



Nurse-led Patient Empowerment Interventions for Female Breast Cancer Patients

A Literature Review

Sumeya Yusuf

Bachelor's Degree Programme of Nursing
2023

Degree Thesis

Sumeya Yusuf

Nurse-led Patient Empowerment Interventions for Female Breast Cancer Patient: A Literature Review

Arcada University of Applied Sciences: Bachelor's Degree programme of Nursing, 2023

Identification number:

24833

Abstract:

According to the World Health Organization (2021) breast cancer is the most common cancer among women worldwide. To address the multifaceted challenges associated with breast cancer, nurse professionals play a crucial role in empowering patients through comprehensive care interventions. Thus, this literature review focuses on different nurse-led patient empowerment interventions for female breast cancer patients.

The goal is to answer the research question: "What are nurse-led interventions to promote patient empowerment"? The findings reveal five unifying key components of nurse-led patient empowerment. Which were patient education, psychosocial support, self-care, telephone-based interventions, and coping methods. Through these five key components, nursing interventions can empower patients to regain control over their lives, make informed decisions, and achieve a higher quality of life. The results of this thesis highlighted that empowerment interventions could be utilized in oncology care with female breast cancer patients. This approach involves a collaborative partnership between nurses and patients. Nurses may also provide counselling and emotional support to help patients cope with the psychological challenges of breast cancer. Thus, implementing interventions that help patients feel more in control of their care, which can lead to better health outcomes. This literature review was conducted using deductive content analysis approach through databases EBSCOhost, CINAHL, PubMed, SAGE Journals and Science Direct. Inclusion criteria was predetermined which on the basis the articles were chosen. Eventually, twelve articles were chosen for review to evaluate the influence of nurse-led patient empowerment. The theoretical framework chosen to guide this thesis is the Comfort theory By Katharine Kolcaba.

Keywords: Breast cancer, Empowerment, Nurse-led interventions, Psychosocial support

Contents

1	Introduction	5
2	Background	6
2.1	Patient empowerment.....	7
2.2	Psychological distress.....	8
3	Theoretical Framework.....	10
3.1	Comfort theory by Katharine Kolcaba	10
4	Aim and Research Question	12
5	Methodology	13
5.1	Data Collection.....	13
5.1.1	Inclusion and Exclusion criteria	14
5.1.2	List of Articles chosen for review	16
5.2	Content Analysis	17
5.3	Ethical consideration.....	19
6	Results.....	20
6.1	Patient empowerment.....	20
6.1.1	Telephone based intervention	21
6.1.2	Patient education	22
6.1.3	Psychosocial support.....	23
6.1.4	Coping methods	25
6.1.5	Self-care.....	25
7	Discussion	28
7.1	Limitations of study	31
8	Conclusion	32
	References.....	34
9	Appendices	38

Tables

Table 1. Inclusion and exclusion criteria	14
Table 2. Illustration of data collection process from databases	15
Table 3. Content categorization used in the data analysis	18

Figures

Figure 1. <i>Statistic showing global factors of female breast cancer in 2020 (WCRF, 2022).</i>	6
Figure 2. <i>A Model of Katharine Kolcabas Comfort Theory</i>	11

1 Introduction

According to the World Health Organization (2021), breast cancer is the most common cancer among women worldwide. It can have a significant impact on the physical, emotional, and social well-being of female breast cancer patients.

The purpose of this review is to gain insight into the key components of empowerment interventions and explore how they can be integrated into breast cancer care. By understanding the essential elements of such interventions, it may be possible to develop new approaches that are tailored to the specific needs of female breast cancer patients. Ultimately, patient empowerment is crucial as it ensures that patients beliefs, wishes and needs are considered into their care.

This thesis will examine what are nurse-led interventions to promote patient empowerment and coping methods for female breast cancer patients. By providing an in-depth analysis of nurse-led patient empowerment interventions, this thesis will highlight the ways to provide healthcare professionals with a comprehensive understanding of the importance of empowering female breast cancer patients and the strategies that can be employed to promote patient empowerment.

The background chapter will cover the imperative need for patient empowerment for female breast cancer patient and the reason behind why they specifically need it based on existing research. The theoretical framework chosen to guide this thesis is the comfort theory by Katharine Kolcaba, which will be covered in the theoretical framework chapter. The aim of this literature review along with the research question will be presented. This thesis will involve a detailed description of the methodology used in data collection and analysis in the Methodology chapter. This study conducts a literature review of 12 peer-reviewed articles from scientific journals. The selected articles are arranged chronologically to enhance clarity and organization. The review aims to present the key findings of these articles and identify commonalities among patient empowerment interventions. Additionally, the discussion chapter of this thesis will provide an analysis of the interpretations, and limitations of the literature review findings. Finally, the conclusion chapter will summarize the key points of the study and present recommendations for future research.

2 Background

Breast cancer can occur in both men and women, and it is the most frequent cancer among women in Europe (Vehmanen, 2020). The following figure demonstrates statistics based on the ten European countries with the highest breast cancer diagnoses. Belgium has the highest rate of incidence of breast cancer. Finland is ranked 9, with over 5 000 cases in breast cancer.

Figure 1. *Statistic showing global factors of female breast cancer in 2020 (WCRF, 2022).*

Rank	Country	Number	ASR/100,000
	<i>World</i>	<i>2,261,419</i>	<i>47.8</i>
1	Belgium	11,734	113.2
2	The Netherlands	15,725	100.9
3	Luxembourg	497	99.8
4	France	58,083	99.1
5	France, New Caledonia	185	99.0
6	Denmark	5,083	98.4
7	Australia	19,617	96.0
8	New Zealand	3,660	93.0
9	Finland	5,228	92.4
10	US	253,465	90.3

Many factors affect the occurrence of breast cancer. Several factors that increase the risk of cancer are known, but it is impossible to assess the cause of the disease in an individual patient. Age is the most important risk factor, and the incidence of breast cancer is largely related to the aging of the population (Vehmanen, 2020). Lifestyle factors such as obesity, physical inactivity, nutrition habits, alcohol consumption and genetic predisposition all are among the leading risk factors for cancer (Bucur et al. 2020).

Early onset of menstruation and late menopause increase the risk of the disease, as well as infrequent births and first birth age after 30 years of age. Lifestyle is estimated to explain about 30% of breast cancer cases in Finland. While being overweight increases the likelihood of developing postmenopausal breast cancer, regular exercise, maintaining a normal weight and a healthy diet seem to protect against getting diagnosed with breast cancer (Vehmanen, 2020).

2.1 Patient empowerment

Recovering or living with breast cancer is rising and the increasing number of these cases needs female breast cancer patients to actively take a leading role in their rehabilitation. With the support of healthcare providers, this can be shifted from acute to chronic care emphasizing self-management of cancer where the patient has an informed role in managing psychological, physical, and social views of their health (Bucur et al. 2020).

Nowadays there is increasingly more attention paid to patient empowerment in cancer treatment and follow-up programs. Patient empowerment has been defined as a sense of control over cancer and cancer treatment. Nursing interventions for patient empowerment are involving and supporting the patients to produce patient comfort and satisfaction for better health (Eskildsen et al. 2017). Because cancer patients require these supportive programs such as multi-disciplinary attention and, in some cases, frequent medical interventions, patient empowerment needs to be in the centre of their care (Mora et al. 2022).

As it is explicitly stated in the research article by Mora et al., (2022), patient empowerment is established as a process or result arising from communication with a healthcare professional that increase the patients' sense of control, coping ability, and self-efficacy. Empowerment has been theoretically and experientially linked to the development in other patient-reported and clinical outcomes. It requires the individual to become a leader in their care, have the skills to set goals and define ways to achieve them, and acquire a higher level of knowledge that is expected to lead to making healthier choices. Moreover, patient empowerment is a key concept in nursing science, as nurses can guide the patients to feel more empowered through developing self-management skills (Mora et al. 2022).

The goal for patient education is to give patients the opportunity to make decisions and partake in their own care. When the patient has adequate knowledge on their disease and care plan, they have already reached the basic element in the empowering process (Ryhänen et al. 2012). There are many studies that show the association between patient empowerment and patient-reported outcomes that include positive health behaviours, transition readiness, communication skills and self-care along with the impact patient empowerment has on the quality of life of patients (Mora et al. 2022). However, initiative and readiness for self-efficiency to manage

with a chronic illness and following the healthcare professional's treatment option and recommendation, needs to come from the patient. Nurse professionals can't enforce self-management to the patient, they can only aid the process of patient empowerment through patient education methods (Ryhänen et al., 2012; Mora et al., 2022).

2.2 Psychological distress

In many cases of breast cancer, a woman may need surgery to remove it. Numerous of these surgeries are invasive and the outcome can be breast deformities or the entire removal of one or both breasts. As the female breast has a social meaning of femininity, motherhood and sexuality, the loss of the breast due to the illness or the mutilation of the breast can have adverse effect on the psychosocial functioning, including their identity, self-esteem, confidence, and self-satisfaction. Such concerns can cause psychological distress and affect the quality of life (Helms et al. 2008). Considering these factors, incorporating a psychological approach into comprehensive cancer care should be a significant contribution. Identifying possible psychological problems in the early stages of cancer diagnosis, could have a positive effect on the decrease in mental health problems in female breast cancer patients (Lickova et al. 2021).

Depression and anxiety can complicate the diagnosis and treatment of cancer. Breast cancer patients seen with mental health issues are predominantly in older age groups, and gender also plays a significant role as depression is two in three times higher in female cancer patients. Studies show that depression and anxiety can have a negative impact on treatment outcomes and can even increase the mortality of cancer patients (Lickova et al. 2021).

There is a high prevalence of depression among patients with cancer, this can negatively impact the health outcomes of cancer patients suffering from mental health issues. It is reported that 60 % of patients diagnosed with cancer have higher rates of depression or other mental health problems. The likelihood of newly diagnosed cancer patients developing a mental health concern is high (Decker et al. 2021).

The majority of female breast cancer patients see their illness as a challenge, some consider their illness significant. For some it is a life-stopping event, a weakness, or a punishment (Almeida et al. (2023). A negative attitude about the effect of the disease on life weakens the

quality of life in terms of psychological wellbeing and satisfaction, and increases the use of avoidance-coping strategies, depression, and anxiety. As further specified by Almeida et al., (2023), cancer diagnosis is a distressing life event which can affect the cognitive and physical suffering and reveals uneasiness and concerns about the future and the uncertainty it holds.

Breast cancer is the most common cancer in women under the age of 50, and this patient group has more depressive symptoms and a poorer quality of life than their peers without breast cancer and older women with breast cancer. Treatment of breast cancer in younger patients can lead to premature menopause, which is associated with sexual, fertility, and sleep disturbances, all of which may increase levels of psychological distress and impair quality of life (Almeida et al. 2023).

While the previously mentioned mental health factors that can have an impact on breast cancer patients' lives, are important, issues related to body image in women with breast cancer can also increase emotional distress. Women are more concerned about their appearance and weight. Weight gain can adversely affect self-esteem and reduce the quality of life of women with breast cancer, as evidence-based research shows that weight gain is distressful and negatively affects the recovery of women with breast cancer (Helms et al. 2008).

Empowering female breast cancer patients play a pivotal role in their overall well-being and treatment journey. Due to female breast cancer patients being more susceptible in developing psychological distress after their diagnosis, they require tailored approaches to address the numerous physical, emotional, and psychosocial challenges they face. Comprehensive patient empowerment initiatives encompassing education, counselling support groups, and shared decision-making can significantly enhance women's ability to actively participate in their treatment plans. By acknowledging and addressing the unique concern of female breast cancer patients, healthcare professionals can foster a sense of control, improve treatment adherence, and positively impact patients' quality of life (Lickova et al. 2021).

3 Theoretical Framework

A theoretical framework expresses an understanding of the theories and concept related to the topic of the research and is related to the wider area of knowledge under the study. Utilizing a theoretical framework can help the researcher connect with existing knowledge and is guided by relevant theory (USC libraries 2023).

In this thesis the comfort theory by Katharine Kolcaba will be used to support the understanding of nurse-led interventions for women with breast cancer. Kolcaba's comfort theory will help identify the patient empowering needs and supportive coping methods for the patients. Additionally, this theoretical framework will help highlight the key prevalent features of nurse-led interventions to promote empowerment for female breast cancer patients.

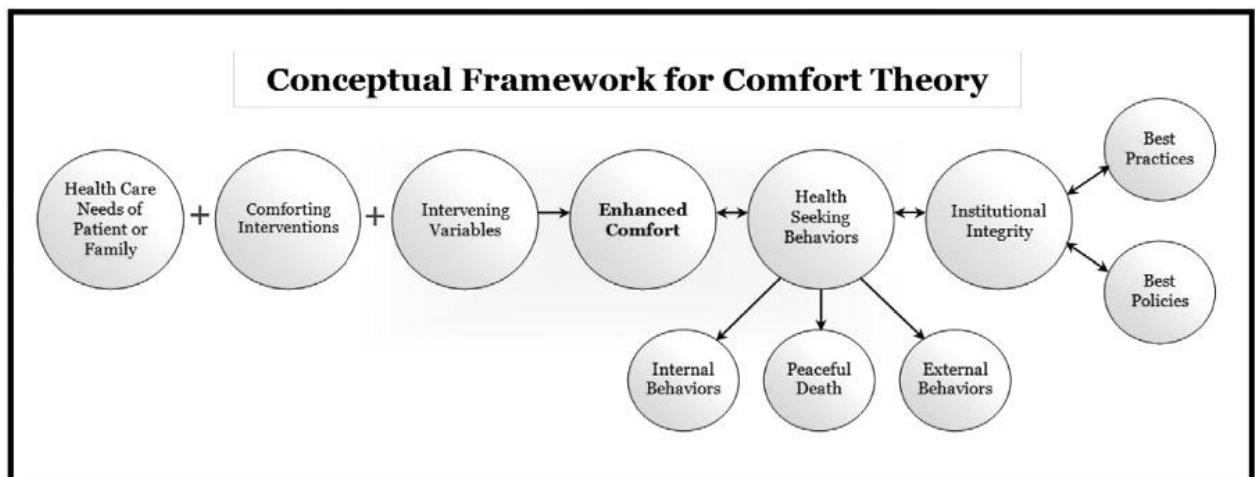
3.1 Comfort theory by Katharine Kolcaba

The framework chosen to guide this thesis is the comfort theory developed in the 1990s by Dr. Katharine Kolcaba. Kolcaba created this theory based on the work of previous nursing theorists. This theory is a mid-range theory. It was developed in the context of home care, long-term care, and elderly care (Krinsky et al 2014). Kolcaba conducted a concept analysis to examine literature from various disciplines on comfort and describes comfort as a *relief*, *ease*, and *transcendence*, occurring in the following context: Physical, environment, sociocultural and psychospiritual. When the patients' comfort needs are met, they experience *relief*. The comfort state of *ease* can occur for instance through pain medication when afterwards the patient feels calm and content. The final part of comfort theory, transcendence comes when a patient is able to rise above their challenges (Krinsky et al 2014).

In Katharine Kolcaba's theory, nursing is described as a process that assesses the patients' comfort needs, by creating and implementing appropriate care plans, and assessing the patients' comfort level after the care plans are implemented. Krinsky et al (2014) further explains, that comfort is the patient's primary goal and central to the patient's experience, thus developing comfort is a general goal of healthcare (Krinsky et al 2014).

The following figure demonstrates a model of Katharine Kolcaba's comfort theory.

Figure 2. A Model of Katharine Kolcabas Comfort Theory



4 Aim and Research Question

This thesis focuses solely on women's breast cancer. Further, rather than focusing on a specific breast cancer type, this thesis discusses breast cancer in general.

The aim of this thesis is to examine different patient empowering and nurse-led interventions for female breast cancer patients.

To achieve the goal the following research question has been presented:

1. What are nurse-led interventions to promote patient empowerment?

5 Methodology

This study is a literature review. A literature review analyses, selects, and strictly evaluates research to compare existing literature to answer the formulated research question. In a literature review, a clearly defined protocol or idea must be followed, in which the criteria are clearly stated before the review is carried out. It is an extensive, transparent search performed on multiple databases (Charles Sturt University 2023).

According to Li et al (2022), the data collection for literature review should be authentic, complete, and available for future reviews and information sharing. Researchers should choose which sources may contain the most suitable information for the evaluation of the articles and have critical thinking if the information is inconsistent across sources (Li et al. 2022).

This chapter describes the methods used to collect and analyse data as well as what type of information has been searched for, evaluated, and reported within a known timeframe along with search terms and database platforms.

5.1 Data Collection

The data collection of this literature review was begun by clearly defining the research question. Further, the search strategy was developed. This was conducted by searching for the appropriate resources and articles from academic databases, journals, and books. During the research process a librarian was consulted on how to execute the search strategy by using appropriate keywords and the Boolean search operators. Screening and selecting articles were done by reading the titles and abstracts of the retrieved articles to determine their relevance to the research question. Irrelevant articles were excluded from those that align with the research objectives. Additionally, the snowball method was used.

The boundaries and scope of this literature review can be viewed from the following subchapter and table 1 which demonstrates the inclusion and exclusion criteria of this literature review in detail.

5.1.1 Inclusion and Exclusion criteria

The inclusion and exclusion criteria were defined in advance and were applied after the initial hits obtained from the databases used in this thesis. Thus, narrowing the search. The inclusion criteria used in this review are language of study to be in English, research or review article, publication date preferably between 2013-2023, published in a peer-reviewed scientific journal, articles must relate with the research question. Full-text articles of the selected studies should be available for a more detailed review, and without cost. Additionally, the focus of the research articles to be on patient empowerment for breast cancer patients and include nursing interventions.

Table 1. Inclusion and exclusion criteria

Inclusion criteria	Exclusion criteria
<ul style="list-style-type: none">○ Year of publication 2013 or later○ Written in English○ Available for free○ Available in full text○ Related to the research question○ Must include nursing interventions and patient empowerment	<ul style="list-style-type: none">○ Articles not published globally○ Articles excluding mental health○ Available upon payment○ Full text not accessible○ Does not answer the research question○ Not including nurse-led interventions and patient empowerment

Articles for this study were collected between February and May in 2023. Article retrieval was made from databases on the internet with Boolean search moderators. Key words ("empowerment OR support") AND ("breast cancer patients") AND ("nursing interventions" OR "nurse-led interventions" OR "nurse's role") AND ("mental health" OR "depression") were applied to databases EBSCOhost, CINAHL, PubMed, SAGE Journals and Science Direct. To obtain an authentic result, the same keywords were used in all the databases. The detailed search is described in table 1. The titles of the articles were reviewed and the articles meeting the criteria were further examined by reading the abstract.

The following figure demonstrates the number of hits shown by each database along with the number of articles and abstract read, and lastly selected for this thesis.

Table 2. Illustration of data collection process from databases

Database	Sorted by:	Key Words	Number of hits	Number of articles and abstracts read	Chosen articles
EBSCOhost	2013-2023 Full PDF text	("empowerment OR support") AND ("breast cancer patients") AND ("nursing interventions" OR "nurse-led interventions" OR "nurse's role") AND ("mental health" OR "depression")	2 395 hits	32 abstracts read	5 chosen
CINAHL	2013-2023 Full PDF text	("empowerment OR support") AND ("breast cancer patients") AND ("nursing interventions" OR "nurse-led interventions" OR "nurse's role") AND ("mental health" OR "depression")	4 323 hits	37 abstracts read	3 chosen
PubMed	2013-2023 Full PDF text	("empowerment OR support") AND ("breast cancer patients") AND ("nursing interventions" OR "nurse-led interventions" OR "nurse's role") AND ("mental health" OR "depression")	28 hits	9 abstract read	2 chosen
SAGE	2013-2023 Full PDF text	("empowerment OR support") AND ("breast cancer patients") AND ("nursing interventions" OR "nurse-led interventions" OR "nurse's role") AND ("mental health" OR "depression")	265 hits	16 abstract read	1 chosen
Science Direct	2013-2023 Full PDF text	("empowerment OR support") AND ("breast cancer patients") AND ("nursing interventions" OR "nurse-led interventions" OR "nurse's role") AND ("mental health" OR "depression")	392 hits	23 abstract read	1 chosen

5.1.2 List of Articles chosen for review

The following articles have been chosen based on the inclusion criteria of this thesis. Conclusively 12 articles were chosen.

1. Abdollahi, et al. (2022), Self-care behaviours mediates the relationship between resilience and quality of life in breast cancer patients, *BMC Psychiatry*, 22 (825)
2. Bouya, et al. (2021), The effect of nursing self-care educational intervention on depression in women with breast cancer undergoing post-mastectomy chemotherapy: A quasi-experimental study, *International Journal of Surgery Open*, 32
3. Gabitova & Burke (2014), Improving healthcare empowerment through breast cancer patient navigation: a mixed methods evaluation in a safety-net setting, *BMC Health services research*, 14(407)
4. Gorini, et al. (2016), A web-based interactive tool to improve breast cancer patient centredness, *ecancer medicalscience*, 10 (659)
5. Kuijpers, et al. (2013), A systematic review of web-based interventions for patient empowerment and physical activity in Chronic Diseases: Relevance for cancer survivors, *Journal of medical internet research*, 15(2)
6. Mirabella, et al. (2022), SMART Oncology Nursing: Literacy, Goals, Coaching, and Empowerment, *Oncology Nursing Forum*, 49 (1)
7. Manouchehri, et al. (2022), How do I deal with breast cancer: A qualitative inquiry into the coping strategies of Iranian women survivors, *BMC Womens Health*, 22(284)
8. Ploos Van Amstel, (2016), The effectiveness of nurse-led intervention with the distress thermometer for patients treated with curative intent for breast cancer: Design of a randomized controlled trial, *BMC Cancer*, 16 (520)
9. Taleghani, et al. (2014), Empowerment needs of woman with breast cancer: A qualitative study, *Iran red crescent medical journal*, 16(11)
10. Torres-Vigil, et al. (2021), The role of empathic nursing telephone interventions with advanced cancer patients: A qualitative study, *European Journal of Oncology Nursing*, 50 (101863)
11. Warren, (2022), Just a call away- supported self-management after treatment for early breast cancer: an evaluation of a new nurse-led telephone-based service in Central New Zealand, *Australian Journal of Cancer Nursing*, 23 (2)
12. Xiufang & Lijie (2022), Analysis of the role of continuous early intervention in improving the quality of life of breast cancer patients, *Computational Intelligence and Neuroscience*, vol. 2022

5.2 Content Analysis

Content analysis, a research tool used to establish the occurrence of specific words, themes, or approaches. This allows the researcher to analyse text or materials put into text form and interpretate the result, explaining the observations and making them comprehensive (Palmquist, Columbia University 2023). An essential part in content analysis is to divide the material into codes and categories for further analysis. This thesis content analysis began by reading carefully through the 12 chosen articles repeatedly and purposefully. The articles have been organized into codes and categories they fit. Each articles process and results were read and highlighted, articles with similar result were put into the same categories and articles with different outcomes were observed and noted. To avoid bias and inconsistencies, the accuracy of the results of each article were reviewed multiple times.

There is a moderate amount of research conducted on patient empowerment for female breast cancer patients. Therefore, the deductive approach was chosen. Inductive methodology involves the process of deriving general principles or theories from specific observations or data. It begins with specific observations and moves towards generalizations and theories. Deductive methodology, on the other hand, starts with general principles or theories and applies them to specific instances or observations to test their validity (Weisberger & Bradford 2023).

The following table briefly demonstrates the themes, categories and sub-categories used in the data analysis process of this thesis. The participants from the 12 articles to be analysed in this thesis, are referred to as patients, for easy readability. The patients are undergoing healthcare treatment and/or patient empowerment interventions.

Detailed information about the findings can be found in the results chapter of this thesis.

Table 3. Content categorization used in the data analysis

Themes	Patient Empowerment				
Major categories	Telephone based interventions	Patient education	Psychosocial support	Coping methods	Self-care
Subcategories	Nurse-led interventions Low threshold approach	Patient centered care Health literacy Skill building	Validation Empathy Providing psychosocial support Motivational interviewing	Acceptance Resilience	Rehabilitation Sense of control over recovery process Confidence Attaining self-care goals Relaxation techniques
Unit of analysis	4,5	1,2,3,5,6,8,9,11,	8,4,10,11	1,2,6,8,3	1,4,6,7,10,11,12,

5.3 Ethical consideration

The ethical issues to be considered vary depending on the type of research being conducted. However, ethical considerations prevent wrong interpretations and distortion of fact when drawing conclusion about all research attempts. The Finnish National Board on Research Integrity (TENK), defines it as a part of principles that guide your research plans and practices. Further, it refers to the preliminary inspection and evaluation of the research plan in the light of the ethical practices generally followed to prevent the research or its results from causing harm to the subject. Naturally, this thesis adheres to the Finnish National Board on Research Integrity (2021). Thorough consideration was made to avoid plagiarism in this thesis and research ethics were applied by citing all sources authentic authors. Additionally, in this literature review article published in a scientific journal alone were acknowledged.

6 Results

12 articles were chosen to identify the prevalent features of each intervention and all shared similarities such as, ensuring the patients adequate health literacy with providing enough education for the patient on their disease management. Other similar key themes were, the importance of self-care and building resilience along with skill building and rehabilitation. Ultimately there were five unifying key elements that all the articles chosen for review shared. These characteristics were patient education, telephone-based interventions, psychosocial support, self-care, and coping methods. A detailed categorization of the data analysis can be found in the previous chapters table 3.

The limitation of this literature review was based on the exclusion criteria of this study. Studies evaluating interventions unrelated to nurse-led patient empowerment were excluded to maintain focus and relevance. This criterion ensured that only studies specifically addressing nurse-led patient empowerment interventions were considered for inclusion. The decision to include only English language studies was made based on resource availability.

This chapter answers the research question of this thesis “What are nurse-led interventions to promote patient empowerment”? The chapter is further split into subcategories where the answer to the research question is presented.

6.1 Patient empowerment

This subchapter discusses the different ways to promote and practise nurse-led patient empowerment interventions. Xiufang & Lijie (2022) defines patient empowerment in their study as a concept that was introduced to grant patients to play an active role in decision-making process regarding their health and quality of life. As the desire to increase patient empowerment, patients in the study reported to have obtain autonomy and power for themselves over the factors that might affect their health. Healthcare professionals and patients collectively perceive that patient gaining control over their care is important for the success of the treatment and improves the nature of the care. Patient-cantered care has become more and more common for it has also improved the nurse-patient relationship. Xiufang & Lijie (2022)

also points out in their extensive research that patient-centeredness and patient empowerment is viewed as an approach that respects the patient's values, ethnicity and social background putting an emphasis on the importance of health literacy needs of the patients.

Several articles chosen for this thesis define patient empowerment as an enabling process. For instance, self-determination interventions give tools to the patient to rightfully have the ability to make their own choices (Xiufang & Lijie 2022; Manouchehri et al., 2022; Mirabella, et al. (2022). As nurses can only motivate the patient to have self-management, with validating, empathy and educating them. The patient must be willing to partake in decision making and have the confidence to overcome their obstacles with resilience themselves. This is why establishing a good nurse-patient relationship and communication is key so that the patient may reach their goals (Bouya, et al. 2021). A well-established nurse-patient relationships gives the patients the ability to express feelings, needs and questions (Taleghani, et al. 2014).

However, nurse-led patient empowerment interventions also have their limitations. One of the main challenges is ensuring that patients have access to the resources and support they need. This can be particularly challenging for patients who live in rural or underserved areas, who may not have access to the same level of healthcare resources as patients in urban areas. Another limitation of these interventions is that they may not be suitable for all patients. Some patients may not be interested in or comfortable with taking an active role in their care, while others may have cognitive or physical limitations that make it difficult for them to participate in these interventions effectively (Mirabella, et al. (2022); Kuijpers, et al. (2013).

6.1.1 Telephone based intervention

This part of the chapter discusses how nurse-led telephone-based interventions can positively affect patient empowerment. Nursing interventions through telephone have been proven to be efficient by numerous studies such as, Warren et al. (2022), Torres-Vigil et al. (2021), Gorini, et al. (2016) and Kuijpers, et al. (2013). In these articles, nurse telephone interventions helped the patients manage with the transition from treatment for breast cancer to living sufficiently after treatment. Thus, this form of communication between the nurse and the patient, are meeting the individuals supportive care needs and are increasing their ability to self-manage. These new models have been welcomed by the patient and their families, as they are

implemented into patient care, empowering female breast cancer patients to manage their condition and move forward after treatment for better quality of life (Kuijpers, et al. 2013).

From the two studies by Warren et al. (2022) and Torres-Vigil et al. (2021), state that traditional follow-up models generally are short clinic visit with the healthcare professional that are disease focused and are intended to detect disease recurrence rather than providing an individual and family-centered care. Patient from both studies have expressed how the healthcare professional didn't see them as a person and that the visits often lacked a person-centred care approach.

After the COVID-19, pandemic nurses and other healthcare professionals are using telephone calls and other remote healthcare tools increasingly than ever before. Patients that participated in the study by Torres-vigil et al. (2021), viewed nurse telephone interventions successful as it improved the patient's psychological symptoms and helped them to better understand their physical symptoms. The patients reported that they received encouragement and empowerment better from the nurses through telephone interventions. This was explained in the study being due to, nurse telephone interventions being easily accessible and convenient, having a low threshold affect, thus making the patients more relaxed. Previous studies on this matter have stated that nurse-led telephone-based interventions reduced chemotherapy related symptoms such as emotional distress and improved overall health related quality of life (Torres-Vigil et al. 2021).

6.1.2 Patient education

Many women living with breast cancer experience difficulties in accessing and understanding health information. Educating the patient is often seen lacking a comprehensive approach when informing the patients on the state of their health in a manner that is conscious and sensitive for health literacy. Patients should be receiving health literacy in a way that they understand with a low threshold approach. Patient education can be delivered verbally by the nurse to the patient (Torres-Vigil et al., 2021; Warren et al., 2022) or in a group setting (Mirabella et al., 2022). Patient from the randomized control trial from Mirabella et al. (2022) and the quasi-experimental study by Bouya et al. (2021), had similarities in the fact that when health literacy needs were incomplete, patient reported that they experienced difficulties in decision-making.

These studies demonstrated that it was common that nurses overestimated the health literacy of the patients. This led to misunderstanding and inferior results (Mirabella et al, 2022). Patients participating in the research by both studies conducted by (Bouya et al, 2021) and (Xiufang & Lijie 2022) experienced encouragement to involve themselves in the decision making of their care. Patients also reported to achieving skill building in coping with their disease as well as to achieve better outcomes for improved quality of life.

Patients who are well-informed about their diagnosis, treatment options and side effects, and self-care strategies are more likely to feel empowered and take an active role in their care. Nurses can provide patients with accurate and up-to-date information about breast cancer and its treatment, as well as resources for emotional and social support. These may consist of educational resources such as brochures, online resources, and guide them to support groups to help them better understand their diagnosis and treatment options (Ploos Van Amstel, (2016); Kuijpers, et al. (2013); Gabitova & Burke (2014). Moreover, nurses can empower the patient by giving them access to online portals where they can view their medical records, track their symptoms, and communicate with their healthcare team. This can help patients feel more involve, giving them the ability and confidence to partake in their care and manage their condition (Taleghani, et al. 2014).

6.1.3 Psychosocial support

The diagnosis and treatment of breast cancer can be a traumatic and stressful experience for patients and their families. Psychosocial support is an important aspect of breast cancer care that can help patients cope with the emotional and psychological challenges of the disease. Thus, psychosocial support is one of the main four themes in this thesis. An important aspect of nurse-led patient empowerment interventions is providing the patient with emotional support, having adequate communication, and listening to the patient while understanding their personal values (Bouya, et al. (2021); Taleghani, et al. (2014).

Breast cancer patients often experience fear, anxiety, depression, and body image issues. Psychological support provides a safe environment for patients to express their emotions, fears, and concerns, fostering resilience and coping abilities. Support groups, counselling services, and psychotherapy sessions can offer valuable emotional support, enhance coping strategies,

and improve patients' psychological well-being. Nurse professionals can enforce interventions and guide the patient to these services by giving them the adequate knowledge of the possible services that are accessible for the patient. By addressing the psychological aspects of breast cancer, patients can regain a sense of control and improve their overall quality of life (Bouya, et al. (2021); Taleghani, et al. (2014).

In the background chapter of this literature review, it was mentioned that female breasts have a social meaning of femininity, motherhood, and sexuality. Therefore, breast cancer diagnosis and treatment can be a very emotional and overwhelming experience for the patients. It is important for nurses to acknowledge and validate the patient's feelings (Abdollahi, et al. 2022; Taleghani, et al. 2014). Validation involves acknowledging and accepting the patient's feelings as real and legitimate. Patients may experience a wide range of emotions, such as fear, anger, sadness, or uncertainty, and it is important for nurses to validate these emotions as a normal response to a difficult situation. Validation can help patients feel that their emotions are understood and that they are not alone in their struggles. Understanding the patient's feelings and experiences can help nurses establish a trusting relationship with the patient. Similar outcomes were reported in the studies by Kuijpers, et al. (2013), Ploos Van Amstel, (2016) and Gabitova & Burke (2014). By demonstrating empathy, nurses can help patients feel heard, understood, and supported. Furthermore, empathy can help nurses identify the patient's needs and concerns, and tailor their interventions to meet those needs (Kuijpers, et al. 2013; Ploos Van Amstel, 2016; Gabitova & Burke 2014). Patients in the study by Taleghani, et al. (2014) found that the care providers empathy was related to higher patient satisfaction and diminished distress. By providing emotional support and validating their feelings, nurses can help patients feel more in control of their care and more confident in their ability to manage their symptoms and decide upon what treatment options they want. Both validation and empathy are significant traits and aspect of nurse-led patients empowerment interventions.

Advocacy is a crucial part of patient empowerment. Nurse professionals can help the patients navigate the healthcare system, accessing resources, and communicating with their healthcare providers. Advocacy can help patients feel empowered and in control of their care. This empowers the patient to improve their self-care and build their skills in self efficiency (Abdollahi et al. (2022).

6.1.4 Coping methods

Teaching female breast cancer patients coping methods is among the five characteristics of nurse-led patient empowerment interventions. Coping methods are crucial in helping breast cancer patients navigate the challenges they face. Coping strategies can vary, including problem-solving, seeking social support, reframing perspectives, and practicing mindfulness. By developing effective coping methods, patients can manage stress, alleviate anxiety, and maintain a positive outlook. Coping techniques empower patients to adapt to the emotional and physical changes associated with breast cancer, enhancing their resilience and overall psychological well-being. Therefore, coping methods is a crucial components of nursing interventions for patient empowerment. Providing coping methods is important as it aids the patient move forward with life living with breast cancer or surviving it (Mirabella et al., 2022; Bouya et al., 2021; Plos Van Amstel et al. 2016).

A successful nursing intervention utilizes different coping methods for female breast cancer patients that produce positive outcomes. These outcomes can be seen in the article by Abdollahi, et al. (2022), as the patients became more active and felt more empowered to partake in their care after implementing coping strategies into their care.

6.1.5 Self-care

Self-care strategies is an important component of cancer treatment and survivorship care. As cancer is a complex disease that affects not only patient's physical health but also their mental and emotional well-being. The psychological distress associated with cancer diagnosis and treatment can have a negative impact on patients' quality of life. Self-care strategies have been found to be effective in reducing stress and anxiety, improving mood, and enhancing the overall health in cancer patients (Warren, 2022). Nowadays self-management courses are utilized in cancer care. As previous studies reported that patients could be empowered with the ability to monitor themselves and report their progress to their healthcare provider. This has improved patient to become more proactive in their treatment plan (Abdollahi et al. 2022).

Physical activity, such as walking, running and resistance training, has been found to improve physical function, reduce fatigue, and improve quality of life of female breast cancer patients who overcame their illness. Nutritional interventions, such as a healthy diet and nutritional

supplements, have been found to improve the overall health and reduce treatment-related side effects in cancer patients (Gabitova & Burke 2014).

Cancer treatment can be a source of stress and anxiety for patients and finding ways to promote relaxation and well-being can be beneficial for their overall quality of life. A variety of relaxation techniques have been found to be effective in reducing stress and anxiety in cancer patients. These techniques include deep breathing, progressive muscle relaxation, guided imagery, mindfulness meditation, and yoga. Deep breathing involves inhaling deeply through the nose, holding the breath, and exhaling slowly through the mouth. Progressive muscle relaxation involves tensing and then relaxing different muscle groups to release tension and promote relaxation. Guided imagery involves visualizing calming scenes in the mind, while mindfulness meditation involves focusing attention on the present moment and observing thoughts without judgment. Yoga combines physical postures, breathing exercises, and meditation to promote relaxation and well-being (Mirabella et al. 2022).

Relaxation techniques can help reduce anxiety, improve sleep, and enhance overall well-being for cancer patients. Nurses can inform breast cancer patients of these relaxation techniques, and they may consider incorporating these techniques into cancer treatment plans to improve patients' quality of life. As healthcare professionals are often disease focused when it comes to cancer treatment, relaxation techniques are often seen utilized by psychiatric cancer care nurses during outpatient clinic visits with the patients (Manouchehri, et al. (2022).

The patients in the study by Mirabella et al. (2022), were shown coping strategies, relaxation techniques, such as meditation, deep breathing, and journaling. Coping and anxiety education provided information and resources to participants. Some other commonly used coping mechanisms by nurses include, a listening ear, using problem solving skills, stress management, using humour and offering a shoulder to cry on sometimes. Similar approaches were seen in the articles by Abdollahi, et al. (2022), Manouchehri, et al. (2022, Gorini, et al. (2016) and Chen, et al. (2022). However, further research is needed to determine the most effective relaxation techniques and how they can be best implemented in cancer care.

The individual's empowerment is a long and personal journey as it is along with self-care, an integral component of personal development and well-being. Recognizing their continuous nature is essential for individuals to embrace a proactive and sustainable approach to their own

empowerment and well-being. By understanding that personal growth and self-care are ongoing processes, individuals can cultivate resilience, adaptability, and a sense of agency in navigating life's challenges and promoting their overall well-being. This was seen in the studies by Abdollahi, et al. (2022), Manouchehri, et al. (2022) and Gorini, et al. (2016), as nurse professionals empowered the patients by giving them self-care advice to improve their physical and emotional well-being in which the patients reported positive outcomes from developing their self-care and building their skills in their disease management.

7 Discussion

A literature review was conducted to identify key unifying features of nurse-led patient empowerment interventions. As reviewed in this thesis, patient empowerment can increase breast cancer patients' autonomy and give them a sense of control over their care, while improving their psychosocial support and emotional needs. Nurses can empower female breast cancer patients through emotional support such as validation and empathy. These are important qualities and aspects of nurse-led patient empowerment interventions. As emphasized by the comfort theory, social support and empathy are essential for the well-being of an individual. An efficient nurse-led patient empowerment intervention promotes the patient's self-efficacy, self-control, and inner strength (Bouya, et al. 2021; Xiufang & Lijie 2022). Although these interventions vary in theory and practice, the characteristics of patient empowerment interventions, seen in the articles chosen, share key components.

The nurse-led patient empowerment interventions in the selected articles tend to follow a charted path. Empowerment interventions started at a certain stage and moved on to the next. For example, the interventions began with education and improving health literacy with skill development and self-management followed by goal setting. Empowerment interventions seen in the 12 articles were not just single interventions or a specific assessment, but rather an individual process and a self-developing journey. The results show that empowerment is a never-ending course in a person's lifespan, rather than having a clear beginning and end (Bouya, et al. 2021; Xiufang & Lijie 2022).

The main themes presented in the results chapter were patient education, telephone-based intervention, psychosocial support, self-care, and coping methods. Although these factors were categorized, they are linked and influence one another. Like the results collected from this thesis, several other studies confirmed that with sufficient information patients feel responsible for promoting their health and quality of life (Manouchehri, et al. 2022); Taleghani et al. 2014). Patients who are involved in their care are more likely to feel empowered and motivated to take an active role in their disease management and recovery. This is achieved by nurses and other healthcare professionals by involving the patient in developing their care plans, setting goals, and tracking their progress. Furthermore, the patient should not receive only general

information, but rather personalized information with treatment options and what risk are associated with them (Taleghani et al. 2014).

A significant characteristic of a good nurse-patient relationship can improve patients' self-efficacy or their belief in their ability to manage their illness and treatment. By providing patients with guidance and support, nurses can help patients develop the skills and confidence they need to take an active role in their care. Patients may feel more empowered to make decisions about their treatment and communicate effectively with their healthcare provider (Warren, 2022).

The diagnosis of breast cancer can be a traumatic experience for patients, and the treatment process can be daunting and overwhelming. Therefore, it is crucial to implement patient empowerment interventions that can help patients cope with the physical, emotional, and psychological challenges associated with the disease. The concept of patient empowerment revolves around promoting patient autonomy, self-efficacy, and involvement in their care, leading to improved patient satisfaction, quality of life, and health outcomes. Nurse-led empowerment interventions aim to provide patients with the knowledge, skills, and support necessary to take an active role in their care, enhancing their ability to cope with the disease and its associated symptoms (Bouya, et al. 2021; Xiufang & Lijie 2022).

The comfort theory by Katharine Kolcaba supports the results of this thesis. As Kolcaba defines comfort as *relief*, *ease* and *transcendence*, nurse-led patient empowerment interventions which have been reviewed in the results chapter can be seen to correlate with the theoretical framework. For example, *relief* can be interpreted when the nurse professional aids the patient to develop adequate health literacy to better understand the complexity of their disease and treatment options. *Ease* can be experienced through nurses validating the patient's feelings and guiding them towards the appropriate psychological support services they may need. The final component of the comfort theory, *transcendence* occurs when the patient can rise above their challenges achieving the necessary skills needed for self-management and obtaining resilience. While having the ability to cope with the challenges and uncertainties of breast cancer whilst maintaining a positive outlook.

The findings from chosen reviewed articles illustrated that nurse-led patient empowerment interventions can be utilized in female breast cancer patient's care. These interventions have been found to promote patients' participation in decision-making (Torres-Vigil et al., 2020; Xiufang & Lijie 2022; Gorini et al., 2016; Gabitova & Burke 2014), obtaining coping skills (Kuijpers et al., 2013; Abdollahi et al., 2022; Mirabella et al., 2022) and emotional support were effective in reducing anxiety and depression in female breast cancer patients. Moreover, empowered patients experienced an improvement in quality of life after self-care, education, goal setting and problem-solving interventions (Taleghani et al., 2014; Bouya et al., 2021; Xiufang & Lijie 2022).

While empowerment interventions have been found to have positive outcomes, it is important to acknowledge that actual behaviour change cannot be imposed upon an individual. Empowerment is a gradual and highly individualized process that is shaped by an individual's life experiences and sense of control over their own life. As such, there is no one-size-fits-all intervention that can empower all individuals (Kuijpers et al. 2013). It is important to recognize that there is no single method of empowerment that can trigger behavioural change in an individual, as empowerment is a complex and multifactorial process that is unique to everyone. Therefore, it is essential to tailor empowerment interventions to the specific needs and circumstances of each individual to promote meaningful and sustainable change (Taleghani et al. 2014).

One of the key strengths of nurse-led patient empowerment interventions is their ability to provide patients with the tools and resources they need to manage their illness effectively. However, there are some challenges that may hinder these positive outcomes.

The challenges of nurse-led patient empowerment intervention can be care provider and patient related. Time constraint of busy nurses and their workload may hinder the potential of adequate nurse-led interventions that promotes patient's empowerment in which patients feel more in control of their care, thus leading to better health outcomes. Poor nurse-patient relationship is reported to negatively affect the treatment outcomes of the patient. Also, unwillingness from the patient's side and their adherence to treatment being negative, can adversely affect the empowerment process of the patient (Mirabella, et al. (2022); Kuijpers, et al. (2013)).

The results of this thesis have combined diverse empowerment interventions into a cohesive structure, rather than promoting a standardized intervention. The distinctive features of these empowerment interventions can be integrated into female breast cancer patients' care and the care of patients with other varying health conditions. The present literature review offers insight that can be utilized by nurses and other healthcare practitioners to incorporate effective interventions into their clinical practice, intending to enhance the recuperation process of female breast cancer patients. Notably, the study has identified a crucial aspect of nurse-led empowerment intervention as a positive nurse-patient relationship. Therefore, by combining these unifying main themes recognized in the findings of this thesis, nurse professionals can create a comprehensive care plan that addresses the diverse needs of breast cancer patients, ultimately promoting a sense of empowerment and resilience.

7.1 Limitations of study

This literature review may have limitations due to not all relevant articles were available and there was a limited number of articles that were related to this topic which could be found. This means that articles that could not be accessed freely had to be excluded and articles based on the exclusion criteria could not be used.

Due to resource constraints and limitations in translation capabilities, only studies conducted in the English language were included in this review. Studies published in languages other than English were excluded. It is acknowledged that this exclusion criterion may introduce language bias and restrict the generalizability of the findings to non-English speaking populations.

Studies that evaluated interventions not directly related to nurse-led patient empowerment were excluded. This criterion aimed to maintain the focus and relevance of the review by including only studies that specifically addressed nurse-led patient empowerment interventions. Studies evaluating other healthcare interventions or interventions led by healthcare professionals other than nurses were not considered for inclusion.

8 Conclusion

"What are nurse-led interventions to promote patient empowerment?" was the research question and, from the 12 articles chosen to be reviewed and help form an answer to the question, an answer has been obtained. The findings reveal five unifying key components of nurse-led patient empowerment. Which were patient education, psychosocial support, self-care, telephone-based interventions, and coping methods. Through these five key components, nursing interventions can empower patients to regain control over their lives, make informed decisions, and achieve a higher quality of life. From the patient education chapter, it can be understood that patients having an adequate information on their health is fundamental in empowering them to make informed decisions on their care. Nurses can employ various teaching methods, such as one-on-one counselling, informational brochures, multimedia resources, and support groups, to effectively educate patients about breast cancer and its management. Additionally, nursing psychosocial interventions like cognitive-behavioural therapy, mindfulness-based stress reduction, and support groups can enhance coping skills, alleviate distress, and promote a sense of empowerment. These are all nursing interventions that nurse professionals can implement into their care provision.

Breast cancer patients face numerous challenges throughout their journey, and developing effective coping strategies is essential for their empowerment. Thus, why it seems that nurse-led patient empowerment interventions for female breast cancer patients go hand in hand with promoting coping strategies and psychosocial support for female breast cancer patients.

Nurses can educate patients on various coping techniques, such as problem-solving skills, relaxation exercises, journaling, and social support networks. These strategies enable patients to adapt to the changes brought about by the disease, enhance resilience, and regain a sense of control over their lives.

In the results chapter of this literature review it is established that nurses play a vital role in supporting and empowering breast cancer patients. As nursing interventions include establishing therapeutic relationships, providing emotional support, facilitating patient-centered care, promoting shared decision-making, and advocating for patients' needs. Additionally, nurses can collaborate with interdisciplinary teams to ensure comprehensive care, facilitate access to community resources, and provide ongoing education and follow-up

support. These are all nurse-led patient empowerment interventions that develop considerable positive outcomes in female breast cancer patients.

The findings of this thesis have shown that nurse-led patient empowerment, education, psychosocial support, self-care, nurse-led telephone-based interventions and coping methods, have improved patient satisfaction, quality of life, and treatment adherence. To address the multifaceted challenges associated with breast cancer, nurse professionals play a crucial role in empowering patients through comprehensive care interventions. Implementing nursing interventions that focus on enhancing patient health literacy, emotional well-being, self-care practices, and promoting coping strategies, can all enhance patient satisfaction, improve clinical outcomes, and promote long-term well-being and improve the quality of life of female breast cancer patients. Establishing substantial nurse-led patient-empowering interventions in female breast cancer care can help patients cope with the psychological challenges of breast cancer, such as anxiety and depression, and improve their overall health and well-being. Nurse-led patient empowerment represents an important shift in the way healthcare is delivered. It recognizes that patients are partners in their care and that their input and participation are essential for achieving positive outcomes. As such, nurse-led patient empowerment has the potential to improve not only the care of female breast cancer patients but also the overall quality of healthcare. Overall, there is a need to pay even more attention to empowering patients with breast cancer in cancer treatment and follow-up programs. Such as research to determine the most effective relaxation techniques and how they can be best implemented in cancer care as well as more unifying patient empowerment strategies that could be utilized from the beginning of care.

References

- Abdollahi A., Alsaikhan F., Andreevich-Nikolenko D., Al-Gazally M., Mahmudiono T., Abdullaev B., Allen K., (2022), Self-care behaviours mediates the relationship between resilience and quality of life in breast cancer patients, *BMC Psychiatry*, <https://bmcp psychiatry.biomedcentral.com/articles/10.1186/s12888-022-04470-5>
- Almeida S.S., Oliveira M.A., Medelros R., Guerra P., Pariante C., Fernandes L., (2023) Emotional, inflammatory, and genetic factors of resilience and vulnerability to depression in patients with premenopausal breast cancer: A longitudinal study protocol, *Plus One*, Available from: <https://doi.org/10.1371/journal.pone.0279344>
- Bouya S., Barahoie Z., Kiani F., (2022), The effect of nursing self-care educational intervention on depression in women with breast cancer undergoing post-mastectomy chemotherapy: A quasi-experimental study, *International Journal of Surgery open*, 32 (2021) <https://www.sciencedirect.com/science/article/pii/S2405857221000243?via%3Dihub>
- Bucur A., Kondylakis H., Crico C., Dong F., Graf N., Hoffman S., Koumakis L., Manenti A., Marias K., Mazzocco K., Pravettoni G., Renzi C., Schera F., Triberti S., Tsiknakis M., Kiefer S., (2020), Patient empowerment for cancer patients through a novel ICT infrastructure, *Journal of Biomedical Informatics*, Available from: <https://doi.org/10.1016/j.jbi.2019.103342>
- Breast cancer patients' knowledge: A randomized control trial, *Patient education and Counseling*, Available from: <https://www.sciencedirect.com/science/article/abs/pii/S0738399112000869> Accessed on 5.3.2023.
- Charles Sturt University (2023) Available from: <https://libguides.csu.edu.au/review/Systematic>
- Decker V.B., Tofthagen C., (2021), Depression screening, assessment, and interventions in oncology nursing, *Clinical Journal of oncology nursing*, 25:4, Available from: 10.1188/21.CJON.413-421
- Eskildsen N.B., Joergensen C.R., Thomsen T.G., Ross L., Dietz S.M., Groenvold M., Johnsen A.T., (2017), Patient empowerment: a systematic review of questionnaires measuring empowerment in cancer patients, *Acta Oncologica*, vol 56, no.2, p:156-165, Available from: <http://dx.doi.org/10.1080/0284186X.2016.1267402>

- Finnish Cancer Registry, (2021), Breast cancer screening annual review, Available from: <https://cancerregistry.fi/screening/breast-cancer-screening/#:~:text=A%20total%20of%20about%205,cancers%20are%20detected%20by%20screening>.
- Gorini A., Mazzocco K., Kondylakis H., McVie G., Pravettoni G., (2016), A web-based interactive tool to improve breast cancer patient centredness, *ecancermedicalscience*, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4970622/>
- Gabitova G., Burke N., (2014), Improving healthcare empowerment through breast cancer patient navigation: a mixed methods evaluation in a safety-net setting, *BMC Health services research*, 14(407), <http://www.biomedcentral.com/1472-6963/14/407>
- Helms R.L., O'hea E., Corso M., (2008), Body image issues in women with breast cancer, *Psychol Health Med*, Available from: <https://web-s-ebscohost-com.ezproxy.arcada.fi:2443/ehost/pdfviewer/pdfviewer?vid=4&sid=fb7ad265-0368-4995-825b-312809239e40%40redis>
- Krinsky R., Murillo I., Johnson J., (2014), A practical application of Katharine Kolcaba's comfort theory to cardiac patients, *Applied Nursing Research*, vol 27, p: 147-150, Available from ScienceDirect
- Kuijpers W., Groen W., Aaronson N., Van Harten W., (2013), A systematic review of web-based interventions for patient empowerment and physical activity in chronic diseases: Relevance for cancer survivors, *Journal of medical internet research*, 15:21, doi: 10.2196/jmir.2281
- Lickova K., Cocek A., Ambrus M., Soumarova R., Vranova J., Klezl P., Mitchell A.J., Raudenska J., Javurkova A., (2021), Rapid screening of depression and anxiety in cancer patients: Interview validation of emotion thermometers, *Asian Journal of Psychiatry*, Available from <https://doi.org/10.1016/j.ajp.2021.102827>
- Lin Y., Zhou Y., Chen C., (2023), Interventions and practices using Comfort Theory of Kolcaba to promote adult's comfort: an evidence and gap map protocol of international effectiveness studies, *Systematic Reviews*, vol 12, Available from Ebscohost,
- Li T., Higgins JPT., Deeks J., (2022), Collecting data, *Cochrane Handbook for Systematic Reviews of Interventions* version 6.3, Available from: <https://training.cochrane.org/handbook/current/chapter-05>
- Manouchehri E., Taghipour A., Ebadi A., Homaei S., Latifnejad R., (2022), How do I deal with breast cancer: a qualitative inquiry into the coping strategies of Iranian women survivors, *BMC Womens health*, vol 22:284, <https://bmcwomenshealth.biomedcentral.com/articles/10.1186/s12905-022-01865-0>

- Mora M.A, Sparud-Lundin C, Fernlund E, Fadl S, Kalliopi K, Rydberg A, (2022), The longitudinal association between patient empowerment and patient-reported outcomes: What is the direction of effect?, *Plus One*, vol 17(11), Available from, <https://doi.org/10.1371/journal.pone.0277267>
- Mirabella A., Vrana A., Bay C., Slater A., Brewer M, (2022), SMART Oncology Nursing: Literacy, Goals, Coaching, and Empowerment, vol 49, no 1, DOI 10.1188/22.ONF.37-45
- Ploos van Amstell F., Prins J., Van der Graaf W., Marlies E., Peters J., Ottevanger P., (2016), The effectiveness of a nurse-led intervention with the distress thermometer for patients treated with curative intent for breast cancer: design of a randomized controlled trial, *BMC Cancer*, vol 16:520, DOI 10.1186/s12885-016-2565-x
- Palmquist, M., (2023), Columbia University Irving Medical Center, Content Analysis Available from: <https://www.publichealth.columbia.edu/research/population-health-methods/content-analysis#:~:text=Content%20analysis%20is%20a%20research,words%2C%20themes%2C%20or%20concepts>
- Ryhänen A. M., Rankinen S., Siekkinen M., Saarinen M., Korvenranta H., Leino-Kilpi H., (2012), The impact of an Empowering Internet-based Cancer Patient Pathway Programme on breast cancer patients knowledge: A randomized control trial, Patient Education and Counseling, Available from: doi:10.1016/j.pec.2012.02.013
- Torres-Vigil I., Cohen M., Million R., Bruera B., (2021), The role of empathic nursing telephone interventions with advanced cancer patients: A qualitative study, *European Journal of Oncology Nursing*, vol 50, 2021, <https://doi.org/10.1016/j.ejon.2020.101863>
- Taleghani F., Bahrami M., Loripoor M., Yousefi A., (2014), Empowerment needs of women with breast cancer: A qualitative study, *Iran red crescent medical Journal*, 16:11, DOI: 10.5812/ircmj.16379
- The Finnish National Board on Research Integrity TENK, (2021) Ethical review, Available from: <https://tenk.fi/en/ethical-review>
- USC University of Southern California, 2023, Research guide, Theoretical framework, Available from: <https://libguides.usc.edu/writingguide/theoreticalframework>
- Vehmanen L., (2020), Rintasyövän toteaminen, alatyypit ja ennuste, *Läälikirja Duodecim*, Available from: <https://www.terveyskirjasto.fi/dlk00618>
- World Health organization 2021, Breast cancer <https://www.who.int/news-room/fact-sheets/detail/breast-cancer>

Warren M., (2022), Just a call away- supported self-management after treatment for early breast cancer: an evaluation of a new nurse-led telephone-based service in Central New Zealand, *Australian Journal of Cancer Nursing*, 23 (2), Available from <https://doi.org/10.33235/ajcn.23.2.22-28>

World Cancer Research Fund International, Breast cancer statistics, Available from: <https://www.wcrf.org/cancer-trends/breast-cancer-statistics/>

Xiufang D., Lijie C. (2022) Analysis of the Role of Continuous Early Intervention in Improving the Quality of Life of Breast Cancer Patients, *Hindawi Computational Intelligence and Neuroscience*, vol 2022, <https://www.hindawi.com/journals/cin/2022/3054587/>

Weisberger M. & Bradford A., (2023), Deductive reasoning vs. Inductive reasoning, Live Science <https://www.livescience.com/21569-deduction-vs-induction.html>

9 Appendices

The following demonstrates a more detailed description on the 12 articles chosen and their results.

No.	Author/s	Title	Year	Method used	Sample size	Results
1.	Abdollahi A., Alsaikhan F., Andreevich-Nikolenko D., Al-Gazally M., Mahmudiono T., Abdullaev B., Allen K.	Self-care behaviours mediates the relationship between resilience and quality of life in breast cancer patients	2022	Qualitative individual in-depth interviews.	195	Self-care behaviours acted as a partial mediator between resilience and quality of life. Participant benefitted from the study.
2.	Bouya S., Barahoie Z., Kiani F.	The effect of nursing self-care educational intervention on depression in women with breast cancer undergoing post-mastectomy chemotherapy: A quasi-experimental study	2022	A Quasi-experimental study.	90	Nursing Self-Care Educational intervention improved the depressive symptoms.
3.	Gabitova G., Burke N.	Improving healthcare empowerment through breast cancer patient navigation	2014	Case study qualitative interviews.	66	Psychosocial support, improved knowledge, better understanding of treatment process, and ensuring better communication between patients and providers.
4.	Gorini A., Mazzocco K., Kondylakis H., McVie G., Pravettoni G.	A web-based interactive tool to improve breast cancer patient centredness	2016	Randomised controlled trial.	100	The study led to increased patient participation in the therapeutic process consequently, leading to improvement in patient empowerment and personalisation of care.

5.	Kuijpers W., Groen W., Aarsonson N., Van Harten W.	A systematic review of web-based interventions for patient empowerment and physical activity in Chronic Diseases: Relevance for cancer survivors	2013	Randomized controlled trials.	20	Identified 7 common elements of interactive web-based interventions in oncology settings that could possibly be translated into eHealth recommendations for female cancer survivors.
6.	Mirabella A., Vrana A., Bay C., Slater A., Brewer M.	SMART Oncology Nursing: Literacy, Goals, Coaching, and Empowerment	2022	Mixed-methods study.	68	Goal attainment was reached, and patient empowerment scores were high.
7.	Manouchehri E., Taghipour A., Ebadi A., Homaei S., Latifnejad R.	How do I deal with breast cancer: A qualitative inquiry into the coping strategies of Iranian women survivors	2022	Qualitative study/ semi-structured interviews.	14	The emotional coping strategies consisted of denial as a temporary escape route, positive thinking and focusing on the positive aspects of life, reinforcement of spirituality, and seeking the support of relatives, was seen to promote the patient's empowerment. Empowerment interventions were successful
8.	Ploos van Amstell F., Prins J., Van der Graaf W., Marlies E., Peters J., Ottevanger P.	The effectiveness of nurse-led intervention with the distress thermometer for patients treated with curative intent for breast cancer: Design of a randomized controlled trial	2016	A randomized controlled trial longitudinal study.	100	Psychosocial care promoted the education about the disease and treatment process, emotional support was experienced, as well as support in choosing treatment modalities.
9.	Taleghani F., Bahrami M., Loripoor M., Yousefi A.	Empowerment needs of woman with breast cancer: A qualitative study	2014	Qualitative method.	19	Nurse interventions were implemented and used in the treatment, educational and counselling programs to promote the empowerment of women with breast cancer.
10.	Torres-Vigil I., Cohen M., Million R., Bruera B.	The role of empathic nursing telephone interventions with advanced cancer	2021	Qualitative descriptive study.	95	This study illustrates a nurse-telephone-interventions that embraced multiple

		patients: A qualitative study				components of clinical empathy. Empathy included understanding patients, communicating that understanding and action.
11.	Warren M.,	Just a call away-supported self-management after treatment for early breast cancer: an evaluation of a new nurse-led telephone-based service in Central New Zealand	2022	A randomized controlled trial.	12	Patients preferred telephone-based follow-up, removing the need to travel to hospital. Nurse-led telephone-based follow-up provided continuity of care and instilled feelings of confidence, reducing worry about recurrence so patients could move forward after treatment for breast cancer.
12.	Xiufang D. & Lijie C.	Analysis of the role of continuous early intervention in improving the quality of life of breast cancer patients	2022	Qualitative method/individual open ended.	60	The implementation of continuous early nursing intervention in breast cancer patients improved quality of life and relieved the negative emotions of patients.