






Experience of internet-delivered cognitive behavioural therapy among patients with non-cardiac chest pain

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Funding information

Kamprad Family Foundation, Grant/Award Number: ISV-2018-00033; Region Östergötland, Grant/Award Number: RÖ-938360

Abstract

Aims and Objective: To explore the experiences of patients with non-cardiac chest pain and cardiac anxiety regarding participation in an internet-delivered cognitive behavioural therapy program.

Background: Non-cardiac chest pain is common and leads to cardiac anxiety. Internet-delivered cognitive behavioural therapy may be a possible option to decrease cardiac anxiety in these patients. We have recently evaluated the effect of an internet-delivered cognitive behavioural therapy program on cardiac anxiety.

Design: An inductive qualitative study using content analysis and the COREQ checklist.

Methods: Semi-structured interviews with 16 Swedish patients, who had participated in the internet-delivered cognitive behavioural therapy program.

Results: Three categories were found. The first, 'Driving factors for participation in the internet-delivered cognitive behavioural therapy program' described the impact of pain on their lives and struggle that led them to participating in the program. The second, 'The program as a catalyst' described that the program was helpful, trustworthy and useful and the last category, 'Learning to live with chest pain' described the program as a tool for gaining the strength and skills to live a normal life despite chest pain.

Conclusions: The program was experienced as an opportunity to return to a normal life. The program was perceived as helpful, trustworthy and useful, which helped the participants challenge their fear of chest pain and death, and gain strength and new insights into their ability to live a normal life.

Relevance to Clinical Practice: A tailored internet-delivered cognitive behavioural therapy program delivered by a nurse therapist with clinical experience of the patient group is important to improve cardiac anxiety.

Patient or Public Contribution: Patients or the general public were not involved in the design, analysis or interpretation of the data of this study, but two patients with experience of non-cardiac chest pain were involved in the development of the pilot study.

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Trial Registration: [ClinicalTrials.gov](https://clinicaltrials.gov) NCT03336112; <https://www.clinicaltrials.gov/ct2/show/NCT03336112>.

KEYWORDS

cognitive behavioural therapy, internet-based interventions, non-cardiac chest pain, patient experience, psychological distress

1 | INTRODUCTION

Since recurrent non-cardiac chest pain (NCCP) is common and leads to functional limitations and cardiac anxiety that can affect patients' lives, a psychological treatment, such as internet-delivered cognitive behavioural therapy (iCBT), may be an effective option for NCCP patients. These patients seek health care to the same extent as patients with cardiac diseases, which creates a burden on the health care system. However, a problem is that many patients with NCCP are discharged with no further explanation regarding the chest pain or their psychological distress. In Sweden, patients experiencing chest pain can seek emergency care without referral from primary care and mostly meet nurses in the first place, sometimes as the only caregiver at this visit (Mourad et al., 2012; Mourad et al., 2013) therefore, interventions that can be used by nurses to reduce psychological distress in patients with NCCP, are warranted. We have recently evaluated a five-week nurse-led iCBT program with the primary aim to decrease cardiac anxiety in patients with NCCP compared with psychoeducation only (Mourad et al., 2022). At the three-month follow-up, cardiac anxiety had decreased more in favour of the iCBT group, although not significant. Though the iCBT was not superior to psychoeducation in decreasing cardiac anxiety, it is important to explore patients' experiences of participating in such nurse-led iCBT programs. Therefore, the aim of this study was to explore the experiences of patients with NCCP and cardiac anxiety regarding their participation in the nurse-led iCBT program. The knowledge from this study can be of importance when designing and evaluating new internet-delivered nurse-led interventions.

1.1 | Background

About 2%–5% of all patients presenting to the emergency department are diagnosed with non-cardiac chest pain (Eslick et al., 2002; Mol et al., 2018; Mourad et al., 2013; Wertli et al., 2019). The main reasons for experiencing NCCP are various (Eslick, 2008; Ruigomez et al., 2009), but many patients are discharged with no further explanation regarding the cause of their chest pain (Bass & Mayou, 2002; Jonsbu et al., 2011). Persistent chest pain, functional limitations and psychological distress such as cardiac anxiety, expressed as the fear of cardiac-related stimuli and sensations (Eifert et al., 2000) are reported by the majority of patients with NCCP, even several years after the initial assessment (Tew et al., 1995; Tremblay et al., 2018), leading to patients avoiding activities, for example physical or social activities, that they consider harmful to their heart (Leise et al., 2010;

What does this paper contribute to the wider global community?

- This study provides new insights into patients' experiences of participation in the iCBT program, which may provide suggestions for improvements that may be helpful in designing new similar nurse-led interventions.
- iCBT programs delivered to patients with chronic somatic disease, such as non-cardiac chest pain, should be tailored to participants' somatic and psychological problems, in order to facilitate for patients to recognise themselves in the treatment program and thus increase adherence.
- Improvement of psychological distress in patients with somatic problems is probably easier to achieve if the therapist, such as nurses, has clinical experience of the patient group.

Tremblay et al., 2018). This has also negative impact on their health-related quality of life (Mourad et al., 2013; Mourad et al., 2016; Mourad et al., 2020; Webster et al., 2012), as well as healthcare use and results in high societal costs (Mourad et al., 2012; Mourad et al., 2013). Cardiac anxiety in particular has been shown to increase healthcare use (Mourad et al., 2016), suggesting that cardiac anxiety worsens the chest pain and creates a 'vicious circle', leading to maintenance of both anxiety and NCCP. Therefore, these patients need help and support to reduce their cardiac anxiety and learn how to cope their NCCP (Hofmann et al., 2012; Hoifodt et al., 2011).

Cognitive behavioural therapy (CBT) is an umbrella term that includes therapeutic interventions such as psychoeducation, mindfulness and exposure, that are selected to fit the treatment of different psychological problems, such as cardiac anxiety. CBT is a structured and collaborative process aiming to help patients evaluate the accuracy and usefulness of their thoughts, and to shift their cognitive appraisals from unhealthy and maladaptive to evidence-based and adaptive (Beck & Dozois, 2011; McMain et al., 2015). CBT is reported to be an effective psychological treatment option for NCCP (Chambers et al., 2015) since it can help patients increase their knowledge about chest pain, cope with cardiac anxiety provoking situations by exposing them to these, change their negative thoughts about physical symptoms, reduce cardiac anxiety and manage their chest pain (Campbell et al., 2017; Jonsbu et al., 2011; Kisely et al., 2012).

Although CBT has been shown to be effective, the treatment is costly, and a lack of therapists makes it difficult to access (Johansson & Andersson, 2012). These barriers can be overcome using internet-delivered CBT (iCBT) treatment, which is equally as effective as face-to-face treatment, requires less therapist involvement, can be delivered to more patients, is cheaper and not time or room dependent (Johansson & Andersson, 2012). iCBT has been effective in decreasing anxiety and depression in general population and in patients with cardiovascular disease (CVD) (Dear et al., 2015; Johansson et al., 2019; Johansson & Andersson, 2012; Ruwaard et al., 2009). Westas et al. (2022) found that patients with CVD and depression experienced iCBT as helpful to learn about and take control of their disease and achieve changes in emotions, thoughts and behaviours. However, working in the program was by the patients perceived as demanding and emotionally difficult, but necessary to achieve these changes. These findings were also described by depressed heart failure patients receiving iCBT in Lundgren et al. (2018). To cope with challenges and demands related to iCBT and to achieve positive outcome, patients' personal drive, motivation and values are important aspects for engagement in digital health interventions (Neher et al., 2019).

2 | METHODS

2.1 | Design

A qualitative interview study with an inductive approach using content analysis developed by Patton (2015) was used to explore patients' experiences of participation in the iCBT program. COREQ (Consolidated criteria for reporting qualitative research [File S1]) (Tong et al., 2007) was used for reporting of this study. The study was conducted according to the Helsinki Declaration and was approved by the Regional Ethical Review Board in Linköping, Sweden (codes 2017/343-31). All participants signed a written informed consent prior to participation in the main study (Mourad et al., 2022).

2.2 | The iCBT program

Participants in the current qualitative study were consecutively recruited from the intervention arm of an RCT study that was conducted in Sweden, that evaluated the effect of an iCBT program on cardiac anxiety in patients with NCCP compared with psychoeducation only. In the RCT, 109 patients were randomised into iCBT ($n = 54$) or psychoeducation ($n = 55$). Of these 48 (89%) in the iCBT group and 52 (95%) in the psychoeducation group completed the 5-week program. The iCBT program was guided by a nurse therapist (Mourad et al., 2022). To be included in the RCT study patients had to be ≥ 18 years, had at least two health care consultations because of NCCP during the past 6 months, and experienced from cardiac anxiety (score ≥ 24 on the Cardiac Anxiety Questionnaire). Patients were excluded if they had no access to a computer or tablet with internet connection, not able to perform physical activity, not able to read or understand Swedish, or had severe depression (measured

by the Patient Health Questionnaire-9), cognitive impairment or cancer requiring treatment (according to medical records).

The iCBT program has been described elsewhere (Mourad et al., 2022). In brief, the program comprised five one-week sessions and included psychoeducation about chest pain, avoidance of situations experienced as threatening, such as physical activities, and safety behaviours, mindfulness and exposure to physical activity with weekly homework assignments. Some of the content was recurrent in order to achieve behavioural change. Psychoeducation aimed to teach participants about chest pain and its impact on everyday life. Mindfulness provided by text and audio files included different exercises using breathing and body awareness techniques to practice on daily basis, from the second week and throughout the program. This was aimed to increase awareness of body, emotions and sensations and to be in the present despite chest pain (Hilton et al., 2017). The physical activity was based on national guidelines and aimed to teach participants that their heart tolerates physical activity. Participants had various weekly assignments to accomplish and send in for weekly feedback from the same nurse therapist. Access to new treatment sessions was provided every week with retained access to previous sessions.

The psychoeducation group only received the same psychoeducation as the intervention group, but without any assignments or feedback.

2.3 | Participants and recruitment to the interview study

After completing the iCBT program, participants were invited to be interviewed regarding their experiences of participation in the program, regardless of number of sessions performed. Those who agreed to participate were interviewed within three months after they completed the program. The characteristics of participants are displayed in Table 1. The initial plan was to ask all participants in the iCBT group to be interviewed. However, due to the COVID-19 pandemic, data collection stopped since the interviews could not be performed as they were face-to-face. In total, 33 of 54 patients were invited and 16, in ages 33–77 years, agreed to participate in this study. According to Malterud et al. (2016), our sample size can be seen as sufficient to achieve information power. This because our aim is specifically related to participation in the iCBT program and that one-third of the total population was interviewed. Moreover, other aspects related to information power discussed by Malterud et al. (2016) were the use of an established qualitative analysis, the quality of dialogue and analysis strategy. In our study, we achieve this by using content analysis by Patton (2015), had rich data (interview mean duration of 47 minutes) and used an analysis strategy, in which all authors participated and mutually discussed and developed a coding scheme.

2.4 | Data collection

Data were collected through individual face-to-face interviews using a semi-structured interview guide. The participants were given

TABLE 1 Participant characteristics

| Characteristics | Frequency (n = 16) | % |
|---|-----------------------|------|
| Male | 8 | 50 |
| Female | 8 | 50 |
| Age, years (mean \pm SD) | 57 \pm 17 | |
| Marital status | | |
| Married/in relationship | 14 | 88 |
| Educational level | | |
| Compulsory school | 2 | 12.5 |
| High school | 8 | 50 |
| University | 6 | 37.5 |
| Occupational status | | |
| Working | 9 | 56.3 |
| Retired | 5 | 31.3 |
| On sick-leave | 1 | 6.3 |
| Unemployed | 1 | 6.3 |
| Interview duration, mins (mean \pm SD) | 47 \pm 20 | |
| Number of sessions performed (mean \pm SD) | 4.4 \pm 1.1 | |

the opportunity to choose the time and place for the interview. Interviews were conducted at the participants' homes, offices or the interviewers' workplace, based on patients' preferences. Only the interviewers and participants were present during the interviews. To address the aim of the study, the following questions including probes and clarifying questions were asked: 'Why did you choose to participate in this study?', 'Can you tell us about your experience of receiving care online?', 'How did you experience the content and structure of the program?' and 'Can you tell us how you experienced the contact with your therapist?'. A pilot interview was conducted and included in the analysis as it did not require any further changes. No repeated interviews were carried out.

The interviews lasted 20–86 min and were conducted by one female: PhD-student, MEL (5 interviews) and two males: PhD, JL (5 interviews) and PhD, PR (6 interviews). All interviewers had previous experience of qualitative interviewing. MEL is a specialist nurse in emergency care, and JL and PR are specialist psychiatric nurses. None of the interviewers were involved in the iCBT treatment and thus had no relationship with the participants. Participants were informed verbally about the interviewers when scheduling the interview. The interviews were audio recorded and transcribed verbatim, the latter by MEL. No field notes were made during and/or after interviews, and no additional comments were requested from participants after the interviews.

2.5 | Data analysis

The analysis was performed according to Patton's (Patton, 2015) content analysis of qualitative data and focused on looking for regularities in the data and searching for patterns to sort into categories.

The software NVivo was used to manage the data. Initially, all recordings were listened to by MEL in order to ensure that they corresponded to the transcripts. The transcripts were then read repeatedly to familiarise with the content. To increase the trustworthiness of the study, three interviews were selected, read and coded individually by all authors. Thereafter, all authors mutually discussed their findings and developed a coding scheme. The remaining transcripts were then systematically coded by MEL based on the initial coding scheme. During the coding, some new codes were added to the scheme. If necessary, old codes were recoded to better describe the content (Patton, 2015). After encoding was completed, the codes were sorted into visible patterns in sub-categories and categories. These categories were then discussed and approved by all authors before writing up the results. The results were strengthened with quotations, which are drawn from the raw data and translated into English for publication (Patton, 2015). Participants did not get any feedback on the findings.

3 | RESULTS

Three categories and eight subcategories were identified, see Table 2.

3.1 | Driving factors for participation in the iCBT program

This category contains two subcategories: 'Fear and anxiety in relation to chest pain' and 'The desire for normalisation'. These describe the impact of chest pain on participants' lives, behavioural changes and their desire to get back to a normal life.

3.1.1 | Fear and anxiety in relation to chest pain

Participants described their everyday lives before treatment as being characterised by fear, anxiety and depressed mood, which was the main driving factor for participating in the study. The chest pain was described as numbness, a burning sensation or muscle tension in the chest, and often led to negative thoughts about their state of health and fear of death. The chest pain led to behavioural changes, such as avoiding of all kinds of physical activities that they perceived as harmful and avoiding social encounters with relatives and friends that they felt pressured them to seek healthcare for their chest pain. That led to feelings of being alone and having a limited life and had no one to contact for support. Telephone contact with the Healthcare Guide (referred to as 1177 in Sweden) often resulted in the advice to seek emergency care, which strengthened their belief that they experienced a serious illness.

Whenever I've called them, they (1177) are so fixated on where the pain is located, and how you are feeling, and then they consult their colleagues and I end up in

TABLE 2 Overview of the study categories and subcategories

| Category | Subcategory |
|---|---|
| Driving factors for participation in the iCBT program | Fear and anxiety in relation to chest pain |
| | The desire for normalisation |
| The program as a catalyst | The program felt trustworthy and provided safety |
| | Feeling commitment to the program |
| | Getting encouragement and confirmation through feedback |
| | Use of and access to the program |
| Learning to live with chest pain | Challenging my fear and gaining strength |
| | Gaining new insights into my abilities |

the emergency room. I do not know, it's not exactly reassuring, it's almost like calling them makes you sicker.

(p.5).

Usually, participants were discharged from the emergency department without any diagnosis or explanation for their chest pain but were assured that they had no acute cardiac disease. This situation mostly caused anxiety or fear of death, as well as loss of confidence in health care.

3.1.2 | The desire for normalisation

The desire to live a normal life, without fear of pain, was a common reason to participate in the program. Participants saw the invitation to the iCBT study as an opportunity to change their situation and regain a normal life without chest pain or fear. Participants further described the wish to find new ways to gain control over their life situation in relation to chest pain.

I just want to get back to my life, doing what I've always done, that made me feel good.

(p.4).

I did not feel like I had gotten enough on my feet so I could live a normal life.

(p.3).

3.2 | The program as a catalyst

This category contains four subcategories: 'The program felt trustworthy and provided safety', 'Feeling commitment to the program', 'Getting encouragement and confirmation through feedback' and 'Use of and access to the program'. These subcategories describe that the program was perceived as helpful, trustworthy and useful.

3.2.1 | The program felt trustworthy and provided safety

The structure and content of the program were perceived as trustworthy, obvious, reliable and clearly related to the participants' problems with chest pain. This gave them a feeling of not being alone with their problems. Participants' different learning preferences were matched due to the varied content and design, which include texts, figures, audio files and videos. This promoted the ability to use different senses and learn in different ways. Some participants asked for more tailored content with more in-depth information and more varied homework assignments that could be adapted to their abilities. Weekly feedback regarding participants' progress, further increased the feeling of trustworthiness.

Now, I'm in this cardiac study, and I feel kind of safe here, because I know someone is monitoring, I can tell someone when I am having chest pain, and there's someone to look at it, or follow up; and it feels amazing, and it makes everyone around me calmer too.

(p.3).

The knowledge and skills of the team including collaboration with a cardiologist, gave an impression of safety and trustworthiness. The impression of using correct terms, concepts and statements strengthened the program's credibility. The therapist's formal education in medical care, connection to science, knowledge, experience of working with healthcare and understanding of the patient group generated a sense of trust.

3.2.2 | Feeling commitment to the program

Participants felt an increased motivation to work with the program when they knew the therapist would read their reports. The therapist was perceived as interested, curious, and encouraging, which increased participants' commitment. They felt that they were being taken seriously when the therapist analysed, reflected upon and responded to their questions. The therapist's courage to ask difficult questions, the opportunity to share thoughts, receive understanding, patience and compassion, strengthened participants' relationship with the therapist and increased their commitment to the program.

I appreciated the therapist, because he listened to my issues, and developed them even further, or perhaps clarified them for me, which allowed me to understand my own thought process, my own line of reasoning better, and then I could take that home. And, again, he inspired confidence, so when he did say something, I would take it seriously.

(p.4).

3.2.3 | Getting encouragement and confirmation through feedback

Feedback from the therapist was confirming and encouraged the participants to work with the program. The feedback including encouraging and boosting messages and reflection over the work progress, was seen as positive since it introduced participants to the next level and helped them to see their own progress and made them want to perform better. However, the participants described that active participation and personal responsibility were necessary to complete the program, but despite this everyday life could be hinderance.

In a way, I think it's important to have someone there at the other end; someone who sees what I've written and follows up on it, and who keeps pushing me.

(p.11).

Having a specific day and time for feedback made the treatment more predictable and easier to plan. Consistency overtime gave the impression of having an ongoing conversation throughout the treatment. Because the therapist used understandable language without formal terms, the feedback was perceived as individual and addressing their specific needs, and that there was a caring person behind the answers. Furthermore, the therapist was perceived to show concern about each participant's life situation. The contact between them was experienced as professional but not rigid or mechanical, giving the impression of seriousness and the individuality and continuity in the contact confirmed the participants' sense of being seen.

It was as if this answer was directed at me. It was personal, which I think is important. Otherwise, it does not matter much, but I think it's important that there is someone to listen to your circumstances, to analyse and translate what you are saying, and to give you feedback, which is directed to a specific recipient, I think that's important.

(p.16).

3.2.4 | Use of and access to the program

The program was seen and used as a database, where facts and information were supplemented by exercises and contact with the therapist. The therapist and program were seen as complementary to each other and that the program would not be the same without the therapist. Feedback and answers were also provided more quickly and easier to grasp when they came from the therapist than from traditional health care. Having computer skills facilitated use of the program but were not necessary for basic use or to get through the program. When technical problems occurred, participants easily accessed technical support from the therapist,

which was important for using the program. This and the easy and unlimited access to the materials in the program, during the treatment period were perceived as supportive. Some participants logged into the program for repeated reading, while others printed out the material to access it offline. Participants could use the program as a safe place that gave them strength when they were struggling with symptoms; for example, reading a few paragraphs of the program at night was perceived to provide safety and had a calming effect. However, worries were expressed that the program could provoke thoughts and fears that could be difficult to cope on their own, such as waking up during the night and having difficulty falling back asleep (i.e. insomnia).

Sometimes when I woke up at night and could not go back to sleep, then I could stay up and read the program and get some kind of security and recognition, which made me calm down

(p.4).

The ability to choose the time and place to work with the program and adapt it to everyday life was a facilitating factor, and in some cases crucial to continue working with it. Participants highlighted the feeling of being free to work with the program when it suited them, while others wanted more structure to find a balance between the program and everyday life.

It has given me time, the way I see it; time to keep working, keep living my life normally, I have been given this tool, which is an enormous gain and it adds massively to my quality of life.

(p.3).

Different choices available in the program increased accessibility even further. The form of physical activity to undertake could be chosen freely, which enabled even those who were not used to training to participate. Mindfulness could be performed at different times during the day and easily incorporated into everyday life. Although some aspects were perceived as more time-consuming, in general the treatment could be considered part of everyday life.

3.3 | Learning to live with chest pain

This subcategory contains two subcategories: 'Challenging my fear and gaining strength' and 'Gaining new insights about my abilities'. These subcategories describe participants' experiences of the program as a tool to make changes, and a way to gain strength and new skills to live their lives despite chest pain.

3.3.1 | Challenging my fear and gaining strength

Participants stated that the program made them challenge their fears, which helped them accept and learn to live with their limitations due

to chest pain. Goal setting, mindfulness and exposure to physical activity helped them to be active, despite existing chest pain or anxiety over the pain. For some, participation in the program made the chest pain disappear, which motivated them to engage in physical activity even more. In other participants, the chest pain did not disappear, but the program taught them new coping skills to control their chest pain and fear, and to deal with situations perceived as dangerous.

Before (the study) I did not dare, I thought it's better that I stay home if we were invited away or if it was some bigger events, so I will not tire out myself socially, because I thought that's how I was going to balance to avoid getting pain, but the pain comes no matter where I am or what I do so I kind of have to learn to live with it and that is what this study and therapist have helped me to understand

(p.3).

Participants realised the need to continue to challenge their limitations. They explained that their daily condition could vary, but through the program they learned to structure and plan and thus to manage their situation and feel better even on bad days. The program improved their ability to focus on everyday life, and they also learned to spend more time with themselves. Furthermore, they learned to normalise their problems by exposing themselves to situations that might cause the pain.

At one point, I was in so much pain, but I thought to myself 'I'm going to the gym', and fact is I stayed longer that time doing my exercises, cycling first, and it actually made it better.

(p.9).

3.3.2 | Gaining new insights about my abilities

The program gave participants insight into how common NCCP is. Knowing about others with the same kind of problems made it easier to recognise themselves in the treatment and feel less lonely. The program provided basic knowledge about their chest pain; for example how to identify different types of chest pain or localisation of pain. Participants also trained themselves to recognise the pain, and to find their own pain-management tools, with guidance from the therapist. This helped to reduce their anxiety about having a cardiac disease. The pain might remain, but their new knowledge shifted the focus away from the pain, until it felt milder or disappeared completely. By using mindfulness techniques and expose themselves to physical activities, they learned how to cope with chest pain. Participants found that they could implement these new skills in everyday life, even outside the program.

Their new knowledge had a calming effect on the anxiety associated with the pain. Awareness of situations that could be relaxing and applying mindfulness, became a strategy that was used

by several participants. The new understanding of their ability to manage the pain and fear by themselves motivated them to refrain from seeking medical care or isolating themselves. Awareness of mind-changing processes and new insights requires long-term work. However, they saw participation in the program as the start of their new journey.

I was going with my brother to take his boat out of the canal [...] and my breathing was really heavy, and I thought, if this had been before the study, I probably would have stayed home, but now I decided I might as well be on the boat, because it makes no difference.

(p.2).

4 | DISCUSSION

To the best of our knowledge, this is the first study to explore and describe the experiences of patients with NCCP and cardiac anxiety regarding participation in a nurse-led iCBT program. Our findings show that the iCBT program made it easier for participants to learn to understand their chest pain and thus to manage life despite such pain and learn to cope with their chest pain and cardiac anxiety.

Participants in this study described their life situation before participating in the iCBT program as limited by chest pain that caused anxiety, worries about their health and sometimes fear of death. To cope with their chest pain and the feelings it caused, participants described avoiding physical and social activities. Avoidance is associated with flight, hypervigilance and pain-related fear (Bass & Mayou, 2002; Jonsbu et al., 2011) and can in the short term be perceived as positive because it gives a feeling of safety. However, in the long term, it can lead to a restricted life and feelings of loneliness (Jonsbu et al., 2011; Leeuw et al., 2007), which also was described by our participants. This and the desire for normalisation, that is to live a normal life without pain or fear, were the driving factors to participate in the program. A recent study exploring the experiences of iCBT in patients with CVD and depression also described that iCBT helped patients take control over their disease (Westas et al., 2022). The invitation to the program was perceived as having come at the right moment in their lives, when they wanted the opportunity to change their life situation in relation to chest pain and to get their life back to how it was before the chest pain.

The program was described as easy to work with and accessible, without concerns about finding a suitable time or place. The ability to relate to pain, and situations caused by pain, gave participants a feeling of not being alone with their problems. The recognition of one's own symptoms and struggles, made the program to be perceived as personal and tailored (Hind et al., 2010). Lundgren et al. (2018) also pointed out the importance of tailoring the iCBT program in order to facilitate for patients to recognise themselves in the treatment. Furthermore, the varying ways of presenting the content and the clear structure gave the impression of the program being trustworthy and reliable. Some participants asked for even

more tailored content based on their preferences and needs, with more varied assignments and deeper information, while others were more satisfied with their experiences of the iCBT program. This suggests that programs tailored to participants' somatic and psychological problems and preferences are for most patients probably easier to relate to, can improve adherence (Johansson et al., 2019) and thus improve outcomes (Flink et al., 2016).

Therapeutic competence is important to achieve a therapeutic alliance, which refers to the relationship between the patient and therapist (Luborsky, 1984; Sharpless & Barber, 2009) and can be crucial to trustworthiness within a program. Participants in our study perceived the therapeutic competence through the use of correct terms, concepts and statements. Aspects as the nurse therapist's knowledge and experience of working with the patient group, was considered as important to feel trust. The therapist's formal education, expertise and collaboration with specialists also created a sense of trust and made the participants feel safe with the advice they received. In addition to this, the therapist's ability to utilise the patients' thoughts and concerns, and provide personal feedback aimed at a particular patient, was also important. Furthermore, the presence of and feedback from the therapist were perceived as encouraging and affirming, and helped participants feel commitment to the program and complete it. Holländare et al. (2016) concluded that feedback in iCBT that provides encouragement, guidance and affirmation is associated with improved outcomes. The benefits of therapeutic and empathic relationships are also stressed by Campbell et al. (2017) who described the importance of paying attention to experienced symptoms, and an empathic acknowledgment of patients' concerns. In our study, a nurse with clinical experience of NCCP who had completed a short course in iCBT acted as the therapist. Tyrer et al. (2021) reported from an eight-year follow-up of a CBT intervention aimed at reducing health anxiety in patients with different somatic diseases that nurses who had clinical experience of the patient's somatic disease achieved the best results. This suggests that when delivering iCBT to patients with a somatic disease, such as NCCP or CVD, besides from tailoring the program, a therapeutic alliance and thus an improvement in psychological distress is probably easier to achieve if the therapist has clinical experience of the patient group. This implicates that nurses with clinical experience of the patient group and brief training can guide internet-delivered psychological interventions.

Participants stated that the program became a tool for managing their negative thoughts and helped them change unhealthy behaviour. The program urged them to challenge their fears and use their newly learnt coping skills and knowledge in everyday life to confront the limitations caused by NCCP. New knowledge and understanding about chest pain, experiences of fear and exposure to situations that they were worried about are some of the techniques and skills used to manage chest pain and cardiac anxiety. Setting goals at the beginning of the program facilitated the evaluation of the outcomes and made their progress visible. All this made participants feel that they were well on their way back towards a normal life. However, they were aware that this journey would be

time consuming, and that participation in the program was just a beginning. To summarise, the experiences of our participants suggest that nurse-led iCBT seems to be an appropriate method for treating cardiac anxiety in patients with NCCP. However, more research is needed to investigate how nurse-led iCBT programs can be designed to provide the best treatment results for these patients.

4.1 | Strength and limitations

A strength of this study is the information power (Malterud et al., 2016). The sample was specific since participants had personal experience of struggling with NCCP, and experience of participating in iCBT, and thus contributed with important knowledge in order to answer the aim of the study. The therapist's competence and experience of working with this patient group is another strength of this study, which also was concluded by Tyrer et al. (2021). A limitation may be the risk that only participants with positive attitudes chose to participate. However, this is a problem many researchers face. We made no field notes during the interviews, which can be seen as a limitation. According to Patton (2015), there are pros and cons with field notes, as they can affect the interview process. For example, field notes can facilitate later analysis and help locating important quotations. On the contrary, making field notes can distract the participants during the interviews. We therefore believe that the lack of field notes did not impact our results.

5 | CONCLUSIONS

Before participating in the iCBT program, participants experienced their lives as being limited by chest pain and cardiac anxiety, leading to health concerns and fear of death. By the invitation to participate in the program, participants experienced the opportunity to return to normal life again, unaffected by fear and anxiety in relation to chest pain. The program was perceived as useful, accessible, easy to relate to and tailored to their somatic and psychological problems. In addition, the presence and feedback from the therapist that encouraged and motivated them to complete the program, gave the impression that the program was trustworthy and reliable. By participating in the program, patients learned how to challenge their fear of chest pain and death and gain strength and new insights into their ability to live a normal life.

6 | RELEVANCE TO CLINICAL PRACTICE

What the authors aimed for in this study, was to explore the experiences of participation in an iCBT program aimed at reducing cardiac anxiety in patients with NCCP, as well as to gain knowledge that can be used in the design and evaluation of new internet-delivered nurse-led interventions. An important lesson learned is that when delivering iCBT to patients with NCCP or other somatic disease, programs should be tailored to target both somatic and psychological problems in the

patients. This can make it easier for them to recognise themselves in the treatment programs and thus increase adherence and treatment effect. Another important lesson is that the guiding therapists, for example nurses, should have clinical experience of the patient group as they have more insight into patients' health problems, which can also make it easier to achieve a patient-centred approach in the program.

AUTHOR CONTRIBUTIONS

MEL, PJ and GM contributed to design of the study. MEL, JL and PR collected data. All authors performed analyses and interpretation of the data and contributed to the drafting of the manuscript.

ACKNOWLEDGEMENTS

The authors would like to acknowledge the participants who made this study possible.

FUNDING INFORMATION

The study was funded by the Kamprad Family Foundation (number ISV-2018-00033), and Region Östergötland (RÖ-938360). The funders played no role in any part of the study.

CONFLICT OF INTEREST

The authors have no conflicts of interest to disclose.

ETHICAL CONSIDERATIONS

The study was conducted according to the Helsinki Declaration and was approved by the Regional Ethical Review Board in Linköping, Sweden (codes 2017/343-31). All participants signed a written informed consent prior to participation in the main study.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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SUPPORTING INFORMATION

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How to cite this article: Eriksson-Liebon, M., Lundgren, J., Rytterström, P., Johansson, P., & Mourad, G. (2022). Experience of internet-delivered cognitive behavioural therapy among patients with non-cardiac chest pain. *Journal of Clinical Nursing*, 00, 1–10. <https://doi.org/10.1111/jocn.16565>