

BMJ Open Perspectives on the treatment of sequelae after cancer: protocol of an interview study of primary care physiotherapists

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ABSTRACT

Introduction An increasing number of patients are living with fatigue, pain and other sequelae after cancer. About 30% of these patients express a need for physical rehabilitation and patients prefer to be involved in medical decision-making. This includes being offered individualised treatment with patient-defined goals and education during all aspects of treatment by physiotherapists with empathic skills. However, physiotherapists are often unaware of the relationship between cancer and its presenting symptoms. This can lead to inappropriate care and unrealistic goalsetting for rehabilitation. This calls for greater attention towards physiotherapist's treatment and their current perspectives on how treatment can be improved in physiotherapy clinics. The aim of this study is to explore physiotherapists perspectives on barriers, facilitators and potential solutions to improve the care of sequelae after cancer in physiotherapy clinics.

Methods and analysis This is a qualitative interview study using individual semistructured interviews with physiotherapists using a phenomenological approach to explore their lifeworld at work. We will recruit physiotherapists working in private clinics based on a variation in gender and years of working experience in private clinics. We will conduct between 10 and 16 interviews online via Microsoft Teams and thematically analyse data supported by NVivo software. Interviewing is scheduled to take place from April 2022.

Ethics and dissemination This is a non-intervention and qualitative study, and the local Ethics Committee in the North Denmark Region has stated that their approval is not needed. Informants will provide a written informed consent. Study information will be sent to the informant at least 3 days prior to the interview session and information will be summarised by the interviewer before the interview.

Aside from publication, results will be disseminated by two teaching institutions, a regional health care provider and DEFACTUM (a public Danish research institution focusing on increasing social equality in health).

INTRODUCTION

The number of people surviving cancer is increasing because of advances in early

Strengths and limitations of this study

- The interviewing is planned to take place online and this is a strength due to easing the availability for participation and thereby supporting a variation among participants.
- Online interviewing limits the building of trust and openness which might be more easily achieved during face-to-face interviewing.
- Transferring of results from this study requires careful thought about the similarity of contexts.

detection and treatment.¹ Among the people who survive cancer, 86% experience sequelae after cancer.² Sequelae are defined as problems arising due to the cancer or as side effects to the cancer treatment.³ Fatigue and pain are commonly reported, and other symptoms include tight surgical scars, lymphoedema, reduced functional capability, sexual dysfunction, depressive symptoms and anxiety.⁴

About 30% of patients with sequelae after cancer express a need for physical rehabilitation.⁵ In the literature, most physiotherapy-led interventions include exercise alone or as part of a combined treatment for the patient,⁶ and various types of exercise like yoga, aerobic training and resistance training can be effective in reducing the severity of the sequelae.⁷ Symptoms often present in a cluster with a combination of physical, psychological and social sequelae.^{8,9}

Patients with sequelae after cancer expect to be involved in medical decisions.¹⁰ In physiotherapy practices, this involvement includes an individualised treatment approach, working with patient-defined goals and offering education during all aspects of treatment by physiotherapists with empathic skills.¹¹ However, physiotherapists are often not aware of the relationship between cancer

and the presenting symptoms, and this can lead to an overestimation in goalsetting of the rehabilitation.¹² Regular physical activity reduces the sequelae and physical activity is associated with a decrease in mortality in patients with breast cancer.¹³ However, many patients do not believe that exercise improves their condition.¹⁴

Consequently, the care of sequelae provided by primary care physiotherapists has the potential to be significantly improved by increased attention to the presence of sequelae after cancer, the choice of treatment and goalsetting. This is an issue that the authors have discussed with a panel of patients with sequelae after cancer and a group of general practitioners in a workshop in Denmark.¹⁵ General practitioners suggested more educational material for patients and education of both general practitioners and primary care physiotherapists in identifying and treating sequelae. The workshop highlighted the need for enhanced qualification of the treatment of sequelae after cancer either during the medical education or implemented in the mandatory specialisation to become a general practitioner or introduced as a supplementary course following specialisation as general practitioner.¹⁵ However, we do not know physiotherapists' perspectives on barriers, facilitators and potential solutions to improve their primary care treatment of sequelae after cancer.

The aim of this study is therefore to explore physiotherapists' perspectives on barriers, facilitators and potential solutions to improve the care of sequelae after cancer in physiotherapy clinics.

METHODS AND ANALYSIS

This study will be conducted as a qualitative survey with one-on-one interviews with physiotherapists following a semistructured interview guide. The development of this study protocol and the future reporting of the findings is informed by the consolidated criteria for reporting qualitative research (COREQ) checklist.¹⁶

Theoretical framework

To gain an insight into the subjective experiences and perceptions of the physiotherapists' treatment of sequelae after cancer, this study will use a phenomenological approach to data collection and thematic analysis, thereby allowing the phenomena to present themselves to the researchers while putting the researchers' preconceptions aside.¹⁷ Consequently, since the phenomenological approach requires a bracketing of the researchers' preunderstandings, AKST, LHH and AR will state their preunderstandings of the field and expectations to the findings in the interviews.¹⁸ This allows for later validation of the findings and transparency of reporting. This preunderstanding will be combined in a document and shared among the authors before the first interview (pilot interviewing not included). After finalising the analysis, we will revisit our preunderstanding and include this in the discussion section for the reporting on the findings.

Patient and public involvement

In 2020, a panel of four patients with sequelae after cancer was established. The panel has provided the authors with insight into their perspectives and perceived treatment in physiotherapists' clinics. Furthermore, the conceptualisation of the overall project was discussed with them and they have pointed to a need for improving information given to patients but also a need for increasing physiotherapists' knowledge about sequelae after cancer. The interview guide will be sent to the patient panel for feedback. The patient panel is not involved in recruitment to the study. Findings are presented to the National Patient Association for sequelae after cancer.¹⁹

Interviewer and research team

All interviews will be conducted by AKST. AKST is a female physiotherapist and Master of Science. AKST is currently a senior lecturer at the Department of Physiotherapy. AKST is experienced in interviewing and has previous experience from leading qualitative research. She has received extensive training in interview techniques such as open-ended questions, active listening and probing as part of her work as a physiotherapist and master's degree in Health Science. AKST will be supervised by LHH, MK and AR. Being a physiotherapist, AKST has knowledge about physiotherapy practice and, thereby, place her close to the field but she will have no prior knowledge of the informants.

Interview guide

The interview guide is developed from discussions among the research team, and the questions are informed by themes occurring from informal discussions with patients with sequelae after cancer, carried out by MK prior to the initiation of this study (online supplemental additional file 1). The interview guide will be further validated by feedback from the patient panel, two pilot interviews with physiotherapists, who have a special interest in treating cancer patients, giving them the opportunity to pinpoint relevant topics for further questioning. Finally, the interview guide will be pilot tested on MK, and any need for changes arising from feedback and pilot testing will be made before the interviews are to be carried out. However, we will also allow for adaptations of the guide following the research interviews.

The interview guide will include open-ended questions that allow the participants to elaborate using examples from their clinical routines. Questions involving possible conflicts are saved for the last part of the interview.

Data collection

Interviewing is planned to take place between primo April and primo September 2022. During the interviews, the interviewer will continuously summarise the participants' accounts to ensure correct understanding and interpretation. All interviews will be audio-recorded and transcribed by LHH using the InqScribe (Inquirium LLC, <https://www.inqscribe.com/>) digital media transcription

software. A predefined transcription key will be used in the process, thus enabling the standardisation of transcription across the interviews. In the case of indistinguishable audio, another member of the research group will listen to the recording. If clarification of what was recorded is not possible, that specific part will not be transcribed or otherwise included in the analysis.

The transcriptions will be verified by AR, by listening to the audio recordings while reading the transcription of the spoken words and checking the quotes. Transcriptions or quotes will not be sent to the informants to be verified, as the interviewer will make a point of vocalising her understanding of the emerging themes during the interview, to verify whether the informant agrees with her understanding. Data will be pseudonymised. An identification key will be stored on a secured server. We will not make field notes.

Setting of data collection

Due to the COVID-19 situation, online interviews will be conducted using the Microsoft Teams online platform. To support and maintain the physiotherapists' role as health-care professionals in their natural working environment, interviews will be conducted in the physiotherapy clinics and preferably in their consultation rooms. During the interview, the informant will be encouraged to participate alone without patients or colleagues present. Likewise, the interviewer will be alone during the interview.

Participants

Physiotherapists working in Denmark in a private clinic will be eligible to participate. Eligible physiotherapists will be identified by AR and MK. The physiotherapists are to be selected using a purposive sampling technique²⁰ aiming for maximum variation in gender and years in clinical practice (in private physiotherapy clinics).

Inclusion criteria

We will include Danish speaking physiotherapists, working in private clinics in Denmark.

Exclusion criteria

We will exclude participants working in a clinic which already had provided one informant. Furthermore, to support a practice-oriented approach, physiotherapists who are not working at least one full day in clinical practice will be excluded from the sample.

Sampling

Based on a narrow research question, the expected similarity in practice organisation and the interviewers' experience with interview techniques, we are aiming for a sample size ($n=10-16$) until data saturation is reached.²¹ This saturation will be assessed during the data analysis, where new subjects and themes occurring at the end of the analysis will lead to the inclusion of new informants. Further interviews will be carried out, until data are considered to be sufficiently saturated. First, we conduct 10 interviews. If data saturation is not reached, additional

Table 1 Text analysis

Step	Primary action	Purpose
1	Listening to the recordings and reading the transcriptions	Becoming familiar with the data
2	Organising the data in meaning units	Creating initial codes
3	Organising the initial codes	Creating potential themes
4	Going through the coding for each potential theme	Ensuring a coherent pattern in the thematic placement of the codes
5	Identifying the essence of each theme	Themes are given their final labels/names
6	Statements are used to build up the argument for answering the research question	Writing the text and choosing quotes to support the text

The analysis is conducted in six steps according to Braun.²²

interviews in rounds of two will be conducted until saturation is reached.

Method of approach

Possible participants will be identified in national networks of physiotherapists working in private clinics and invited via LinkedIn and other social media. Where they will be invited to contact MK by e-mail or telephone. MK and AR will conduct the final identification of the sample to obtain maximum variation. MK will then send contact information to AKST, who will contact the participants, provide further study information and schedule an hour for the interview. Participants will not be paid or otherwise compensated for their participation. Participants will be aware of the overall purpose of the project but will not have personal knowledge of AKST.

Informed consent

Before participation in the interview, the informant will provide their written informed consent. Study information will be sent to the informant at least 3 days prior to the interview session.

Data analysis

The data will be analysed following a thematic text analysis as described by Braun and Clarke, as this strategy facilitates clear and systematic reflections on underlying themes occurring in the informants' statements.²² The thematic text analysis contains six phases (table 1).

In the initial phase, AKST will familiarise herself with the data by listening to the audio recordings and reading through the transcriptions of the interviews. The aim is to ensure an in-depth familiarity with the data prior to the analytical work. Therefore, the first phase will be concluded when the researcher can briefly summarise the apparent essence of each interview.²² In the second phase,

AKST and LHH will create initial codes and thereby organise the data into meaningful units. This organisation will be carried out using the quantitative coding programme NVivo (QSR International 2021, <https://www.qsrinternational.com/nvivo-qualitative-data-analysis-software/home>), and because of the phenomenological approach, the creation of initial codes will be done in an inductive manner. The inductive coding will focus on the themes appearing from the data and thereby ensure an open and reflexive approach enabling the phenomena to speak for themselves.

The third phase will consist of organising the initial codes in potential themes. Here, the researcher will consider which codes are fitting as possible overarching themes, and which codes constitute subthemes.²¹ The fourth phase will involve going through the coding for each theme to ensure a coherent pattern in the thematic placement of the codes. If the coded statements do not form a coherent pattern in the theme they are currently placed under, the deviating statements will be moved to other themes or the name of the theme will be changed. Furthermore, the depth and width of the coded themes will be discussed to consider whether some themes are considerable larger than others. If so, a possible division into smaller themes will be carried out to clarify what statement they represent.

In the fifth phase, the essence of each theme will be identified, with a focus on how each theme addresses the physiotherapists' perspectives on barriers, facilitators and potential solutions to improve primary care treatment of sequelae after cancer.²¹ Furthermore, the themes will be given their final label/names on the basis of their identified essence. In the sixth and final phase, the written analysis will be composed to enable the informants' statements to be used to build the argument for answering the research question. Quotes will be included to support essential perspectives. Data will be coded and analysed by the interviewer (AKST) with supervision from LHH and AR.

ETHICS AND DISSEMINATION

This is a non-intervention qualitative study and the local Ethics Committee in the North Denmark Region has stated that their approval is not needed (29 March 2021). Informants will provide written informed consent.

This study is conducted as part of a larger research project about developing interventions to improve the primary care treatment of sequelae after cancer in Denmark. The wider research project is conducted in collaboration between the Department of Physiotherapy at University College in Northern Denmark, The Research Unit for General Practice at the Department of Clinical Medicine in Aalborg, the Quality Unit for General Practice in the North Denmark Region and DEFACTUM (a public research institution in Denmark, focusing on increasing social equality in health). Thereby, we will be including practice, healthcare providers and

educational institutions for medical students and physiotherapy students in the project. This is believed to ensure the future implementation of findings from the project. Furthermore, the results will be disseminated via national and international conferences and will be published in a peer-reviewed international journal.

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Contributors The concept of this study was conceived by AKST, LHH, MS, CMS, JLT, MK and AR. LHH drafted the first version with supervision from AR. All authors commented during rounds of reviews. AKST wrote the last version. All authors read and approved the final version of the manuscript.

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Competing interests None declared.

Patient and public involvement Patients and/or the public were involved in the design, or conduct, or reporting or dissemination plans of this research. Refer to the Methods section for further details.

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Additional file 1. Interview guide

Theme	Questions and information
Introduction	<p>Hi, my name is [name of interviewer], and I am part of a research group that examines physiotherapists' treatment of late effects after cancer.</p> <p>First of all, I want to thank you for allowing us to talk to you about your experiences.</p>
Informed Consent	<p>Before we get started, I need to let you know that I record our conversation. However, only my colleagues and I within the research group will hear the recordings, and in our analysis of the interview, you will be anonymised.</p> <p>This information is also apparent from the information I have sent to you before today's sitting, but now I repeat it to make sure you agree to these terms.</p>
Background questions regarding the physiotherapist	<p>First, I would like to ask you, how long have you been practising physiotherapy?</p> <p>How many patients do you assess weekly?</p> <p>How long have you been assessing patients suffering from long-term consequences of cancer treatment?</p>
Patients characteristics	<p>How large a proportion of patients has long-term effects after cancer treatment out of your total number of patients?</p> <p>- Just an estimate from the top of your head?</p> <p>What symptoms or disorders are they treated for?</p> <p>- Such as pain, scar tissue, restricted movement or the like?</p>
Assessment of long-term effects	<p>How do the patients usually find you and your skills as a physiotherapist?</p> <ul style="list-style-type: none"> - Referrals? Recommendation? Other things? <p>Do you feel competent in the treatment of long-term effects after cancer?</p> <ul style="list-style-type: none"> - If so, what has helped you build this competence? - If not, what do you feel you are missing? <ul style="list-style-type: none"> o What information or knowledge could help you offer the best possible treatment to your patients? <p>What are your thoughts on treating long-term effects of cancer being included as part of physiotherapists' basic training?</p> <ul style="list-style-type: none"> - Would it be preferable if it were a course you attend yourself after graduation? <ul style="list-style-type: none"> o Why / why not?

	<p>What are your thoughts and experiences with others in the primary sector regarding treatment op long-term effects of cancer?</p> <ul style="list-style-type: none"> - What other parties do you work with? - Which parties would you wish you had a closer collaboration with? <p>What would it look like if you could design the best possible collaboration in the primary sector in terms of long-term treatment?</p>
Overall barriers	<p>What are the most prominent barriers/issues regarding assessment/treatment of long-term consequences of cancer in your experience?</p> <ul style="list-style-type: none"> - How do these problems/barriers manifest? <p>What could be done to remedy these problems/barriers?</p>
Verification of issues pointed out by patients	<p>Previous interviews with several patients who have undergone physiotherapeutic treatment after cancer has pointed out some late treatment problems. I would therefore like to inquire into a few things and draw on your experiences concerning the issues.</p> <p>The patients express that they must be very outreach in the course of treatment and that it can be challenging to find relevant physiotherapists.</p> <ul style="list-style-type: none"> - What are your taughts on this matter? <ul style="list-style-type: none"> o How do you think it would be best to remedy this problem? - What do you thiskis is like to cooperate with othersin the primary secktor regarding long-term effects of cancer? <ul style="list-style-type: none"> o What other partners do you work with? o What would it look like if you could design the best possible collaboration (/course) in the primary sector in terms of long-term treatment? <p>Several patients were surprised that cancer's long-term effects are not taught in the physiotherapist primary education, even though many Danes undergo a cancer course in their lifetime.</p> <ul style="list-style-type: none"> - Would it be relevant, from your perspective, to incorporate treatment of long-term effects of cancer as part of the primary education, or should it be a course you must seek out yourself after completing your education? <ul style="list-style-type: none"> o What ought to be taught? o What knowledge and abilities do you lack as a newly trained physiotherapist to assess cancer's long-term effects?
Closing	
Rounding/validation of findings	<p>To summarise our conversation/this interview, I have heard you say that..... represent a potential for a change in your objective.</p> <ul style="list-style-type: none"> - Is that correctly understood? - Is there anything you would like to add? - <i>Then I would like to end our conversation by saying thank you for your participation in the interview.</i>

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