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# Use of tactile massage as an effective therapy for elderly:

A qualitative literature review

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**Abstract**

The application of complementary therapies to reduce and in certain cases replace the continued use of drugs for the treatment of many typical conditions of elderly patients such as pain, insomnia or lack of functionality is a trend in continuous growth. Therapeutic massage, among other complementary care interventions, is already part of the role of nurses and it approaches nursing profession in a holistic manner. In this sense, there is no doubt about the importance that direct communication, human and affective contact, closeness, intimate connection and respect with the patient have in nursing care (Erikson's theory describes such relationship in the concept of *caring communion*). Massage therapy is to some extend a way of communication that acquires special meaning in patients with whom it is more difficult to communicate due to pathologies such as dementia or Alzheimer's. This study is the result of a content qualitative analysis of eleven articles on the effects of massage on the well-being, socialization as well as on the physical and psychological health of elderly. The revision of the literature targeted in this study demonstrate a positive impact of massage and highlights that besides the primary effects such pain relief and relaxation, the use of massage enhances the well-being, health and quality of life of elderly.

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Language: English Key words: massage, elderly, complementary therapy, caritas

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**Table of Contents**



**Table of figures**



**Appendices**

# 1 Introduction

From Aristotle's argument of the social character of human being to the first sociologists of the 20th century headed by Aronson that define humans as social animals, the inherent social character of human being is out of any discussion. (Aronson, 2007).

It is widely demonstrated that communication and social interaction are primary necessities. From the very first moments of life the bounds between mother and new-born start to be set through verbal and non-verbal communication, eye-to-eye contact and touch. That early interactions reassure new-borns and provide them relax, well-being sensation and a permanent bound to other humans that will go with them through their lives.

For World Health Organization life style behaviours as well as the interaction with close relatives and friends can effectively modify the influence of heredity on functional decline and the onset of disease. (WHO, w.y).

When elderly are receiving social and / or medical care it is because they are to some extend in a vulnerable situation. The close human interaction that the nursing care involves and the very act of touching have a positive impact in such situations.

The use of appropriate massage techniques is often meant to provide a beneficial effect because, besides the primary physiological effects on blood circulation and muscle relaxation, it increases the physical interaction with the elder skin.

Even though research into how experts understand and define what massage is and describe the field of massage therapy is limited (Kennedy, 2016) for this study the author had to establish a setting and define massage as "*the use of the hands to physically manipulate the body's soft tissues for the purpose of effecting a desirable change in the individual*". ( Casanelia, 2009).

Those beneficial effects of the use of massage in elderly may be accompanied with other complementary therapies like protocols including activities, calming music (Livingston et al., 2014) or Aromatherapy.

To give massage to older people requires a certain level of training that will depend on the complexity of the intervention. Basic techniques of relaxation massage do not demand special courses but the possible contraindications must be taken into account by caregivers or nurses when giving massage. It is necessary a prior evaluation and assessment of the elderly needs since certain diseases and health problems may be contraindicated to massage.

## 2 Aim and problem definition

The primary objective of this study is to determine whether or not tactile massage benefits the elderly population as well as its efficacy as a non-pharmacological approach to improve their wealth and well-being. Also the author aims to gather and gain more information and knowledge through the analysis of literature on how massage improves the quality of life of the senior citizens.

The problem definition presented in this study is:
**Can massage enhance the well-being, health and quality of life of the elderly?**

## 3 Theoretical background

This chapter discusses the foundation of the study through the explanation of different definitions and concepts, and will provide the reader with a better understanding of the basics of this study.

### 3.1 Complementary and alternative care

Complementary and alternative care and/ or medicine (CAM) is a large set of systems, practices, techniques and products that generally are not considered part of the conventional medicine, that traditionally accepted in Western society.
Although an important part of CAM has deep roots in the tradition of many societies, it is a large field in constant change.
This permanent evolution of CAM and its increasing implementation as a part of regular treatments of certain health disorders make it difficult to determine the limits between mainstream medicine and CAM. As a matter of fact, some CAM practices have become part of regular treatment in conventional medicine.
Complementary and alternative medicine has been described as "*diagnosis, treatment and/or prevention which complements mainstream medicine by contributing to a common whole, satisfying a demand not met by orthodoxy, or diversifying the conceptual frameworks of medicine*". (Ernst et al., 1995).
In some contexts a differentiation between complementary medicine and alternative medicine is suitable, and the general term CAM is split in two different concepts: Complementary medicine encompasses all treatments that are used along with standard

medical practices but are not considered to be standard treatments, whereas Alternative medicine refers to those treatments that are used instead of standard medical treatments.
For some treatments (i.e. to treat headache, neck and back pains…) patients' perception of the effectiveness of CAM happens to be higher than the one that conventional medicine provides (Eisemberg et al., 2001).
The use of CAM has been increasing in recent decades and has been gradually incorporated into many conventional treatments. This trend is particularly noticeable in palliative medicine and in the treatment of cancer (Molassiotis, 2005) where patients using CAM grew up to 35,9% in the United States in the last decade. (Seymour and Dubois, 2015).

## 3.2 Therapeutic massage

Therapeutic massage is the manipulation of the soft tissue of whole body areas to bring about generalised improvements in health, such as relaxation or improved sleep, or specific physical benefits, such as relief of muscular aches and pains (Vickers et al., 2001).
Therapeutic massage is included in the Classification of Nursing Interventions where it is described the way that acupression and basic massage have to be performed. (McCloskey and Bulecher, 2000).
The manipulation of soft tissues is a universal technique present since the beginnings of civilization and it is found in almost any culture around the world. The first steps taken in Europe to approach massage therapy in a systematic way go back to the 19th century when the considered "father of the Swedish Massage", Pehr Henrik Ling (Ottosson, 2010), developed a system of integrated manual therapy, combining physical training and gymnastic procedures with knowledge of anatomy, physiology, and pathology. A Ling's contemporary Dutch practitioner, Johan Georg Mezger, adopted the French names to denote the basic strokes of the classic massage, as they are known nowadays:

- Effleurage: Gentle stroking along the length of a muscle.
- Petrissage: Pressure applied across the width of a muscle.
- Friction: Deep massage applied by circular motions of the thumbs or fingertips.
- Kneading: Squeezing across the width of a muscle.
- Hacking: Light slaps or karate chops.

In this study, massage is considered as caring touch.

## 3.3 General indications for geriatric massage

Those techniques together with some others are applied to the patient following a case history. It is essential to find out the older patient's necessities and adapt the intervention to each individual. Whereas a regular massage session for adults usually lasts between 15 and 90 minutes, when in comes to elderly the maximum length should be shorter. A no longer than twenty-minute application per area (limbs, back) is generally recommended, depending on the indication and the patient's condition.

The suitable conditions for a massage session include a special attention to the environmental conditions (light, a quiet and warm space, to avoid excessive conversation, to prevent occasional interruptions…) and a special table with a whole for the patient's face when lies decubitus prone (the patient lies on the chest facing down).

Since the ideal condition for a massage session includes the direct access to the patient's skin, the practitioner has to take into account the prejudice that generally exists in elderly about the perception of their own bodies affected by the passing of the years. Anyone can feel a certain feeling of modesty when undressing for a massage but such feeling is often more pronounced when it comes to older people.

To improve the sliding of the hands of the practitioner on the skin of the patient, different oils are used. Special attention must be taken with elder patients since their skin is thinner, fragile, more wrinkled and usually more dehydrated than in general patients; such conditions may cause dermal irritations.

Elderly muscles are weaker, their joints may be rigid and deformed so that pain can appear. The prevalence of osteoporosis in the elderly makes it necessary to pay special attention to sudden manipulations that could cause a fracture. The massage should be soft, slow and continuous since the pressure on the peripheral blood circulation can cause bruising. The massage is contraindicated on areas where decubitus ulcers (pressure ulcers) are starting to appear.

Therapeutic massage involves direct physical contact and manipulation of the patient's body, in consequence practitioners must have received the appropriate training as well as the official acknowledge of regulatory bodies. Practitioners avoid the use of massage in contraindicated cases such acute period of trauma, sprains, contusions, burns, joint effusions, phlebitis and vascular fragility, open wounds and skin infections. (Vickers et al., 2001).

## 3.4 Elderly care in Finland

Elderly care, also referred as elder care or senior care, is the specific and specialized care that targets the needs of senior citizens.

In Finland, the rapid growth of the elderly population is not matching the resources available to care for them professionally. The main focus is in home care as residential elderly homes are lacking with staff and resources.

Life expectancy in Finland is 82 years, two years higher than the Organization for Economic Co-operation and Development (OECD) average of 80 years (OECD, 2018).

A quick look on the evolution of the demographic dependency ratio in Finland shows an undeniable increase in the elderly population. (OSF, 2015).

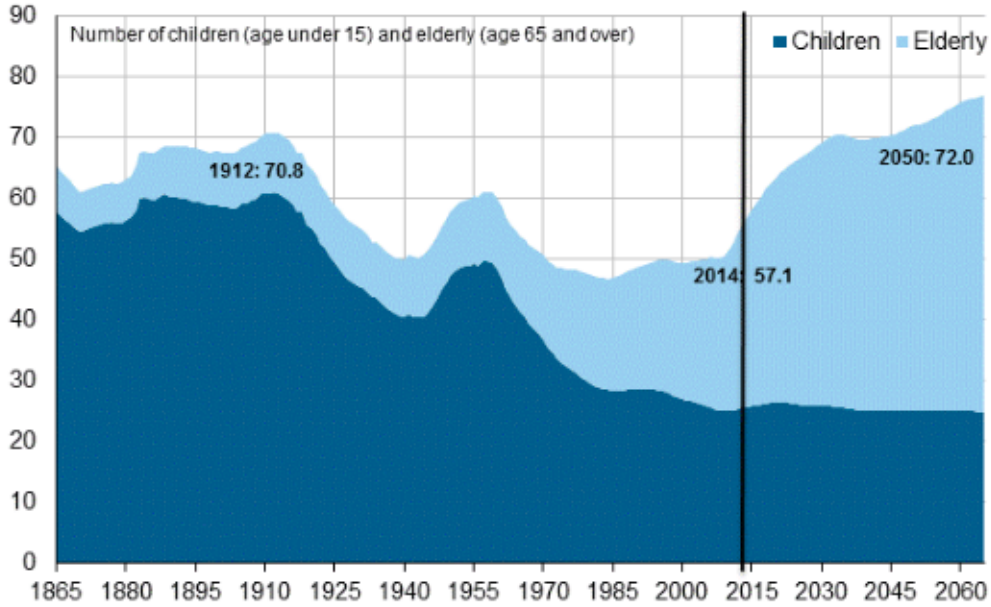


Figure 1: Demographic dependency ratio 1865–2065. (OSF, 2015).

The Ministry of Social Affaires and Health (MSAH) is responsible for the running of services for elderly (Social och Hälsovårdsministeriet, 2018). It determines the course of service development, draws up legislation and oversees the implementation of reforms. The ministry also monitors service standards through the National Supervisory Authority for Welfare and Health and the Regional State Administrative Agencies.

National laws determine the obligation of municipalities to ensure health and social care for their inhabitants. Unlike many other European countries, Finland has a high degree of decentralization in the provision of health services and social assistance.

The evident growth in relative terms of the elderly population in Finland should be accompanied by structural measures in the health system as well as in home care. Nursing unions claim that the challenge that this demographic trend is subjecting the system is not being adequately addressed. "*The whole system for elderly care is in big crisis, especially home care*" says Leena Kaasinen of the Union of Finnish Practical Nurses. (SuPer, 2018).

It is evident that the number of people who need professional attention does not cease to grow, but according to those union sources there are not enough funds allocated to deal with this situation.

The work overload on nursing staff in homes and hospitals is a burden that spreads throughout Europe. To alleviate the stress of the social and health system many countries are changing their policies towards home care interventions that are less expensive. In this same line, MSAH recognizes a change in trend in Finland. The numbers of elderly people in nurse homes and chronic care hospitals in Finland is dropping gradually as shown in the following chart. (Voutilaine, 2015).

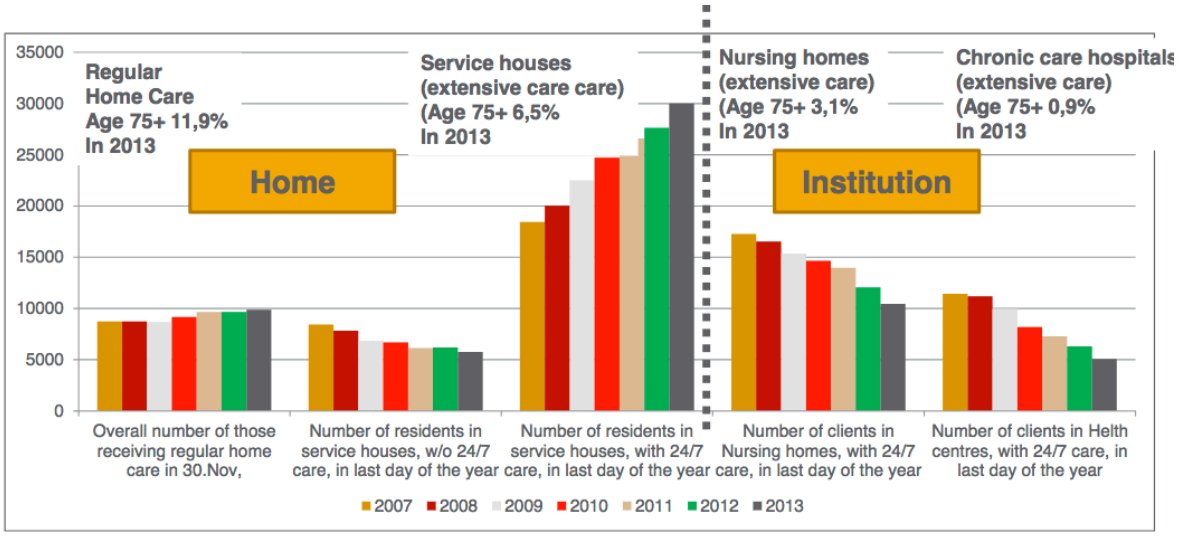


Figure 2: Service system for older populations 2007-2013

If this trend is maintained or even generalized, a question arises now: Will the option of home care versus care in centres or residences be the appropriate response for the elderly population in need of daily care? The risk of neglecting from providing a proper attention in patients' homes and the inevitable resulting loneliness and its consequences, overshadow this approach.

# 4 Theoretical framework

Katie Eriksonn's theory of caritative caring has been chosen for this study as the theoretical framework.

## 4.1 Caritative Caring Theory

Eriksson's Caritative Caring model is an appropriate theoretical framework to be used as a reference and starting point in nursing research. (Alligood, 2014).

Nursing profession entails the ethical dimension of caring and involves respect for the patient's dignity and responsibility in the meaning of body, soul and spirit in protecting and keeping away from hurt and injury as Eriksson says.

The influence of the Eriksson model goes beyond being a humanistic philosophical theory that has an influence on nursing education in Scandinavian countries. It is a discipline considered as a reference and without any doubt is the nursing training model par excellence in Finland. Several Scandinavian schools have based their practice and their welfare philosophy on the ideas and the theory of Caritative Caring developed by Eriksson. Even though it is a general model, it has been applied in all healthcare contexts. Eriksson's theory has been evaluated and her results have been presented in a number of doctoral theses and master's dissertations, and have appeared in scientific and professional publications.

Eriksson's thinking has influenced the fields of leadership and nursing administration. Her model has been integrated into the training of nurses at various levels; likewise, the basic organizational structure of the curriculum and of teaching at numerous levels is based on the science of care as an autonomous humanistic discipline, with sub-disciplines such as the care ethic, the theology of care and the history of ideas about care. Currently a number of courses based on Eriksson's theory are offered as a part of continuing education in nurses working in clinical practice.

Eriksson has developed a research program based on her own experience and includes the science of systematic care, the science of clinical care, didactics, administration and interdisciplinary research.

Eriksson stressed the importance of basic research and its need in clinical research. A particularly solid point in her research is a clearly formulated theoretical perspective that confers greater clarity and depth to knowledge. Eriksson has always underlined the need to carry out a systematic and exhaustive analysis of the basic concepts. Eriksson describes

caring as a form of tending, playing and learning. She says that tending is "*to dare to sometimes go further than the already expressed, but most of all it means to dare to go outside yourself, to show that you really 'care for' the other through different small actions*". (Alligood, 2014).

## 4.2 Katie Eriksson

Katie Eriksson (Jakobstad, 1943) graduated in 1970 in the nursing teacher training program at the Helsinki Finnish school or nursing. He later graduated in philosophy and defended her doctoral thesis in pedagogy. He worked as a professor of the science of care at the University of Kuopio, at the Åbo Akademi University and the medical school of the University of Helsinki. Since 1996, she works as a nursing director at the Helsinki University Central Hospital, with responsibilities in the research and development of the science of care.

Her main area of work has been carried out in teaching and research. Such research leads to a deepening of assistance through an ideal model of care called Caritative Caring theory. She started her publications since the 1970s, comprising a total of 400 titles and she has got numerous national and international awards for her career in the field of education and research.

### 4.2.1 Theoretical references

There are many theoretical sources that inspire the work of Eriksson to build her theory of care, from the classics Plato, Socrates and Aristotle to contemporary theologians and philosophers.

Eriksson's work highlights that concepts have both meaning and substance. She reaches such argument after a systematic analysis of fundamental concepts with the help of an analytical method. The assumption that ethics precedes ontology, argued by Emmanuel Levinas (1988), has a great relevance in the whole formulation of the Caritative Caring ethic. Backed by the Russian philosopher and historian Nikolai Berdiaev (1993), Eriksson put emphasis on the importance of the knowledge of the history of ideas to preserve the entire spiritual culture.

Eriksson conceives the human being as comprising three dimensions: body, soul and spirit. Such three dimensional vision of the human being aroused interesting philosophical

dialogues with theologians, such as Gustaf Wingren (1960-1996), Antonio Barbosa da Silva (1993) and Tage Kurtén (1987).

### 4.2.2 Empirical evidence

Eriksson applied empiricism to systematize a hypothetical and hermeneutic deductive method. She developed the concept of "evidence" based on the science of care and pointed out that the evidence cannot be related only to a method and empirical data. Eriksson summarized the empirical evidence and its logic in a concept development model. In the care department of Åbo Akademi University, Eriksson carried out clinical research programs on more systematic and comprehensive care.

## 5. Research methodology

This part includes a description of the method used in this study and how the data was gathered and analysed in order to reach the aim of the study. This section also contains the ethical considerations taken into account to carry out the study.

In order to generate evidence, a nursing research may be designed and conducted through either a qualitative or a quantitative approach. Whereas a qualitative research tends to investigate the subject's perspective about the problem (Polit & Beck, 2012) a quantitative approach tends to quantify the problem by generating numerical data that can be transformed into usable statistics.

A qualitative research is, so to speak, a first exploratory study, a subjective type of research in which data comes from literature review and / or informal interviews. In any case the literature review has to be systematic and has to be done following inclusion and exclusion criteria. (Polit & Beck, 2010).

### 5.1 Literature review and content analysis

The researcher chose a systematic literature review, and as stated by Moule and Goodman, "*the process of review aims to support evaluation of the quality of the published literature identified in the search".* (Moule & Goodman, p.32).

In order to determine the dimension of a literature review, Polit and Beck (2017, p.88) propose to start by determining the topic of the review, its scope and the type of literature

to be reviewed. The review of primary sources of information that is original research papers is the most suitable type of literature rather than secondary sources. On the other hand secondary sources may provide a wide picture of the research subject.

A qualitative literature review is not a simple summary of a number of prior studies. It should be a meaningful exposition of prior knowledge produced through empirical studies, a systematic process with clearly identified inclusion and exclusion criteria meant to discriminate what material will help to reach the study aims.

A total of eleven studies met the inclusion criteria and have been reviewed for this study. The articles come from primary sources, and although they vary in terms of the composition of their samples (patients in institutions, residences of elderly, dependent or not, with or without a certain condition such as dementia, etc.), all have the elderly population as their target group and have the common aim of demonstrating the possible relationship of the application of therapeutic massage (accompanied sometimes with other complementary non-pharmacological treatments) with the improvement of the physical or mental well-being and / or the general health status of the elderly.

## 5.2 Data collection

This study is the result of a content qualitative analysis of eleven articles on the effects of massage on the well-being, socialization as well as on the physical and psychological health of elderly.

The search was made using Novia FINNA, and going into the databases EBSCO, PubMed and CINAHL, that are free of charge. Google Scholar has also been used in this study.

An initial search led to 618 potential articles by typing in the search bar “tactile massage”, “”tactile massage + nursing”, “tactile massage + elderly”, “tactile stimulation + elderly”, “caritas+ elderly”, “caring theory + nursing”, and “caring theory + Eriksson”.

To narrow down more the number of articles, the key word “tactile touch” was used minimizing by year (only articles from 2008 and forward), and which language was either English or Spanish.

A redefinition of the inclusion criteria after revising titles and abstracts was necessary because some of the mentioned databases do not offer many searching criteria possibilities.

The final sample was reached by a manual selection to finally include eleven studies published between 2008 and 2017, with the word “massage” in the title (or meaningfully

used in the abstract), as well as caring touch, together with the age group targeted (using elder, elderly, older people and aged as key words).

The sample of population contained in the reviewed articles is diverse in terms of its geographical location since it includes older people from Brazil, Mexico, Iran, Australia, the United States, Spain, Canada, Thailand, Japan and Portugal.

The fifteen studies that were found relevant for the purpose of this study are listed in appendix 1.

## 5.3 Inclusion and exclusion criteria

The articles that met the inclusion criteria are written in English or Spanish; published after the year 2008; and included the word "massage" in the title or in the abstract. The study populations of these materials include only elderly from any geographical location published in a peer-reviewed journal. The data for the analysis was qualitative (See Apendix 1).

The ones that didn't meet the criteria, and therefore were excluded, are quantitative, non pier-reviewed, non-English or Spanish articles older than 10 years that didn't include the word "massage" in the title and/or the abstract; and which study population included other than older citizens.

## 5.4 Ethical considerations

As World Health Organization (WHO) states, nursing profession encompasses autonomous and collaborative care of individuals of all ages, families, groups and communities, sick or well and in all settings. It includes the promotion of health, the prevention of illness, and the care of ill, disabled and dying people (WHO, 2017). But nurses can also take a key role in research since their daily and direct contact to those groups gives them a strategic position. As the anthropologist Cora Dubois stated, "*The only group that had any real sense of the problem as a human one, were the nurses*." (Seymour and Dubois, 2015).

As early as 1958 an expert committee of WHO underlined the need "*to develop a group of nurses who are capable of planning and carrying out the necessary research and of working with other researchers on team studies*" (WHO, 2017). Hence nurses' role as promoters of good health should be applied in their traditional function as care givers as

much as in such strategic role in conducting or taking part of research. (Kiikkala & Krause, 1996, 65).

As stated Guerrish and Lacey, a research proposal needs to include an account of the main ethical issues associated with undertaking the project and explain how this will be addressed (Guerrish and Lacey, 2015).

In all cases, the researcher must determine the extent of existing knowledge, define his or her own area of enquiry, collect data, analyse it and draw conclusions. In addition, the purpose of all types of research should be to increase knowledge and a research should not be done if there already is an obvious answer to the research question. (Goodman M. and Moule P)..

The Finnish Advisory Board on Research Integrity (TENK) affirms that a responsible conduct of research should not include practises such falsification, plagiarism, fabrication or misappropriation (Räsänen and Moore, 2016) and describe them as violations against the responsible conduct of research (RCR).

The TENK defines those scientific frauds as follow (sic):

- *"Fabrication refers to reporting invented observations to the research community. The fabricated observations have not been made by using the methods as claimed in the research report. Fabrication also means presenting invented results in a research report.*

- *"Falsification refers to modifying and presenting original observations deliberately so that the results based on those observations are distorted. The falsification of results refers to the unfounded modification or selection of research results. Falsification also refers to the omission of results or information that are essential for the conclusions.*

- *"Plagiarism refers to representing another person's material as one's own without appropriate references. These include research plans, manuscripts, articles, other texts or parts of them, visual materials, or translations. Plagiarism includes direct copying as well as adapted copying.*

-*"Misappropriation refers to the unauthorized presentation of another person's results, ideas, observations, or data as one's own."* (Räsänen and Moore, 2016, p.2).

The present study is a review of scientific literature of a sample obtained according to the inclusion and exclusion criteria mentioned earlier in this study, and by using the databases and search engines referred to in section 4 of this work. Therefore there has not been any

contact with the participants in the different studies that were reviewed for the purposes of the present paper.
In order to ensure the correct and ethical use of the material that is the object of this study, the references of all the articles consulted have been included mentioning the title, date of publication and authors.
The sources were accessed through reputable scientific journals and official Internet sites of accredited institutions and root certificates of the respective sites were checked.
Although there are relatively old citations in this study, the articles that have been reviewed directly were published later than the year 2008 so that the information and knowledge is recent enough.

## 5.5 Data analysis

The eleven articles picked for this study were read and understood carefully.

A qualitative content analysis of the eleven articles chosen was the method used to achieve the objective of the study.
In the stage of data analysis the data used on the study is arranged in order to be able to make the conclusions, providing knowledge and a representation of the facts. (Elo & Kyngäs, 2008, p 108).

As stated by Bengtsson (2016, 10), "in qualitative content analysis data are presented in words and themes, which makes it possible to draw some interpretation of the results".
After reading the materials thoroughly, the author had to find the similarities in all the articles that are related to the aim and the research question chosen for this paper.
Generally, after highlighting and colour coding those similarities, the author arranges them in themes, categories and quotations.

In this case, and due to the fact that all categories were considered to belong under the same theme, there will not be any theme per se, instead all those three categories that will be discusses in the section 6, results, lay under a same and only category.

# 6 Results

In this thesis, the author was able to answer the question, also known as problem definition, that was presented earlier in this study: "Can massage enhance the well-being, health and quality of life of the elderly?".

Tactile massage is beneficial for every aspect of the well-being of the elderly adult, as well as improves their quality of life.

*"For older adults experiencing persistent pain, massage reduces the limitations due to physical or emotional issues; better emotional health, more energy/ less fatigue, better social functioning, and a better overall health".* (Munk et al., 2011, 2).

*"Application of psychomotor massage techniques as a therapeutic intervention in nursing homes for elderly is effective in enhancing health and quality of life of institutionalized elderly persons...this psychomotor technique could be considered as an option for achieving health benefits with a low cost for nursing homes".* (Roque et al., 2017, 165).

By using the method of qualitative content analyses, three different categories belonging to the same theme emerged regarding the benefits of tactile massage: physical improvements, psychological improvements, and emotional improvements.

## 6.1. Physical improvements

Most of the articles have a common denominator, which is the considerable reduction in the pain levels suffered by the patients that had been treated with tactile massage (pain relief), and also increases the functionality capacity and delays the disease progression of those patients.

According to Hoffman et al. (2017, 8-9). Massage *"reduces lower back pain and increases functional capacity", "contributes to reducing the functional limitations caused by low back pain which usually prevent or disrupt the activities in the elderly population",* and *"induces analgesia".*

Jimenez-Ochoa et al. (2015, 52-54) state that therapeutic massage *"increases the functional capacity",* is *"effective for improving pain, movement range and the strength of the elderly",* and *"is effective for increasing the functional capacity of the elderly".*

*"Massage therapy is an intervention that improves coping in older adults with persistent pain".* (Munk et al., 2011, 2).

Massage *"integrated as additional options to improve holistic care to older people with chronic low back pain show significant improvements in pain intensity, indicating immediate short and long term effectiveness".* (Sritoomma et al., 2014, 91).

## 6.2 Psychological improvements

In this category a substantial improvement in aspects related to the psychological state of the patients treated with massage is referred.
The most frequently mentioned refer to a reduction in anxiety, stress, aggression and or agitated behaviour. As well as it addresses the substantial reduction in the demand for drugs and / or analgesics in patients with pain.

*"The implementation of slow stroke back massage can be effective for reducing the fatigue of elderly patients with multiple sclerosis".* (Karimi et al., 2016, 52).

*"Massage at bedtime may reduce the use of sedative-hypnotic drug usage with older adults".* (Nelson & Coyle, 2010, 217).

## 6.3 Emotional improvements

The findings suggest a significant improvement in the emotional aspect, such as sleep patterns and reduction of insomnia.

*"Massage reduces agitation and related behavioural problems in people with dementia ad these behaviour changes are maintained after the massages ceases".* (Moyle, et al., 2011, 160).

Massage indicates "*effectiveness improving the quality of sleep of elderly people",* and can be considered as a *"non-pharmachological therapy method for sleep-disturbed elderly people". (*Hossein-Abadi et al., 2008, 2).

*"Favourite music and hand massage, both individually and combined are effective in significantly decreasing agitation immediately following the intervention and also one hour post intervention".* (Hicks-Moore & Robinson, 2008, 102).

## 7 Discussion

Further research on economical viability and cost effectiveness of including therapeutic massage or basic massage protocols in older people care is needed. Such feasibility might go from protocols with a short slow-stroke massage or simple forms of massage applied by caregivers to programmed therapeutic massage sessions implemented by specialized staff. Quality care for an increasingly numerous sector of the population, such as the elderly, poses an important challenge to the health and social care system.

Additionally, the question of the specific training needed for caregivers and/or nurses to apply massage to older people, should be taken into account since the use of massage is contraindicated in some pathologies affecting particularly to elderly.

The use of massage as therapy should not be applied in a generalized way without taking into account the individuals, and not only for purely medical reasons. Respect for the privacy and the intimacy of the person must be especially taken into account. The modesty that can be felt by any person when undressing for a massage in front of a practitioner, may be more pronounced when it comes to older people, since they might have a more negative concept of their bodies affected by the age and may be counterproductive and cause anxiety or stress.

Six of the articles found after using the mentioned inclusion criteria have as sample elderly affected by dementia. To exclude a direct correlation between the benefits of massage and dementia further research is would be necessary targeting elderly population not affected by such mental disorder.

The present study has only included works whose final objective is to demonstrate the benefits of massage in the elderly. It would be necessary further research on the effect of tactile-touch on a daily basis in the care of the older people to find out whether the positive effects of massage have to do with the technique of massage or, the tender touch, the natural and sustained human contact, the attention with positive non-verbal reinforcement (tone of voice, eye-to-eye communication, natural and spontaneous physical contact...) have also these beneficial effects.

# 8 Conclusion

The revision of the literature targeted in this study demonstrates a positive impact of massage. It highlights that, besides the evident primary effects such pain relief and relaxation, tactile massage is proved as a beneficial complementary treatment because it enhances the well-being, health and quality of life of elderly.

Having had the opportunity of doing this study has given me a good access to understand better the importance of the caring touch in the elderly, and has been an interesting process all together.

Even though the elderly population is such a vast sector the information on the topic is very limited.

Despite the limitation of the study I have come to understand how we as nurses can improve their quality of life and alleviate their suffering.

As the author of this study, I am aware that the research group is small and that the literature and resources available on the matter are limited, but the results are encouraging to take further insight into the issue.

Working as a practical nurse with elderly patients for the past five years in different elderly homes, both in England and in Finland, made me realize how important a simple touch is, especially for patients suffering from dementia and Alzheimer's.

We often don't pay attention on those simple gestures that perhaps for us don't mean much but for them can make a big difference, both physically and also in their mood.

Through my own experience I have been able to see in first hand how, for example, a hand massage can relax the elderly when they are feeling a bit stressed or worried, so working on this thesis has really provided me with a better overview and understanding on how massage is beneficial.

Society has the tendency of forgetting the elderly and their needs and putting them aside. There's not much interest in researching and investigating on the subject, so in my opinion further studies should be conducted on this topic, especially qualitative ones, as the ones available are not so many, and the literature should be updated.

With awareness of the limits encountered throughout the process of writing this study, the work on this study has really provided me with a good insight and knowledge, as well as I have acquired better and deeper understanding, therefore I consider that the aim of the study has been achieved.

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## Appendices

Appendix 1: Table of reviewed articles

| Title | Aim | Method | Results |
|---|---|---|---|
| Foot Reflexotherapy Induces Analgesia in Elderly Individuals with Low Back Pain.<br><br>Hoffmann, B. et al. 2017 | To evaluate the effects of foot reflexotherapy on pain and postural balance in elderly individuals with low back pain. | Participants filled questionnaires on pain and disability: Visual Analogue Scale (VAS) , and Roland-Morris Disability Questionnaire (RMDQ).<br>Heart rate variability, orthostatic balance and baropodometric were also assessed during and after the intervention. | The results of the present study demonstrate that reflexotherapy reduces lower back pain and increases functional capacity.<br>Interestingly, it was observed that in the first two sessions the analgesic effect produced by RT did not persist for the whole week. However, from the third session on, the analgesic effect of RT was prolonged, persisting for more than one week, an effect that was observed until the last treatment session. |
| The effect of therapeutic massage as part of nursing care for the functional capacity of the elderly.<br><br>Jiménez-Ochoa, S., et al. 2015 | To evaluate the effect of classic therapeutic massage as nursing care on the functional capacity of the elderly in a home. | Barthel index, Cronbach's alpha of 0.95. Non-probabilistic sampling for convenience. The analysis was carried out with descriptive and nonparametric statistics through Wilcoxon T and Mann Whitney U for which the SPSS v.19 program was used. | The study group post-test (Wilcoxon, Mann Whitney) showed a significant increase in the functional capacity. There are not many similar works in the literature; however some research studies have demonstrated that therapeutic massage is effective in improving movement and gripping strength, and also in reducing pain among elderly adults. |
| The Effect of Slow Stroke Back Massa-ge on Elderlies With Multiple Sclerosis in Kahrizak Charity Foundation in 2014. | To evaluate the effect of slow stroke back massage on fatigue in elderly patients with multiple sclerosis. | Questionnaires were applied to assess fatigue. Data Analysis was performed by SPSS version 16, and the statistical tests of Shapiro-Wilkes, | The results of this study showed that fatigue had a significant difference before and after the intervention and slow stroke back massage was effective for |

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| Karimi, M., et al. 2016 | | repeated ANOVA and Friedman, Wilcoxon and Bonferroni, and U-Mann Whitney were used. | reducing fatigue. |
| Exploring the effect of foot massage on agitated behaviours in older people with dementia.<br><br>Moyle, W., Johnston, A., O'Dwyer, S. 2011 | To explore the effects of foot massage on agitated behaviours in older people with dementia living in long-term care. | The scales to systematically assess agitation was Cohen-Mansfield Agitation Inventory (CMAI-SF) and the report to measure the observable behavioural problems was Revised Memory and Behaviour Problems Checklist (RMBPC) both tools were completed at baseline, post-test and 2-weeks follow up. | Cohen-Mansfield Agitation Inventory and Revised Memory and Behaviour Problems Checklist scores were significantly reduced at post-test and remained significantly lower than baseline at follow up. |
| Massage Therapy Usage and Reported Health in Older Adults Experiencing Persistent Pain.<br><br>Munk, N., Kruger, T., Zanjani, F. 2011. | To he examine the potential impact of massage therapy in older adults with persistent pain, | The tool used to collect the data was an anonymous, mail-in survey to compare self-reported health outcome scores among those who have and have not utilized massage therapy in the past year. | Massage applied to elderly affected by persistent pain, affects positively since they report improvements in their emotional and general health, social relationships. Such association massage-better self-reports was not affected by factors like age, education, cumulative morbidities, location of the persistent pain, complementary and alternative medicine options in addition to massage used in the past year. |
| Impact of a psycho-motor massage prog-ram on the quality of life of institutionali-zed elderly people. | To evaluate the impact of a number of actions including physical, artistic, cultural, and social activities on quality of life of | Trained Education students applied COOP / WONCA tests to the participants. The data was processed in a Excel database and analysed in SPSS 17.0. | Participants' improvements in pain, physical mobility, energy, emotional health problems, has been progressively increasing. These |

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| Roque, G., Perira, C., Veiga, G. 2017 | institutionalized older adults | | scenarios often lead to institutionalization, which has been associated with the loss of quality of life, sleep, social isolation, and health status. |
| Using Massage to Reduce Use of Sedative-Hypnotic Drugs With Older Adults.<br><br>Nelson & Coyle. 2010 | To explore the impact of massage in the amount of PRN-SHD medication requested. | Information of the possible changes in the request of PRN-SHD medication was collected throughout the process. Data were analysed using SPSS version 15. | Results, indicating a 13% greater reduction in requests for PRN-sedative-hypnotic drugs for the intervention group when it received massage, approached statistical significance for the quadratic planned comparisons While preliminary, results suggest that massage at bedtime may reduce PRN-sedative-hypnotic usage with older adults. |
| Acupoint Massage in Improving Sleep Quality of Older Adults<br><br>Hossein-Abadi, R. et al. 2008 | To determine the effectiveness of acupoint massage in elders experiencing sleep disturbances. | Participants completed the Pittsburgh Sleep Quality index (PSQI) questionnaire. | This study confirmed the effectiveness of acupressure in improving the quality of sleep of elderly people and offered a non-pharmacological therapy method for sleep-disturbed elderly people. |
| The effects of ear acupressure, massage therapy and no therapy on symptoms of de-mentia: a randomi-zed controlled trial.<br><br>Rodríguez-Mansilla, J, et al. 2016 | To evaluate the effectiveness of ear acupressure and massage in the improvement of pain, anxiety and depre-ssion in patients with dementia. | Participants evaluated pain, anxiety and depression variables using Cornel Scale for depression and dementia (CSDD), Campell Scale as well as Doloplus2 (Beha-vioural Pain Assess-ment in elderly). | A total of 111 participants completed the study. Their aged ranged from 67 to 91 years old and 86 of them (77.4%) were women. The ear acupressure intervene-tion group showed better improvements than the massage thera-py intervention group in relation to pain and depression during the treatment period and at one month of follow-up. The best impro-vement in pain was |

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| | | | achieved in the last (3rd) month of ear acupressure treatment. Regarding anxiety, the best results were also observed in the last month of treatment. |
| Favourite music and hand massage. Two interventions to decreese agitation in residents with dementia.<br><br>Hicks-Moore & Robinson. 2008 | To test the effectiveness of hand massage together with favourite music in reducing agitated behaviours in elderly affected by dementia. | Agitation Inventory (CMAI) was applied in order to measure the level of agitation. | The results suggest that preferred music and hand massage treatment individually and combined have a positive effect in a immediate reduction of agitation right after the intervention as well as one hour after it.<br><br>Further research is needed due to the methodological limitations. |
| The effectiveness of Swedish massage with aromatic ginger oil in treating chronic low back pain in older adults: a randomized controlled trial.<br><br>Sritoomma, N., Moyle, W., et al. 2014 | To investigate the effects of Swedish massage with aromatic ginger oil on chronic low back pain and disability in older adults compared with traditional Thai massage. | Questionnaires after each intervention and at the end of the process: The Visual Analogue Scale (VAS); the short form McGill Pain Questionnaire (MPQ); Owestry Disability Questionnaire (ODQ). | Both massage techniques produce not only an immediate positive impact in pain intensity and disability but also in short and long term effectiveness but Swedish massage combined with aromatic ginger oil demonstrated to be more effective than traditional Thai massage at short- and long-term assessments. |