

[Special article]

Call No. 01/2018 – Publication of scientific articles in the original article and systematic and integrative review categories under the topic "Advanced Nursing Practice: Specialized care and leadership in the building of excellence in nursing".

Integrative Review=

Nursing practices in patients with chronic pain: an integrative review

Práticas de enfermagem ao paciente com dor crônica: revisão integrativa Prácticas de enfermería para pacientes con dolor crónico: revisión integrativa

Juliane de Macedo Antunes¹
Donizete Vago Daher¹
Maria Fernanda Muniz Ferrari¹
Lara Clarete Cavalcante Muniz Pereira¹
Magda Faria²
Mariana Cabral Sveichtizer³
Marcia Morete⁴
Cecília Izidoro⁵

Keywords

Chronic pain; Nursing care; Pain clinics

Descritores

Dor crônica; Cuidados de enfermagem; Clínicas de dor

Descriptors

Dolor crônico; Atención de enfermería; Clínicas de dolor

Submitted

September 1, 2018

Accepted

January 28, 2019

Abstract

Objective: To know the benefits of nursing practices to patients with pain followed-up in the pain clinic.

Methods: Integrative literature review, using the electronic portal SCIELO, CINAHL and PubMed Central databases, with time cut from 2008 to 2018 and data collection period between June and July 2018. The Health Science Descriptors (DeCs) and Medical Subject Heading (MeSH) were: Patients, Chronic pain, Nurse Care, Pain clinic.

Results: It was evidenced that the production analyzed is mostly on non-pharmacological nursing practices for patients with chronic pain, with reduced publications in Brazil and tended to focus on the last five years. The patient with this type of injury experiences multifactorial conditions that directly influence the health condition, and requires integral follow-up by interprofessional team, including the care network, through qualified and resolutive interventions, aiming at adaptation and/or improvement of their health condition.

Conclusion: The studies indicate benefits generated by systematized practices implemented by nurses, through instruments and tools for

Conclusion: The studies indicate benefits generated by systematized practices implemented by nurses, through instruments and tools for detection, intervention and evaluation, as well as clinical support.

Resumo

Objetivo: Conhecer os benefícios das práticas de enfermagem aos pacientes com dor acompanhados na clinica de dor.

Métodos: Revisão integrativa de literatura, sendo utilizado o portal eletrônico SCIELO, e base de dados CINAHL e PubMed Central, com recorte temporal de 2008 a 2018 e período de coleta de dados entre junho e julho de 2018. Como descritores em saúde (DeCs): Pacientes, Dor crônica, Cuidados de Enfermagem, Clínicas de dor; e, o Medical Subject Heading (MeSH): Patients, Chronic pain, Nurse Care, Pain clinic.

Resultados: Evidenciou-se que a produção analisada é, majoritariamente, sobre práticas de enfermagem não farmacológica a pacientes com dor crônica, com publicações reduzidas no Brasil e tendem a se concentrar nos últimos cinco anos. O paciente com este tipo de agravo, vivencia condições multifatoriais que influenciam diretamente na condição de saúde, e necessitando de acompanhamento integral por equipe interprofissional, com inclusão da rede cuidadora, através intervenções qualificadas e resolutivas, visando adaptação e ou melhora da sua condição de saúde.

Conclusão: Os estudos indicam benefícios gerados pelas práticas sistematizadas implementadas por enfermeiros, por meio de instrumentos e ferramentas para detecção, intervenção e avaliação, além de apoio clínico.

Resumen

Objetivo: Conocer en la literatura la producción científica sobre prácticas de enfermería para pacientes con dolor crónico realizada en las clínicas de dolor.

Métodos: Revisión integrativa de literatura, utilizando el portal SCIELO, y las bases CINAHL y PubMed Central, con recorte temporal de 2008 a 2018 y período de recolección de datos de junio a julio de 2018. Como descriptores de salud (DeCs): Pacientes, Dolor Crónico, Atención de Enfermería, Clínicas de Dolor; y, en Medical Subject Heading (MeSH): Patients, Chronic pain, Nurse Care, Pain clinic.

Enfermería, Clínicas de Dolor; y, en Medical Subject Héading (MeSH): Patients, Chronic pain, Nurse Caré, Pain clinic.

Resultados: Se evidenció que la producción analizada se refiere principalmente a prácticas de enfermería no farmacológica a pacientes con dolor crónico, con publicaciones reducidas en Brasil, que tienden a concentrarse en los últimos cinco años. Los pacientes con este tipo de problemas experimentan condiciones multifactoriales que influyen directamente en su estado de salud y necesitan un seguimiento completo por equipo interprofesional, incluyendo la red de atención, mediante intervenciones calificadas y resolutivas, con el objetivo de adaptar y/o mejorar su estado de salud.

Conclusión: Los estudios indican beneficios generados por las prácticas sistematizadas implementadas por enfermeros, a través de instrumentos y herramientas de detección, intervención y evaluación, además del apoyo clínico. El propósito es mejorar la calidad de vida, la adhesión al tratamiento, manejo del autocuidado y minimización del sufrimiento en pacientes con dolor crónico.

Corresponding author

Juliane de Macedo Antunes https://orcid.org/0000-0002-9763-8291 E-mail: julianedemacedoantunes@hotmail.com

D0I

http://dx.doi.org/10.1590/1982-0194201800093



How to cite:

Antunes JM, Daher DV, Ferrari MF, Pereira LC, Faria M, Sveichtizer MC, et al. Nursing practices in patients with chronic pain: an integrative review. Acta Paul Enferm. 2018;31(6):681-7.

¹Escola de Enfermagem Aurora Afonso Costa, Universidade Federal Fluminense, Rio de Janeiro, RJ, Brazil.

²Faculdade de Enfermagem, Universidade do Estado do Rio de Janeiro, Rio de Janeiro, RJ, Brazil.

Escola Paulista de Medicina, Universidade Federal de São Paulo, São Paulo, SP, Brazil. Hospital Israelita Albert Einstein, São Paulo, SP, Brazil.

⁵Escola de Enfermagem Anna Nery, Universidade Federal do Rio de Janeiro, Rio de Janeiro, RJ, Brazil.

Conflict of interest: none known

Introduction =

The focus of nursing attention is the human being, with its bio-psycho-socio-spiritual needs, with the primary function of instituting nursing practices, promoting health, preventing diseases and, recovering and rehabilitating health, with care capable of meeting needs of patients. The care, present in the different practices, adds actions of the nature of the profession, resulted from a technical and scientific preparation that is based on empirical, personal, ethical, aesthetic and political knowledge, aiming to promote health and human dignity. It requires greater application of knowledge, which guides the practices of these professionals in the search for objective and subjective data from the patient.

In this sense, nursing should pay special attention to pain. It has always been present in the life of man and its chronification negatively impacts the physical and mental health of the human being. (4) The need for pain to be recognized as a vital sign has the objective of raising the awareness of health professionals about their treatment and adequate therapeutics. (5) Currently, this definition is in the process of hospital accreditation, as in the case of the Joint Commission on Accreditation of Healthcare Organizations (JCAHO). (6)

Patients suffering from pain should be assisted by multidisciplinary and interdisciplinary health team in the design of a multidimensional model of care. Thus, the Pain Clinics model is highlighted, in which they differ from a multidisciplinary pain center, since they include research activities and academic teaching in their regular programs. Participating professionals can be physicians, nurses, mental health professionals and physiotherapists, and must be able to manage evidence-based, patient-centered care. Description

Considering the need to expand knowledge and given the scarcity of production, it was aimed to know in the literature the scientific production on nursing practices to patients with chronic pain accompanied in the pain clinics.

Methods

Integrative literature review (IRL) is a research method developed in evidence-based medicine that allows the incorporation of evidence into clinical practice. It consists of gathering and systematizing research results on a given topic. It has 6 different and complementary stages in its course: elaboration of the research question, search for studies, data extraction, analysis of included studies with interpretation of the results and presentation of the review.⁽¹⁰⁾

For this study, we used the PICo strategy (Population, Phenomenon of Interest and Context) to guide data collection, a specific guide to extract information and classify the quality of the results. (11) In this review, Population (P) covered patients with chronic pain; the Phenomenon of Interest (I), the nursing practices and the Context (Co) referred to the pain clinics.

In the first stage of IRL, the guiding question was created from the strategy mentioned above: What is the impact of nursing practices on patients with chronic pain followed-up in the clinic of Pain?

Following the second step, we performed the search using the Health Sciences Descriptors (DeCs), in the electronic portal SCIELO, with the boolean phrase: ("patients") AND ("chronic pain") AND ("nursing care") AND ("pain clinics") totaling 10 articles. The Medical Subject Heading (MeSH) was used in the CINAHL and PubMed Central database: (patients) AND ("nursing care" OR "care, nursing" OR "nursing care Plan" OR "nursing interventions") AND ("pain clinics" OR "pain clinic" OR "Clinic, Pain")), with respectively 32 and 220 articles.

In this study, the key word "nursing practices" was replaced by the descriptor "nursing care", because it allows the expansion of scientific findings.

The searches was conducted between June and July 2018, as inclusion criteria were considered: articles in English, Spanish and Portuguese languages, published between 2008 and 2018, that addressed nursing practices to patients with chronic pain followed-up in pain clinics.

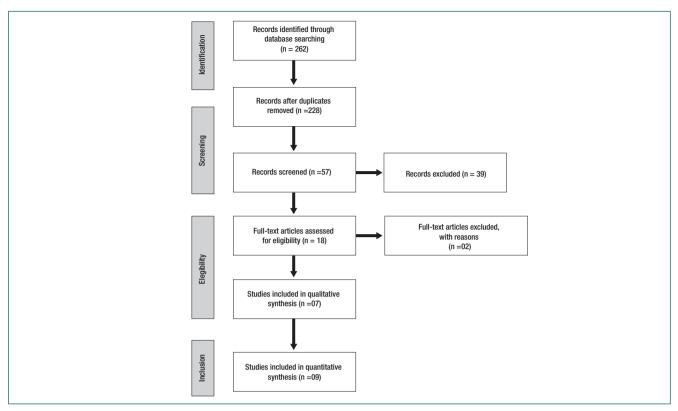


Figure 1. Flowchart with eligibility representation and inclusion of articles in the selection of studies

As exclusion criteria, other forms of publication were chosen that did not respond to the guiding question, did not present content related to the research topic, duplicated articles in other databases.

To assist in choosing the best possible evidence, a hierarchy of evidence is proposed: 1: Systematic reviews; 2: evidence obtained in individual studies with experimental design; 3: evidence from quasi-experimental studies; 4: evidence from descriptive or qualitative studies; 5: evidence from case or experience reports; 6: evidence based on expert opinions. (12)

The analysis of the studies was carried out in a descriptive way with the purpose of answering the research question, taking into account ethical aspects, respecting the authorship of the ideas, concepts and definitions present in the included articles. The titles and summaries of the articles were evaluated in order to refine the sample, highlighting those that responded to the proposed objective of this review. Subsequently, exhaustive reading of each selected publication, subsidizing reflections about the health scenario, seeking to identify rel-

evant aspects that were repeated or highlighted. Afterwards, the articles were organized in order to collect data for the construction of IRL.

The analysis occurred critically identifying the issues pertaining to each article. They were grouped by levels of evidence, identifying different methodologies, as well as samples and data collection technique.

In the initial search, performed by two independent reviewers, with a standardized protocol for the use of descriptors and cross-referencing, we found, initially, 262 articles. After applying the inclusion and exclusion criteria, there were 57 studies that after reading the titles and abstracts, 18 were analyzed, of which 02 were excluded because they did not address the topic (Figure 1).

Results

The scientific production analyzed was 16 articles, 31.25% of which were indexed in the CINAHL database, 56.25% PUBMED and 12.5% in the

SCIELO portal; mostly on nursing practices, with reduced publications in Brazil and concentrated in the last five years (75%). The most prevalent study designs were randomized clinical trials (31.25%), followed by a systematic and qualitative review (18.75%); and experimental, almost experimental, experience report, case study and literature review (6.25%). The nursing practices provided to the patient with chronic pain formed

a totality in the findings, with 25% of non-pharmacological interventions; 18.75% of educational practices; 12.5% interface with the team, patient follow-up by telephone and home Visits; 6.25% Pain Assessment, Nursing Prescription and Adequate Registry.

The 4th and 5th stages were performed concomitantly, where analysis and interpretation of the results occurred (Chart 1).

Chart 1. Synthesis of data collection

Author/ Year/ Country	Design	Level of evidence	Nursing practices	Results
Freire et al, 2018 Brazil ⁽¹³⁾	Systematic review	1	Non-pharmacological interventions	Therapeutic interventions of physical, emotional and spiritual aspects that promoted the improvement of the health conditions of the patient his QoL, evidenced by means of validated measurement scales and reliable statistical power, described in the respective studies.
Oliveir, et al, 2013 Brazil [®]	Descriptive, qualitative	4	Educational practices to assess pain and Non-pharmacological interventions	The nurse can evaluate, examine and implement non-pharmacological strategies of effectiveness to the relief of pain, guaranteeing the quality of life of the patient but is not aware as a direct responsible for the care, regarding the identification of the nursing activities performed for pain management.
Thomas, et al, 2012 USA ⁽¹⁴⁾	Randomized Case-Control Study	1	Educational Practices	Using educational techniques, nurses help patients develop an adequate plan of care to reduce pain and other symptoms. The motivational interview technique achieves good results in this type of patient.
Baker, 2016 USA ⁽¹⁵⁾	Experimental	2	Non-pharmacological interventions - Cognitive behavioral therapy, Mindfulness	With the understanding of how chronic pain is related to mental illness, mindfulness techniques and behavioral therapy can be used to help decrease dependence on dangerous opioid medications and help patients understand, accept and deal with their chronic pain.
Taplin,et al, 2015 USA ⁽¹⁶⁾	Systematic review	1	Interface with team	Multidisciplinary teams for screening result in improvements in follow-up and continued compliance with the guideline; positively affect the planning and implementation of therapy, leading to better adherence and pain control.
Stapelfeld, et al, 2011 Denmark ⁽¹⁷⁾	Randomized case-control study	1	Non-pharmacological interventions	A study performed in patients with low back pain within the study showed that multidisciplinary, non-pharmacological intervention is more effective than brief intervention in subgroups of patients with low job satisfaction, without influence on job planning and with risk of job loss due to medical leave, compared to subgroups that do not meet these criteria.
Mohammed, et al, 2016 USA ⁽¹⁸⁾	Systematic review	1	Interface with team	User satisfaction impacts on the planning and evaluation of health care delivery. The study evidenced the importance of the nurse's communication with the team and patient.
Yıldırım e Kanan, 2016 Turkey ⁽¹⁹⁾	Quasi- experimental study	3	Nursing care plan - non-pharmacological therapy	Mirror therapy practiced for 4 weeks provided a significant decrease in the severity of phantom limb pain and patients who were not using prosthesis had greater benefit from mirror therapy.
Griffith, et al, 2010 USA ⁽²⁰⁾	Experience report	5	Telenovation consultation	The implantation of early palliative care helps to control pain, especially with an interdisciplinary approach, as well as insertion of the family into the care plan. The palliative care nurse often communicates with patients and family members over the phone to ensure that the recommended interventions are effective in controlling pain and symptoms without causing costly side effects.
Potássio, et al, 2009 USA ⁽²¹⁾	Literature review	5	Nursing Registration	Identified the main impediments and facilitating factors in the provision of service in pain management, due to the professionals' records in the electronic system, being an important factor in the continuity of services after a regional disaster.
Ramelet, et al, 2014 France ⁽²²⁾	Cross-over randomized study	1	Telenovation consultation	The telenovation consultation happens at least once a month, by a qualified and experienced nurse. It aims to provide affective support, health information and decision support. It allows individualized and frequent care, with patient satisfaction, adherence to treatment and use of tele-research service and cost.
Antony e Merghani, 2016 India ⁽²³⁾	Cross- sectional and descriptive	4	Home Visits	The results of this study showed that certain demographic and psychosocial factors influence the manifestation of pain and its intensity among chronic patients. Therefore, improvements in education, economic status and psychosocial support should be considered for the management of chronic patients.
Morales, et al,2016 Spain ⁽²⁴⁾	Randomized controlled study	1	Educational Interventions	Nurses can play a vital role in treating pain by using best practices in assessing and managing pain under a holistic approach where the patient plays a proactive role in approaching the disease process. Educational interventions on self-esteem, pain awareness, communication and relaxation techniques will be performed.
Costello, et al 2013 USA ⁽²⁵⁾	Case-study	5	Pain Evaluation	The ability to balance the level of patient comfort by minimizing adverse outcomes related to opioid overdose is key to providing excellent postoperative care for the patient with chronic pain.
Sørensen e Frich, 2008 Denmark ⁽²⁶⁾	Randomized controlled study	1	Home visits	Patients in the nursing intervention group used fewer health care resources at lower costs.
Stenner e Courtenay, 2008 England ⁽²⁷⁾	Qualitative, descriptive study	4	Nursing Prescription	The nurse's prescription is beneficial for patients and for the health service in general. Faster access to treatment, better quality of care, greater security, better relationship and communication with patients, greater efficiency and cost-effectiveness.

Discussion

The nurse's role is set in the articulation of knowledge that provides the patient with adaptive possibilities in his/her life due to the varied interventionist practices that positively impact the understanding of chronic pain.

Elimination of painful sensation, possibly in acute pain, is often not feasible in patients with chronic pain. The control of chronic pain, associated symptoms, disability and improvement of quality of life are paramount in the treatment. ⁽²⁸⁾ In addition, the practices implemented in pain clinics should guide patients about the harmful effects of inactivity, attend to their needs, know their limitations and plan patient-centered care actions. ⁽⁹⁾

Patient-centered practice aimed at empowering the patient to self-care, having the support and guidance of nurses with appreciation of the painful experience can enable the recovery and control of their lives with less suffering. (24) It is pertinent to emphasize that suffering is the word that has been most used to designate mental, internal and subjective aspects of pain. It happens when the dimensions of the inner self and personal integrity are threatened. (28)

It was verified that patients with greater social interaction had decreased pain intensity and that this fact is due to the opportunity to verbalize about it; as well as, there is a direct correlation between purchasing power and educational level, where, faced with the intensity of pain, these people have better tools to access health care and, thus, increase their quality of life. (23) This finding raises that the social, socioeconomic, cultural and educational level of patients with chronic pain determine the way to reconfigure their daily life experience with pain.

Social isolation (solitude) is an important risk factor for the manifestation of the disease in patients with chronic diseases. This indicates the importance of social interaction for general health and well-being. (29) The finding that the highest level of social interaction was associated with reduced pain intensity corroborates this explanation.

Household patients have more interpersonal interactions with family members and society than

hospitalized patients, so home visits are shaped as innovative strategies because they contribute to cost reduction in health treatment, but they will not necessarily impact, alone, in the pain-related health situation. (26) The aspects that involve this symptom do not change based, solely, on the logistics, but on the integrated and interprofessional care.

The inclusion of the family network is potentiated as a link in the relationship between patient and team and is presented as one more proposal, in order to raise awareness and make possible a greater understanding about the aggravation and interaction with the environment. A concrete example of this possibility of partnership in this nursing care is effected by the nurse's patient service by phone. (20,22) Studies have shown that the recommended interventions are effective for pain and symptom management without causing costly side effects, as well as having a holistic approach that facilitates assessment of quality of life, (20,22) that is, they increase their efficiency in meeting patients' needs and include a wide range of activities, including screening in emergencies, patient safety through nursing counseling and teaching. (22)

The systematized care of the nurse produces autonomy in the management of pain and its interventions were able to overcome the existing inadequacies through pain evaluation, nursing prescription and adequate recording, resulting in comfort, better understanding of the patient and organization of the work process. (21,25,27)

Regarding comfort and integrated approach, non-pharmacological complementary treatments have been proven as great contributors to pain relief. (12,22,25) Thus, these therapeutic resources show, in the last decades, as potent adjuvants in the global rebalancing and not only symptomatic treatment, adding to the drug therapies previously had as the only and priority in the control of pain. (14,15,24,28)

Multiprofessional programs offering chronic pain nursing practices, with patient-centered care, low complexity psychological approaches (cognitive behavioral therapy), combined with lifestyle reorientation, are interventions that have stood out in the studies, with potential emphasis on rehabilitation, promotion of self-care, ability

to promote comfort, minimization of suffering and promotion of quality of life, as well as meditation. (12,13,15,17,19,24,25) These programs constitute a multidisciplinary approach (9,16,17) and for those with pain and life-threatening risks, the implementation of a palliative care program is essential for receiving appropriate interventions from trained professionals for problematic symptoms, thus improving quality of life, as they aim to reduce pain and other symptoms. (20)

The continuing offering of Continuing Education is highlighted as an important ally in pain management. In this sense, the interventions need to be carried out by qualified professionals, which interfere both in the care and in the health of the patient. (13,27) Systematized activities, with good communication and evaluation of the behaviors established to the patient, as well as satisfaction regarding the care, guide improvements and benefits both the team and the patient. (13,18,21,22,27) The Educational Practices allow direct positive interference both in the care plan and in the daily life of the same as in the greater response to the treatment due to the information provided that causes understanding the lived situation. (13,15,24)

Conclusion =

There was a low production of studies carried out in Brazil and Latin America. Levels of evidence were strong in other countries, such as North America and Europe. There was a reduced number of typologies of nursing practices, which shows the need to increase investments in the area, such as Continuing Education. We observed the prevalence of non-pharmacological interventions and educational practices in the follow-up of patients with chronic pain. The benefits of these services are reinforced by the systematized form of the nurse's role in care, carried out through instruments and tools for detection, intervention and evaluation, as well as clinical support, which has produced improved quality of life, adherence to the proposed treatment, management self-care and minimization of patients' suffering.

References

- Vale GE, Pagliuca FM. Construção de um conceito de cuidado de enfermagem: contribuição para o ensino de graduação. REBEn. 2011;64(1):106–13.
- Souza ML, Sartor VV, Padilha MI, Prado ML. O cuidado em enfermagem: uma aproximação teórica. Texto Contexto Enferm. 2005;14(2):266–70.
- Silva RC, Ferreira MA. A dimensão da ação nas representações sociais da tecnologia no cuidado de enfermagem. Esc Anna Nery Rev Enferm. 2011;15(1):140–8.
- Rondinelli, MC, Antunes JM Sampaio WC, Santos JF. Implementação de um programa de controle da dor em hospital de traumatologia e ortopedia. Relato de caso. Rev Dor. 2016; 17(2):141-4.
- Sociedade Brasileira para o Estudo da Dor. Hospital sem dor diretrizes para implantação da dor como 5º. sinal vital [Internet]. São Paulo: Sociedade Brasileira para o Estudo da Dor; 2013. [citado 2018 Abr 11]. Disponível em: http://www.dor.org.br/profissionais/5_sinal_vital.asp>.
- Viana DL, Dupas G, Pedreira ML. A avaliação da dor da criança pelas enfermeiras na Unidade de Terapia Intensiva. Pediatria (São Paulo). 2006; 28(4):251-61.
- Lima MA, Trad L. Dor crônica: objeto insubordinado. Hist Ciênc Saúde - Manguinhos. 2007;15(1):117-33.
- Oliveira RM, da Silva LM, Pereira ML, Moura MA. Manejo da dor de pacientes com aids: análise da estrutura gerencial em hospital de referência. Rev Esc Enferm USP. 2013;47(2):456–63.
- International Association for the Study of Pain [Internet]. Education. [cited 2018 Nov 20]. Available from: http://www.iasp-pain.org/ Education/Content.aspx?ltemNumber=1381
- Mendes KD, Silveira RC, Galvão CM. Revisão integrativa: método de pesquisa para a incorporação de evidências na saúde e na enfermagem. Texto Contexto Enferm. 2008;17(4):758–64.
- The Joanna Briggs Institute. Joanna Briggs Institute Reviewer's Manual. 2011 edition. Adelaide: Institute Joanna Briggs; 2011.
- 12. Galvão FT, Pereira GM. Revisões sistemáticas da literatura: passos para sua elaboração. Epidemiol Serv Saúde. 2014;23(1):183-4.
- Freire ME, Sawada NO. França IS, Costa SF, Oliveira CD. Qualidade de vida relacionada? saúde de pacientes com câncer avançado: uma revisão integrativa. Rev Esc Enferm USP. 2014;48(2):357–67.
- 14. Thomas ML, Elliott JE, Rao SM, Fahey KF, Paul SM, Miaskowski C. A randomized, clinical trial of education or motivational-interviewing-based coaching compared to usual care to improve cancer pain management. Oncol Nurs Forum. 2012;39(1):39–49.
- Baker N. Using Cognitive Behavior Therapy and Mindfulness Techniques in the Management of Chronic Pain in Primary Care. Prim Care. 2016;43(2):203–16.
- 16.Taplin SH, Weaver S, Salas E, Chollette V, Edwards MH, Bruinooge SS, et al. Reviewing cancer care team effectiveness. J Oncol Pract. 2015;11(3):239-46.
- 17. Stapelfeldt CM, Christiansen DH, Jensen OK, Nielsen CV, Petersen KD, Jensen C. Subgroup analyses on return to work in sick-listed employees with low back pain in a randomised trial comparing brief and multidisciplinary intervention. BMC Musculoskelet Disord. 2011;12(1):112.
- Mohammed, et al. Creating a Patient-Centered Health Care Delivery System: A Systematic Review of Health Care Quality From the Patient Perspective. Am J Med Qual. 2016;31(1):12-21

- 19. Yıldırım M, Kanan N. The effect of mirror therapy on the management of phantom limb pain. Agri. 2016;28(3):127–34.
- 20. Griffith J, Lyman JA, Blackhall LJ. Providing palliative care in the ambulatory care setting. Clin J Oncol Nurs. 2010;14(2):171–5.
- Potash MN, West JA, Corrigan S, Keyes MD. Pain management after Hurricane Katrina: outcomes of veterans enrolled in a New Orleans VA pain management program. Pain Med. 2009;10(3):440–6.
- Ramelet AS, Fonjallaz B, Rapin J, Gueniat C, Hofer M. Impact of a telenursing service on satisfaction and health outcomes of children with inflammatory rheumatic diseases and their families: a crossover randomized trial study protocol. BMC Pediatr. 2014;14(1):151.
- 23. Antony T, Merghani TH. The influence of demographic and psychosocial factors on the intensity of pain among chronic patients receiving home-based nursing care. Indian J Palliat Care. 2016;22(3):362–5.
- 24. Morales-Fernandez A, Morales-Asencio JM, Canca-Sanchez JC, Moreno-Martin G, Vergara-Romero M; Group for pain management Hospital Costa del Sol Members. Impact on quality of life of a nursing

- intervention programme for patients with chronic non-cancer pain: an open, randomized controlled parallel study protocol. J Adv Nurs. 2016;72(5):1182-90.
- Costello M, Greenberg H, Bell C, Trowers-Smith J. Management of the hospitalized patient experiencing acute on chronic pain: a case study. Pain Manag Nurs. 2013;14(4):e268-e273.
- 26. Sørensen J, Frich L. Home visits by specially trained nurses after discharge from multi-disciplinary pain care: a cost consequence analysis based on a randomised controlled trial. Eur J Pain. 2008;12(2):164–71.
- 27. Stenner K, Courtenay M. Benefits of nurse prescribing for patients in pain: nurses' views. J Adv Nurs. 2008;63(1):27–35.
- 28. Leão ER, Chaves LD. Dor 5º. sinal vital: reflexões e intervenções de enfermagem. São Paulo: Martinari; 2007.
- Khayyam-Nekouei Z, Neshatdoost H, Yousefy A, Sadeghi M, Manshaee G. Psychological factors and coronary heart disease. ARYA Atheroscler. 2013;9(1):102–11.