The Factors for Success and Lack of Success in the Breast Cancer Patient Care Pathway: A Qualitative Study From the Health Care Staff Perspective

ABSTRACT

Objective: To produce information about factors related to successful and unsuccessful breast cancer care pathways from the health care staff perspective.

Materials and Methods: An electronic qualitative survey was used to collect data simultaneously from hospitals located in four different countries, focusing on four professional groups: diagnostic radiographers; radiation therapists; breast cancer nurses; and biomedical laboratory scientists (n = 23). The hospitals participating in the study treat breast cancer patients and research permits were applied from all of them. Data was analysed by deductive thematic analysis.

Results: At the core of a successful breast cancer care pathway is the right content and timely information provided to the patient at the pace the patient is able to adopt. This is especially highlighted at the beginning of the treatment process. In regards to diagnostic services, rigorous execution of mammography, sampling techniques and analyses were seen as important. Staff also valued the importance of aftercare and follow-up, and highlighted the fact that the patient should be given a chance to keep in close contact with care and treatment staff, even after their active treatment process has finished.

Conclusion: Health care staff recognized the same success factors for optimal breast cancer care and treatment pathways as patients reported in previous studies, yet more emphasis was put on patient characteristics and the technical performance features of the process. Both patient and staff viewpoints should be taken into account in planning breast cancer care pathways.

Keywords: Breast cancer, care pathway, staff viewpoint, success factors

Cite this article as: Metsälä E, Schroderus-Salo T, Straume K, Strom B, Marmy L, Øynes M, Jorge JAP, Randle L, Kivistik S. The Factors for Success and Lack of Success in the Breast Cancer Patient Care Pathway: A Qualitative Study From the Health Care Staff Perspective. Eur J Breast Health 2022; 18(3): 222-228

Key Points

- Providing the right content and timely information to the patient at the pace the patient is able to adopt it is very important factor for breast cancer care and treatment success.
- Ensuring the availability of staff for counselling at the breast cancer care follow-up stage should be emphasised in breast clinics.
- Both patient and staff viewpoints should be taken into account in planning breast cancer care pathways.
Introduction

Care pathways are used to systematically plan and follow up patient-focused care programmes (1, 2). The aim of the care pathway is to enhance the quality of care by improving risk-adjusted patient outcomes, promoting patient safety, increasing patient satisfaction, and optimizing the use of resources (3). Metsälä et al. (4) suggested the concept of the patient-centred pathway to emphasize the importance of patient perspective in service planning (4).

Common breast cancer treatment involves surgery, chemotherapy, radiotherapy, hormonal and biological therapies. The breast cancer patient pathway from the patient perspective can be divided into three stages: diagnosis, treatment, and the follow-up stage (5, 6). Patient pathways are unique and dynamic, following the individual features of each patient’s health status, genetics, experiences, as well as the context. This requires all involved health care professionals should have knowledge about the entire care and treatment process (4, 7).

The planning and execution of breast cancer care and various treatments should be conducted by a multidisciplinary team (8). The European Society of Breast Cancer Specialists, EUSOMA (9), reminds health care organizations to pay close attention to multidisciplinary and patient-centred breast cancer pathways, ranging from the diagnostic stage to the follow-up stage (10). Cancer detection, diagnosis and care coordination comprise appropriate care that is timely and provided by an interprofessional team including professionals from many fields (11). A multi-professional mode of working results in better breast cancer treatment in terms of clinical and process outcomes in many aspects, including patient participation in decision making, as well as cancer research (12).

Hansen et al. (4) found that at the beginning of their care pathway, patients are focused on the biological goals and conventional treatment. By biological goals, Berntsen et al. (13) mean removing the cause of the disease and relieving symptoms through biological manipulation. In contrast, Waelli et al. (14) reported that breast cancer patients with chronic conditions rated non-clinical demands to be almost as important as clinical demands. They identified five types of non-clinical patient demands in the delivery of their health care services: demands related to daily life; alternative medicine; the structure of the treatment pathway; administrative and logistic assistance; and demands related to new technologies (14).

Some studies show that patients report that health care staff do not have the diversity of competencies to optimally meet patient needs (6, 15-17). There are deficiencies in empathy and communication skills, as well as in giving adequate information throughout their care pathway. Unmet needs in the patient care pathway have the potential to affect their survival and satisfaction levels (6, 15). According to Sandager et al. (16, 17), patients and their next of kin were not satisfied with the level of their involvement in treatment decisions and the amount of information received. They also reported not being informed about the persons responsible for their care. Studies have demonstrated that women with breast cancer have too little relevant information (15, 18, 19). There is a lack of psychosocial support, individualized care and choice of treatment, as well as a lack of follow-up during their treatment process (15, 18, 19). In order to improve breast cancer patients’ services and care, it is necessary to have the patient and staff viewpoints regarding the process (15, 20). This study is part of a larger project where the breast cancer patient care pathway is inspected from both of these viewpoints. In this article, the staff viewpoint is focused on.

The objective of this research was to produce information about the factors contributing to the success or lack of success in a breast cancer care pathway at the treatment phase, from the health care staff perspective. In this study, our subjects comprise staff educated at universities of applied sciences; diagnostic radiographers; radiation therapists; breast cancer nurses; and biomedical laboratory scientists. The information obtained in this study will be used in planning a web-based education platform about the topic for these groups of health care professionals. The research questions were:

1. What factors are associated with successful breast cancer care pathways at the treatment stage?
2. What factors are associated with unsuccessful breast cancer care pathways at the treatment stage?

Materials and Methods

Design, Sampling and Data Collection

The methodological approach chosen was phenomenography where the emphasis is on how people construct their views about the world. The analysis is whole group oriented since all data was analysed together with the aim of identifying possible conceptions of experience related to the phenomenon under investigation (21, 22). The data collection instrument was constructed based on the principles of critical incident methodology with the aim of identifying the factors contributing to successful and unsuccessful individual care pathways during cancer treatment and procedures, from the staff viewpoint (23).

Data was collected simultaneously at four hospitals treating breast cancer patients in four different countries, as follows: Tartu University Hospital in Estonia; Oulu University Hospital in Finland; Cantonal Hospital of Freiburg in Switzerland; and Haukeland University Hospital in Norway. The target groups included diagnostic radiographers, radiation therapists, breast cancer nurses and biomedical laboratory scientists.

The convenience sampling method was used. In Estonia and Finland, the research contact person invited to participate in the study by sending an email to relevant organizations. In Norway, the contact person at each department provided a link to the invitation on the department web page. In Switzerland, there were several contact people at the hospital, who sent the invitation to their staff by email. It included the participant information letter comprising the data privacy notice and the link to the questionnaire. Criteria for the respondents were: being able to read and write in English (except in Switzerland); having at least three years of work experience with oncology patients; and working with breast cancer patients at the time of the survey. The aim was to have two or three respondents from each professional group per country. The survey was planned to be conducted from 17.05.21 to 07.06.2021. Due to an insufficient number of responses, reminders were sent midway through September for a two-week extra data collection period. The data collection was completed on 30.09.2021. Responses were obtained from seven diagnostic radiographers, eight radiation therapists, two breast cancer nurses and six biomedical laboratory scientists, comprising a total of 23 respondents.
Data Collection Instrument

Regarding the background factors, there was only one open-ended question about the profession of the respondent. The eight open-ended questions were based on the steps of the breast cancer care pathway as described by the EUSOMA quality indicators of breast cancer care (10, 24), as well as by European research studies (5, 25). In regards to the services in the care pathway, the staff were asked what they considered to be the factors leading to successful and unsuccessful service provision. The questionnaire in English was provided in Estonia, Finland and Norway to avoid bias due to translation. In Switzerland, the questionnaire was provided in French, and translated by the project group members who also translated the responses from French to English.

Pilot Study

Before applying for a research permit, the questionnaire was piloted by seven project group members from each of the countries participating in the study who had not participated in constructing of the data collection instrument but represented each of the target group professions. The data collection instrument was revised according to the comments obtained by piloting, including the addition of a question about the respondent profession and reformulation of some sentences to make them clearer.

Statistical Analysis

Data was analysed by deductive thematic analysis, using as a theoretical frame of analysis the steps of the breast cancer care pathway which also formed the organizing themes (26, 27). Firstly, one researcher became familiar with the data to identify units of analysis, which were then formed into condensed-meaning units. Then, the features of interest in the data were coded across the dataset, collating data relevant to each code. After coding, the codes were abstracted to themes and subthemes. The first author performed the preliminary coding and thematization. The coding consistency and thematization were then checked by two more researchers. No major discrepancies were found.

Ethical Issues

Research permits were obtained from every hospital participating in the study. The need for an ethics board permit was requested from the Norwegian centre for research data as the Western Norway University of Applied Sciences (HVL) was coordinating the data collection of this study. However, the Norwegian centre for research data responded that the ethics board permit was not necessary since no medical or sensitive data was collected. A data privacy notice was provided to the subjects. The only personal data collected from the participants was their professional title. However, it would be impossible to connect the subjects to their responses. The software used for data collection was Cisco AnyConnect Secure Mobility Client governed by the Western Norway University of Applied Sciences (HVL). Only nominated persons from the project group processed and analysed the data stored in the closed cloud drive and thereby protected against third party data access.

Results

Results are presented in two subchapters: a) diagnostic services comprising laboratory and mammography services; and b) treatments and therapies comprising preparation to treatment, breast surgery and reconstruction, radiotherapy, chemotherapy, endocrine and biological therapies and counselling following the treatment.

Factors Contributing to Success or Lack of Success of Diagnostic Services in the care Pathway

In mammography, patient guidance about the procedure and the capability to perform the examination in an optimal manner were seen as the factors important for success. In addition, the ability to support the patient during the procedure was also considered important. However, the pain, anxiety or fear experienced by the patient during the procedure or the inability of staff to conduct the examination in an optimal manner contributed to a suboptimal performance of diagnostic services.

“Patient anxiety about the mammogram result and the procedure.” (Lack of success factor related to patient anxiety and fear).

Most comments obtained from health care staff were about the rigorous performance of sampling techniques and analyses.

“Carry out the analyses of patients conscientiously and following our ethics (quality control, respect of pre-analysis, respect of the deadline of results, professional conscience.” (Success factor related to rigorous execution of sampling techniques and analyses).

Reliable and quick reporting of laboratory results, a short waiting time and pleasant behaviour of laboratory staff were reported as signs of optimal breast cancer pathways by the respondents. On the other hand, the lack of these signs may indicate a suboptimal performance (Table 1).

Factors Leading to Success or Lack of Success of Treatments and Therapies in the care Pathway

Regarding the preparation prior to treatment and giving the patient enough information with the right kind of content was recognized by the respondents as a success factor in the breast cancer care pathway.

“Information about procedures and psychological support. It is important to communicate well. Secure that the information is given and received.” (Success factor related to giving the patient enough information).

Many respondents emphasized the importance of psychosocial support, continuity of care, proper facilities, planning and professional conduct. The factors contributing to the failure of the breast cancer care pathway involved mostly the absence of success factors mentioned above. In addition, the patient’s emotional state or reactions, such as denial or fear, were also mentioned in association with the negative outcome of preparation for treatment. Furthermore, the staff lacking time to meet the patient needs were seen as inhibiting the preparations for treatment (Table 2).

The factors contributing to both successful and unsuccessful surgery and reconstruction of the breast were associated with tumour location and type, as well as with the patient’s psychosocial and physical state and health.

“Some patients have had reconstructed their breast before they got irradiation. It can then be difficult to get high enough dose due to thin skin. We have to adjust the bolus, and the skin gets very sunburned.” (Lack of success factor related to tumour type and size).
Some respondents recognized that information self-acquired over the internet and unclear decision-making were factors associated with unsuccessful surgery and reconstruction. Staff competency, patient trust in health care staff and clear communication about breast surgery contribute to successful breast cancer surgery of the patient. On the other hand, comments about unsuccessful surgery were mainly related to technical failures during surgery (Table 2).

“Poorly done operation/reconstruction”.

“Failure in reconstruction technique” (Lack of success factor related to staff performance).

In radiotherapy treatment, the factors contributing to the success or failure of treatment were mainly the same as at the surgery stage, but with different weightings. Most respondents highlighted the importance of understanding all radiotherapy treatment stages by the patient, including the effects and side-effects of radiation.

“Information on the location of the radiotherapy, how it works, the risks involved (burns), the different appointments, the means of reimbursement for transport to get to the radiotherapy every day.” (Success factor related to patient understanding).

However, according to respondents, radiotherapy treatment will not proceed in an optimal manner if the patient is fearful or nervous about it or shows disagreement or signs of inability to continue through the entire treatment process or gets multiple side-effects from the treatment. The most often mentioned factor in radiotherapy treatment was the staff ability to perform optimal radiotherapy treatment, as well as staff competency in general. Furthermore, the importance of multi-professional collaboration of the radiotherapy team was emphasized. Issues contributing to suboptimal radiotherapy treatment were a lack of time, lack of timely patient information and ineffective organization of appointments (Table 2).

Respondents identified informing the patient about the treatment and its possible side-effects among the success factors for chemotherapy, and endocrine and biological therapies. However, most of them agreed that an important factor for potential failure of treatment was the patient’s fear about the side-effects of treatment or actual realization of them.

“Severe side-effects which occurs during therapies, treatment cancellations.”

“Fear of side effects of treatment.” (Lack of success factor related to fear of side-effects).

Ensuring good communication in aftercare and follow-up was seen as the most important issue. Importantly, it was recognized that the patient left alone or without any aftercare may result in the failure of the entire care pathway (Table 2).

**Discussion and Conclusion**

In mammography, the guidance and support given to the patient during the examination were emphasized, in addition to technical performance. Mammography is a somewhat inconvenient procedure and may be painful for some women (28). That is why helping the patient to feel peaceful and relaxed while tolerating optimal amounts of compression is also important for the optimal quality of a mammography image. When it comes to laboratory services, the staff focus seemed to be more on the technical details of the laboratory process than on the fluency of services, which is natural due to the importance of details in their professional knowledge.

Based on this study, it seems that health care staff recognize that the patient needs to be well-informed in a timely manner, especially at the beginning of the care and treatment pathway. The recognition of patient needs may also be due to the adoption of evidence-based practice where reading research studies is essential.
Table 2. Factors for the success and lack of success of treatments in the breast cancer care pathway

<table>
<thead>
<tr>
<th>Preparation prior to treatment, e.g., information about procedures and psychological support, genetic counselling and preserving fertility</th>
<th>Successful</th>
<th>Unsuccessful</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Enough information with right kind of content (11 comments)</td>
<td></td>
<td>• Too little, unclear or wrong time given information to the patient and her care givers (7 comments)</td>
</tr>
<tr>
<td>• Psychosocial support available for the patient (8 comments)</td>
<td></td>
<td>• Lack of psychosocial support (4 comments)</td>
</tr>
<tr>
<td>• Other: ensuring continuity of care, proper facilities and planning, professional conduct of staff (4 comments)</td>
<td></td>
<td>• Emotional state of the patient (3 comments)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Staff not having enough time for the patient (2 comments)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Surgery and reconstruction of the breast</th>
<th>Successful</th>
<th>Unsuccessful</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Favourable type or location of the cancer or operation type (2 comments)</td>
<td></td>
<td>• Unfavourable type or location of the cancer or operation type (2 comments)</td>
</tr>
<tr>
<td>• Good physical and psychosocial state of the patient (2 comments)</td>
<td></td>
<td>• Impaired psychosocial state of the patient, fear (3 comments)</td>
</tr>
<tr>
<td>• Competency of staff performing surgery (3 comments)</td>
<td></td>
<td>• Self-acquired information from the internet and unclear decision making (2 comments)</td>
</tr>
<tr>
<td>• Trust on health care professionals (2 comments)</td>
<td></td>
<td>• Some failure in performing surgery (4 comments)</td>
</tr>
<tr>
<td>• Clear information given to the patient of different aspects of surgery (4 comments)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Radiotherapy</th>
<th>Successful</th>
<th>Unsuccessful</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Patient understanding all the stages of radiotherapy treatment including effects of radiation and its side-effects (8 comments)</td>
<td></td>
<td>• Fear or nervousness of the patient (4 comments)</td>
</tr>
<tr>
<td>• Other patient related factors: lack or fear, early-stage cancer (3 comments)</td>
<td></td>
<td>• Disagreement or problems in continuing through the whole treatment period (3 comments)</td>
</tr>
<tr>
<td>• Being able to execute optimal RT techniques (5 comments)</td>
<td></td>
<td>• Side-effects of the RT treatment (2 comments)</td>
</tr>
<tr>
<td>• Competent radiotherapy professionals (3 comments)</td>
<td></td>
<td>• Other patient related factors: patient smoking, patient having metastases (2 comments)</td>
</tr>
<tr>
<td>• Multiprofessional co-operation of the RT team (3 comments)</td>
<td></td>
<td>• Lack of time for the patient - too little staff (4 comments)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Lack of timely information and support (3 comments)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Problems in organising or keeping appointment time (3 comments)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Other staff related factors: suboptimal co-operation of RT-team, suboptimal fixation of the patient (2 comments).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemotherapy, endocrine and biological therapies</th>
<th>Successful</th>
<th>Unsuccessful</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Staff is able to clearly inform about the treatment and its side-effects to the patient (5 comments)</td>
<td></td>
<td>• Fear of side-effects and side-effects as such (7 comments)</td>
</tr>
<tr>
<td>• Good response to the treatment (2 comments)</td>
<td></td>
<td>• Lack of information and communication (2 comments)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Aftercare and counselling following treatments</th>
<th>Successful</th>
<th>Unsuccessful</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Ensuring good communication with the patient at the follow up stage (7 comments)</td>
<td></td>
<td>• No follow-up, patient being left alone (5 comments)</td>
</tr>
<tr>
<td>• Different ways of ensuring aftercare and follow up (3 comments)</td>
<td></td>
<td>• Lack of information or communication (3 comments)</td>
</tr>
<tr>
<td>• Being attentive and empathetic towards the patients (2 comments)</td>
<td></td>
<td>• Other: fear, denial, patient returning to special care, not optimal recovery from the treatments (3 comments)</td>
</tr>
<tr>
<td>• Ensuring that the patient and her care givers understand the meaning and are involved in the follow up (2 comments)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Committee Approval:

The need for an ethical board permit was requested from the Norwegian centre for research data as the Western Norway University of Applied Sciences (HVL) was coordinating the data collection of the study. Informed consents of the participants were obtained.

The authors would like to acknowledge health care staff organising the data collection in their clinics, members that shared their viewpoints for the research as well hospitals taking part the data collection in Tartu University Hospital in Estonia, Oulu University Hospital in Finland, Cantonal Hospital of Freiburg in Switzerland and Haukeland University Hospital in Norway. Authors thank EBreast11 project group for supporting the study, especially Floro Cubelo for linguistic comments.

Ethics Committee Approval: The need for an ethical board permit was requested from the Norwegian centre for research data as the Western Norway University of Applied Sciences (HVL) was coordinating the data collection of this study. However, the Norwegian centre for research data responded that the ethical board permit was not necessary since no medical or sensitive data was collected.

Informed Consent: Informed consents of the participants were obtained.

Peer-review: Externally peer-reviewed.
Eur J Breast Health 2022; 18(3): 222-228

Authorship Contributions

Conflict of Interest: No conflict of interest was declared by the authors.

Financial Disclosure: This study was supported by European Commission Erasmus + Strategic partnership programme grant number 2020-1-EE01-KA203-077941.

References
6. Cherif E, Martin-Verdier E, Rochette C. Investigating the healthcare pathway through patients’ experience and profiles: implications for breast cancer healthcare providers. BMC Health Serv Res 2020; 20: 735. (PMID: 32781993). [Crossref]
8. Harbeck N, Grant M. Breast cancer. Lancet 2017; 389: 1134-1150. (PMID: 27865536) [Crossref]
11. Waish J, Harrison JD, Young JM, Butow PN, Solomon MJ, Masya KA203-077941. (PMID: 31084760) [Crossref]
12. Prades J, Remue E, van Hoof E, Borras JM. Is it worth reorganising cancer services on the basis of multidisciplinary teams (MDTs)? A systematic review of the objectives and organisation of MDTs and their impact on patient outcomes. Health Policy 2015; 119: 464-474. (PMID: 25271171) [Crossref]
15. Zayyner IA, Lomborg K, Christiansen PM, Kirkegaard P. Surgical breast cancer patient pathway: Experiences of patients and relatives and their unmet needs. Health Expect 2019; 22: 262–272. (PMID: 30636366) [Crossref]
17. Sandager M, Freil M, Knudsen JL. Please tick the appropriate box: Perspectives on patient reported experience. Patient Exp J 2016; 3: 63-79. [Crossref]
21. Yates C, Pattridge H, Bruce C. Exploring information experiences through phenomenography. Library and Information Research 2012; 36: 96–119. [Crossref]
23. Viergever R. The Critical Incident Technique: Method or Methodology? Cognition, Technology & Work 2015; 17: 35-44. [Crossref]