

Fiona Gacheru, Hibo Mumin, Ken Muraya

# Systematic Search About Care and Service Interventions For Breast Cancer Patients

Literature Review

---

Helsinki Metropolia University of Applied Sciences

Health care

Degree Programme in Nursing

Final project

13.4.2016

Author(s) Title Number of Pages Date	Fiona Gacheru Hibo Mumin Ken Muraya Systematic Search About Care and Service Interventions For Breast Cancer Patients 32 pages + 9 appendices 13 April 2016
Degree	Bachelor of Health Care
Degree Programme	Nursing and Health Care
Specialisation option	Nursing
Instructor(s)	Eija Metsälä, Principal Lecturer
<p>The main purpose of this final project was to evaluate from previous literature the available care and service interventions that are provided for breast cancer patients. The aim was to highlight the existing information of breast cancer treatments and results. Breast cancer is the most common cancer among women in the world. The care process is designed to be individual for every patient. Treatment is based on the stage of breast cancer. Over the years treatment has improved and due to it the survival rates have dramatically increased.</p> <p>The data for this final project was collected through the selected articles by systematic search. 18 articles were in relevance to the research questions. The articles were obtained from CINAHL (n=12), PubMed (n=5) and manually searched (n=1). An inductive approach was used to analyze the data.</p> <p>Results of the data analysis presented the three main care and service categories which are therapeutic, psychosocial/psychotherapeutic and rehabilitative intervention. The outcomes of these interventions showed the positive and negative effects of breast cancer care and service. The discussion of the results revealed that breast cancer patients are in need of different interventions of care and services, particularly supportive care. The outcomes resulting from interventions displayed more positive than the negative effects. The findings showed that therapeutic interventions were the only ones with both the positive and negative effects.</p> <p>To conclude identification, assessment, development and integration of different interventions are essential parts in patient-centred treatment. Due to the lack of possible negative effects in two of the major interventions, the evaluation of potential harms is needed. Further studies should focus on the quality and effectiveness of breast cancer care/services.</p>	
Keywords	breast cancer, intervention, care, patients

Tekijä (t) Otsikko  Sivumäärä Aika	Fiona Gacheru, Hibo Mumin, Ken Muraya Systemaattinen kirjallisuushaku rintasyöpöpotilaiden hoidon - ja palvelun interventioista 32 sivua + 9 liitteitä 13 April 2016
Tutkinto	Sairaanhoidtaja (AMK)
Koulutusohjelma	Hoitotyön koulutusohjelma
Suuntautumisvaihtoehto	Sairaanhoidtaja
Ohjaaja(t)	Eija Metsälä, Yliopettaja
<p>Tämän opinnäytetyön tarkoituksena on arvioida hoidon ja palvelun interventioita viimeaikaisista tutkimuksista. Tavoitteena on tuoda esiin olemassa olevaa kirjallisuutta rintasyöpöpotilaiden hoidoista ja niiden tuloksista. Rintasyöpä on maailman yleisin syöpä naisten keskuudessa. Jokaisen potilaan kohdalla, hoitoprosessi on suunniteltu yksilöllisesti. Rintasyövän hoito perustuu syövän levinneisyysasteeseen. Syövän hoito on parantunut vuosien varrella ja sen myötä selviytymisluvut ovat huomattavasti parantuneet.</p> <p>Opinnäytetyön aineisto koottiin valittujen artikkeleiden perusteella käyttäen systemaattista hakumenetelmää. Kaiken kaikkiaan 18 artikkelia vastasi tutkimuskysymyksiin. Aineisto kerättiin seuraavista tiedonhakukannoista: CINAHL (n=12), PubMed (n=5) ja yksi oli manuaalisesti (n=1) haettu. Aineiston analysoimisessa käytettiin induktiivista sisällön analyysia.</p> <p>Aineiston analyysivaiheen jälkeen tuloksista nousi kolme suurta pääluokkaa hoidon ja palvelu interventioista, joita ovat: terapeuttinen, kuntouttava ja psykoterapeuttinen/psykososiaalinen interventio. Näiden interventioiden tulokset osoittivat enemmän positiivisia kuin negatiivisia vaikutuksia. Tulosten perusteella naiset ovat erilaisten hoito ja palveluinterventioiden tarpeessa ja erityisesti supportiivisen tuen muodossa. Tulokset viittaavat myös siihen, että terapeuttiset interventiot olivat ainoita interventioita, jotka sisälsivät sekä positiivisia että negatiivisia vaikutuksia.</p> <p>Lopuksi, erilaisten interventioiden integrointi, arviointi, kehitys ja tunnistaminen ovat tärkeitä osa-alueita potilaslähtöisessä hoidossa. Mahdollisten haittojen arviointi on tarpeessa, jotta kahden pääintervention potentiaalisten haittojen puitteista. Jatkossa, tutkimukset voivat keskittyä rintasyövän hoidon/palvelun laatuun ja tehokkuuteen.</p>	
Avainsanat	rintasyöpä, interventio, hoito, potilaat

## Contents

1	Introduction	1
2	Theoretical background	2
2.1	Breast Anatomy	2
2.2	Breast Cancer	2
2.3	Signs and Symptoms of Breast Cancer	3
2.4	Risk Factors of Breast Cancer	4
2.5	Diagnosis and Imaging Modalities	4
2.6	Breast Cancer Care and Service Intervention	6
2.7	Care process / care pathway	7
3	Purpose, Aim and Research Questions	8
4	Methods	8
4.1	Pilot search	8
4.2	Literature review	10
4.3	Data collection	10
4.4	Data analysis	11
5	Results	12
5.1	The Care and Service Interventions	13
5.1.1	Therapeutic Interventions	14
5.1.2	Psychosocial/psychotherapeutic intervention	16
5.1.3	Rehabilitative Intervention	17
5.2	The Outcomes of Care & Service Interventions	18
5.2.1	Positive effects	19
5.2.2	Negative effects	21
6	Ethical Considerations, Validity and Limitations	23
6.1	Ethical Considerations	23
6.2	Validity & Reliability	23
6.3	Study Limitations	24
7	Discussion of the Results	24
8	Conclusions	27

8.1 Suggestions and Implications	27
References	28
Appendices	
Appendix 1. Database search	
Appendix 2. Data analysis	

## 1 Introduction

Breast cancer is the most prevalent form of cancer among women in the world. The prevalence of breast cancer in the world is growing, mainly as a result of adopting western lifestyles and a raise in life expectancy. (WHO 2016.) In 2012, around 1.7 million new cases were diagnosed making it the second most common cancer overall, with it representing about 12% of all new cases and 25% of all cancers in women (WCRF 2015). Since 2013, it has been confirmed as the second leading cause of death after cardiovascular disease. It is also expected to increase in all countries due to population growth, aging, and increasing prevalence of risk factors. (Hoekstra et al. 2016.)

In a study tracking the death rates for breast cancer since 1989 to 2012 in the US, the number of people dying had decreased by about 36%, meaning that approximately 249,000 deaths were avoided. (American Cancer Society 2016). The percentage of women who had mammograms in the US from 2013 to 2015 is around 66.8%, with the number of people going to see a physician sitting at around 12.1 million, and about 3 million of them were outpatient hospital department visits where mammograms were ordered or provided. (CDCP 2016). In the Europe, an estimated 494,100 incidence rate was confirmed in 2012, with a mortality rate of about 142,980 (Europa Donna 2013).

In Finland it has been the most frequent form of cancer amongst women since the 1960s (Finnish Cancer Registry 2010). During 2012, Finland was 14<sup>th</sup> in incident rates and 5<sup>th</sup> in survivors five years after diagnosis, in Europe (WCRF 2015). The results of treatments have improved during the last decades, however the number of 5-year life expectancy is lower than 90 % (Huovinen – Matson 2015: 1033).

Survival for long-term cancer has improved however, mainly due to early detection and the progress made in effective combined treatment modalities, development of effective immunotherapy and drug-targeted therapy. With that said, surgery is still considered a very effective choice for early on-set treatment of any cancer. This fact is supported by the increased survival rates. It is also important to note that these rates include the effective use of combined modalities, radiation, and systematic treatment, better surgical techniques, equipment that help lessen intraoperative and postoperative bleeding, anaesthesia and intensive care facilities, conventional techniques, laparoscopic procedures, robotic and image-guided surgery. (Hoekstra et al. 2016.)

This final project is a part of larger project called Education and Training in Early Detection of Breast for Health Care Professionals (E-Breast). The purpose of this final project is to review the most common breast cancer care and service interventions from the previous literature and to highlight the outcomes of these interventions.

## **2 Theoretical background**

### **2.1 Breast Anatomy**

To understand how breast cancer affects a person, it is important to have a clear picture of the areas being affected. The breast is mostly made up of fat cells called adipose tissue. This adipose tissue occupies the space from the collarbone down to the underarm and across to the middle of the ribcage. A healthy breast is made up of sections called lobes. These lobes divide into many smaller parts called lobules, otherwise known for producing milk in women who are nursing. The lobes and lobules are connected by milk ducts, which carry milk to the nipple. These structures are mostly where the cancer begins to form. (Marieb 2013: 565.)

Around the adipose tissue there is a network of ligaments, nerves, fibrous connective tissue, lymph nodes, lymph vessels, and blood vessels. The lymph system is part of the immune system, consisting of vessels and nodes running throughout the body. Similar to the way the blood circulatory system works, the lymph system transports cells and fluids that assist in disease-fighting. Lymph nodes are fixed in certain areas throughout the system and act as filters by carrying abnormal cells away from healthy tissue. (Marieb 2013: 565.)

### **2.2 Breast Cancer**

Breast cancer is a form of overgrown breast cells that mutate and go through unusual changes. Breast cancer means that cells in the breast have developed into a malignant tumor. In most cases breast cancer usually begins in the lobules cells, the glands that produce milk, or the channels (ducts) that milk travels to the nipple from the lobules. In

less common cases, it can begin in the stromal tissues that include the breasts fibrous and fatty connective tissues. (Cancer Research UK 2015.)

To comprehend breast cancer, it helps to grasp how any cancer can develop. Usually, cells in the body are replaced through cell growth, meaning that new cells replace older cells that eventually die out. However, as time passes certain genes in a cell can be turned on or off due to the mutations that occur. The changes that occur in that cell give it the ability to divide and multiply uncontrollably, eventually generating more cells similar to it that end up forming a tumor. (Cancer Research UK 2015.)

Tumors however come in two forms, benign or malignant. Benign tumors (not considered to be dangerous to health) are non-cancerous, have ordinary cells that do not grow rapidly, do not invade nearby tissue or spread to other parts of the body. Malignant tumors (cancerous), untreated can eventually spread to other parts of the body. (Cancer Research UK 2015.)

In most cases the formation of breast cancer begins from inside the milk ducts (milk lobules). If not treated the cancer begins to spread. This is made easier due to the fact that the structure of the breast consists of small blood vessels, lymphatic channels, fat globules and connective tissue (fibrocytes). Environmental and life-style factors are the most common causes for breast cancer. However, there is a slight possibility that an individual could start forming cancer due to genetic mutations of breast cells (abnormal breast cancer genes in the nuclei). An even less common way for formations to begin is when the cancer starts developing in the fibrous connective tissue cells. (Bellenir 2009: 10–35.)

Mutations are the most common reason for breast cancer and only 5-10 % of the cancers is due to inherited genes from parents. However, more than 90 % of breast cancer are due to abnormal or mutated genes caused by life-style choices, environmental factors or just as a result of old age. (Bellenir 2009: 10–35.)

### 2.3 Signs and Symptoms of Breast Cancer

A lump in the breast is the most frequent symptom of breast cancer. The lump is regularly painless, but it may also be tender. Other symptoms may include pain in the breast,



nipple withdrawal, a bright bloody discharge (from the nipple), and skin change or in particular a skin rash. (Terveyskirjasto 2012.)

Additionally, growth of breast size and inflammation like redness that does not go away with antibiotics, can sometimes be a symptom of breast cancer. If the breast cancer has spread, the symptoms can be multiple. Typical signs include a lump in the armpit, shortness of breath, pathological fracture and neurological symptoms of brain metastasis. (Aalberg et al. 2013: 596.)

## 2.4 Risk Factors of Breast Cancer

Several factors contribute to the risk of breast cancer formation. As genetic background plays a role in breast cancer risk, family history is important. Alterations in genes are typically situated on gene 1 (BRCA1) or gene 2 (BRCA2). Up to 5-10 % of breast cancers in women originate from these gene mutations. If a close relative such as mother sister or daughter has cancer, the woman's risk of getting breast cancer is double. (Brown & Kartoiz 2014.)

The study of Cardoso et al. (2012) outlines age as one risk factor for breast cancer development. The possibility of breast cancer development is equivalent to 0.04% per year for average risk in women between the ages 30 - 39 and increases more than 10 % each year in those women who are over 80 years. Among women under 40 years, breast cancer is not a common illness. However, reports by many countries reveal a vast rise in the number of women diagnosed with breast cancer, who have not yet reached the menopause. Above age and genetics, the factors acting as risks for the incidence of breast cancer consist of: extreme alcohol consumption, late menopause and late age of first pregnancy (WHO 2016).

## 2.5 Diagnosis and Imaging Modalities

Mammography is a basic breast imaging method (Aalberg et al. 2013: 598). It is utilized clinically and for screening purposes. Clinically, mammogram is used to test patients with breast cancer symptoms. (IARC 2002: 25). For screening, the objective of mammography is to detect breast cancer at primary phase when treatment is more effective and in certain situations less severe. One of the mammogram's abilities is to recognize minor

particles which could not be identified via clinical or self- examination. (Edgar, Glackin, Hughes & Rogers 2013: 1021; IARC 2002: 25.) Around 20 % of ductal carcinoma in situ (DCIS) or stage 0 cancer is detected by mammography, and approximately 5 % of the cases are in women before the age of 40 years. (Narod et al. 2015)

Full-field digital mammography improves cancer detection in certain populations of women especially those who are younger than 50 years. They have variant dense breast tissue or extremely dense breasts and also premenopausal. The development of Full-field digital mammography has led to new techniques to improve breast imaging. One of those technique is digital breast tomosynthesis (DBT) also known as digital tomosynthesis mammography. It is a new technology that merges the use of tomography and 3-D reconstruction with breast imaging to improve lesion visibility. (Baldwin 2009: 57–74.)

Ultrasounds are an essential part of patients' symptomatic breast imaging in addition to mammography. It often enables to recognize metastasis in axillary lymph nodes prior to surgery. (Aalberg et al. 2013: 598.) It is primarily used as a tool for diagnosis. One of its benefits is the lack of radiation. Ultrasounds detect as well the dilated ducts. (Giurescu, Hu & Obembe 2010: 133.) A galactography is used to examine the duct system, if they are secreting. Specifically, a contrast agent is injected to the duct and as result of this, tubular tumor appears as a shadow deficiency in the x- ray. (Aalberg et al. 2013: 597.)

Magnetic resonance imaging known as MRI is a sensitive method for breast cancer detection (Aalberg et al. 2013: 599). Its sensitivity and specificity is better than a mammogram, or physical examination (Aalberg et al. 2013; Giurescu et al. 2010). Among young women, the MRI sensitivity is up to 70 – 90 % and its utilization is expected to be high (Aalberg et al. 2013; Wang et al. 2013). Following the evaluation and confirmation of pathologist for the diagnosis, a breast MRI is used to evaluate the extent of the cancer. This preoperative MRI examination facilitates the optimal surgical plans for the physicians. (Wang et al. 2013: 627.)

## 2.6 Breast Cancer Care and Service Intervention

According to the general definition *intervention* means to intervene or measure, which then seeks to influence something. When the term intervention is seen in the context of health care, intervention is usually understood to be an event, the purpose of which is to contribute to an individual or group health status or behavior. In this case, the key objective of interventions is to achieve positive results that finally promote the client's health. (Pölkki 2014: 3.)

Nearly two-thirds of all cancer patients are alive five years after diagnosis. In recent decades' cancer care has improved steadily and by international estimation the care results are good in Finland. (THL 2014.) In the case of breast cancer women go through different forms of medical treatment, which is dependent on the stage of breast cancer (Suwankhong & Liamputtong 2015: 2). The principal methods used in cancer care are surgery, radiotherapy, cytotoxic drugs, hormone therapy, and biological therapy (interferon). (THL, 2014.) Some of these women are treated with a one of the principle method or a combination of them (Suwankhong & Liamputtong 2015: 2; Marcu, Santos & Bezak 2014: 51). Usually surgery would be first option for early stage of cancer. (Suwankhong & Liamputtong 2015:2.

As mentioned above the context of breast cancer care is diverse in terms of methods, as many experts from various fields of medicine will participate in the selection of the care method. Every patient's care is planned individually. (THL 2014.) According to NICE guidelines of breast cancer care should be patient- centred. The care and services should meet patients' individual needs (Williamson 2015: 17).

Mostly, these individuals have many psychological and physical problems after breast cancer treatments, therefore they need support after therapies (Charlier et al. 2012: 791). Besides that, breast cancer patients and their families encounter lots of problems related to adverse effects of treatment that cause serious harm for patients since more therapies are creating harm (Miller 2008: 479–480.) Therefore, interventions should be provided by health care professionals emphasizing on well-being and health promotion, in order to advise patients on how to manage life with a chronic illness. (Miller 2008: 479–480.) Particularly, specialized rehabilitation facilities and services should be immensely accessible for patients to reduce social, mental and physical ramification of breast cancer care (Senkus et.al 2015: 8–30).

## 2.7 Care process / care pathway

A care pathway is explained as general patient centred care. The concept of care pathway comprises training, prevention, diagnosis, treatment, rehabilitation, follow up and collective care. (Baffer et al. 2015). Care pathways describe the health center and on the other hand the specialized hospital division of work between the different stages of patient care (HUS 2015). Pathways are perceived to develop and reorganize the quality of care given in order to assure the current evidence - based research (Ryhänen 2012: 14). The purpose of care pathway is to promote the flow and effectiveness of care when a patient is in need of primary care and specialized services for a certain disease. Not all illnesses need care pathways. Care pathways or so called chains are drawn up for diseases that affect a large group of patients. Such diseases may include, for example, asthma, allergy, diabetes or osteoporosis. (HUS 2015).

In the context of breast cancer, care pathway is described by several stages of breast cancer care process (Figure 1.):

- Breast diagnosis and referral to the cancer centre
- Appointment with surgeon and nurse
- Surgery à follow-up examination
- Appointment with oncologist
- Chemotherapy, radiotherapy, hormone therapy
- Follow up (HUS).

Figure 1. Care process (CCO 2015).



### **3 Purpose, Aim and Research Questions**

The main purpose of this final project is to evaluate from previous literature the available care and service interventions that are provided for breast cancer patients. The aim is to highlight the existing information of breast cancer treatments and results.

Besides that, the goal of this final project is to increase the understanding of breast cancer patients on the care and service options that have the least negative effects.

Our first focus is on the recent types of care and service methods usually used for breast cancer patients. And our second focus is on the possible outcomes of the care and service interventions.

The research questions of this final project were formulated based on PICO model. PICO model/ frame is used to make up research questions from these four components: population/problem, intervention, comparison and outcome. These elements together cover the PICO model. (Huang, Lin & Demner-Fushman 2006.) In this final project the PICO is Population =breast cancer patients, phenomena of Interest= intervention/treatments, effects/outcomes and Context= breast cancer care and service.

The formulated questions for this final project are as follows:

1. What kind of care and service interventions are most recently available for breast cancer patients?
2. What are the possible outcomes of these care and service interventions?

### **4 Methods**

#### **4.1 Pilot search**

Before the actual data search was done, a trial search was performed by using a combination of these search words, breast cancer, care and service. The databases included CINAHL, PubMed and Medline (Ovid) as shown in (Table 1). One limiting factor that was used to find available data was a time frame of 5–10 years. The purpose of this pilot

search was to give us a wider picture about the existing information of the final project topic and to facilitate our last data search.

As a result of the trial search, a surmountable number of hits stood out when the search word “care” was used instead of “service”. Therefore, in the final systematic search, the term “service” is excluded to get relevant results for our research questions concerning both care and service interventions.

Table 1. Data Search

data base	search terms	time frame	hits
CINAHL	breast cancer care	10 years	734
		5 years	424
CINAHL	breast cancer service	10years	44
		5 years	24
CINAHL advanced search	breast cancer care & services	10 years	441
		5 years	297
Pubmed	breast cancer care	10 years	331
		5 years	205
Pubmed	breast cancer service	10 years	74
		5 years	46
Ovid	breast cancer care	10 years	473
		5 years	113
Ovid	breast cancer service	10 years	0
		5 years	0

## 4.2 Literature review

Literature review is a study which purpose is to understand and interpret literature that relates to a certain topic (Aveyard 2010: 6). It develops the theoretical understanding of literature and evaluates the existing theory. Similarly, it enables to understand and perceive the overview of certain context. (Johansson, Axelin, Stolt & Ääri 2007: 3.)

Literature review proceeds deliberately through different stages. In this final project after formulation of research question, a systematic search was undertaken. The aim of this, was to obtain as much possible academic articles in order to address the topic. In systematic data searches, all the search hits must be gone through. By reading abstracts and titles, the researcher selects the eligible hits to the inclusion criteria. (Johansson et al. 2007: 51.) Since this final project comes under the bachelor degree, only the basic principles of systematic search are applied in this work.

## 4.3 Data collection

The data for this final project is collected through the selected studies by systematic search. When conducting literature review, the selection of final articles occurs phase by phase in regard to the criteria box. The chosen articles are confirmed upon the level of title, abstract on full text. (Johansson et al. 2007: 59.) The research articles selected for this final project had to meet the inclusion and exclusion criteria (Table 2). The inclusion and exclusion criteria of literature review needs to be explained precisely and carefully. And criteria should be logical and related to research questions or the topic. Comprehensive inclusion criteria prevent systematic errors. (Johansson et al. 2007: 48.)

In this final project selected articles were published between the years 2005 - 2016. Secondly, the filtration of articles contained limitations in terms of language, availability of text and research questions. Dissertations were eliminated from the selection criteria due to a scarce number of findings in the nursing databases and to the difficulty of attaining the access to read. Detailed information of the criteria is inside (Table 2.)

Table 2. Data selection: Inclusion &amp; Exclusion criteria

Included:	Excluded:
Articles published after 2005	Articles before 2005
Publications in English and Finnish	Other languages than English and Finnish
Peer reviewed articles	Not peer reviewed
Academic journals, qualitative reviews	Dissertations
Free access articles	Articles not addressing our research questions

The search for the selected articles was performed using both MeSH terms and keywords. The original keywords were *breast cancer* or *breast neoplasms*, *breast cancer care* and *service interventions*. In the keywords search the following combinations were used *breast cancer AND care interventions*; *breast cancer AND intervention AND care*; *breast cancer AND therapy interventions*; *breast cancer AND care AND effects*. The MeSH terms used were *breast cancer patients*, *therapy interventions* and also direct CINAHL headings.

#### 4.4 Data analysis

In this final project a content analysis was used as a method for analyzing data. Many previous sources describe content analysis as a process to analyze documents systematically and objectively. Document can be any type of written material. The purpose of content analysis is to organize data into much smaller and clearer parts without mislaying the accessible information. (Tuomi & Sarajärvi 2009: 103–108.)

There are two different approaches to the process of content analysis. The two approaches are inductive and deductive. In the inductive approach, the concepts result from the data. (Elo & Kyngäs 2007: 109.) For this project, the data was analyzed inductively. The raw data was picked from chosen research articles to create concepts. So theoretical data was created from the selected articles. Previous assumptions, theories and models had nothing to do with the outcomes of desired phenomenon. (Tuomi & Sarajärvi 2009: 59.) However, in deductive approach, the concepts are from previous



knowledge which main purpose is to test the theory. In deductive method, selected studies for analysis are applied to the theoretical background that contains the prepared categories. (Tuomi & Sarajärvi 2009:59; Elo & Kyngäs 2007: 107–111.)

The process of content analysis consists of three phases. The first phase is similar in both deductive and inductive approaches. In the first phase, the unit of analysis is selected and the whole sense of data is obtained. As in the data analysis of this project, the selected articles were read through many times and headings were made which is explained as open coding. In the second phase, headings were collected together to form coding sheets and grouping. During the last phase, grouping was followed by categorization and abstraction. Categorization is defined as the creation of categories. In this final project the data was filtered into smaller categories. Later, abstraction was made to create main description of the topic. (Elo - Kyngäs 2007: 110–111.)

## 5 Results

Cinahl gave 1329 hits, PubMed 434, also manually searched and applicable title one article was found. A total of 1763 articles about the topic were found with the keywords and Mesh-terms used. The articles were further examined from the level of title and relevance and (n=1440) were found irrelevant. Abstract of the articles with relevant titles (n=130) were reviewed. After 43 articles were read in full and the final selection was made based on the quality and relevance to the topic. This resulted to 18 articles (Figure 2).

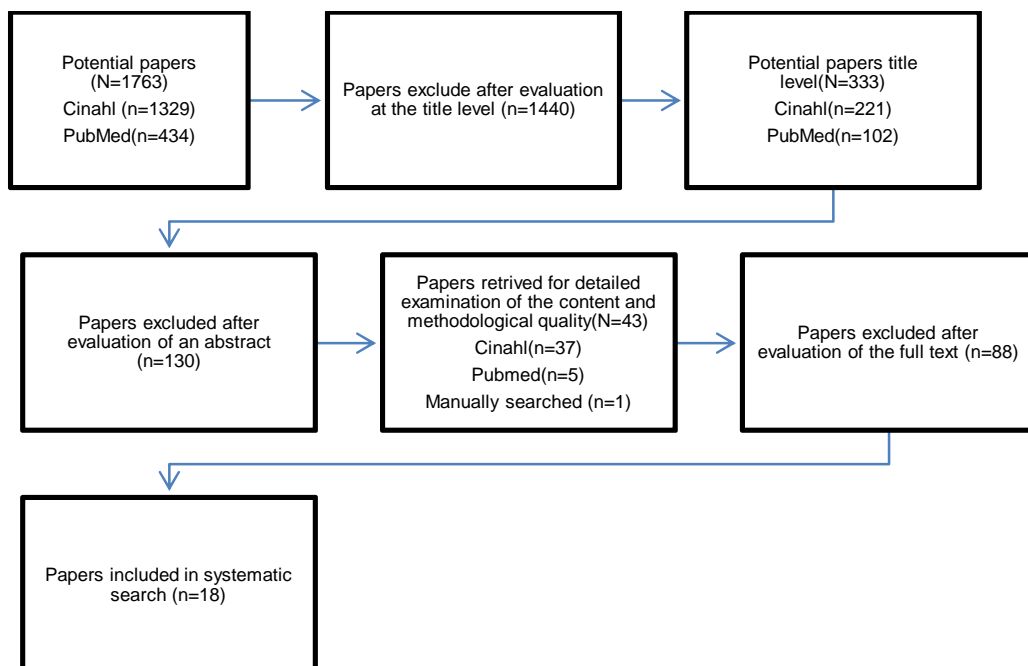


Figure 2. The process of the selected articles

A total of 18 articles were included in the results according to the criteria (Figure 3). The articles described well the care and services interventions and the outcomes. The studies were made in 9 different countries in Asia, Europe, North and South America. The studies were mostly reviews, experimental case studies and interviews made by the multidimensional health care team.



Figure 3. Overview of the selected studies

## 5.1 The Care and Service Interventions

When responding to the first research question 1) what are the recently available care and service interventions for breast cancer patients, the main heading for our actual research question was the care and service intervention itself. The care and service interventions provided for cancer patients are multidimensional in each case of disease. In this final project, the care and service interventions were classified into three main categories. These are psychosocial/psychotherapeutic intervention, therapeutic intervention and rehabilitative intervention. These interventions contain 11 subcategories in total. The results for the first research question is further explained in (Figure 4.) and in the following sub chapters.

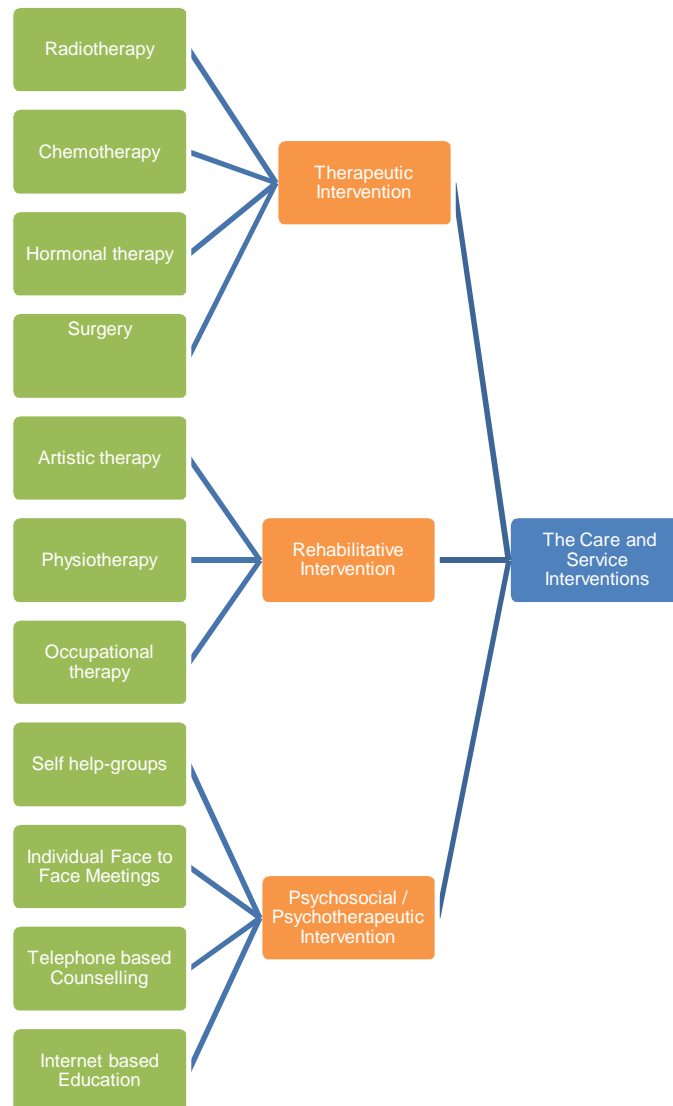


Figure 4. The Care and Service Interventions

### 5.1.1 Therapeutic Interventions

In order to understand how cancer is treated it is important to understand that cancer treatment is reliant on the stage it has reached. This is done first off all by determining what stage the cancer has reached. Staging of cancer is done in order to help locate, figure out if or not it has spread, and know if it is affecting other parts of the body. First tests are done to determine the cancer's stage. Completing all the tests is the only way to accurately stage it. This thereby help doctors in planning treatment, predicting the chances for the cancer coming back, predicting the chances for recovery, proper diagnosis, and determining the effectiveness of the treatment. A TNM system is used to describe the stage. This system is a globally recognized standard for classifying the spread

of cancer. In this review, it is proven that the most effective way for treating breast cancer apart from surgery namely lumpectomy (breast conserving) and mastectomy (removal of whole breast), is the use of combination therapies such as chemotherapy, radiotherapy, and hormone therapy to increase survival chances. Treatment is individual and depends on some factors such as the size of the tumor, the stage it has reached, and the type of cancer. (Santa-Maria et al. 2015.)

In some trials conducted, their meta-analysis showed that there was an overall survival benefit from postmastectomy radiotherapy within women with node-positive breast cancer. (Chapman & Jagsi 2015). Adjuvant systemic therapies are potent in decreasing the risk of distant and local recurrence, including endocrine therapy, anti-HER2 therapy, and chemotherapy, even in patients at low risk of recurrence. Adjuvant hormone therapy is also recommended by most doctors no matter how small the tumor and it is continued for at least 5 years post. The main purpose for this therapy is to lower the woman's estrogen levels. (Anampa et al. 2015.)

Postmastectomy radiotherapy (PMRT) might improve breast cancer outcomes through a number of mechanisms. Deterrence of local regional recurrence (LRR) is the most direct possible benefit. (Chapman & Jagsi 2015). However, if chemotherapy is needed, radiation is usually delayed until the chemo has been done. All patients with ER- and/or PR-positive illness must always get at least a 5-year course of endocrine therapy, usually started after chemotherapy is concluded, if given (Anampa et al. 2015.)

Neoadjuvant chemotherapy has the probability of converting unresectable tumors to resectable ones, and be able to lessen the amount of surgery needed to achieve adequate resection. (Santa-Maria et al. 2015). Neoadjuvant therapy might be taken into account for patients with chemoresponsive breast cancers, due to the fact that patients can benefit from this treatment. (Santa-Maria et al. 2015). Chemotherapy must be continuous until progression of illness as endured because it significantly improves overall survival and considerably improves progression-free survival, but this has to be balanced against toxicity and quality of life. However, they continue to recommend that chemotherapy is usually best started once endocrine therapy is no longer effective. (Partridge et al. 2014.)

Combination therapy has proven rises in treatment response rates, but not in overall survival, compared with single-agent treatments. It is meant to shrink the tumors, alleviate the symptoms, and help patients live as long as possible (not able to cure the cancers but can make them go away and maybe even stay away. (Partridge et al. 2014).

### 5.1.2 Psychosocial/psychotherapeutic intervention

The psychosocial/therapeutic intervention contains four different sub-categories which are the telephone based counselling, self-help groups, internet-based education and individual face to face meetings. The sub- categories were formulated based on the yielded data from (n=6) research articles.

Supportive care is an intervention that supports the personal relationships and psychosocial/ psychotherapeutic reliefs of breast cancer patients. This intervention is based on different support needs of patients. (Mei-Nan, Ping-Ling, Miin-Fu & Shin-Cheh 2009:50.) The purpose of psychotherapeutic/social interventions is to offer support and guidance to breast cancer patients by various means: education and delivery of information about the illness, guidelines for home workouts, counselling of stress related issues (Salonen et al. 2012: 398). A study by Badger et al. (2005: 277) underlines the telephone calls as a method for the provision of psychosocial and psychotherapeutic interventions to meet the needs of breast cancer patients. Telephone based counselling focuses on matters like informational (breast cancer education), emotional and social support (Bager et al. 2005: 275).

Informational support refers to the guidance given to the existing problem (Mei-Nan et al. 2009:50). The main source of this support is health care professionals (Salonen et al. 2012: 397). The aim of informational support is to give breast cancer patients knowledge about their diagnosis, illness and care. Information given to patients affects their needs and expectations (Vieruaho, Palonen, Åstedt-Kurki & Leino 2016: 38). Emotional support contains the establishment of allocated time and possibility to discuss. Patients and families can express their emotions while they are being comforted, listened, sympathized and encouraged. (Mei-Nan et al. 2009: 52.) Social support is mainly attained by social communication which allows patients to process the reactions caused by stress factor (Badger et al. 2005: 274). It is also a type of support that is an essential factor offering the sense of power to patients when encountering numerous difficult situations (Park,

Kim & Kim 2012:106). Social support is provided by mutual self-help groups or through social network arenas (Stang & Mittelmark 2010; Badger et al. 2005).

As referred by Mei- Nan et al. (2010: 52), interventions based on supportive care can be given via one-on-one meetings in addition to the mobile based method. Personal meetings are offered to patients in every stage of biopsy process. In face to face meetings, the questions of breast cancer patients are clarified without any time limitations. The goal of one on one interventions is to increase mental adjustment in breast cancer patients (Badger et al. 2005). In these face to face sessions, the purpose as well is to take into account the individual concerns and needs of breast cancer patients (Salonen et al. 2011: 398).

Among the psychosocial and psychotherapeutic interventions professionally ran self-help groups help breast cancer women to manage the cancer recovery phase (Stang & Mittelmark 2010: 46). The importance of self-help groups is the support given by peers. These groups are led by a professional nurse that promotes free conversation among patients. (Stang – Mittelmark 2010: 46–48.) This type of intervention provides the opportunity to ask issues that bothers the patients (Salonen et al 2012: 398).

Internet - based education can be used as an intervention to support the coping process of breast cancer patients (Vieruaho et al. 2016: 38). Alongside with their family, breast cancer patients report having health care personnel as a member of their social network. Social network offers social support to patients. (Salonen et al. 2012: 396–400.) On top of social support, interned based guidance contains informational and emotional support (Vieruaho et al. 2016: 38).

### 5.1.3 Rehabilitative Intervention

There are three sub categories in rehabilitative interventions. They include occupational therapy, art therapy (drama) and physiotherapy. Occupational therapy is a patient - centred profession involved in improving well-being and health through occupation. According to occupational therapists; occupation is the daily activities that individuals do with families or with the community to bring meaning and purpose to life. (Desiron, Donceel, Godderis, Van Hoof & Rijk 2015: 267–280.)

Occupational participation is partaking in a life situation through occupation which can be daily activities of living, work or play. Environment comprises the elements of cultural, social, physical, financial and legislative and the exterior surroundings the individuals and their reaction. (Palmadottir, 2010: 299–307.) Occupational therapy goal is to encourage patients to get involved in activities of daily living, by working together with them and the communities, also to boost their capability in the occupations they have interests on or supposed to do by revamping the environment or occupation for better support in their occupation involvement. (Desiron et al. 2015: 267–280.)

Various forms of art have been used as rehabilitative intervention, one of the form is drama. Drama is used to deliver information, ascertain thoughts, feelings, ideas and stress to help people cope with an illness. Drama profound viewpoint is based on the apprehension of theatrical assertion methods, excitement and conflict, working with focus and apprehending more being a person with the use of imaginary actions. (Mattsson-Lidsle et al. 2007: 470–487.)

Physiotherapy service development is a cornerstone for patients at all phases of their breast cancer treatment. The service is for treatment related to the following problems; arm and breast lymphedema, scar tightness, axillary web syndrome, shoulder dysfunction and reduced arm strength. (Pidlyskij, Roddam, Rawlinson & Selfe 2014: 156–161.) Interventions regarding physiotherapy decrease lymph volume and support the skin integrity and its surroundings (Park et al. 2012: 107).

## 5.2 The Outcomes of Care & Service Interventions

When responding to the second research question 2) what are the outcomes of care and service interventions for breast cancer patients, the main heading for our actual research question was the outcomes of care and service interventions itself. In this final project, the outcomes were identified and classified into two main categories which are positive and negative effects. These main categories comprise 5 subcategories. The results for the second research question is further explained in the figure (5.) and in the following sub chapters.

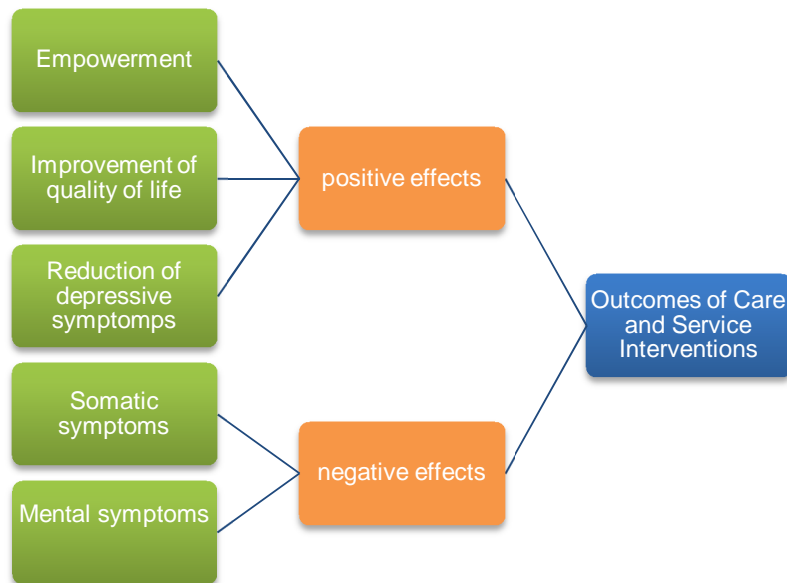


Figure 5. Outcomes of Care and Service interventions

### 5.2.1 Positive effects

During the breast cancer care process and some years after it, there is a constant proof that psychosocial and psychotherapeutic interventions have positive effects on breast cancer patient's physical, psychological functioning and on their quality of life (Salonen et al. 2012: 396). Especially interventions including tailored social, emotional and informational support have been proved to increase the mental wellbeing of patients. Programs offered via telephone or face to face sessions increase care results for patients with breast cancer. (Mei-Nan et al. 2009: 51.)

Personal telephone based counselling is capable of reducing psychological concern that frequently follows chemotherapy. It's cost effective for breast cancer and it decreases the symptoms of treatment in comparison to the person without any phone contact. (Badger et al. 2005: 274.) For example, anxiety of breast cancer patients decreases by telephone discussion or follow-up. Follow up care gives patients opportunity to communicate with nurses and physicians, as a result of expansion in their supportive resources. (Mein- Nan et al. 2009: 52.)

Individual face to face interventions benefit breast cancer patients in a way that improves their physical functioning and quality of life. In particular, women are able to cope with the sexual problems caused by therapeutic interventions. (Salonen et al. 2011:404.) The



aid offered by nurses to patients reduces remarkably the negative changes in sexual functioning (Salonen et al. 2012:403).

In addition to the reduction of depressive symptom, the study by Stang and Mittelmark (2010:49) shows that self-help groups may promote empowerment. From the aspect of emancipation, patients are inspired by self-help groups in the recovery phase of the illness. Similarly, Vieruaho et al. (2016: 43) points out the effect of internet- based education on the patient empowerment. Web pages are seen as beneficial by breast cancer patients. They are able to read the experiences and stories of other patients in order to manage breast cancer better.

Apart from the psychosocial and psychotherapeutic interventions, the rehabilitative interventions are also used to empower and improve the quality of life for the breast cancer patients. One of the interventions is occupational therapy. Occupational participation has an important impact in treatment and diagnosis. It is divided into three categories managing control and stability, experiencing sensibility of self-worth and enhancing self-evolvement. (Desiron et al. 2015: 267-280.)

Managing control and stability is having a daily routine which helps the patients to limit negative thoughts and acquire cohesion. Avoiding staying in bed more than required, leaving the house often to run errands helps the patients. Experiencing sensibility of self-worth is achieved by productive roles such as making beneficial pieces for the family, executing a project or caring for grandchildren is useful in preserving a sensibility of self-worth. Enhancing self-evolvement includes participation in crafts, creative occupations in patients' homes, and arranged workshops at the support Centre (Desiron et al. 2015: 267–280.)

Physiotherapy is another rehabilitative intervention that empowers and improves the quality of life of breast cancer patients. The specialist service physiotherapy improves the patients' confidence for being treated by specialized breast cancer therapist since one is familiar with the patient group and also has familiarity of handling post treatment impairment. The emotional, psychosocial and physical needs are met particularly for those lacking someone else to confide their struggles. The improvement in physical function has an impact on family role, in that the improvement in movement, function and reduction of pain make the patients more independent in doing tasks. (Pidlyskij et al. 2014: 156–161.)

In drama as an intervention the patients feel the support and solidarity, in that they all share the similar difficulties and are able to uplift each other in issues about their illness, feminine concerns or other delicate issues. The paintings of the thoughts and the feelings of the patients enlighten their subconscious feelings which make them express the important events in their life. Also they have the courage to face up their hidden feelings and thoughts and to express them. The patients feel inner strength, inner peace and inner tranquility had developed. (Mattsson-Lidsle et al. 2007: 470–487.)

Positive effects from therapeutic interventions are straight forward and radical. Postoperative radiation and chemo therapies are meant to reduce the risk of recurrence (locally) and extend the overall chances for survival in patients with breast cancer. (Agrawal 2014)

### 5.2.2 Negative effects

Breast cancer patients are curious to know what to expect from the treatment and diagnosis in terms of physical and psychological side effects (Kenyon, Mayer & Owens 2014: 382). One of the typical responses of radiotherapy is fatigue, it causes the reduction of self-confidence and low- social life which then becomes a negative factor for the quality of life of patients (Alcântara-Silva, Freitas-Junior, Freitas & Machado 2013: 2680). Fatigue caused by cancer is persistent, weakening and a long-standing effect of breast cancer therapeutic interventions. It correlates with patient's daily performance regarding physical, cognitive and emotional activity. (Kenyon et al. 2014: 387.)

In comparison to other cancers, the presence of depression has been quite high with patients suffering breast cancer. This persistent depression decreases the quality of life of patients. (Kenyon et al. 2014: 385.) The same study by Kenyon et al. (2014: 384) states similarly that breast cancer patients are at greater risk of depression and anxiety to numerous stressors. Anxiety usually coincides with depression (Brem & Kumar 2011: 65). Anxiety is typically and sensitively felt reaction amongst females with breast cancer (Mei-Nan et al. 2009: 50). Perhaps, it is related to fear of reoccurrence and it remains to exist as a quite substantial issue for women many years after diagnosis phase (Kenyon et al. 2014: 385).

Above other signs of mental distress, pain is usually coexisting factor among breast cancer patients (Brem & Kumar 2011: 66). The most frequent effect of pain is associated

with (ALND) Axillary Lymph Node Dissection (Brem & Kumar 2010: 66). Likewise, the study by Kenyon et al. (2014: 391) underlines the fact that patients with ALND show the most elevated pain scores.

Breast cancer patients demonstrate cognitive dysfunction after cancer treatment. This type of impairment notably affects patient's quality of life. (Brem & Kumar 2011: 67.) The exact mechanism or etiology of cognitive dysfunction is still not identified (Kenyon et al 2014; Brem & Kumar 2011). However, patients manifest the cognitive impairments through learning and memory disability, slow speed and motor functions and attention problems. Specially, patients with chemotherapy show a decrease in total cognitive function in the matter of language and memory. (Kenyon et al. 2014: 385–386.)

There is a chance for lymphedema after therapies, which is long term chronic swelling. It's defined as an accumulation of fluid in the tissues. This situation usually appears when patients undergo ALND or radiotherapy. The main factor causing the risk of lymphedema is the type of surgical operation performed. Signs of lymphedema include: constant inflammations, fatigue, changes in sensation and self-image and pain. (Kenyon et al. 2008: 389.)

About 25 % of breast cancer patients are in their reproductive years. During the diagnostic process, these young patients are very distressed by infertility and premature menopause. (Kenyon et al. 2014: 392.) Premature menopause is defined as a cessation of menstruation is due to therapeutic interventions. It has consequential effects on patients' somatic and mental side. (Brem & Kumar 2011: 68.) Therapeutic interventions such as chemotherapy causes ovarian dysfunction which results in amenorrhea. Women with breast cancer who experience amenorrhea, still retain premature menopause and impaired fertility. (Kenyon et al. 2014: 392.) The development of menopause is in fact dependent on woman's age at the time of therapeutic treatment. Women under 40, are less likely to have amenorrhea than older women during treatment. (Brem & Kumar 2011: 68.)

Therapeutic negative effects have been noted to be very individual, as some may experience symptoms that others may not or to a lesser extent. Some of the post treatment effects stated by Agrawal (2014: 112–115) include cardiovascular toxicity (cardiomyopathy) caused by chemotherapy, the health of bones to a lesser degree, and some pulmonary issues namely radiation induced pneumonitis.

## 6 Ethical Considerations, Validity and Limitations

### 6.1 Ethical Considerations

Ethical principles and issues should be considered by authors in every research even when reviewing an academic journal (Connelly 2014: 54). In this final project, ethical principles were applied. One part of the ethical considerations is that research topic and purpose are clarified and explained. The researcher's ethical explanations and the credibility of the study go together. (Tuomi ja Sarajärvi 2013: 131–132.) The ethical acceptability, the validity and credibility, require an adherence of good science practice from researchers (ETENE 2006: 3; Tuomi & Sarajärvi 2013: 142).

### 6.2 Validity & Reliability

The ethics address quality of the research. The researcher must ensure that research plan is good in terms of quality and that research questions and reporting are well and precisely presented. An ethical commitment directs a good research. The research ethics is rounded by validity and evaluation criteria. (Tuomi & Sarajärvi 2013: 127.) A *validity* is described as a decent way of reflecting the concepts being examined (Burns & Groves 2007: 365). The authors of this final project paid attention to the quality of the selected research articles in way that validity was considered as one criteria during data search process. This is explained through the inclusion and exclusion criteria where all articles selected for the data analysis were peer reviewed journals.

As noted by Burns and Groves (2007: 365) validity should be considered along with *reliability*. Every statistical analysis of certain research should contain the results of reliability. Reliability takes into consideration the features of consistency in a study. (Burns and Groves 2007: 365.) The process of conducting this final project relied on the accuracy of prior studies conducted. One of the ways to improve the validity is to resort to an expert when conducting a systematic search (Johansson et al. 2007: 49). Therefore, librarians were also consulted to assure the validity of this project. During the data collection process several discussions were held in order to come into consensus with the selected articles and so as to avoid any repetitions or misinterpretations. Finding valid research articles requires published and unpublished literature (Glasziou, Irwig, Bain & Colditz 2001: 2). In this context unpublished data refers to the grey literature (Johansson et al. 2007: 53; Glasziou et al. 2001: 16). Unpublished information was not used in this

review because its access portal would have contradicted the criteria regarding systematic search. However, publication bias can be avoided and diminished by using unpublished data (Johansson et al. 2007: 53; Glasziou et al. 2001: 23). Therefore, there is a possibility of bias in this final project.

### 6.3 Study Limitations

Limitations are defined as restrictions that weaken the credibility of the results (Burns & Grove 2007: 37). Some limitations of this final project contributed to the study findings. One of them is the time given and the broadness of the research topic. The basic requirement of qualitative research is that authors have sufficient time to conduct a research (Tuomi & Sarajärvi 2013: 142). In this final project, the time allocated for this research was in turn less adequate in comparison to the sought phenomenon. Therefore, in the data search the authors had to prepare criteria that facilitated the process of conducting a literature review and to search valuable answers for research questions. Another limitation that affected the findings was the language. To set only two languages for the criteria might have led to missing out relevant studies in other language. During the data search process, there was a vast amount of insignificant papers that added no relevance and value to the search process. Accordingly, the authors excluded non-relevant articles in order to remain inside the particular theme.

## 7 Discussion of the Results

The findings of this final project showed that females with breast cancer are in need of various types of care and services. Results of this literature review illustrate the three major interventions available for breast cancer patients and the outcomes that come along with these interventions. Therapeutic, rehabilitative and psychosocial/or psychotherapeutic interventions, all these three form the components of care and services.

Finding out that you have cancer is a very difficult and emotional time for an individual and their loved ones. During this process a person needs a lot of care and support from the people around them. This has been unanimous throughout this literature review, with a lot of the studies indicating the importance of a core that can help people work through the fear and concerns.

- Can I be cured?
- What are my options?
- How long does the treatment take?
- Will I survive?

Above are just a few questions that go through a person's mind, and the weight behind those questions shows just how stressful this period is for people. Therapeutic interventions, is a period that can certainly be considered as the most stressful time for a woman, mainly due to the amount of uncertainty and fear involved in this period. A lot of factors should be considered during this time, because this is when an individual is waiting on things such as their diagnosis (is it benign or malignant), this is also when they are supposed to be informed about their treatment plan (what stage of cancer they have and the course of action that will be following), and finally this is when they are physically and emotionally at their weakest.

Some other things to consider are the long-term effects of therapeutic interventions. It can take some time to get used to the new body shape and image after surgery. There are intense feelings such as, grief, fear, shock, and anger or resentment after surgery. However according to cancer research, most women generally get used to their new body image and the feel of their breast.

There are also emotional ups and downs to consider after surgery, such as anxieties involving coming back for post-surgery check-ups, or re-emergence of the cancer. An individual's body and mind goes through so much during this period that it can't be said enough the importance of having good care and people that can help you work through it.

From the actual point of psychosocial or psychotherapeutic interventions, several studies pointed out the importance of supportive care in relation to meeting the psychological needs of cancer patients, from the diagnostic process of breast cancer to the very end of treatment. Most of the studies demonstrated the essential parts of the psychosocial or psychotherapeutic interventions. These vital parts are the different forms of support. The emotional, social and informational support given by telephone, face to face sessions, groups or via internet facilitates the care outcomes for breast cancer patients.

The study by Mei-Nan et al. (2009: 57) concludes that supportive care should be continuous and that mental status of breast cancer patients should be evaluated constantly.

These statements are consistent with the previous theory that breast cancer patients need psychological support on top of the actual medical treatment.

The results of the studies emphasized the responsibility of nurses in providing support to patients. According to Salonen et al. (2012: 402) health care professionals play a significant role in creating supportive interventions for patients with breast cancer. In particular, the informational support given by nurses has raised its importance. (Salonen et al. 2012: 402–403.) Nurses can provide support and education to patients by above interventions. And since patients poorly participate the face to face psychosocial interventions, patients can be encouraged to take part in internet- based or telephone interventions (Badger et al. (2005: 277).

In the rehabilitative interventions the patients experienced a sense of well-being and developed a sense of fulfilment as individuals. The different drama art used like music, dance movement, meditation theatre and visual art were valuable for the patients and also the support groups contributed in positive change of attitude towards breast cancer (Mattsson-Lidsle et al. 2007: 470–487.) The significance of therapeutic relationship between the patient and therapist in physiotherapy, has been indicated to have a positive impact on the overall gratification and treatment results (Pidlyskyj et al. 2014: 156–161.) RTW is necessary part of rehabilitation of breast cancer patients and should be integrated as part of healthcare. It is also important in supporting patients to continue their progression from patients to survivors rejuvenate their work involvement. (Desiron et al. 2015: 267–280.)

The possible outcomes of the breast care and service interventions mainly dealt with the health related factors. As relatively cited in the theoretical background that some of the care & service interventions are causing potential harm for patients, the findings of this final project are supporting the existing theory.

In addition to the different methods of care & service interventions, the results of this final project presented that breast cancer patients experience positive and negative effects related to interventions. It was evident that most of the negative effects of interventions are due to therapeutic interventions. The negative effects are the ones affecting the psychological and physical health of breast cancer patients. As stated in the results section, the most common late effects of breast cancer are anxiety, depression and stress and as well as physical symptoms such as lymphedema, pain and sexual dysfunction.

The factors contributing positively to patients' health are the outcomes of rehabilitative and psychosocial / psychotherapeutic interventions. The positive effects comprised the improvement of quality of life and empowerment. The increase in quality of life is a result of multiple changes in patient's physical and mental wellbeing through the programmes concerning rehabilitation and psychology. The development of empowerment is recognizably disturbing the existence of negative effects of therapeutic treatments.

## **8 Conclusions**

During this final project, the authors found a vast variety of quality and evidenced based guidelines. However, authors of the original studies have recommended for further studies to be conducted on the interventions that support better health outcomes for breast cancer patients. Throughout this review, the key points noticed are identification, assessment, development and integration and they all should be considered when offering any type of care and service to patients. Health care faculty should take more responsibility for the care of the breast cancer patients during all the stages of affliction.

### **8.1 Suggestions and Implications**

Emphasis was placed on the importance of early detection prior to the therapeutic phase. This fact was proven to significantly improve one's chances of recovery and even more so, improve their overall survival chances. When it comes to psychosocial / psychotherapeutic and rehabilitative interventions different types of support needs should be provided individually by health care professionals.

Further studies are needed to assess the effectiveness of breast cancer care and services. A key example of this would be the lack of potential adverse effects in psychosocial /rehabilitative interventions.



## References

- Aalberg, V., Roberts, P. J., Kellokumpu-Lehtinen, P-L., Jyrkkö, S., Kouri, M., Teppo, L., Joensuu, H. (2013). Syöpätaudit. Duodecim.
- Agrawal, S. (2014). Late effects of cancer treatment in breast cancer survivors. *South Asian J Cancer*. 3 (2): 112–115.
- Alcantara-Silva, T.R., Freitas-Junior, R., Freitas, N. MA., Machado, G. DP. (2013). Fatigue related to radiotherapy for breast and or gynecological cancer: a systematic review. *Journal of Clinical Nursing*. 22, 2679–2688.
- American Cancer Society (2016). Cancer Facts & Figures. Atlanta, Georgia. <<http://www.cancer.org/acs/groups/content/@research/documents/document/acspc-047079.pdf>> Read 15.2.2016
- Anampa, J., Makower, D., Sparano, J.A. (2015). Progress in adjuvant chemotherapy for breast cancer: an overview. *BMC Medicine*.
- Aveyard, H. (2010). Doing a Literature Review in Health and Social Care- A practical guide (2<sup>nd</sup> Ed.) New York: Open University Press. 1–170.
- Badger, T., Segrin, C., Meek, P., Lopez, AM., Bonham, E., Sieger, A. (2005). Telephone Interpersonal Counselling With Women with Breast Cancer: Symptom Management and Quality of Life. *Oncology Nursing Forum*. 32 (2), 273-279.
- Baffert, S., Hoang, H.L., Bredart, A., Asselain, B., Alran, S., Berseneff, H., Huchon, C., Trichot, C., Combes, A., Alves, K., Koskas, M., Nguyen, T., Roulot, A., Rouzier, R., Hequet, D. (2015). The Patient- breast cancer care pathway: How could it be optimised? *BMC Cancer*. 15, 394.
- Baldwin, P. (2009). Digital breast tomosynthesis. *Radiologic Technology*, 81(1), 57–74.
- Bellenir, K. (2009). Breast Cancer Sourcebook (3<sup>rd</sup> Edition). Detroit: Omnigraphics. 10–35.
- Brem, S. and Kumar, N.B. (2011). Management of Treatment- Related Symptoms in Patients with Breast Cancer: Current Strategies and Future Directions. *Clinical Journal of Oncology Nursing*. 15 (1), 63–71.
- Brown, S.L. and Kartoz, C. (2014). Breast Cancer Risk Assessment in Primary Care. *The American Journal of Maternal/Child Nursing*. 39 (5), 313–318.
- Burns, N. and Grove, S.K. (2007). Understanding Nursing Research. Building an evidence-based practice (4<sup>th</sup> Ed.) United States of America. Elsevier.
- Cancer Research UK. *Breast Cancer*. <<http://www.cancerresearchuk.org/about-cancer/type/breast-cancer/>> Read 10.12.2015
- Cardoso, F., Loibl, S., Pagani, O., Graziottin, A., Panizza, P., Martincich, L., Peccatori F., Fourquet, A., Delaloge, S., Marotti, L., Penault-Llorca, F., Kotti-Kitromilidou, AM., Rodger, A., Harbeck, N. (2012). *The European Society of Breast Cancer Specialists recommendations for the management of young women with breast cancer*.

<<http://www.eusoma.org/doc/The.European.Society.of.Breast.Cancer.Specialists.recommendations.pdf> > Read 18.10.2015

Castellanos, M.R., Conte, J., Fadel, D.A., Raia, C., Forte, F., Ahern, K., Smith, M., Elsayeh, D., Buchbinder, S. (2008). Improving Access to Breast Health Services with an Interdisciplinary Model of Care. *Breast Journal*. 14 (4), 353–356.

Center for Disease Control and Prevention. *Mammography and Breast Cancer*. <<http://www.cdc.gov/nchs/fastats/mammography.htm> > Read 25.3.2016

Chapman, C.H., Jaggi, R. (2015). Postmastectomy Radiotherapy after Neoadjuvant Chemotherapy: A Review of the Evidence. *Cancer Network Oncology Journal*.

Charlier, C., Pauwels, E., Lechner, L., Bourgois, J., De Bourdeaudhuij, I., Van Hoof, E., (2012). Physical activity levels and Supportive needs for physical activity among breast cancer survivors with different psychosocial profiles: a cluster analytical approach. *European Journal of cancer care*. 21, 790–799

Connelly, L.M. (2014). Ethical Consideration in research studies. *MEDSURG, Nursing*. 2 (1), 54–55.

Desiron, H.A.M., Donceel, P., Godderis, L., Van Hoof, E., Rijk, A. (2015). What is the value of occupational therapy in return to work for breast cancer patients? A qualitative inquiry among experts. *European Journal of Cancer Care* 24, 267–280

Edgar, L., Glackin, M., Hughes, C., Rogers, K.M.A. (2013). Factors Influencing Participation in Breast Cancer Screening. *British Journal of Nursing*. 22 (17), 1021–1026.

Elo, S. and Kyngäs, Heli (2007). The qualitative content analysis process. *Journal of Advanced Nursing*, 62 (1), 107–115.

Europa Donna. The European Breast Cancer Coalition. *Breast Cancer Facts*. <<http://www.europadonna.org/breast-cancer-facts/>>

Finnish Cancer Registry. <[http://www.cancer.fi/syoparekisteri/en/mass-screening-registry/breast\\_cancer\\_screening/](http://www.cancer.fi/syoparekisteri/en/mass-screening-registry/breast_cancer_screening/) > Read 22.10.2015

Giurescu, M. E., Hu, T., Obembe, O. (2010). Role of Imaging in Breast Cancer Detection. *American Association of Occupational Health Nurses Journal*. 58 (4), 131-134.

Glasziou, P., Irwig, I., Bain, C., Colditz Graham. (2001). *Systematic Reviews in Health Care. A Practical Guide*. Cambridge University Press. Read 17.4.2016

Helsinki ja Uudenmaan Sairaanhoidopiiri. <<http://www.hus.fi/ammattilaiselle/hoitoketjut/Sivut/default.aspx> > Read 23.10.2015

Helsinki ja Uudenmaan Sairaanhoidopiiri. <<http://www.hus.fi/en/medical-care/medical-services/Oncology/cancer-patient-treatment-pathways/breast-cancer-patients-treatment-pathway/Pages/default3.aspx> > Read 23.10.2015

Hoekstra, H.J., Wobbes, T., Heineman, E., Haryono, S., Aryandono, T., Balch, C.M. (2016). Fighting Global Disparities in Cancer Care: A Surgical Oncology View. *Annals of Surgical Oncology*.

Holli, K., Isola, J., Joensuu, H., Kataja, V., Lehtimäki, T., Linder, N., Lundin, J., Lundin, M., Sihto, H., Turpeenniemi-Hujanen, T. (2011). Long-term prognosis of breast cancer detected by mammography screening or other methods

Huang, X., Lin, J., Demner-Fushman, D. (2006). Evaluation of PICO as Knowledge Representation for Clinical Questions. *University of Maryland*. American Medical Informatics Association. <<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1839740/>> Read 27.2.2016

Huovinen, R. and Matson, J. (2015). *Levinneen rintasyövän hoito*. <http://www.terveysportti.fi.ezproxy.metropolia.fi/xmedia/duo/duo12295.pdf> Read 16.10.2015

IARC. International Agency for Research on Cancer. (2002). Breast Cancer Screening. IARC Handbook of Cancer Prevention. volume 7. 1–229.

Johansson, K., Axelin, A., Stolt, M., Ääri, R-L. (2007). Systemaattinen kirjallisuuskatsaus ja sen tekeminen. Turun yliopisto. Read

Kenyon, M., Mayer, D.K., Owens, A.K. (2014). Late and Long -Term Effects of Breast Cancer Treatment and Surveillance Management for the General Practitioner. *Journal of Obstetric, Gynecologic & Neonatal Nursing*. 43, 382–398.

Marcu, L.G., Santos, A., Bezak, E. (2014). Risk of Second Primary Cancer after Breast Cancer Treatment. *European Journal of Cancer Care*. 51–64.

Marieb, E.N. (2013). *Essentials of Human Anatomy and Physiology* (10<sup>th</sup> Edition). London: Pearson. 1–617.

Mattsson.Lidsle, Barbro McS, Snickars-von, W., H, Birgitta, Lindholm, Lisbet, Fagerström, Lisbeth, (2007). Drama as a New Rehabilitation Possibility for Women Afflicted With Breast Cancer. *Cancer Nursing*, 30 (6), 479–487.

Mei-Nan, L., Ping-Ling, C., Miin-Fu, C., Shin-Cheh, C. (2009). Effect of supportive care on the anxiety of women with suspected breast cancer. *Journal of Advanced Nursing*. 66 (1), 49-59.

Miller, A. (2008). Implementing a surviving care plan for patients with breast cancer. *Clinical Journal of Oncology Nursing*. 12 (3), 479–487.

Narod, S.A., Iqbal, J., Giannakeas, V., Sopik, V., Sun, P. (2015). Breast Cancer Mortality after a Diagnosis of Ductal Carcinoma in Situ. *JAMA Oncology*. 1 (7), 889.

Palmodottir, G. (2010). The role of occupational participation and environment among Icelandic women with breast cancer. *Scandinavian Journal of Occupational Therapy*. 17, 299-307

Park, H., Kim K., Kim, J., (2012). Factors that Influence Korean Breast Cancer Patients to Undergo Cancer Rehabilitation Therapy. *Asian Oncology Nursing*. 15 (2), 106–113.

Partridge, A.H., Rumble, R.B., Carey, L.A., Come, S.E., Davidson, N.E., Di Leo, A., Gralow, J., Hortobagyi, G.N., Moy, B., Yee, D., Brundage, S.B., Danso, M.A., Wilcox, M., Smith, I.E. (2014). Chemotherapy and Targeted Therapy for Women With Human Epidermal Growth Factor Receptor 2–Negative (or unknown) Advanced Breast Cancer:

American Society of Clinical Oncology Clinical Practice Guideline. *Journal of Clinical Oncology*. 32(29), 3307-3329.

Pidlyskij, K., Roddam, H. Rawlinson, G., Selfe, J., Physiotherapy, (2014). Exploring aspects of physiotherapy care valued by breast cancer patients. *Physiotherapy*, 100, 156–161.

Pölkki, T. (2014). Hoitotyön interventiot ja niiden vaikuttavuus. Pääkirjoitus. *Tutkiva Hoitotyö*. 4, 3–43.

Ryhänen, A.M. (2012). Internet based breast cancer patient's pathway as an empowering patient educational tool. University of Turku, Department of Nursing Science. <<http://www.doria.fi/ezproxy.metropolia.fi/bitstream/handle/10024/85110/AnnalesD1045Ryhanen.pdf?sequence=1>> Read 14.4.2016

Salonen, P., Tarkka, MT., Kellokumpu-Lehtinen, PL., Koivisto, AM., Aalto, P., Kaunonen, M. (2012). Effect of social support on changes in quality of life in early breast cancer patients: a longitudinal study. *Scandinavian Journal of Caring Sciences*. 27, 396–405.

Salonen, P., Tarkka, MT., Kellokumpu-Lehtinen, PL., Koivisto, AM., Åstedt-Kurki, P., Kaunonen, M. (2011). Individual face-to face support and quality of life in patients with breast cancer. *International Journal of Nursing practice*. 17, 396-410.

Santa-Maria, C.A, Camp, M., Cimino-Mathews, A., Harvey, S., Wright, J, Stearns, V. (2015). Neoadjuvant Therapy for Early-Stage Breast Cancer: Current Practice, Controversies, and Future Directions. *Cancer Network Oncology Journal*.

Senkus, E., Kyriakides, S., Ohno, F., Penault-Llorca, Poortmans, P., Rutgers, E., Zackrisson, S., Cardoso, F. (2015). Primary breast cancer: ESMO Clinical Practice guidelines for diagnosis, treatment and follow-up. *Annals of Oncology*. 26, 8–30

Stang, I. and Mittelmark, M.B. (2010). Intervention to enhance empowerment in breast cancer self-help groups. *Nursing Inquiry*. 17, 46–56.

Suwankhong, D. and Liamputtong, P. (2015). Experiences of Changes and Social Stigma among Thai Women in Southern Thailand. *Breast Cancer Research*. 1-8.

Terveyskirjasto. Duodecim. (2012). *Rintasyöpä: toteaminen ja ennuste*. <[http://www.terveyskirjasto.fi/terveyskirjasto/tk.koti?p\\_artikkeli=dlk00618](http://www.terveyskirjasto.fi/terveyskirjasto/tk.koti?p_artikkeli=dlk00618)> Read 20.9.2015

Terveyden ja Hyvinvoinnin laitos. 2014. <<https://www.thl.fi/fi/web/kansantaudit/syopa/syovan-hoito>> Read 14.10.2015

Vieruaho, K., Palonen, M., Åstedt-Kurki, P., Leino, K. (2016). Rintasyöpäpotilaiden Internetpohjainen ohjaus – Systemaattinen kirjallisuushaku. *Hoitotiede*. 28(1), 38–49.

Wang, S., Vimig, B.A., Tuttle, T.M., Jacobs, D.R., Kuntz, K.M., Kane, R.L. (2013). Variability of Preoperative Breast MRI Utilization among Older Women with Newly Diagnosed Early-Stage Breast Cancer. *The Breast Journal*. 19 (6), 627–636.

World Cancer Research Fund International. *Breast Cancer Statistics*.  
<<http://www.wcrf.org/int/cancer-facts-figures/data-specific-cancers/breast-cancer-statistics>> Read 20.3.2016

Williamson, H.A. (2015). Moving Forward With Symptomatic Breast Services. *Synergy: Imaging and Therapy Practice*. 16–21.

World Health Organization. <[http://www.who.int/cancer/events/breast\\_cancer\\_month/en/](http://www.who.int/cancer/events/breast_cancer_month/en/)>Read 17.8.2015

**Database search**

Database	Search terms	Limitations	Hits	Chosen by title	Chosen by abstract	Chosen by full text	Finally selected
Cinahl	Breast cancer AND care interventions	2005 ->	107	38	21	9	1
	Breast cancer AND therapy interventions	2005 ->	54	8	6	2	1
	Breast cancer care AND effects	2005 ->	175	49	15	5	3
	Breast cancer AND intervention AND care	2005 ->	186	17	10	4	1
	Breast cancer and interventions AND patients AND effects	2005 ->	147	20	11	2	1
	Breast cancer treatment AND patients	2005 ->	350	42	15	2	1
Pubmed	Breast cancer care	2005 ->	203	38	29	4	1
	Breast cancer AND care interventions	2005 ->	59	37	24	7	1
	Breast cancer treatment	2005 ->	171	26	20	9	3
Manually searched							1
Manually searched with direct Cinahl headings	(MH "Breast Neoplasms/RH")	2005 ->	244	27	26	10	3
	(MH "Breast Neoplasms/RH") AND breast cancer patients	2005 ->	66	20	17	3	1
							<b>Total: 18</b>

## Data analysis table

Author(s), year, title	Purpose of the study	Participants (Sample size)	Methods	Main Findings	Interventions & Effects Found
Mei-Nan, L., Ping-Ling, C., Miin-Fu, C., Shin-Cheh, C. (2009). Effect of supportive care on the anxiety of women with suspected breast cancer. <i>Journal of Advanced Nursing</i> . 66(1), 49-59.	Investigate the effect of a programme of supportive care on anxiety levels of women with suspected breast cancer during the diagnostic process.	122 women	Longitudinal quasi-experimental study which included three face to face sessions and two follow up telephone consultations	After adjusting covariance of breast discomfort, regular breast self-examination and biopsy result, the anxiety levels of women receiving supportive care were significantly lower than biopsy and after diagnosis than those of women receiving routine care.	<p><b><u>Answers Question 1.</u></b> Psychosocial/psychotherapeutic intervention:</p> <ul style="list-style-type: none"> <li>Provision of emotional, informational and social support via <i>face to face meetings or telephone calls</i></li> </ul> <p><b><u>Answers Question 2.</u></b></p> <ul style="list-style-type: none"> <li>Anxiety</li> <li>Reduction of depressive symptoms</li> </ul>
Salonen, P., Tarkka, MT., Kellokumpu-Lehtinen, PL., Koivisto, AM., Aalto, P., Kautonen, M. (2012). Effect of social support on changes in quality of life in early breast cancer patients: a longitudinal study. <i>Scandinavian Journal of Caring Sciences</i> . 27, 396–405.	Examine the social support received from social network and nurses within 6 months and quality of life (QOL) in women with breast cancer.	164 women	Quasi-experimental two-group design, Interventions were done by 2 physiotherapist. Interventions were provided by telephone and face to face.	Affect and Aid from network decreased in both groups and affirmation in the intervention group within 6 months. No significant changes were found within groups. Received social support had an effect on changes in sexual functioning, global QOL and health and functioning.	<p><b><u>Answers Question 1.</u></b> Psychosocial/psychotherapeutic intervention:</p> <ul style="list-style-type: none"> <li>Provision of social &amp; informational support via <i>internet-based intervention</i> by nurses</li> </ul> <p><b><u>Answers Question 2.</u></b></p> <ul style="list-style-type: none"> <li>Improvement of quality of life: reduction of negative changes in sexual functioning</li> </ul>

<p>Badger, T., Segrin, C., Meek, P., Lopez, AM., Bonham, E., Sieger, A. (2005). Telephone Interpersonal Counselling with Women with Breast Cancer: Symptom Management and Quality of Life. <i>Oncology Nursing Forum</i>. 32(2), 273-279.</p>	<p>Examine the effectiveness of a telephone interpersonal counselling (TIP-C) intervention compared to a usual care attentional control on women's symptom management and quality of life.</p>	<p>48 women</p>	<p>Experimental study design,  All interventions and data was completed over the telephone.</p>	<p>Women in the intervention group experienced decreases in depression, fatigue and stress over time and increases in positive affect.</p>	<p><b>Answers Question 1.</b> Psychosocial/psychotherapeutic intervention:</p> <ul style="list-style-type: none"> <li>· <i>Telephone based interpersonal counselling (TIP-C)</i> which offers emotional, social and informational support to breast cancer patients</li> </ul> <p><b>Answers Question 2.</b></p> <ul style="list-style-type: none"> <li>· <i>Reduction of depressive symptoms</i></li> <li>· <i>Improvement of quality of (QOL)</i></li> </ul>
<p>Stang, I. and Mittelmark, M.B. (2010). Intervention to enhance empowerment in breast cancer self-help groups. <i>Nursing Inquiry</i>. 17, 46–56.</p>	<p>Present detailed empowerment intervention and analysis of participants of the group intervention</p>	<p>18 women</p>	<p>Participatory intervention</p>	<p>The participants experienced group participation as both empowering and as a valuable source of support. Professionally led self-help group contribute to patient empowerment and function.</p>	<p><b>Answers Question 1.</b> Psychosocial/psychotherapeutic intervention:</p> <ul style="list-style-type: none"> <li>· <i>Self-help groups</i> among intervention for breast cancer management</li> </ul> <p><b>Answers Question 2.</b></p> <ul style="list-style-type: none"> <li>· Empowerment</li> </ul>
<p>Kenyon, M., Mayer, D.K., Owens, A.K. (2014). Late and Long -Term Effects of Breast Cancer Treatment and Surveillance Management for the General Practitioner. <i>Journal of Obstetric,</i></p>	<p>Examine the most common long term and late effects of breast cancer treatment.</p>	<p>-</p>	<p>A comprehensive Literature review</p>	<p>Topics relevant to challenges to psychosocial, cognitive and emotional wellbeing; satisfaction for life, cognitive dysfunction, challenges to physical wellbeing.</p>	<p><b>Answers Question 1.</b> Therapeutic intervention:</p> <ul style="list-style-type: none"> <li>· Mentions; <i>radiotherapy, chemotherapy, hormonal therapy.</i></li> </ul> <p><b>Answers Question 2.</b></p>



<p><i>Gynecologic &amp; Neonatal Nursing</i>. 43, 382–398.</p>					<ul style="list-style-type: none"> <li>• Mental symptoms: <i>anxiety, depression, stress, fatigue</i></li> <li>• Somatic/physical symptoms: <i>pain, lymphedema, cognitive &amp; sexual dysfunction, premature menopause.</i></li> </ul>
<p>Alcantara-Silva, T.R., Freitas-Junior, R., Freitas, N. MA., Machado, G. DP. (2013). Fatigue related to radiotherapy for breast and or gynecological cancer: a systematic review. <i>Journal of Clinical Nursing</i>. 22, 2679-2688.</p>	<p>Assess the profile, evaluation criteria and treatments for fatigue.</p>	<p>12 studies</p>	<p>Systematic review</p>	<p>Pre-treatment fatigue level maybe an important risk to aggravate it during radiotherapy and decrease the quality of life. 5 studies proposed interventions for pharmacological therapies.</p>	<p><b><u>Answers Question 1.</u></b> Therapeutic intervention:</p> <ul style="list-style-type: none"> <li>• <i>radiotherapy</i></li> </ul> <p><b><u>Answers Question 2.</u></b></p> <ul style="list-style-type: none"> <li>• the presence of <i>fatigue</i> as a negative factor influencing QOL</li> </ul>
<p>Salonen, P., Tarkka, MT., Kellokumpu-Lehtinen, PL., Koivisto, AM., Åstedt-Kurki, P., Kaunonen, M. (2011). Individual face-to face support and quality of life in patients with breast cancer. <i>International Journal of Nursing practice</i>. 17, 396-410.</p>	<p>Examine the QOL of breast cancer patients and to test factors associated with their QOL 6 months after surgery</p>	<p>204 women</p>	<p>Quasi-experimental two-group design, Interventions were performed via individual face to face sessions.</p>	<p>Women in the intervention group reported less arm and clinically better sexual functioning.</p>	<p><b><u>Answers Question 1.</u></b> Psychosocial/psychotherapeutic intervention:</p> <ul style="list-style-type: none"> <li>• Individual face to face intervention</li> </ul> <p>Therapeutic interventions:</p> <ul style="list-style-type: none"> <li>• Mentions about: <i>surgery, chemotherapy &amp; radiotherapy</i></li> </ul> <p><b><u>Answers Question 2.</u></b></p> <ul style="list-style-type: none"> <li>• <i>Improvement of QOL: a decrease in sexual dysfunction</i></li> </ul>

<p>Brem, S. and Kumar, N.B. (2011). Management of Treatment- Related Symptoms in Patients With Breast Cancer: Current Strategies and Future Directions. <i>Clinical Journal of Oncology Nursing</i>. 15(1), 63-71.</p>	<p>Summarize the psychological and physical symptoms related to breast cancer treatment; the prevalence, contributing therapies and interrelatedness of the symptoms</p>	<p>74 studies</p>	<p>A comprehensive literature review</p>	<p>Results of this review identify the gaps in knowledge and assist in the design of assessments and approaches to improve mortality and quality of life and provide the foundation for the development of evidenced based guidelines to standardize palliative care in survivors.</p>	<p><b>Answers Question 1.</b> Therapeutic intervention:</p> <ul style="list-style-type: none"> <li>· Mentions; <i>radiotherapy, chemotherapy, hormonal therapy.</i></li> </ul> <p><b>Answers Question 2.</b></p> <ul style="list-style-type: none"> <li>· Mental symptoms: anxiety, depression, stress, fatigue</li> <li>· Somatic/physical symptoms: <i>pain, lymphedema, cognitive &amp; sexual dysfunction, premature menopause.</i></li> </ul>
<p>Vieruaho, K., Palonen, M., Åstedt-Kurki, P., Leino, K. (2016). Rintasyöpäpotilaiden Internetpohjainen ohjaus – Systemaattinen kirjallisuushaku. <i>Hoitotiede</i>. 28(1), 38-49</p>	<p>Describe internet based guidance offered to breast cancer patients.</p>	<p>38 studies</p>	<p>Systematic literature review</p>	<p>The websites offering guidance give access to information and support which helps to increase patients' decision-making capabilities regarding treatment options as well as experiences of being able to control and empowerment their life.</p>	<p><b>Answers Question 1.</b> Psychosocial/psychotherapeutic intervention:</p> <ul style="list-style-type: none"> <li>· <i>Internet based education</i> as a tool to support breast cancer patients informationally</li> </ul> <p><b>Answers Question 2.</b></p> <ul style="list-style-type: none"> <li>· Websites increase patient <i>empowerment</i> and offer social and emotional support</li> </ul>
<p>Palmodottir, G. (2010). The role of occupational participation and environment among Icelandic women with breast cancer. <i>Scandinavian Journal</i></p>	<p>Explore the role of occupational participation and environment in the perception of health and well-being of</p>	<p>18 women</p>	<p>Interviews</p>	<p>Results support that occupational participation in a safe and supportive environment has powerful restorative properties</p>	<p><b>Answers Question 1 &amp; 2</b> Rehabilitative intervention:</p> <ul style="list-style-type: none"> <li>· Occupational therapy</li> </ul> <p><b>Answers Question 2.</b></p>

<p><i>of Occupational Therapy. 17, 299–307</i></p>	<p>Icelandic women with breast cancer.</p>				<ul style="list-style-type: none"> <li>· Maintaining control and stability</li> <li>· Experiencing sense of self-worth</li> <li>· Enhancing self-development</li> <li>· Support and care Access to information.</li> <li>· Refuge in community</li> </ul>
<p>Pidlyskij, K., Roddam, H. Rawlinson, G., Selfe, J., Physiotherapy, (2014). Exploring aspects of physiotherapy care valued by breast cancer patients. <i>Physiotherapy</i>, 100, 156–161.</p>	<p>Explore the reported value of physiotherapy care received by patients who had accessed a specialist Breast care physiotherapy</p>	<p>19 female in which the number was subdivided into three groups</p>	<p>One participant of each subgroup was interviewed.</p>	<p>Participants valued the importance of the therapeutic alliance and value of psychological, emotional and educational support.</p>	<p><b>Answers Question 1</b></p> <p><u>Rehabilitative intervention:</u></p> <ul style="list-style-type: none"> <li>· Physiotherapy.</li> </ul> <p><b>Answers question 2</b></p> <ul style="list-style-type: none"> <li>· Improvement in both physical functioning impacted on confidence and family role.</li> </ul>
<p>Mattsson.Lidsle, Barbro McS, Snickars-von, W., H, Birgitta, Lindholm, Lisbet, Fagerström, Lisbeth, (2007). Drama as a New Rehabilitation Possibility for Women Afflicted With Breast Cancer. <i>Cancer Nursing</i>, 30(6), 479-487.</p>	<p>Evaluate drama as a method within the rehabilitation of women afflicted with breast cancer</p>	<p>11 out of 20 women participated.</p>	<p>A drama pedagogic perspective based on theatrical expression methods, working with a focus, excitement and conflict using fictitious actions.</p>	<p>All the women felt support and solidarity within the group as well as personal development.</p>	<p><b>Answers question 1.</b></p> <p><u>Rehabilitative intervention:</u></p> <ul style="list-style-type: none"> <li>· <u>Drama</u></li> </ul> <p><b>Answers question 2.</b></p> <ul style="list-style-type: none"> <li>· Selfconfidence and inner peace. Feeling healthy</li> <li>· A rich picture of existence and direction in</li> </ul>

					<p>life Personal development</p> <ul style="list-style-type: none"> <li>Support and solidarity.</li> <li>Learning to live with anxiety-</li> </ul>
<p>Desiron, H.A.M., Donceel, P., Godderis, L., Van Hoof, E., Rijk, A. (2015). What is the value of occupational therapy in return to work for breast cancer patients? A qualitative inquiry among experts. <i>European Journal of Cancer Care</i> 24, 267-280</p>	<p>Explore expert's opinions on Occupational therapy interventions for Return to Work in Breast cancer patients in the Belgian</p>	<p>Occupational therapy departments heads.</p>	<p>Semi- structured interviews</p>	<p>Occupational interventions supporting RTW in Breast cancer patients are useful when integrated in regular healthcare</p>	<p><b>Answers question 1.</b></p> <p><u>Rehabilitative intervention:</u></p> <ul style="list-style-type: none"> <li>Occupational therapy: <ol style="list-style-type: none"> <li>(Importance of RTW support.</li> <li>Early intervention.</li> <li>Participative goal setting.</li> </ol> </li> </ul> <p><b>Answers question 2.</b></p> <ul style="list-style-type: none"> <li>Assisting BC patients in maintaining contact with their roles in daily life.</li> <li>Importance of workplace visit</li> </ul>
<p>Agrawal, S. (2014). Late effects of cancer treatment in breast cancer survivors. <i>South Asian J Cancer</i>. 3(2): 112–115.</p>	<p>Evaluation of late effects caused by breast cancer treatment.</p>	<p>Review of post treatment effects.</p>	<p>Literature review</p>	<p>Effect vary but they are serious and can have a major impact on the patient's life post treatment.</p>	<p><b>Answers Questions 1&amp;2</b></p> <p><u>Therapeutic intervention:</u></p> <ul style="list-style-type: none"> <li>chemotherapy</li> </ul>

					<ul style="list-style-type: none"> <li>radiotherapy</li> </ul> <p><b>Answers Questions 2.</b></p> <ul style="list-style-type: none"> <li>Post treatment radiotherapy and chemotherapy.</li> <li>Effects caused by breast cancer treatment.</li> </ul>
<p>Partridge, A.H., Rumble, R.B., Carey, L.A., Come, S.E., Davidson, N.E., Di Leo, A., Galow, J., Hortobagyi, G.N., Moy, B., Yee, D., Brundage, S.B., Danso, M.A., Wilcox, M., Smith, I.E. (2014). Chemotherapy and Targeted Therapy for Women With Human Epidermal Growth Factor Receptor 2–Negative (or unknown) Advanced Breast Cancer: American Society of Clinical Oncology Clinical Practice Guideline. <i>Journal of Clinical Oncology</i>. 32(29), 3307-3329.</p>	<p>To identify optimal chemo- and targeted therapy for women with human epidermal growth factor 2 (HER2)–negative (or unknown) advanced breast cancer.</p>	<p>79 studies.</p>	<p>A systematic review of randomized evidence.</p>	<p>That it is possible that there is an optimal schedule or duration of treatment that was failed to establish simply because the appropriate trials have not been done.</p>	<p><b>Answers Questions 1</b></p> <p><u>Therapeutic intervention:</u></p> <ul style="list-style-type: none"> <li>chemotherapy</li> <li>radiotherapy</li> </ul> <p><b>Answers Questions 2.</b></p> <ul style="list-style-type: none"> <li>Chemo and targeted therapies.</li> <li>Optimal treatment methods</li> </ul>

<p>Anampa, J., Makower, D., Sparano, J.A. (2015). Progress in adjuvant chemotherapy for breast cancer: an overview. <i>BMC Medicine</i>.</p>	<p>Summarization of key milestones in the evolution of adjuvant systemic therapy in general, and adjuvant chemotherapy.</p>	<p>Review of current practice.</p>	<p>Randomized studies.</p>	<p>Localized and regionally advanced breast cancer is a potentially curative disease with local therapy alone, and adjuvant systemic chemotherapy, endocrine therapy, and anti-HER2 directed therapy substantially reduce the risk of distant recurrence and breast cancer mortality.</p>	<p><b>Answers Questions 1.</b></p> <p><u>Therapeutic intervention:</u></p> <ul style="list-style-type: none"> <li>· <u>Chemotherapy</u></li> </ul> <p><b>Answers Questions 2.</b></p> <ul style="list-style-type: none"> <li>· Adjuvant chemotherapy</li> <li>· Proven results in desired effect</li> </ul>
<p>Chapman, C.H., Jagsi, R. (2015). Postmastectomy Radiotherapy after Neoadjuvant Chemotherapy: A Review of the Evidence. <i>Cancer Network Oncology Journal</i>.</p>	<p>Postmastectomy radiotherapy (PMRT) as a strategy to improve outcomes in women with breast cancer.</p>	<p>Review of current practice.</p>	<p>Multiple randomized trials.</p>	<p>There is a lack of evidence from randomized trials demonstrating the benefits of delivery or the safety of omission of PMRT in patients who receive neoadjuvant chemotherapy.</p>	<p><b>Answers Questions 1.</b></p> <p><u>Therapeutic interventions</u></p> <ul style="list-style-type: none"> <li>· Postmastectomy radiotherapy</li> <li>· Better outcomes for treatments following</li> </ul>