

The effects of Quranotherapy on pain during invasive procedures in newborns have also been investigated. Quranotherapy reduced pain level in the neonates during venipuncture or intravenous procedure or heel stick in neonates [12][13]. Kurdahi Badr et al. [14] reported that the Quran mothers listened to during pregnancy was beneficial for preterm infants, as it decreased pain and improved behavioral states during a heel stick. Majidipour et al. [15] studied the effects of the Quran recitation on the physiological indicators of pain in premature infants. The Quran recitation led to a decrease in the heart rate and an increase in the oxygen saturation level during and after blood sampling at all the evaluated time points in preterm infants, but it was effective on the respiratory rate only 20 minutes after the intervention [15].

In conclusion, we would like to emphasize that there are many non-pharmacological therapies used to manage pain in children and that parents use non-pharmacological therapies than pharmacological therapies to manage their child's pain. Non-pharmacological therapies reduce the adverse events of drug use by contributing to the reduction of drug use and they may also improve the effectiveness of medications. Secondly, Quranotherapy, a transcendental meditation method, is effective in treating pain in both children and adults [16]. Randomized controlled studies should be conducted on this subject in societies with different beliefs and socio-cultural structures, because the Quran is a unique, comprehensive sacred book comprising many books to which recourse may be had for all the needs of all mankind [17].

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