

ORIGINAL RESEARCH

Coping with breast cancer: between diagnosis and surgery

Sigrunn Drageset, Torill Christine Lindstrøm & Kjell Underlid

Accepted for publication 16 October 2009

Correspondence to S. Drageset:
e-mail: sigrunn.drageset@hib.no

Sigrunn Drageset MSc RN
Assistant Professor
Faculty of Health and Social Sciences,
Bergen University College
Norway

Torill Christine Lindstrøm PhD
Professor, Psychologist
Faculty of Psychology, University of Bergen,
Norway

Kjell Underlid PhD
Professor, Specialist in Clinical Psychology
Faculty of Health and Social Sciences, Bergen
University College, Norway

DRAGESET S., LINDSTRØM T.C. & UNDERLID K. (2010) Coping with breast cancer: between diagnosis and surgery. *Journal of Advanced Nursing* 66(1), 149–158.

doi: 10.1111/j.1365-2648.2009.05210.x

Abstract

Title. Coping with breast cancer: between diagnosis and surgery.

Aim. This paper is a report of a descriptive study of coping strategies used by women between diagnosis of breast cancer and surgery.

Background. Although research has suggested that the initial phase of breast cancer is important in the overall process of coping, there have been few qualitative studies conducted in the period between diagnosis and surgery to describe women's experiences and coping efforts in the midst of stress.

Method. Individual interviews were conducted with 21 women with newly diagnosed breast cancer who were awaiting surgery. Data were collected from February 2006 to February 2007 at a Norwegian university hospital. Transcripts were analysed using methods of qualitative content analysis.

Findings. Prominent themes about coping between diagnosis and surgery were: step-by-step, pushing away, business as usual, enjoying life, dealing with emotions, preparing for the worst and positive focus. The women were highly aware of the threat of death, but at the same time hopeful and optimistic. In general, they wanted to be treated as usual. Pity and compassion could increase their feelings of fear and vulnerability. Emotions were dealt with either by openness or by holding back.

Conclusion. Avoiding being overwhelmed by emotional reactions was a major goal for the women. Their coping strategies displayed similar patterns but diverged on some points. In general they needed to manage the situation in their own way. By being aware of women's individual needs and different coping strategies, nurses and other healthcare professionals can improve support to women in this vulnerable situation.

Keywords: breast cancer, coping, diagnosis, healthcare professionals, interviews, nurses, preoperative phase, surgery

Introduction

Breast cancer is the most common cancer and a leading cause of cancer deaths in women throughout the world (World

Health Organization 2008). It accounts for 23% of all female cancers in Norway, and the annual number of new cases is expected to increase (Norwegian Breast Cancer Group 2008). The most stressful experiences when facing breast cancer are

reported to be waiting for the results of diagnostic testing, receiving the diagnosis and waiting for surgery (Green *et al.* 1998, Gurevich *et al.* 2002).

Background

A breast cancer diagnosis provokes a variety of emotional reactions such as chaos, uncertainty, anxiety, hopelessness and despair (Montazeri *et al.* 2000, Zabora *et al.* 2001, Landmark & Wahl 2002, Fu *et al.* 2008, Shaha *et al.* 2008), and places extraordinary demands on women's coping abilities (Taleghani *et al.* 2006, Landmark *et al.* 2008). Coping strategies used during the diagnostic phases of breast cancer have been found to be indicators of psychological adjustment after surgery (Degner *et al.* 2003, Schou *et al.* 2005a, Jadouille *et al.* 2006). Active acceptance at diagnosis predicts better adjustment through the first year (Roussi *et al.* 2007, Stanton *et al.* 2002). Defensive strategies reduce distress at 3 months, but increase fear of cancer recurrence at 1 year (Stanton *et al.* 2002). Defensive avoidance-oriented coping, a helpless/hopeless coping style combined with pessimism or passive acceptance and resignation predicts poor psychological adaptation 1–3 years later (Stanton *et al.* 2002, Hack & Degner 2004, Schou *et al.* 2004).

A wide variety of coping theories exists (Olf 1991), and different coping theories have been applied in breast cancer research. Lazarus' (1999) theory of appraisal, stress and coping, and Ursin's (1988) theory of cognitive-behavioural coping were used as theoretical frameworks in the study reported in this paper. The results are also discussed in the context of the Roy Adaptation Model of nursing (Roy 2009). This model describes people in terms of holistic adaptive systems that cope with environmental stimuli through processes of adaptation. Adaptation occurs in four modes: physiological–physical, self-concept-group identity, role function and interdependence.

Coping can be defined as constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appreciated as a stressor, according to Lazarus (1999). Coping strategies are classified as 'problem-focused coping', behaviour directed at solving the problem or situations, and 'emotion-focused coping', behaviour directed at changing the emotional reactions to the problem or situations. The latter also covers various defensive and avoidant strategies. Coping is independent of outcome, and defence is regarded as a specific form of coping behaviour.

Coping can also be defined as 'positive response outcome expectancy' (Ursin 1988), implying a generalized positive attitude to a person's capacities to handle a stressful situation, independent of the particular strategy used. The essential

element is the acquired *expectancy* of being able to control the situation. In this tradition, coping efforts are based on a reasonably correct perception of reality, whereas defence mechanisms are based on distortions of reality. Four styles have been identified through a factor-analytic study (Eriksen *et al.* 1997) that revealed two coping factors – instrumental-focused and emotion-focused coping – and two defensive factors – cognitive defence and defensive hostility. Instrumental-focused and emotion-focused coping are related to Lazarus' (1999) problem- and emotion-focused coping, but defensive strategies are different from these.

Research has indicated that preoperative experiences and ways of coping with breast cancer have postoperative impacts (Stanton *et al.* 2002, Schou *et al.* 2005a, Jadouille *et al.* 2006). Previous studies of women's experiences of coping in the period between diagnosis and surgery do not provide in-depth understanding of their experiences. In addition, most studies of women's coping in the preoperative period have been conducted retrospectively. Retrospective investigations have disadvantages such as recall bias and repression of unpleasant memories, as well as the fact that the outcome of the surgery may colour the memories. Therefore we conducted our study in the period between diagnosis and surgery, more specifically the day before surgery, to capture specific coping behaviours at a point where stress may be highest.

The study

Aim

The aim of this study was to describe coping strategies used by women between diagnosis of breast cancer and surgery.

Design

A qualitative descriptive design was used, and data were collected through individual semi-structured interviews.

Participants

A convenience sample of 21 Norwegian women with newly diagnosed breast cancer awaiting primary surgery at a day surgery unit at a Norwegian University Hospital was recruited for the study. Selection criteria used were scheduled for primary surgery, over 18 years of age, and able to speak and write Norwegian. Forty-eight patients were invited and 21 were interviewed. There were no essential demographic differences between participants and non-participants. The period between diagnosis and surgery varied from 1 to 3 weeks. Short notice before surgery was the only reason

given for not participating. The sample size was determined by data saturation.

Data collection

The women received an invitation to participate together with the information about surgery. Data were collected from February 2006 to February 2007. The interviews were conducted in the hospital on the day before surgery, and before preoperative information. The average length of interviews was 97 minutes.

A semi-structured interview guide was developed based on our previous research (Drageset and Lindstrom 2003, 2005). Informants were asked about their experiences of and coping with the period between diagnosis and surgery: 'How have you experienced this period?' and 'How have you coped with this situation?' During the interview the themes mentioned by the women were probed. The interview atmosphere and non-verbal communication were noted shortly after the interviews, which were audiotaped, transcribed verbatim and prepared for analysis.

Ethical considerations

The study was approved by the Regional Ethical Board. Women's needs for emotional protection were respected by not dwelling too deeply on threatening issues. An arrangement was made with the outpatient clinic to offer the women a follow-up consultation with professionals after the interview if needed. None requested it.

Data analysis

Following Kvale's (1997) guidelines, content analysis was used at three levels: self-understanding, common-sense and theoretical understanding. At the first level, the transcribed interviews were read to acquire a sense of the whole. The meaning units were identified, and data condensed. Self-understanding occurred as the women's statements were condensed in line with our understanding. At the second level, transcriptions were read several times to achieve common-sense understanding, providing a broader comprehension. The different themes were identified and transformed into meaningful units, then coded into major themes with sub-themes. At the third level, theoretical understanding to reveal a deeper meaning and relationships between the whole and the parts were scrutinized. The themes were interpreted and discussed in light of earlier research, Lazarus' (1999) and Ursin's (1988) theories of coping, and the Roy Adoption Model (2009). The qualitative data analysis

software QRS-NVivo 7 (<http://www.qrsinternational.com>) was used.

Rigour

Strategies to ensure validity were established using the guidelines set by Kvale (1997) and Malterud (2001). The first author conducted all interviews, took field notes and transcribed the interviews. The authors analysed the data independently. Throughout the analysis process, we all discussed the information to reach agreement. If doubts arose, we went back to the data and reassessed the meaning of the statements. Memos were written during the analysis to ensure that impressions, ideas and reflections were not lost.

Findings

The women's mean age was 54 years, ranging from 41 to 73 years. Sixteen were married or cohabiting, one was single, one was widowed and three were divorced. Sixteen had children; 17 lived with somebody (spouse/partner/children). Nineteen were in full-time or part-time employment, and two had retired. Five women had completed lower secondary school education and nine upper secondary, six had attended university colleges and one had a university degree.

The most common ways of coping employed can be summed up by the following themes: step-by-step, pushing away, business as usual, enjoying life, dealing with emotions, preparing for the worst and positive focus. Some of the themes are organized into sub-themes. The themes were related to corresponding theoretical concepts (see Table 1).

Table 1 Theoretical concepts related to themes discovered in the data

Theoretical concepts	Empirical themes
Cognitive defence	Step-by-step Pushing away
Emotion-focused coping	Business as usual Enjoying life Dealing with emotions Preparing for the worst
Instrumental-focused coping	Positive focus
Problem-focused coping	Positive focus

Instrumental-focused coping, emotion-focused coping and cognitive defence are concepts used in Ursin's theory (1988). Problem-focused coping and emotion-focused coping are concepts used in Lazarus' theory (1999).

Step-by-step

Step-by-step was the most common coping strategy. It implied trying only to relate to the present situation and ignoring problems that might arise later. This coping behaviour was chosen to avoid being overwhelmed by threatening thoughts and emotions, and to reduce worrying: 'It's easier for me if I take it step-by-step. Makes me calmer. I try to push away the worst possibilities'.

The women wanted only as much information as they considered relevant at each point in time, and only when they felt ready to receive it: 'Information is important for me, but I don't want to receive it all at once'. Too much information at a time, whether from the hospital or the Internet, frightened them. Some felt that they lost control because the information was overwhelming: 'Initially, I spent a lot of time on the Internet reading, but I decided I had to stop. There's little to be found there that's positive. I like to have control, and then I suddenly found out that everything is beyond my control'. In contrast, some women wanted all the information at once and used all available resources: 'I'm not so afraid when I know what's going to happen. It's very important for me to know'.

Pushing away

Some distanced themselves emotionally from reality: 'It's not about me'. Some women tried to manage anxiety and uncertainty by pushing away distressing thoughts and emotions, but without results: 'I try to push thoughts away. No matter what I do, these thoughts return'.

Focus on something else

Clearly connected to 'pushing away' was focusing on something else. Some managed to push away by finding something else to think about. Letting emotions into their consciousness scared them, and sometimes the anxiety could be quite overwhelming: 'You rush to the toilet and break out in a cold sweat. I think to myself that I'm not going to let this destroy me. I must bear it somehow; try to rid myself of it. For me the solution has been to find something else to think about, to push it aside'. Avoiding ruminating was important: 'I've never sat down and ruminated. I've tried to keep busy to avoid these thoughts'. Another mentioned: 'I feel afraid when I start to think about it. I can't let myself plunge into self-pity. That's the worst thing that could happen'. Coping by focusing on something else such as hobbies, gardening and music to achieve positive emotions and minimize negative intrusive thoughts was experienced as successful. Some coped by being physically active: 'I go for walks in the countryside and to fitness classes, and these activities help me'. One woman used

breathing techniques as a method to keep her attention off the diagnosis. Spending time with others was also a welcome distraction: 'Friends are good for me. They help me to think about other things, and then the waiting time passes'.

Business as usual

Most of the women coped by living as usual and by getting absorbed in their ordinary routine everyday activities such as hobbies and work. That life continued as normal gave them a feeling of being in control: 'Working gives me a feeling of having control of *something* in my life'. Work provided distraction and people to talk to. Some women emphasized the importance of feeling included in the social environment at work. Most wanted to be treated as usual. Others' pity and compassion triggered negative emotions and made some feel vulnerable and scared: 'If people feel sorry for me, I start to feel sorry for myself'. Some therefore selected specific persons to associate with, those who contributed to normalizing the situation: 'I prefer those who treat me in precisely the same way as they did before I got the diagnosis'. One woman mentioned: 'When my husband argues with me, it feels like a relief: the world is normal. If he changes, then one suddenly thinks the situation is more dramatic than it actually is'.

Enjoying life

Some women reacted by considering what was really important for them in their lives. Focus on meaningful values and activities helped them in their coping process. For them sick-leave was important: 'I want to stay at home and do positive things, like taking walks with my husband and taking care of my plants. It doesn't feel right for me to go to work'. Another commented that she wanted to arrange her day to suit herself. 'I can't be bothered to deal with trivialities at work'. Another mentioned: 'I've enjoyed myself at home this fortnight not having to go to work'.

Dealing with emotions

Openness

Emotions were differently experienced and expressed. As mentioned, some women wanted to keep emotions at a distance; others felt relief after expressing their feelings: 'It's important that you can cry and feel sad. This sadness is something the body has to get rid of. Being allowed to react and to express sadness felt good'. Some experienced that depersonalization ceased when their emotional reactions were let out: 'Everything ground to a stop, at the same time as everything around me went on as usual. But in a way I wasn't

part of it until I managed to talk through some of the feelings and cry a bit'. Some wanted to express emotions in solitude, others used diary-writing to clarify their thoughts and to express their emotions: 'It may be good later to read what I thought and felt, and good to write oneself out of the here and now. Nobody's going to comment on it. You can write just what you want – rage or smile'. Others wanted to express emotions when being with people they perceived as supportive: 'When I met a colleague who is emotionally close to me, it felt good for me to cry and drop the mask'.

Talking about the diagnosis felt good. One woman emphasized that for her it was therapy: 'I feel I've talked a lot, both at home and with others that are close to me, and I think it's important to be open about it and talk about it. This may not apply to everyone, but for me this was therapy; it became natural for me to be open'.

Holding back

In contrast, others pointed out that it did not help to express feelings. It reduced feelings of strength, induced self-pity and loss of energy: 'It doesn't help to cry; then I only feel self-pity. It affects your whole psyche'. One mentioned: 'It's my personality. I don't want to show that kind of emotion'. A number of women felt that they had to consciously suppress their feelings: 'To live normally I had to suppress my feelings'. This strategy also prevented questions and reactions from other people: 'It's difficult to confront others with this; it makes me uncomfortable'.

Preparing for the worst

Some were pessimistic and expected emotional loss-reactions after surgery: 'I'm prepared for the emotional reactions to the diagnosis to come later. I'm sure I'll get a period of grief seeing myself with only one breast. It will be strange to lose a part of myself'. Others even anticipated an early death. The most frightening thing was the possibility of being informed about metastasis after surgery. Some women mentally prepared themselves for the worst, expecting that the cancer had spread and was totally incurable. Some emphasized that they always tended to think of the worst possibilities in frightening situations: 'When you have cancer, you have cancer. It needn't be lethal. But I feel it's serious. I prepare myself for the worst. I'm a bit pessimistic'.

Positive focus

Optimism and hope

The women were highly aware of possible threat of death, but were also optimistic and hopeful. This optimism seemed

to be grounded on a general positive self-perception, and previous coping experiences. Some of them demonstrated a fighting attitude: 'I've always been an optimist, in good spirits, and have believed that most things go well'. Prior experience of coping with major problems helped them to think positively: 'I've been through tough times before, but I've never given in'. Some women appeared to activate extra strength in difficult situations: 'I think I have strength when I'm in difficult situations. The reaction comes later when everything is over'. To be in good humour was an important factor in coping: 'I think I gain a lot of strength from a good laugh. I think this is important and one shouldn't be depressed and have dark thoughts'.

Encouragement

Good relationships with friends and family, a positive attitude, and supportive and realistic information about cancer from both medical sources and their private networks helped. Early detection of the cancer, trust in the doctors and the hospital system, and learning how common breast cancer is and its good prognosis encouraged them. Some consulted survival statistics and postcancer patients and felt reassured: 'There are many women in the same situation. I feel it helps a bit to know that you're not the only one who gets it. The doctors are skilled, they can cure'. Having the operation at the surgical outpatient clinic gave most of them the impression that their cancer was not so serious. Self-reassurance was important: 'I tell myself over and over again that this will go well'. Some of the women thought that general good health would influence the outcome: 'I'm in good shape and I think that helps'. Focus on self-care, also comforted: 'I spent the time cossetting myself and changed my diet. I find consolation in building myself up'.

Discussion

The study limitations were that the data came from only one ethnic group with similar demographic backgrounds and only one geographical area.

Information-seeking is often documented as a positive coping strategy among women with breast cancer (Rees & Bath 2000, Long 2001, Loiselle *et al.* 2006), and some of the women in the current study also faced realities by seeking as much information as possible. However this strategy was found to frighten most of them. Step-by-step was the preferred coping method: it enabled the women to face realities gradually and facilitated the process of accepting and preparing for what might come. It gave a sense of control over a situation they primarily perceived as being beyond their control, and allowed them to process the disease in a less

negative way. Similar findings have been reported before (Heskestad & Tjemsland 1996). According to Lazarus' theory (1999), step-by-step seems to imply a mixture of emotion-focused coping and avoidance that function simultaneously and facilitate each other. Focus was kept on actual facts in the present situation, and women avoided dwelling on problems that *might* arise. This strategy kept anxiety at a tolerable level. According to the Roy Adaptation Model (Roy 2009), this strategy reflects the cognator coping subsystem information processing and emotion, implying using processes of selective attention and defence to avoid anxiety-provoking information. Problem-focused coping is associated with greater personal control than emotion-focused coping (Folkman & Moskowitz 2004). However, these women were in a situation in which solving the problem, 'getting rid of the cancer', was objectively beyond their control. Therefore this mode of emotion-focused coping was rational and adaptive, as also previously reported (Olf 1991, Lazarus 1999, Austenfeld & Stanton 2004). Despite the limited active coping possibilities, their self-integrity was thus maintained and presented an adaptive self-concept mode response (Roy 2009).

Our findings revealed that some women distanced themselves emotionally from potential threats; some tried, with varying results, to push away unbearable thoughts and emotions. Many used 'you' instead of 'I' when talking about themselves, indicating a defensive distancing from the situation as the cancer diagnosis threatened their self-concepts. They all knew they had cancer, but none knew its exact severity. Most of them had difficulties accepting their diagnosis while simultaneously feeling perfectly healthy. Frightening prospects could haunt their thoughts and emotions. For some pushing away worked badly and for others moderately. Poor results implied that no matter how hard they tried, disturbing thoughts returned. For those who managed moderately, cognitive and emotional distancing by focusing on something positive was the most adaptive coping strategy. Coping by avoidance or distancing can be positive in situations where possibilities for direct action are limited (Jonsen *et al.* 2000, Drageset & Lindstrom 2005, Jadouille *et al.* 2006), but the effect is short-lived. Defensive strategies can be counter-adaptive because they imply avoiding problems, and may prevent taking adequate actions – behaviour that may lead to compromised processes and adaptation problems (Hanna & Roy 2001). An illness has to be faced, 'accepted' and adapted to (Olf 1991, Stanton *et al.* 2002). But again, there was nothing the women could do *themselves* to get rid of their cancer. They had to cope with having to wait.

Generally, active ways of coping such as focus on activities requiring concentration and physical activity helped. Physical

activity, a way of coping enhancing both physiological-physical and self-concept modes of adaptation (Roy 2009), appeared to be particularly effective: it produced positive emotions, reduced anxiety, and provided physical and mental strength. Also other studies have shown the benefit of active strategies such as physical activity in women with breast cancer (Ben-Ze'ev 2000, Kolden *et al.* 2002, Manuel *et al.* 2007). Focusing on something else resembles similar reports that distraction was valued to take the mind off threatening emotions (Logan *et al.* 2006, Lauver *et al.* 2007, Giske & Artinian 2008). Spending time with others was also helpful – not only as emotional support but also as distraction through positive activities. It is suggested that emotional support is important at the time of diagnosis (Taleghani *et al.* 2006, Arora *et al.* 2007). The current study also suggests that support as *distraction* was important.

'Business as usual', signalling both to themselves and others around that 'life was normal', was important in these women's coping. Being engaged in work and receiving positive responses from their colleagues for doing so reduced anxiety, led to a sense of controlling something in life and thereby strengthened their self-confidence. Taking control over their lives and creating order in the chaos they experienced can be interpreted as a basic adaptive coping strategy related to both self-concept and role-function modes (Roy 2009). That living as usual is a meaningful way of coping has also been reported previously (Landmark & Wahl 2002). Not only was living as usual important, but also being treated as usual. Our interviewees did not want to have their new cancer patient-role exposed. People who increased their anxiety and vulnerability by too much consideration and compassion were avoided. Receiving exaggerated compassion from others led to self-pity and made the women feel seriously ill: it signalled danger.

The diagnosis made some of the women pay more attention to their priorities, to what mattered most in life, and gave joy and positive emotions. Such strategies are found to be adaptive in coping with stressful events (Folkman & Moskowitz 2004, Folkman 2008). By them highlighting personal values, according to Roy and Andrews (1999) this coping helped to maintain a positive self-concept and psychological and spiritual integrity.

Expressing emotions gave positive relief for some women. Crying, talking and writing could provide an outlet for their emotions, helping them to keep calm and stopping feelings of depersonalization. Writing about traumatic, stressful or emotional events has been found to improve both physical and psychological health (Walker *et al.* 1999, Baikie & Wilhelm 2005). Disclosing their situation to trusted people was also central in our participants' coping processes. Other

studies have shown that emotional expressive coping is associated with decreased distress (Iwamitsu *et al.* 2005b, Iwamitsu & Buck 2005) related to adaptive outcomes (Reynolds *et al.* 2000, Iwamitsu *et al.* 2005a), and is more beneficial if the social contexts are receptive (Stanton *et al.* 2000, Loiselle *et al.* 2006).

However, the expression of emotions was a double-edged sword in this situation. It could lead to feelings of weakness and self-pity and thereby reduce the sense of coping. Theories of bereavement and crisis have shown that it is possible to get through stressful situations without massive emotional outlets (Lindstrom 2002, Stroebe *et al.* 2006). Similarly, many of our women suppressed their emotions to live normally and to manage without breaking down. They had to deal both with their emotions and also with the reactions of those they told about the cancer. This resulted in increased stress and anxiety. This situation of both having their own needs and having to attend to others' needs suggested that the social context was both a resource and a strain, thereby showing the complexity and difficulty of maintaining satisfying affectional relationships within the interdependence mode (Roy 2009).

An important finding was that no matter how hard they tried to think in optimistic ways, some pessimism, negative thinking and doubt were always present for these women. Some even had a general pessimistic orientation to life, as reported before (Schou *et al.* 2005b). Metastasis and death were frightening possibilities, and some prepared themselves mentally 'for the worst'. According to Folkman and Moskowitz (2004), this can represent future-oriented coping that reflects efforts to save strength to deal with events that will occur with certainty. Others tried to handle their emotional reactions by refusing to acknowledge the possibility of a lethal outcome, thereby avoiding rumination and self-pity. Rumination, the tendency passively and repeatedly to focus on negative cognitions, is associated with increased symptoms of depression and anxiety (Nolen-Hoeksema 2000) and poorer adjustment to breast cancer (Stanton *et al.* 2000). Likewise in our study, rumination led to terrifying fantasies and anxiety. Self-pity reduced confidence to cope, as reported by Støber (2003). It also threatened their integrity, and is an ineffective response (Roy 2009).

Death anxiety was evident, and the women used different coping strategies to ease their emotional pain. They were hopeful and optimistic at the same time, as also reported about other patients with breast cancer (Rustoen & Wiklund 2000, Fu *et al.* 2008). In addition to faith in the doctors' expertise and cancer survival statistics, women's hope and optimism seemed to be related to a positive life attitude, belief in their own resources, and earlier successful dealing with suffering and illness that led to generalized

coping expectancies. Hope can be regarded as a coping strategy (Rustoen 1995, Stanton *et al.* 2002) that helps people to endure uncertainty (Giske & Gjengedal 2007). Hope and fear are both intertwined and future-oriented (Lazarus 1999). In this situation metastasis and death were frightening possibilities, but the women were strongly oriented towards the future and had positive expectancies that they would get rid of their cancer. They were aware of the fact that coping would be hard and would take time. Individuals are coping when they have established a positive response outcome expectancy (Ursin 1988). This strategy may be referred to as control (Ursin & Eriksen 2004), but also as a positive self-concept (Roy 2009). Most of our women were confident that they had resources within themselves to do something to affect the outcome. Some showed a fighting attitude, indicating that they viewed the situation not only as a threat but also as a challenge. Some had even experienced unexpected strength in previous difficult situations, and this caused them to expect to cope now.

Several factors contributed to their positive thinking, such as having good humour, being physically fit and positive self-talk. To this end, active instrumental coping strategies were used to enhance both mental and somatic health and were adaptive responses promoting integrity in both the personal and physical self within the self-concept mode (Roy 2009). Social interdependence, having good friends and relationships and no other serious family problems were contributory factors. Several researchers have documented the importance of social support when facing breast cancer (Landmark *et al.* 2002, Manning-Walsh 2005, Liao *et al.* 2007), and have shown that a cancer diagnosis is harder to handle for those who have other personal or family problems (Tjemslund & Soreide 2001).

In this situation, maintaining a positive focus by constructive self-talk could be interpreted as emotional coping (Lazarus 1999), i.e. reappraising the situation. Reappraisal is suggested to be an effective way to cope with a stressful situation (Lazarus 1999, Manuel *et al.* 2007). However, comforting cognitions (Eriksen *et al.* 1997) involving defence by self-deceptive encouragement can be too defensive (Olf 1991). Whether self-talk was 'reappraisal' or 'defence' for our participants was hard to determine. However, constructive self-talk reduced anxiety and generated positive emotional responses, at least during the short period between diagnosis and surgery.

This study revealed that women had considerable uncertainty and anxiety in the period between diagnosis and surgery. We found opposite strategies for managing this situation: information-seeking vs. step-by-step, business as

What is already known about this topic

- Waiting for surgery is experienced as a very stressful time when facing breast cancer.
- Preoperative experience and coping with breast cancer have postoperative impact.
- Breast cancer diagnosis triggers a variety of emotional reactions and places extraordinary demands on women's coping abilities.

What this paper adds

- A major goal for women's coping between breast cancer diagnosis and surgery was to avoid being overwhelmed by emotional reactions.
- Keeping the diagnosis at some distance seemed helpful for women awaiting breast cancer surgery.
- Women with breast cancer and awaiting surgery used opposite coping strategies: information-seeking vs. step-by-step, business as usual vs. enjoying life, dealing with emotion by openness vs. holding back feelings.

Implication for practice and/or policy

- Healthcare professionals should be aware of both the similarities and variations in the coping strategies of women awaiting breast cancer surgery to support individual coping.
- Women with breast cancer awaiting surgery could benefit from being given information according to a step-by-step strategy and could be recommended to live a normal life.
- Healthcare professionals could emphasize the value of maintaining a positive focus in women with breast cancer awaiting surgery, but should also acknowledge and respect these women's fear and concerns.

usual vs. enjoying life and dealing with emotion by holding back vs. openness.

Conclusion

From a clinical nursing perspective, it is important to be aware of both similarities and variations in these women's coping. The need to keep the diagnosis at some distance seems important. When intervening to promote adaptive coping, sensitivity is essential. Based on this study, we can tentatively suggest that healthcare professionals give information according to a step-by-step strategy, help patients to

accept eventually depressive reactions, suggest living a normal life and stress the value of maintaining a positive focus through enjoyable activities, thereby avoiding deleterious rumination. A goal for holistic nursing is to promote adaptation in all adaptive modes. Awareness of women's individual needs is important, thereby enhancing their integrity.

Acknowledgements

The authors thank the patients who participated in the study and so generously shared their experiences with us. The authors also thank Haukeland University Hospital, Breast Clinic Department, Surgical Outpatient Clinic for valuable support and cooperation.

Funding

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Conflict of interest

The authors declare no conflict of interest.

Author contributions

SD and TCL were responsible for the study conception and design. SD performed the data collection. SD, TCL and KU performed the data analysis; responsible for the drafting of the manuscript; and made critical revisions to the paper for important intellectual content. TCL and KU supervised the study.

References

- Arora K.N., Finney Rutten L.J., Gustafson D.H., Moser R. & Hawkins R.P. (2007) Perceived helpfulness and impact of social support provided by family, friends, and health care providers to women newly diagnosed with breast cancer. *Psycho-Oncology* **16**, 474–486.
- Austenfeld J.L. & Stanton A.L. (2004) Coping through emotional approach: a new look at emotion, coping, and health-related outcomes. *Journal of Personality* **72**(6), 1335–1363.
- Baikie A.K. & Wilhelm K. (2005) Emotional and physical health benefits of expressive writing. *Advances in Psychiatric Treatment* **11**, 338–346.
- Ben-Ze'ev A. (2000) *The Subtlety of Emotions*. MIT Press, Cambridge.
- Degner L., Hack T., O'Neil J. & Kristjanson L.J. (2003) A new approach to eliciting meaning in the context of breast cancer. *Cancer Nursing* **26**(3), 169–178.

- Drageset S. & Lindstrom T.C. (2003) The mental health of women with suspected breast cancer: the relationship between social support, anxiety, coping and defence in maintaining mental health. *Journal of Psychiatric and Mental Health Nursing* 10(4), 401–409.
- Drageset S. & Lindstrom T.C. (2005) Coping with a possible breast cancer diagnosis: demographic factors and social support. *Journal of Advanced Nursing* 51(3), 217–226.
- Eriksen H.R., Olff M. & Ursin H. (1997) The CODE: a revised battery for coping and defence and its relations to subjective health. *Scandinavian Journal of Psychology* 38(3), 175–182.
- Folkman S. (2008) The case of positive emotions in the stress process. *Anxiety, Stress & Coping* 21(1), 3–14.
- Folkman S. & Moskowitz J.T. (2004) Coping: pitfalls and promise. *Annual Review of Psychology* 55, 745–774.
- Fu M.R., Xu B., Liu Y. & Haber J. (2008) 'Making the best of it': Chinese women's experiences of adjusting to breast cancer diagnosis and treatment. *Journal of Advanced Nursing* 63(2), 155–165.
- Giske T. & Artinian B. (2008) Patterns of 'balancing between hope and despair' in the diagnostic phase: a grounded theory study of patients on a gastroenterology ward. *Journal of Advanced Nursing* 62(1), 22–31.
- Giske T. & Gjengedal E. (2007) 'Preparative waiting' and coping theory with patients going through gastric diagnosis. *Journal of Advanced Nursing* 57(1), 87–94.
- Green B.L., Rowland J.H., Krupnick J.L., Epstein S.A., Stockton P., Stern N.M., Spertus I.L. & Steakley C. (1998) Prevalence of posttraumatic stress disorder in women with breast cancer. *Psychosomatics* 39, 102–111.
- Gurevich M., Devins G.M. & Rodin G.M. (2002) Stress response syndromes and cancer: conceptual and assessment issues. *Psychosomatics* 43(4), 259–281.
- Hack T.F. & Degner L.F. (2004) Coping responses following breast cancer diagnosis predict psychological adjustment three years later. *Psycho-Oncology* 13(4), 235–247.
- Hanna D.R. & Roy C. (2001) Roy adaptation model and perceptions on the family. *Nursing Science Quarterly* 14(10), 9–13.
- Heskestad S. & Tjemland L. (1996) [You have cancer. A qualitative study of women's immediate reactions to diagnosis of breast cancer]. *Tidsskrift for Norsk Lægeforening* 116(9), 1067–1071.
- Iwamitsu Y. & Buck R. (2005) Mood state and health, viii. In *Emotional Distress in Breast Cancer Patients. Suppression of Negative Emotion Social Support* (Clark Anita V., ed.), Nova Biomedical Books, New York, NY, pp. 87–119.
- Iwamitsu Y., Shimoda K., Abe H., Tani T., Okawa M. & Buck R. (2005a) Anxiety, emotional suppression, and psychological distress before and after breast cancer diagnosis. *Psychosomatics* 46(1), 19–24.
- Iwamitsu Y., Shimoda K., Abe H., Tani T., Okawa M. & Buck R. (2005b) The relation between negative emotional suppression and emotional distress in breast cancer diagnosis and treatment. *Health Communication* 18(3), 201–215.
- Jadoulle V., Rokbani L., Ogez D., Maccioni J., Lories G., Bruchon-Schweitzer M. & Constant A. (2006) Coping and adapting to breast cancer: a six-month prospective study. *Bulletin du Cancer* 93(7), E67–E72.
- Jonsen E., Athlin E. & Suhr O.B. (2000) Waiting for a liver transplant: the experience of patients with familial amyloidotic polyneuropathy. *Journal of Clinical Nursing* 9(1), 63–70.
- Kolden G.G., Strauman T.J., Ward A., Kuta J., Woods T.E., Schneider K.L., Heerey E., Sanborn L., Burt C., Millbrandt L., Kalin N.H., Stewart J.A. & Mullen B. (2002) A pilot study of group exercise training (GET) for women with primary breast cancer: feasibility and health benefits. *Psycho-Oncology* 11(5), 447–456.
- Kvale S. (1997) *Interviews – An Introduction to Qualitative Research Interviewing*. Sage Publications, Thousand Oaks, CA.
- Landmark B.T. & Wahl A. (2002) Living with newly diagnosed breast cancer: a qualitative study of 10 women with newly diagnosed breast cancer. *Journal of Advanced Nursing* 40(1), 112–121.
- Landmark B.T., Strandmark M. & Wahl A. (2002) Breast cancer and experiences of social support. In-depth interviews of 10 women with newly diagnosed breast cancer. *Scandinavian Journal of Caring Sciences* 16(3), 216–223.
- Landmark B.T., Bohler A., Loberg K. & Wahl A.K. (2008) Women with newly diagnosed breast cancer and their perceptions of needs in a health-care context. *Journal of Nursing and Healthcare of Chronic Illness in association with Journal of Clinical Nursing* 17(7B), 192–200.
- Lauver D.R., Connilly-Nelson K. & Vang P. (2007) Stressors and coping strategies among female cancer survivors after treatments. *Cancer Nursing* 30(2), 101–111.
- Lazarus R.S. (1999) *Stress and Emotions: A New Synthesis*. Springer Publishing Co., London.
- Liao M.N., Chen M.F., Chen S.C. & Chen P.L. (2007) Healthcare and support needs of women with suspected breast cancer. *Journal of Advanced Nursing* 60(3), 289–298.
- Lindstrom T.C. (2002) "It ain't necessarily so"...challenging mainstream thinking about bereavement. *Family and Community Health* 25(1), 11–21.
- Logan J., Hackbusch-Pinto R. & De Grasse C.E. (2006) Women undergoing breast diagnostics: the lived experience of spirituality. *Oncologic Nursing Forum* 33(1), 121–126.
- Loiselle C.G., Lambert S.D. & Cooke A. (2006) The searching, processing, and sharing of breast cancer information by women diagnosed with the illness. *Canadian Journal of Nursing Research* 38(3), 82–104.
- Long L.E. (2001) Being informed: undergoing radiation therapy. *Cancer Nursing* 24(6), 463–468.
- Malterud K. (2001) Qualitative research: standards, challenges, and guidelines. *Lancet* 358, 483–488.
- Manning-Walsh J. (2005) Social support as a mediator between symptom distress and quality of life in woman with breast cancer. *Journal of Obstetric, Gynecologic, and Neonatal Nursing* 34(4), 482–493.
- Manuel J.C., Burwell S.R., Crawford S.L., Lawrence R.H., Farmer D.F., Hege A., Phillips K. & Avis N.E. (2007) Younger women's perceptions of coping with breast cancer. *Cancer Nursing* 30(2), 85–94.
- Montazeri A., Harirchi I.I., Vahdani M., Khaleghi F., Jarvandi S., Ebrahimi M. & Haji-Mahmoodi M. (2000) Anxiety and depression in Iranian breast cancer patients before and after diagnosis. *European Journal of Cancer Care* 9(3), 151–157.
- Nolen-Hoeksema S. (2000) The role of rumination in depressive disorders and mixed anxiety/depressive symptoms. *Journal of Abnormal Psychology* 109(3), 504–511.

- Norwegian Breast Cancer Group (2008) *Brystkreft. Diagnostikk og Behandling. En Veiledning (Breast Cancer. Diagnosis and Treatment. A Guide)*. Norsk Kirurgisk Forening, Norsk Onkologisk Forening, Den Norske kreftforening, Oslo. Retrieved from <http://www.nbcg.no/nbcg.blaaboka.html#Anchor> on 19 December 2008.
- Oloff M. (1991) *Defence and Coping: Self-Reported Health and Psychobiological Correlates*. Dissertation, University of Utrecht, Utrecht, The Netherlands.
- Rees C.E. & Bath P.A. (2000) Information-seeking behaviours of women with breast cancer. *Oncologic Nursing Forum* 28(5), 899–907.
- Reynolds P., Hurley S., Torres M., Jackson J., Boyd P. & Chen V.W. (2000) Use of coping strategies and breast cancer survival: results from the Black/White Cancer Survival Study. *American Journal of Epidemiology* 152(10), 940–949.
- Roussi P., Krikeli V., Hatzidimitriou C. & Koutri I. (2007) Patterns of coping, flexibility in coping and psychological distress in women diagnosed with breast cancer. *Cognitive Therapy and Research* 31, 97–109.
- Roy C. (2009) *The Roy Adaptation Model* (3rd edn). Pearson, Upper Saddle River, NJ.
- Roy C. & Andrews H.A. (1999) *The Roy Adaptation Model* (2nd edn). Appleton & Lange, Stamford, CT.
- Rustoen T. (1995) Hope and quality of life, two central issues for cancer patients: a theoretical analysis. *Cancer Nursing* 18(5), 355–361.
- Rustoen T. & Wiklund I. (2000) Hope in newly diagnosed patients with cancer. *Cancer Nursing* 23(3), 214–219.
- Schou I., Ekeberg O., Ruland C.M., Sandvik L. & Karesen R. (2004) Pessimism as a predictor of emotional morbidity one year following breast cancer surgery. *Psycho-Oncology* 13(5), 309–320.
- Schou I., Ekeberg O. & Ruland C.M. (2005a) The mediating role of appraisal and coping in the relationship between optimism-pessimism and quality of life. *Psycho-Oncology* 14(9), 718–727.
- Schou I., Ekeberg O., Sandvik L. & Ruland C.M. (2005b) Stability in optimism-pessimism in relation to bad news: a study of women with breast cancer. *Journal of Personality Assessment* 84(2), 148–154.
- Shaha M., Cox C.L., Talman K. & Kelly D. (2008) Uncertainty in breast, prostate, and colorectal cancer: implications for supportive care. *Journal of Nursing Scholarship* 40(1), 60–67.
- Stanton A.L., Danoff-Burg S., Cameron C.L., Bishop M., Collins C.A., Kirk S.B., Sworowski L.A. & Twillman R. (2000) Emotionally expressive coping predicts psychological and physical adjustment to breast cancer. *Journal of Consulting & Clinical Psychology* 68(5), 875–882.
- Stanton A.L., Danoff-Burg S. & Huggins M.E. (2002) The first year after breast cancer diagnosis: hope and coping strategies as predictors of adjustment. *Psycho-Oncology* 11(2), 93–102.
- Støber J. (2003) Self-pity: exploring the links to personality, control beliefs, and anger. *Journal of Personality* 71(2), 183–220.
- Stroebe M.S., Folkman S., Hansson R.O. & Schut H. (2006) The prediction of bereavement outcome: development of an integrative risk factor framework. *Social Science & Medicine* 63(9), 2440–2451.
- Taleghani F., Yekta Z.P. & Nasrabadi A.N. (2006) Coping with breast cancer in newly diagnosed Iranian women. *Journal of Advanced Nursing* 54(3), 265–273.
- Tjemsland L. & Soreide J.A. (2001) [Cancer in addition...]. *Tidsskrift for Norsk Lægeforening* 121(9), 1046–1051.
- Ursin H. (1988) Expectancy and activation: an attempt to systematize stress theory. In *Neurobiological Approaches to Human Disease* (Hellhammer D., Florin I. & Weiner H., eds), Hans Huber, Toronto, pp. 313–334.
- Ursin H. & Eriksen H.R. (2004) The cognitive activation theory of stress. *Psychoneuroendocrinology* 29(5), 567–592.
- Walker B.L., Nail L.M. & Croyle R.T. (1999) Does emotional expression make a difference in reactions to breast cancer? *Oncologic Nursing Forum* 26(6), 1025–1032.
- World Health Organization (2008) *Cancer. Screening for Breast Cancer*. Retrieved from <http://www.who.int/cancer/detection/breastcancer/en/index.html> on 19 December 2008.
- Zabora J., BrintzenhofeSzoc K., Curbow B., Hooker C. & Piantadosi S. (2001) The prevalence of psychological distress by cancer site. *Psycho-Oncology* 10(1), 19–28.

The *Journal of Advanced Nursing (JAN)* is an international, peer-reviewed, scientific journal. *JAN* contributes to the advancement of evidence-based nursing, midwifery and health care by disseminating high quality research and scholarship of contemporary relevance and with potential to advance knowledge for practice, education, management or policy. *JAN* publishes research reviews, original research reports and methodological and theoretical papers.

For further information, please visit the journal web-site: <http://www.journalofadvancednursing.com>

Reasons to publish your work in *JAN*

High-impact forum: the world's most cited nursing journal within Thomson Reuters Journal Citation Report Social Science (Nursing) with an Impact factor of 1.654 (2008) – ranked 5/58.

Positive publishing experience: rapid double-blind peer review with detailed feedback.

Most read journal globally: accessible in over 6,000 libraries worldwide with over 3 million articles downloaded online per year.

Fast and easy online submission: online submission at <http://mc.manuscriptcentral.com/jan> with publication within 9 months from acceptance.

Early View: quick online publication of accepted, final and fully citable articles.