The use of non-pharmacological nursing interventions on the comfort of cancer patients: A comprehensive systematic review protocol

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Review question/objective

The objective of this review is to identify and synthesize the best available evidence on the experiences of cancer patients of non-pharmacological nursing interventions.

More specifically, the review will focus on the following questions:

Are non-pharmacological nursing interventions effective for increasing comfort in cancer patients?
What are the experiences of cancer patients of non-pharmacological nursing interventions?

Background

Cancer is a leading cause of death worldwide and the total number of cases globally is increasing. New cases of cancer are estimated to increase from 11.3 million in 2007 to 15.5 million by 2030.¹

Individuals with a severe condition, such as cancer, experience feelings of threat, loss and uncertainty regarding the progression of the disease, as well as concerns around finitude, expected lifespan, anxiety, quality of life, communication and family dynamics, and deprivation of basic needs. These feelings lead to discomfort and suffering, which are part of the personal experience of cancer patients,
particularly terminal patients who not only have to face physical symptoms, but are also confronted with the idea of death being near and, therefore, feel that their integrity is threatened.\textsuperscript{2, 3}

In addition, cancer patients sometimes need aggressive treatments, such as chemotherapy, that cause an increase in anxiety, depression and body discomfort, which, consequently, can have a significant effect on comfort and well-being during and after cancer treatment.\textsuperscript{4, 5}

The term comfort is often used in several contexts of nursing practice as part of nurses’ common language. The concept is frequently related to the person’s physical dimension, but, within nursing literature, it assumes a more extensive meaning. The literature shows that comfort is a concept that has been identified as an element of nursing care; it is attached to its genesis and has assumed, throughout history, different meanings which are related with the historical, political and religious evolution of humanity, as well as with the technical-scientific progress in health sciences, especially nursing.

“Throughout its history, the mission of nursing has been focused on patients’ discomfort and interventions to relieve it. Nursing should base its interventions in operable theories that support the provision of comfort through an assessment of the patients’ needs, implementation of care, and assessment of the results from those interventions”.\textsuperscript{(p. 403)}\textsuperscript{6}

In fact, since the earliest times, nursing practice has been connected to the notion of comfort. When analyzing the etymological origin of comfort and nurse, we can see that both concepts are closely related. Nurse comes from the Latin term \textit{nutrire}, which means “nurture”, that is, the one who nurtures, cares, and promotes the person’s strengthening by increasing his/her comfort.\textsuperscript{7} On the other hand, the etymological origin of comfort derives from the Latin term \textit{confortare} which means “to strengthen”.\textsuperscript{8} Therefore, the nurse is the person who promotes the strengthening and the comfort of patients.\textsuperscript{9}

The nursing literature mentions a significant number of authors, such as Ida Orlando, Callista Roy, Hildegard Peplau, Jean Watson, Madeleine Leininger, Josephine Paterson, Loretta Zderad, Joan Hamilton, Janice Morse, and Katharine Kolcaba, who contributed to the theoretical development of this subject and to the perception of comfort as a noble concept and one of its main objectives.\textsuperscript{9}

Orlando described comfort as a central aspect to satisfy human needs, arguing that the nursing role should focus on addressing anything that might interfere with the patients’ physical and mental comfort. On the other hand, Peplau considered it as a basic need related to food, rest, sleep and communication needs, while Roy, in her adaptation theory, studied psychological comfort and ways to increase it.\textsuperscript{10, 11, 12}

Both Leininger’s Theory of Transcultural Care\textsuperscript{13} and Watson’s Human Caring Theory\textsuperscript{14, 15} captured the essence of what nursing is and incorporated the notion of comfort.

In 1981, Leininger identified comfort as a major taxonomic caring construct, which must be assessed in its cultural context in order to provide quality and holistic care. So as to assess and intervene according to a patient’s comfort needs, the nurse must take into account the meaning ascribed to it by each person, family or cultural group.\textsuperscript{13, 16}

In Watson’s Human Caring Theory, comfort is considered as a condition that interferes with the person’s internal and external development. Comfort is an external variable that the nurse can control. The comfort promoted by the nurse should help the person to function effectively.\textsuperscript{17} Watson considered that comfort activities can be a support, protection or correction of personal development. Watson identified social and cultural comfort measures related to habits, behaviors and values of the patient’s
culture, family life and social class, recognizing that knowledge and respect for the spiritual meaning that each person attaches to life can be very comforting to him/her. Transpersonal caring allows humanity to move collectively towards a greater harmony with mind, body, spirit, with itself, others and with nature.\textsuperscript{14, 15}

Morse, with a background in anthropology, focused on nurses’ actions of comfort. In an ethnoscientific analysis of comfort, it was concluded that touch and speak are two major components, and to listen is a minor component of the process of comfort.\textsuperscript{18}

To achieve comfort, the person cannot be dominated by the body, and the aim of nursing is to increase comfort in the sense of calm and relieve distress. Nevertheless, for the patient, achieving comfort is a paradox, in which the term patient derives from the Latin term \textit{paiti} that means “to suffer”. Thus, it seems incongruous to speak of patient comfort. Comfort, paradoxically, appears as a state of embodiment beyond consciousness, recognized only when the patient has experienced a state of discomfort and constituted a pre-reflective experience. Therefore, it is difficult to describe, it being easier to describe what constitutes discomfort or discomforts. Comfort might lie in the shadow of discomfort and, being inaccessible, it makes more sense to speak of discomfort.\textsuperscript{19}

In an article about comfort and how to comfort, Morse\textsuperscript{20} mentions that to comfort is a complex act, that it is not just about keeping patients warm and well positioned in bed. It is, in addition, being aware of the manifestations of distress and providing measures to ease the suffering. For nursing, the aim of comfort in the short term is to relieve the discomfort of patients and assist them to support their pain. Another important goal is to help the individual stay healthy, although for such he/she has to support minor discomforts. Therefore, nurses provide care in response to patients’ needs, in order to help them support the discomfort, applying their professional skills in planning and developing strategies until the patient feels comfortable.\textsuperscript{20}

Morse considers comfort as the final stage of the therapeutic nursing action, defining it as a state of well-being that can occur during any stage of the health-disease continuum.\textsuperscript{21} The focus on the discomfort to give comfort is consistent with the central mission of nursing, which is to provide treatment and opportunities to the normal functioning of the person. Nursing has a central role in a patients’ comfort, which can be considered as a final state of health and, therefore, a caring goal or aim.\textsuperscript{18, 20}

In turn, concerned with this assessment, Kolcaba considered comfort as a resulting state of nursing interventions to alleviate or eliminate distress. Comfort is a state in which basic needs related to the state of relief, ease and transcendence are satisfied.\textsuperscript{22, 23, 24} Relief is the state of having a specific need met, being necessary for the person to re-establish his/her usual functioning; ease is a state of calm and contentment necessary for effective performance; transcendence is a state in which each person feels they have skills or potential to plan, control their destiny and solve their problems. This type of comfort is also called renewal.

These three comfort states develop into four contexts: the physical context relates to bodily sensations; the social context to interpersonal, family and social relationships; the psychospiritual context to internal awareness of self, including esteem, concept, sexuality and the meaning of one’s life, which may also involve a relationship to a higher order or being; and the environmental context which involves aspects such as light, noise, equipment (furniture), color, temperature and natural versus synthetic elements.\textsuperscript{22, 24}
But despite Kolcaba’s focusing her theory on changing the state of comfort felt by the patient after the nursing intervention, she recognizes that, in the aesthetic sense, nursing art is the creative application made by nurses of scientific and humanistic principles of care within the specific care contexts. One form of nursing art is called comfort care, which requires a process of comforting actions, as well as the product of comfort gained by patients. Comfort care entails both a process of comforting actions, and the result of these actions. The process is a method (nursing intervention) and the product is the result of this process. The increase of comfort is the desired result that follows the process of comfort. The process does not occur as a separate entity of the product. The process is not completed until the product, increased comfort, occurs and this may be a continuous process.

Several nursing theories show different perspectives of comfort, but the most significant ones are those by Leininger, Watson, Morse and Kolcaba. In Watson’s and Leininger’s theory, care takes on a central importance and comfort is a care component. Both Leininger and Watson consider comfort as a component of care, while Morse considers care as a construct of comfort. Morse and Kolcaba agree that the nursing intervention is the action of comforting and that comfort is the result of this intervention. Morse focused her work in the process of comfort, in other words, nurses’ actions, but makes no reference to the evaluation of the result of these actions. For its part, Kolcaba considers that studying the process of comfort without evaluating the results is an incomplete exercise, which should, therefore, have an underlying process of conceptualization and operationalization.

In this context, some studies have been carried out on the impact of non-pharmacological nursing interventions on comfort or another outcome related to this concept, such as pain, suffering, anxiety, mood, relaxation, health-related quality of life, and well-being, particularly in cancer patients. In these studies, guided imagery and relaxation have been reported to have an effect on improving these outcomes in cancer patients.

Other studies have been carried out around the experiences of cancer patients of non-pharmacological nursing interventions. In these, therapeutic touch and massage have been reported as interventions which provide feelings of calm, comfort, relaxation, security, and awareness.

A preliminary search of the Joanna Briggs Library of Systematic Reviews, the Cochrane Library, CINAHL and Medline has revealed that there is not currently a systematic review (either published or underway) on this topic.

Therefore, a comprehensive systematic review on the experiences of cancer patients of non-pharmacological nursing interventions and on the effectiveness of non-pharmacological nursing interventions in the comfort of cancer patients is necessary to generate best practice guidelines specifically for nurses who work in this area.

Keywords

Initial English language keywords to be used will be:

Comfort; nurs*; interven*; cancer; patient*
Inclusion criteria

Types of participants

This review will consider studies that include cancer patients:

1) adult patients aged 18 years and older
2) patients receiving or not receiving pharmacological treatment
3) patients with any type or stage of cancer

Types of intervention(s)/phenomena of interest

Quantitative

This review will consider studies that use non-pharmacological interventions for cancer patients which are implemented by nurses compared to usual care. These interventions may include, but not be limited to, guided imagery, relaxation, therapeutic touch, therapeutic humor, and massage.

Qualitative

This component of the review will consider studies that include the following phenomena of interest: the experiences of comfort by patients undergoing non-pharmacological nursing interventions in ambulatory care and hospital care.

Types of outcomes

Quantitative outcomes

This review will consider studies that include the outcome “comfort” or another outcome related to this concept, measured by any comfort, pain, anxiety, depression, stress and fatigue scale.

Types of studies

Quantitative

This review will consider any experimental study design, including randomized controlled trials, non-randomized controlled trials, or other quasi-experimental studies, including before and after studies for inclusion.

Qualitative

This review will consider any interpretive studies concerning the experiences of cancer patients regarding comfort undergoing non-pharmacologic nursing interventions. Studies may include, but will not be limited to, designs such as phenomenology, grounded theory and ethnography.
Search strategy

The search strategy aims to find published and unpublished studies. A three-step search strategy will be used in this review. An initial limited search of MEDLINE and CINAHL will be undertaken, followed by the analysis of text words in the titles and abstracts, and of the index terms used to describe the article. A second search using all identified keywords and index terms will then be undertaken across all databases included. Thirdly, the reference list of all identified reports and articles will be searched for additional studies. Studies published in English, Spanish and Portuguese will be considered for inclusion in this review. Studies published in any year will be considered for inclusion in this review in order to cover a significant time span.

The databases to be searched include:

- Academic Search Complete
- CINAHL Plus with Full Text
- MEDLINE with Full Text
- Cochrane Central Register of Controlled Trials
- LILACS
- Embase
- Scopus
- Library, Information Science & Technology Abstracts
- Nursing & Allied Health Collection: Comprehensive
- MedicLatina
- Scielo - Scientific Electronic Library Online

The search for unpublished studies will include:

- Agency for Healthcare Research and Quality (AHRQ)
- ‘Grey Literature Report’ from New York Academy of Medicine
- Mednar
- Scirus.com website
- National Library of Australia’s Trove service
- ProQuest – Nursing and Allied Health Source Dissertations
- Banco de teses da CAPES (www.capes.gov.br)
- RCAAP – Repositório Científico de Acesso Aberto de Portugal
Assessment of methodological quality

Quantitative

Papers selected for retrieval will be assessed by two independent reviewers for methodological validity prior to inclusion in the review using standardized critical appraisal instruments from the Joanna Briggs Institute Meta Analysis of Statistics Assessment and Review Instrument (JBI-MAStARI) (Appendix I). Any disagreements that arise between the reviewers will be resolved through discussion, or with a third reviewer.

Qualitative

Papers selected for retrieval will be assessed by two independent reviewers for methodological validity prior to inclusion in the review using the standardized critical appraisal instruments from the Joanna Briggs Institute Qualitative Assessment and Review Instrument (JBI-QARI) (Appendix I). Any disagreements that arise between the reviewers will be resolved through discussion, or with a third reviewer.

Data collection

Quantitative

Data will be extracted from papers included in the review independently by two reviewers, using standardized data extraction tools from the JBI-MAStARI (Appendix II). Any disagreements that arise between the reviewers will be resolved through discussion, or with a third reviewer.

Qualitative

Data will be extracted from papers included in the review independently by two reviewers, using standardized data extraction tools from the JBI-QARI (Appendix II). Any disagreements that arise between the reviewers will be resolved through discussion, or with a third reviewer.

Data synthesis

Quantitative

Quantitative data will, where possible, be pooled in statistical meta-analysis using JBI-MAStARI. All results will be subject to double data entry. Effect sizes expressed as odds ratio (for categorical data) and weighted mean differences (for continuous data) and their 95% confidence intervals will be calculated. Heterogeneity will be assessed statistically using the standard Chi-square. Where statistical pooling is not possible, the findings will be presented in narrative form including tables and figures to aid in data presentation where appropriate.

Qualitative

Qualitative data will, where possible, be pooled using the JBI-QARI. This will involve the aggregation or synthesis of findings to generate a set of statements that represent that aggregation, through assembling the findings (Level 1 findings) rated according to their quality, and categorizing these findings on the basis of similarity in meaning (Level 2 findings). These categories will be then subjected to a meta-synthesis in order to produce a single comprehensive set of synthesized findings (Level 3 findings) that will be used as a basis for evidence-based practice.
Conflicts of interest

There are no conflicts of interest.

Acknowledgements

The authors thank the support provided by Health Sciences Research Unit – Nursing (UICISA-E), hosted by the Nursing School of Coimbra (ESEnfC).
References


Appendix I: Appraisal instruments

QARI Appraisal Instrument

**JBI QARI Critical Appraisal Checklist for Interpretive & Critical Research**

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<th>Yes</th>
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<td>2. Is there congruity between the research methodology and the research question or objectives?</td>
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<td>6. Is there a statement locating the researcher culturally or theoretically?</td>
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<td>7. Is the influence of the researcher on the research, and vice-versa, addressed?</td>
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<td>8. Are participants, and their voices, adequately represented?</td>
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<td>9. Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?</td>
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<td>10. Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?</td>
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Overall appraisal: [ ] Include [ ] Exclude [ ] Seek further info. [ ]

Comments (including reason for exclusion)

________________________________________________________________________
________________________________________________________________________

Page 383
MAStARI Appraisal instrument

**JBI Critical Appraisal Checklist for Randomised Control / Pseudo-randomised Trial**

Reviewer ........................................ Date ........................................

Author ........................................ Year .................. Record Number .....

1. Was the assignment to treatment groups truly random? □ Yes □ No □ Unclear □ Not Applicable

2. Were participants blinded to treatment allocation? □ Yes □ No □ Unclear □ Not Applicable

3. Was allocation to treatment groups concealed from the allocator? □ Yes □ No □ Unclear □ Not Applicable

4. Were the outcomes of people who withdrew described and included in the analysis? □ Yes □ No □ Unclear □ Not Applicable

5. Were those assessing outcomes blind to the treatment allocation? □ Yes □ No □ Unclear □ Not Applicable

6. Were the control and treatment groups comparable at entry? □ Yes □ No □ Unclear □ Not Applicable

7. Were groups treated identically other than for the named interventions? □ Yes □ No □ Unclear □ Not Applicable

8. Were outcomes measured in the same way for all groups? □ Yes □ No □ Unclear □ Not Applicable

9. Were outcomes measured in a reliable way? □ Yes □ No □ Unclear □ Not Applicable

10. Was appropriate statistical analysis used? □ Yes □ No □ Unclear □ Not Applicable

Overall appraisal: Include □ Exclude □ Seek further info. □

Comments (Including reason for exclusion)

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Appendix II: Data extraction instruments

QARI data extraction instrument

JBI QARI Data Extraction Form for Interpretive & Critical Research

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**Study Description**

Methodology

Method

Phenomena of interest

Setting

Geographical

Cultural

Participants

Data analysis

Authors Conclusions

Comments

Complete

Yes □

No □
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### JBI Data Extraction Form for Experimental / Observational Studies

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**Date**  
**Author**  
**Year**  
**Journal**  
**Record Number**  

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#### Participants

**Setting**

**Population**

#### Sample size

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#### Interventions

**Intervention A**

**Intervention B**

#### Authors Conclusions:

- 
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#### Reviewers Conclusions:

- 
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Page 387
### Study results

#### Dichotomous data

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#### Continuous data

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