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Body awareness and cognitive behavioral therapy for multisite musculoskeletal pain: patients' experiences with group rehabilitation

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ABSTRACT

Background: An extended group program called Mind and Body (MB), based on body awareness exercises and cognitive behavioral therapy (CBT), was offered to a subgroup of patients who had completed their traditional outpatient multidisciplinary rehabilitation and were motivated for further treatment.

Purpose: To explore how patients with multisite musculoskeletal pain experienced participation in the MB program with respect to usefulness, meaningfulness, behavioral changes, and transferability to daily life and work.

Method: The study is rooted in the phenomenological tradition. Individual, semi-structured interviews were performed with eight patients aged 29–56 years. The data were analyzed using systematic text condensation.

Results: Two main themes emerged: 1) New knowledge provided increased body awareness, new ways of thinking, and acceptance of one's own situation. This theme reflected how new knowledge and MB coping strategies were useful in the process of changing problematic thoughts, increasing body awareness, and facilitating acceptance; and 2) Implementing new habits and strategies in daily life revealed how demanding it was to alter behavior, a process that unfolded over time.

Conclusion: A combination of body awareness exercises and cognitive coping strategies was described as helpful in further improving function and coping with pain and stress in daily life and work.

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Multisite musculoskeletal pain; rehabilitation; follow-up program mind and body; body awareness; cognitive behavioral therapy



Introduction

Long-lasting musculoskeletal pain commonly occurs in many areas of the body and is frequently described as multisite, generalized, or chronic widespread pain (CWP) (Carnes et al., 2007; Hartvigsen, Natvig, and Ferreira, 2013). Ambiguity regarding the name and diagnosis of this muscular pain condition confuses the field (Butler et al., 2016). The present study employs the term multisite musculoskeletal pain. Multisite musculoskeletal pain can be defined as pain occurring in several body areas at the same time (Coggon et al., 2013). Compared with localized pain, there seems to be general consensus that multisite pain is often associated with reduced physical function, psychological distress, and poorer prognosis (Bruusgaard et al., 2012; Haukka et al., 2013). Living with multisite musculoskeletal pain may lead to work loss, financial strain, sleep deprivation and reduced quality of life (Biguët et al., 2016; Fernandes

and Burdorf, 2016; Gordon et al., 2017). Qualitative studies support the complexity of the condition and describe living with chronic musculoskeletal pain as an “adversarial struggle on multiple levels” including sense of body and self, “time, relationships and health care” (Toye et al., 2013).

As multisite musculoskeletal pain has a complex etiology, treatment commonly requires a long-term and multifaceted approach using a biopsychosocial perspective. Multidisciplinary programs aim to reduce symptoms, improve function, and help patients develop coping skills to better self-manage their condition. A program including cognitive approaches, cardiovascular training, flexibility, relaxation and body awareness is often recommended (Elbers et al., 2022; Scascighini, Toma, Dober-Spielmann, and Sprott, 2008).

It is often challenging to sustain healthy lifestyle changes following rehabilitation (Häuser et al., 2009; Skúladóttir et al., 2021). Skouen, Grasdal, and

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Haldorsen (2006) found that the effect of multidisciplinary rehabilitation for multisite musculoskeletal pain diminishes after one to two years. It has been proposed that factors such as longer follow-up times, including booster sessions or follow-up programs with CBT, can help patients achieve sustainable change. Matching treatment to patients' characteristics has also been recommended (Backryd et al., 2018). To extend the follow-up time and match treatment to patients' characteristics, we therefore in 2011 developed a program also referred to as the follow-up program "Mind and Body" (MB). MB was offered to a subgroup of patients motivated for further treatment after they had finished the standard group rehabilitation. In a review study of Devan et al. (2018) they found that three factors enabling self-management: self-discovery, feeling empowered and supportive ambiance. The MB integrates elements from CBT and body awareness exercises. Enhanced body awareness is a self-discovery process that can facilitate change of movement and breathing patterns, as well as improve coping and function (Bravo, Skjaerven, Guitard Sein-Echaluce, and Catalan-Matamoras, 2018; Dragesund and Øien, 2020), and CBT may further empower the patient and improve coping (Bernardy, Klose, Welsch, and Häuser, 2018; Gatchel et al., 2014). Being in a group may give a supportive ambiance, and especially a group led by professional health workers (Bravo, Skjaerven, Guitard Sein-Echaluce, and Catalan-Matamoras, 2018; Devan et al., 2018).

Establishing new habits can be demanding. In addition to tools and skills to maintain changes, knowledge and an understanding of why change is necessary are important in the process of altering behavior (Martin, Haskard-Zolnierok, and DiMatteo, 2010). The Transtheoretical Model of Behavior Change (TTM) may provide a theoretical framework to understand the process of behavioral changes (DiClemente, 2015; Korban and Bonsaksen, 2014). The model recognizes change as a process that unfolds over time and includes five distinct stages: 1) Precontemplation (i.e. not ready to learn cognitive techniques and body awareness exercises); 2) Contemplation (i.e. ambivalent, but considering to learn new strategies); 3) Preparation (i.e. planning to learn new cognitive techniques and body awareness exercises); 4) Action (i.e. learning/practicing and implementing new cognitive strategies and body awareness exercises); and 5) Maintenance (i.e. continuing practicing new

strategies and preventing relapses). At each stage of change, a certain set of tasks must be achieved in order to progress to the next stage (Krebs, Norcross, Nicholson, and Prochaska, 2018; Norcross, Krebs, and Prochaska, 2011). Assessing a person's readiness to change is essential as factors like motivation is likely to influence the treatment outcome (Dysvik, Kvaløy, and Natvig, 2012). Identifying a person's stage of change can therefore be useful to tailor interventions, and it has been suggested that individuals in the preparation and action stages are more ready to benefit from self-management programs such as the MB (Zimmerman, Olsen, and Bosworth, 2000). In the field of physiotherapy, TTM has been used as a framework to understand adherence and promote physical activity habits (Bassett, 2015; Joelsson, Bernhardsson, and Larsson, 2017). A deeper understanding of how patients perceive body awareness exercises and CBT as tools to promote sustainable behavioral changes may be useful to tailor treatment. Therefore, the aim of the present study was to investigate how patients with multisite musculoskeletal pain experience participation in the MB follow-up program with respect to usefulness, meaningfulness, behavioral changes, and transferability to daily life and work.

Method

Design

We used a phenomenological approach with semi-structured qualitative interviews conducted six weeks after the participants had finished the MB program. The study took place from November 2016 to June 2017 at a multidisciplinary outpatient clinic in Western Norway. The interview study was approved by the Data Protection Officer at Haukeland University Hospital (# 2016/8394). The Norwegian Regional Ethics Committee regarded approval by the Data Protection Officer to be sufficient (# 2016/809/REK vest).

Study setting

In our outpatient rehabilitation clinic, we offer a standard group rehabilitation program consisting of pain education, clarification of diagnosis, reassurance, exercises, and strategies to facilitate work participation. The program also includes a brief introduction to stress management with some body awareness exercises and cognitive strategies.

Table 1. Participants' description at baseline, after initial assessment at the clinic before any treatment.

Participant	Gender	Age	Duration of widespread musculoskeletal pain	Education	Work status	Prev. sick leave (last 2 yrs)	Painful areas marked on a body drawing
P 1	F	56	1–2 years	College/Univ. <4 years	Full time work	None	4
P 2	F	46	1–2 years	College/Univ. >4 years	Full time work	None	7
P 3	F	44	3–12 months	High School	100% sick leave	1 time	6
P 4	M	55	1–2 years	Vocational college	50% sick leave	None	5
P 5	F	48	>2 years	College/Univ. <4 years	50% sick leave	2–5 times	8
P 6	F	29	3–12 months	College/Univ. <4 years	Full time work	1 time	8
P 7	F	29	1–2 years	College/Univ. >4 years	40% sick leave	1 time	6
P 8	F	53	1–2 years	College/Univ. <4 years	Full time work	2–5 times	5

1) P1= Participant no. 1 given pseudonym "Thea," P2="Sara," P3="Anna," P4="Christian," P5="Pia," P6="Victoria," P7="Sally," P8="Liz;" 2) Gender; 3) Age; 4) Duration of widespread musculoskeletal pain; 5) Education; 6) Work status; 7) Previous sick leave (last 2 years); and 8) Painful areas as indicated on a body manikin by Carnes et al. (2007).

However, in order to maintain changes over time, some patients may benefit from participating in the extended program MB. The MB group emphasized cognitive techniques and body awareness exercises to further improve coping, problem solving, and function.

Participants

Patients were referred from family physicians and other medical specialists to the multidisciplinary outpatient clinic. After a comprehensive examination by a physician, nurse and physiotherapist, and based on the assessment results, patients with multisite musculoskeletal pain lasting >3 months, sick leave <10 months, risk of sick leave or previous history of recurrent sick leave, employed or self-employed, and age between 18 and 65 years were offered standard multidisciplinary rehabilitation. Exclusion criteria consisted of serious medical conditions, pregnancy, severe depression and/or anxiety, ongoing health insurance claims, and receiving disability benefits in Norway. Patients with multisite musculoskeletal pain who had participated in standard group rehabilitation and were motivated to engage in further behavioral changes were considered as candidates for the MB program.

Patients were recruited from three different MB groups, each group consisting of 10–12 persons. The clinicians informed and invited patients to participate in the study. To ensure rich data, we sought variation in age and gender. Seven females and one male, aged 29 to 56, agreed to participate and were included in the interview study. Four of them had participated in the first MB group, three in the second and one in the third group. Background information about the participants is presented in Table 1.

The Follow-Up Program "Mind and Body" (MB)

The MB program consisted of four sessions, each lasting 3.5 hours over a four-week period. The first part of the program, body awareness, relaxation and grounding exercises, was built on Norwegian Psychomotor Physiotherapy (NPMP) and principles developed by Øvreberg described by Anderson, Strand, and Råheim (2007). Lying mindful yoga and body scan meditation were also integrated into this part of the program (Kabat-Zinn, 1982; Lauche et al., 2013). The second part focuses on cognitive techniques to improve function, problem solving, and coping. To increase awareness of thoughts and promote an understanding of the interplay between thoughts, emotions, body and behavior, the "cognitive diamond" and ABCD models (i.e. Activating events, Beliefs, Consequences, and Disputation of beliefs) were used as a framework (Fenn and Byrne, 2013; Lam and Gale, 2000). Theory of habit formation, goal setting, and stress management techniques were also emphasized in the program (Bailey, 2019; Lally and Gardner, 2013). The third part focuses on Tibetan yoga (i.e. Lu Jong, The Five Elements movements) which emphasizes balance and a combination of movement, breathing and mindfulness (lujong.org). Mindful meditation was the last component in the program.

Health professions involved in the MB program consisted of two nurses specialized in CBT and two physiotherapists experienced in body awareness approaches. The role of the nurses was to provide knowledge on cognitive behavioral strategies, and facilitate reflection and group discussions. The physiotherapists guided patients through different types

of body awareness exercises. Patients were encouraged to explore their experiences with the exercises. Between each session patients were expected to practice using the coping skills and body awareness exercises they had learned, and register their experiences with this in a self-management booklet. Six weeks and four months after finishing the program all patients had individual appointments with clinicians at the outpatient clinic to further support them in their recovery work.

Procedure

The first author (MM) interviewed the participants after they had signed written informed consent. The eight interviews, using a semi-structured interview guide, lasted between 40 and 60 minutes. The interview guide consisted of questions about expectations and experiences related to the treatment approach, with a specific focus on behavioral changes. The interviews were audiotaped and transcribed verbatim by the first author (MM), who along with the last author (LHM) read the transcribed data and contributed to the analysis. The first author (MM) was not involved as a therapist in the program. Prior to the study, a pilot interview was conducted together with a nurse at the clinic, and feedback and suggestions for improvements were given. The patients were invited to take part in the interview study while participating in the MB program. Pain marked above and below a horizontal line in the

thoracolumbar region on a body chart was defined as multisite musculoskeletal pain (Kvåle, Ellertsen and Skouen 2001). In addition, we used an overview of pain sites by Carnes et al. (2007) based on markings in different areas on a body manikin.

Data analysis

Systematic text condensation (STC) was used to analyze the interviews (Malterud, 2012). STC is a descriptive thematic cross-case strategy suited for exploratory analysis of qualitative data. STC consist of a four steps analysis: 1) Reading the entire text several times to get an overall impression of preliminary themes; 2) Identifying and marking meaningful text units based on descriptions by MB participants and what they perceived to be useful, meaningful, and transferable to daily life, especially with respect to behavioral changes. The meaning units were sorted into code groups accordingly; 3) Abstracting condensed texts from each code group and subgroup; and 4) Re-conceptualizing the condensed texts by creating synthesized descriptions of the participants' experiences in the MB program. Examples of these analytic steps are presented in Table 2

Results

Two main themes emerged from the analysis: 1) New knowledge provided increased body awareness, new

Table 2. Example of the analysis process from meaningful text unit to condensation and synthesis using body awareness as an example.

Preliminary themes	Meaningful text unit	Condensation	Synthesis
Contact with the body, perceiving the body, awareness of the body.	The code group "increased body awareness" was established. Examples of meaning units: "I have learned to take breaks and release tension in my shoulders and back as well as becoming aware of my breathing patterns." ... "I have become aware of my body and learned to relieve muscle tension when I am stressed." ... "The body awareness exercises have really helped me to calm down and increase flexibility and control pain."	An artificial quotation/condensed text was created for the code group "increased body awareness," e.g.: "From participating in the MB program I have learned to become aware of my body, breathing and my needs. I can perceive if my body is relaxed and tensed and I have some tools to relieve muscle tension and stress as well as calm down my body." The theme "New knowledge provided increased body awareness" (new ways of thinking, and acceptance of one's own situation) was developed.	An analytic text was produced from the subgroup "increased body awareness:" The participants described an increased awareness of their body in daily life and situations. They reported greater awareness of muscle tension, muscle relaxation, and whether their breathing was restricted or flowing spontaneously. The body awareness exercises were felt to be useful and meaningful tools in the rehabilitation process, etc.

ways of thinking, and acceptance of one's own situation; and 2) Implementing new habits and strategies in daily life and at work (Table 3)

Table 3. Themes and subthemes emerging from the analysis.

Themes	Subthemes
1. New knowledge provided increased body awareness, new ways of thinking, and acceptance of one's own situation	<ul style="list-style-type: none"> • Increased body awareness • New thoughts • Accepting one's own situation
2. Implementing new habits and strategies in daily life and at work	<ul style="list-style-type: none"> • Changing habits • Transferring new habits into everyday life and work

New knowledge provided increased body awareness, new ways of thinking, and acceptance of one's own situation

This theme describes how knowledge gained from the MB program increased body awareness and facilitated development of new coping strategies and acceptance.

Increased body awareness

A general experience gained from the MB program was the importance of attention directed toward the body. The participants described increased awareness of their body in daily activities such as sitting, standing, and stressful situations. They described increased awareness of muscle tension, muscle relaxation, and whether their breathing was restricted or flowing spontaneously. Being in contact with the body in stressful situations enabled the participants to let go of muscle tensions, slow down, take breaks, and let their breathing flow. Some reported that increased body awareness influenced the quality of movement in daily situations and that their movements became more balanced and less restricted. Others appreciated that they had learned new and better ways of exercising adapted to their body and needs. The body awareness exercises were experienced to be useful and meaningful tools in the rehabilitation process, providing a repertoire of exercises tailored to each individual's needs. The participants reported that they practiced exercises regularly, and that improvement in body awareness, pain, sleep, functional capacity, muscle tension, and muscular flexibility were achieved.

Thea, 56 years old, experienced that slow and gentle movements focusing on relaxation, free flow of breath, and flexibility were helpful. She put it this way:

I can really feel that the exercises are working because the intense pain I had around my hips has decreased.

My back can get in contact with the floor while I am lying down. I also feel more open in my chest because I have done the psychomotor physical exercises, and I am aware of my breathing, I don't hold my breath when it hurts as I used to. I now know what to do when my body hurts. The pain has not gone, but much has changed and I feel stronger because I now have some good strategies and tools to manage my pain.

Attention to breathing was perceived to be helpful in calming down both body and mind in stressful situations. Victoria, 29 years old, described how breathing helped to calm down her body at work:

I have very busy days at work and there has been a lot of sickness lately. It is stressful. I know it is not good when it gets too much, and my shoulders are hunched up towards my ears. I then try to make time to go to a quiet place and just practice breathing, it helps and calms down my body and reduces my stress.

New thoughts

Many participants stated that they learned to think differently after participating in the MB program. They described the "cognitive diamond" and the ABCD model as useful tools to increase awareness of the interplay between thoughts, emotions, bodily reactions, and behavior. Stress was better managed by learning to identify problematic thoughts and replacing them with more constructive ones. Sally (29 years) expressed it as follows:

By participating in the MB I became aware that stress, worry and overload are parts of my problem. I am much better at letting go of things now and I worry less. If I worry, I do it at a set time early in the evening. At this set time I am allowed to have worrisome thoughts.

By changing unhelpful thoughts, participants reported reduced stress, catastrophizing and pain, as well as improved communication skills. The participants also reported that successful change required practicing the cognitive techniques systematically in their daily life. One participant described making more use of body awareness exercises than cognitive techniques. He also reported that peer support and learning from the other group members were meaningful factors. Other participants, too, described these group effects as helpful in achieving behavioral change. Although all participants identified numerous benefits of being part of a group, one person also reported negative feelings related to less optimistic experiences shared by other group members, making her concerned about her own recovery.

Accepting one's own situation

All participants reported that the MB program provided insight into their own situation. New ways of managing pain, life challenges and stressful situations were acknowledged. Accepting their current situation and learning to cope with pain was felt to be crucial. They described many different ways of facilitating acceptance in daily life. Some focused on accepting that it was ok to take several breaks during housework. Others practiced not being perfect and instead be satisfied with what they were able to do. Delegating tasks, learning to say no, creating space and taking better care of oneself were experienced to be important factors in the process of improving function and coping. When it came to acceptance of pain, different strategies were employed. Some participants found it helpful to shift focus from their pain to what they were able to do and to look for possibilities. Others stressed pain education, coping strategies and social support as factors facilitating acceptance. Thea (56) described acceptance as follows:

It has been important to accept that it takes time to get better. I have also become more aware of my own situation, my breathing and the importance of relaxation, as well as to pay attention to myself and accept that this is ok.

Implementing new habits and strategies in daily life and work

This theme reflected the participants' processes of changing and implementing new habits in daily life. It consists of two subthemes: changing habits and implementing new strategies in daily life and work.

Changing habits

Many of the participants felt that MB training made them aware of both good and bad habits. The process of changing behavior unfolded over time, and awareness of unhelpful habits was the first step in this process. Understanding why change is necessary and learning how to maintain change over time were emphasized. Some participants stated that they became aware of their maladaptive coping strategies and dysfunctional movement patterns while taking part in the standard rehabilitation program, but did not have the tools to achieve changes over time. They described an increased understanding of their pain and that it was safe to exercise due to participation in the standard group. After completing the MB group, they reported further improvement of pain and stress as a result of the new self-management

skills. However, the majority of participants expressed that it was challenging to alter thought patterns, implement new coping strategies, and maintain exercise habits. Setting realistic goals was described to be an important factor in succeeding. Anna, 44 years of age, described the hard work of changing behavior as follows:

Prior to the MB I knew I had some bad habits which I wanted to change. I was a Duracell rabbit, I did not sit down to eat breakfast or drink coffee in the morning. The only time I sat down was at suppertime. This has changed by participating in the MB course. I now sit at the table in the morning and drink my coffee without thinking about everything I have to do later. It took time to change, but I was determined and had decided to sit for 30 minutes and eat my breakfast. This was my goal.

Transferring new habits into everyday life and work

Most of the participants cited many examples of how they implemented their new knowledge in everyday life and work. Becoming aware of stress triggers and bodily reactions to stress helped them manage their stress. Sara, 46 years, said:

I have to acknowledge my duties in a fast-paced work environment. The way I deal with stress, the way I work and think about stress and what strategies I have to manage stress all contribute to improve my work situation. I am also practicing breathing when I am stressed and letting go of tension in my shoulders and back. This was the essence of MB for me.

Many participants underlined how they learned to reduce stress by slowing down, taking short breaks throughout the day and paying attention to their breathing. Delegating and sharing the workload, both at home and at work, was helpful as well. The new strategies enabled them to better cope in everyday life and at work. Anna, 44 years old, expressed how these strategies facilitated her return to full-time work:

I work 100% now, and it goes well. I am better at doing one thing at a time and take regular breaks. Before, I didn't always have lunch. Now I have a lunch break as well as a coffee break. I think this is what makes me able to be at work, as well as slowing down both at work and during my training. I have recognized that I don't need to work for two or three persons. My home situation also plays a role, I sit and relax after work more often than I used to.

Several participants reported that they integrated mindfulness strategies into everyday life. A "mindful break" helped to reduce stress, increase energy, and improve well-being. They mentioned different ways of practicing

mindfulness, such as mindful walking, mindful meditation, and being aware of what was happening during daily activities.

Discussion

The main purpose of this study was to gain insight into how patients with multisite musculoskeletal pain experienced participating in the MB program. From the participants' point of view, MB led to an increased awareness of the interplay between body and thoughts as well as enhanced body awareness. This increased awareness seemed to be the first stage in the process of change. By using their new cognitive management skills and the body awareness exercises, participants described better function and coping with pain and stress. Acceptance of their own situation and acknowledging the time it took to improve were perceived to be essential in altering behavior. Integrating new habits and changing behavior were experienced as hard work in a process that unfolded over time.

New knowledge, increased body awareness, new ways of thinking and acceptance

Knowledge about the interplay between mind and body and the application of coping strategies and body awareness exercises were perceived to be useful in the management of multisite musculoskeletal pain. Participants in the present study described that the MB program facilitated development of self-management skills, enabling them to take responsibility for their own health in line with a person-centered care approach (Hutting, Johnston, Staal, and Heerkens, 2019; Hållstam, Stålnacke, Svensen and Löfgren 2015).

All participants in our study reported that stress affected them to some degree in daily life and work, and that learning new strategies was helpful in dealing with stress. Stress management training, CBT and MBSR have previously been found to be beneficial in the treatment of chronic pain and fibromyalgia (Cash et al., 2015; Karlsson, Burell, Anderberg, and Svärdsudd, 2015; Khoo et al., 2019) supporting the findings of the present study. Stress can impact people's social lives, including work participation, relationships, identity, and daily activities. Stress can also affect the autonomous nervous system (i.e. biological systems) and influence mood, concentration and well-being (i.e. psychological perspectives) (Mengshoel et al., 2021). It is therefore paramount to address these issues in connection with rehabilitation.

The majority of participants in the present study described that the body awareness exercises helped

them understand bodily reactions such as increased muscle tension and restricted breathing caused by pain and stress. As such, increased body awareness may also result in new ways of thinking. Body awareness exercises were also described to relieve muscle tension, develop contact with the body and oneself, and improve sleep and well-being. This is consistent with findings from other studies (Bravo, Skjaerven, Guitard Sein-Echaluce, and Catalan-Matamaros, 2018; Dragesund and Øien, 2020; Olsen and Skjaerven, 2016). Understanding bodily reactions to stress and becoming more in touch with one's own body and needs have been described to "prevent and reverse new episodes of pain" in women who had recovered from fibromyalgia (Grape, Solbrække, Kirkevold, and Mengshoel, 2015).

The present study employed a number of different body awareness exercises. The reason for this was to give patients a variety of exercises to choose from, tailored to each individual's needs (Booth et al., 2017). However, this makes it difficult to identify the particular body awareness exercises that were most beneficial. All the different mind and body approaches in the follow-up program, including CBT, aim to increase awareness of the body, self and mind to "help optimize the self-healing process" and to improve self-regulation in accordance with McSwan et al. (2021). However, other approaches such as being out in nature and doing aerobic exercises can also have an impact on well-being and health (Booth et al., 2017; White et al., 2019).

Improving from multisite musculoskeletal pain was described to be hard work, involving acceptance of one's own situation, acknowledging the time it takes to improve, focusing on self-care, and employing new coping strategies. This is in keeping with findings from other studies (Biguet et al., 2016; Devan et al., 2018; Grape, Solbrække, Kirkevold, and Mengshoel, 2015) suggesting that redefining oneself, self-efficacy, social support, practicing self-management strategies and a sense of empowerment can promote acceptance. Women recovered from fibromyalgia have also described the process of recovery as complex and challenging. Factors promoting recovery were described as a better understanding of themselves and their illness, creating hope to get better, gradually building up their tolerance and finding the right balance in life. Reconnecting with the body also seemed to be an essential part of the recovery process (Eik, Kirkevold, Solbrække, and Mengshoel, 2022).

Being stuck in a biomedical understanding of pain, lack of motivation and social support, as well as distress have been described as barriers to acceptance (Devan et al., 2018). The nurses' role as facilitators in group

discussions in our study, and their ability to create a therapeutic alliance together with social support from peers, may have promoted adherence to practicing the new self-management strategies. Therapeutic alliance has been found to be a factor facilitating self-management (Devan et al., 2018). However, one person in our study described some negative feelings related to less optimistic experiences shared by other group members. Therefore, it is important that group leaders have several strategies to deal with varying participant reactions and are aware of that they could exist (Marmarosh, 2021).

Change as a process unfolding over time

Based on the descriptions of our participants, the first step in the process of changing behavior seemed to be an increased awareness of the interplay between body sensations, unhelpful thoughts, and nonproductive habits. According to CBT, becoming aware of the relationship between thoughts, emotions and bodily reactions is a prerequisite to facilitating behavioral change (Beck and Beck, 2011; Fenn and Byrne, 2013; Lam and Gale, 2000).

The process of altering behavior was experienced to unfold over time, well in line with TTM. According to the model, readiness to alter behavior is a process that progresses through five stages (Krebs, Norcross, Nicholson, and Prochaska, 2018). Our MB program extended the usual multidisciplinary timescale, a factor that may have positively influenced results by allowing problematic thoughts and behavior to change over time in order to implement new habits. Due to organizational issues in connection with the standard group and the MB program, approximately four months had passed from the end of the first standard group to six weeks after the MB program when the interviews took place. Even more time had passed since the initial assessment at the outpatient clinic. This adding time to the changing process. It is likely that the standard group started off the rehabilitation process by providing a better understanding of pain and one's own role in the recovery process, and thereby allowed for further self-management to be developed while participating in the MB program.

The MB program may be described as an action-orientated self-management approach that is likely to be most effective with participants in either the preparation or action stage. It has been suggested that treatment including CBT can work well in the preparation, action and maintenance stages (Norcross, Krebs, and Prochaska, 2011; Zimmerman, Olsen, and

Bosworth, 2000). Therefore, MB was offered to a subgroup of patients with multisite musculoskeletal pain who were ready to continue to work with both cognitive techniques and body awareness exercises. It has been suggested that "readiness to change" is an important factor in ensuring successful self-management (Kongsted, Ris, Kjaer, and Hartvigsen, 2021).

Criticism has been raised against the excessive use of action-orientated health programs such as MB, which are not tailored to patients in the pre-contemplation and contemplation stages (Prochaska, 2003). It has been proposed that these patients may benefit more from individual treatment sessions using techniques such as motivational interviewing to increase awareness and "begin to think about a change" (Zimmerman, Olsen, and Bosworth, 2000).

The participants in the present study described the action stage, which involves the process of changing thoughts, implementing new coping strategies and integrating body awareness exercises into daily life, as hard and time consuming. The challenges of achieving behavioral change are well described in the literature on habit formation (Gardner, Lally, and Wardle, 2012; Lally and Gardner, 2013). Participants in our study also expressed that realistic, tailored, and obtainable goals were important in achieving and maintaining changes. Goal-setting has been suggested as a helpful strategy in the process of changing behavior (Bailey, 2019).

Methodological considerations

The present study has some limitations. The interviews took place six weeks after participation in the MB group, a stage at which it may be easier to remember details regarding the MB program. It might have been useful to conduct the interviews at a later stage to gain knowledge of the participants' abilities to maintain changes over even longer time periods.

The first author and interviewer (MM) was not involved in the treatment of participants. However, with a background in physiotherapy and clinical experience, one's own knowledge and preconceptions can influence the analysis and interpretation of data. Follow-up questions during the interviews and the topics that were addressed could have been influenced by the first author's knowledge. Efforts to put aside personal assumptions and beliefs were emphasized. To establish credibility, the other authors were also involved in the analysis and interpretation of the data (Bengtsson, 2016).

Since this study was carried out with relatively few informants some years ago, it could be useful to conduct new interviews with the MB participants to investigate possible new experiences with the program and thus build on the knowledge from current study. To gain deeper knowledge of participants' experiences with the standard group it may also have been useful to interview participants after the standard group and then following the MB program.

We included eight interviews in the study. Sample size in a qualitative study is dependent on the study aim, sample specificity, use of established theory, quality of dialogue, and analysis strategy. Our study aim was narrow, all participants shared the experience of participating in the MB program, and we used an established theory and analysis strategy. Based on these criteria, we ascertained that the sample size was sufficient (Malterud, Siersma, and Guassora, 2016).

One limitation of our study may be the fact that we are unable to clearly distinguish between the yield from the standard program and the MB program. The programs may be considered as a continuous learning process with one building upon the other. However, the aim of the study was not to dive into the differences between the programs, but rather to explore the benefit of the additional MB program.

Few negative experiences were reported in connection with the program, even though questions on negative experiences were included in the interview guide. Another explanation may be that participants who volunteered for the present study may be those who benefitted most from the MB program and were therefore more eager to participate in the interviews. MB was offered to a subgroup of patients who were motivated for further rehabilitation, many of them with a higher education. These factors may have influenced the results. It is also worth noting that only one participant had multisite musculoskeletal pain lasting longer than two years, and many participants had a short history of sick leave, factors that may have facilitated behavioral changes. Early and targeted intervention for this patient group may also have played a role.

Conclusion

Our study provided a deeper understanding of participants' perspectives on the MB program, and the way in which they transferred treatment experiences into daily life and work. Based on their descriptions, CBT and body awareness exercises were experienced to be useful self-management skills that improved coping

and developing contact with the body. This again seemed to enhance self-regulation in daily life and at work. They reported the process of changing habits to be hard work, involving acceptance of their own situation. Self-management may have been facilitated by participants' readiness to change, as all of them were either in the preparation or the action stage, according to TTM. The knowledge gained from participants' descriptions in this study may be useful in tailoring treatment to other patients with multisite musculoskeletal pain.

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