

Outcomes of non-pharmacological nursing interventions' on patients with chronic pain

Abstract

Considering the high number of people who experience chronic pain, with need of differentiated care, it is relevant to identify non-pharmacological nursing interventions in pain control and health gains. The objective of this paper is to identify nursing intervention and outcomes of non-pharmacological measures in chronic pain. The results of the analysis of literature allow us to synthesize some efficient interventions as: (1) auricular point acupressure; (2) hearing stimulation; (3) manipulation of the cervical and thoracic spine; (4) therapeutic massage (5) physical activity; (6) incentive the use of woolen underwear; (7) therapeutic dialogue and (8) behavioral interventions. Significant improvements in pain control as found, like increased functional capacity, improved quality of life, control of psychological maladjustment, and increased health literacy. This nursing interventions are recommended in the hospital environment and in primary health care.

Keywords: nursing care, interventions non-pharmacological, chronic pain, outcomes

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Chronic pain is a subjective, complex, and multidimensional experience and it constitutes the type of pain that creates bigger consequences on the persons, with a significant impact in quality of life and on the society.¹ According to Pain Proposal,² a project developed to evaluate chronic pain's impact on Europe, chronic pain affects approximately 36% of the Portuguese population with over 18 years old. It creates suffering in around 3 million individuals and has a negative influence on health, well-being, daily life activities and professional performance, which accounts to elevated costs of the country's nation health system and national economy. Furthermore, this project assessed the economic effect of chronic pain in the individuals that are on labor inactivity due to chronic pain for at least 14 days per year, which resulted in costs around 290 million euros/ per year, supported by social security.

The individual suffering caused by pain predispose to the isolation, negative feelings and neglect of their own needs, due to the low self-esteem and altered body image perception, that compromising their relationship with the others. Caring for the patient with pain is a gratifying challenge for the nurse, who holds specialized knowledge about different therapeutic interventions, mainly on the non-pharmacological ones. These non-pharmacological interventions must be chosen according to the patient's preferences as well as the goals of the treatment and in agreement with the more recent scientific evidence.³ So is important analyze previous studies with non-pharmacological nursing intervention to understand their impact in well-being and quality of life of the patients with chronic pain, as the health gains for the economic system.

Kiyak's⁴ conducted a randomized controlled study, which evaluates the benefit of wearing wool underwear in adults suffering from chronic low-back pain. These research verifies that wool has a bigger capacity of heat-retaining, when compared to regular fiber, and improving muscular tension, reducing the pain intensity and improving the general functionality. The treatment group reported

that they consumed less analgesics, less anti-inflammatory drugs and less muscle-relaxant drugs when compared to the control group. Panpanit et al.⁵ study verified that Education Programmer that include pain and symptom management strategies as well a healthy lifestyle behaviors and problem-resolution strategies have a positive result on individual's functionality and self-management. The American Pain Society recommends patient education as a fundamental first step to pain control preceding to any type of pharmacological intervention. The multidisciplinary chronic pain management program presented by Dysvik et al.⁶ has demonstrated that the use of Behavioral Cognitive Therapy on chronic pain help to increase their quality of life, as well as their functional capacity.

According to Yeh et al.,⁷ auricular acupressure had notorious results changing pain intensity on individuals suffering from low-back chronic pain. It verified a 30% reduction of pain intensity immediately after the first session and a continuous improvement until 44% reduction by the end of the treatment. A study developed by Lara-Palomo et al.⁸ exposed the effectiveness of the combined procedure of the massage and electrotherapy in individuals suffering from low-back chronic pain of a non-mechanic etiology. The rating scales were applied before the treatment and immediately after the last treatment and concluded that it resulted in improvements on functional capacity, pain management and quality of life.

A randomized study of Saavedra-Hernández et al.⁹ compared the use of cervical spine manipulations in mechanic cervical chronic pain, against the use of more complex manipulations in the cervical, cervico-thoracic and thoracic spine. This study permit concluded that complex manipulations increase the functional capacity, while the pain reducing is similar in both types of manipulations. Furthermore, in both types of manipulation an increase of the cervical movement's range of motion was verified (Table 1).

The non-pharmacological nursing interventions have been developed from a vision that integrates the individual's bio-

psychosocial level, empowerment and making patient the main responsible for this process of rehabilitation. It is commonly agreed, that the non-pharmacological interventions only by themselves do not replace the pharmacological ones, but the combination of both brings a wide range of benefits to the treatment of chronic pain. In the functional state of the individual, literature points relevant positive changes in sleep patterns. The nurses promotes adaptive strategies, treatment-adherence and self-control. The pain self-management is empowered by the health literacy, which help to acquire knowledge on how to deal, manage and taking control of his own health conditions. The pain control is an outcome that had influence on the physical, emotional and social status.

Table 1 Non-pharmacological intervention to control chronic pain and outcomes

	Interventions	Outcomes
Pain Management	1 - Multidisciplinary Chronic Pain Management Programme ⁶	1 - Pain Intensity reduction ^{4,7}
	2 - Electro-massage with interferential current ⁸	2 - Decreased pain perception ⁶
	3 - Auditory and Visual stimulation ¹⁰	3 - Decrease usage of drugs ^{4,10}
Functional State	4 - Use of woollen undergarments ⁴	4 - Functional capacity improvement ^{8,9}
	5 - Auricular Acupressure ⁷	5 - Quality of Life improvement ^{6,8}
	6 - Follow-up Programmes ⁶	6 - Better sleep pattern ¹⁰
Coping Strategies	1 - Group-Therapy Sessions ⁵	1 - Self-management Improvement ^{5,6}
	2 - Problem-solving strategies ⁵	2 - Therapeutic Adherence promotion ⁵
	3 - Behavioural Cognitive Therapeutic ⁶	3 - Distress reduction ⁵
	4 - Therapeutical Dialogue ⁶	
Quality of Life	1 - Group-Sessions Family Participation ⁵	1 - Family workload relief ⁵
	2 - Pain treatment information ⁵	3 - Nursing care satisfaction ⁵
	3 - Practitioners' Evaluation ⁵ (reduction in pharmacological drugs' usage) ^{4,10}	4 - Cost-Effective relation
Literacy	1 - Health Education (healthy lifestyles) ⁵	1 - Rational utilization of health services ⁵

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Conflicts of interest

The authors declare no conflicts of interest.

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