

## STAYING ACTIVE DESPITE PAIN

*Pain beliefs and experiences with activity-related pain among outpatients with chronic musculoskeletal pain*

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## ABSTRACT

*Objective:* Maintain a level of activity and exercise is advice often given to patients with chronic musculoskeletal pain, but many patients find physical activity painful and, consequently hesitate to move. Disability seems to be associated with fear of pain and there is a need to enhance our understanding of patients' beliefs and attitudes about how fear of pain affects physical activity and why some people are active despite their pain. The aim of this research was to understand thoughts and experiences about pain related to activity in patients with musculoskeletal disorders; the situations that promoted pain and if and how fear was expressed.

*Methods:* Five women and five men, recruited from a larger survey on fear, pain and physical activity were interviewed. The interviews were analyzed by qualitative methods for themes about participants' pain and beliefs about pain.

*Results:* By interpreting signals from the body, patients calculated and planned their daily life to stay active despite pain, and participate in their social lives. Pain was a signal with diverse meanings which, with the influence of time, seemed to change from a sign of danger to a reminder to moderate their level of activity. By experimenting with different activities, patients learned how to gradually remain or become physically active.

*Conclusion:* Patients strived to stay active despite pain. The interpretation of pain changed over time, from a threatening signal to a signal with diverse meanings.

*Practice implications:* The findings provide insights that may improve the educational rehabilitation of patients with musculoskeletal pain.

**Key words:** Muscle pain, physical activity, pain beliefs, fear avoidance, qualitative research.

## INTRODUCTION

Chronic musculoskeletal pain is a common condition that negatively affects many aspects of peoples' lives and is one of the most frequent reasons for disability pensions in Norway (1). Patients' beliefs, experiences and actions associated with pain are significant factors that contribute to pain perception (2;3) and hence are important in our understanding of pain development and management. In the rehabilitation of patients with chronic muscular pain, staying active is important and exercise is often proposed as a treatment modality (4;5). However, common clinical observations indicate that patients report increased pain during exercise and activities of daily living. Research has described how patients with low back pain restrict their physical activity because they are afraid of provoking pain (6), and that low back pain, even when described as moderate, forces patients to be aware of movements and physical activity (7).

Inactivity among individuals with musculoskeletal pain may be explained by pain-related fear of physical activity, and several quantitative studies have investigated the relationship between pain related fear and disability (8;9). From a theoretical perspective, the fear avoidance theory offers one explanation about how musculoskeletal pain transitions from acute to chronic pain and brings about disability (9;10). In essence the interpretation of an injury, or a pain experience, varies between individuals. If pain is interpreted as very threatening then some individuals may develop pain-related fear of physical activity and avoid activities and/or become hyper vigilant to situations that provoke pain. This interpretation of pain as fearful can eventually lead to disability (8;10). As a consequence, rehabilitation as well as general activities and work may become difficult, bringing patients into a vicious circle of pain, social withdrawal, depression and inactivity (10;11). However, withdrawal from situations that provoke pain is a natural response and avoiding pain by limiting activity may be a rational behavior (5). As well, it is likely that pain intensity is an important reason for limiting activity (8).

Both psychological and physiological factors influence pain disability, and treatment often includes educational approaches as well as exercise (12;13). If cognitive approaches are to assist patients to cope with chronic pain, assessing and lessening fears associated with activity is important (8). In a recent survey of pain related fear and physical activity we found that patients who described increased pain during activity, still appeared to be physically active, and even exercised (14). This finding raised for us questions of what prompts people to maintain their activity despite pain. In the rehabilitation process of patients with chronic muscular pain, patients' attitudes and beliefs are important factors, and to determine the patients' perspectives, qualitative research methods are important (15). Researchers who investigate the experience of muscle pain indicate that pain restricts physical activity and that pain management related to physical activity is influenced by the norms of society (16;17). However, we lack information about patients' perspectives of activity and muscle pain and how fear is a part of it. Greater understanding in this area will contribute to health care professionals' knowledge about how to advise and assist patients to manage their pain. The aim of the present research was to understand more about activity related pain in patients with chronic musculoskeletal disorders, and also if and how fear is a part of it.

## METHODS

Research methods as described by Malterud (18) guided this research. These exploratory methods were selected to enable the researchers to understand the participants' experiences and to interpret these experiences in a meaningful manner. Data were drawn from qualitative interviews (19) with outpatients at the Department of Physiological Medicine and Rehabilitation. Semi structured, open ended questions provided an opportunity for the interviewees to give detailed and rich descriptions of their experiences and beliefs concerning why they continue to exercise despite experiencing pain.

The study took place from the period of March to June 2006. In a previous survey (14), one hundred and twenty outpatients who attended this department consented to participate in a survey about physical activity and pain. Included in the survey package

were self report questionnaires about the participants exercise habits and whether they experienced pain during physical activity. Also included was an invitation to participate in a follow-up study to examine their experiences concerning activity-related pain in more detail. Of the one hundred twenty individuals, fifteen, who met the criteria described below, were invited to participate in the present study and ten gave informed consent. These were contacted by telephone by the first author and given additional information about the study before they were interviewed. The study was approved by the Regional Ethical Committee in Northern Norway (Number: 5.2005.828).

## Participants

The participants were selected based on answers from a survey comprising demographic data, pain variables, standardized questionnaires, and questionnaires developed by the researcher on physical activity and pain (14). Participants were selected for diversity regarding duration of pain, pain location, exercise habits and pain during exercise and general activity. Both men and women were included as gender differences in pain are known (20) (Table 1).

Three participants had a college education, five had vocational training and two had high-school education. Six were married, three were divorced and one was single. Nine had children. Six participants were currently in a full time work; three were on sick leave, and one was applying for 50 % disability pension. One participant was taking an occupational retraining program. The participants had endured their pain from one to more than ten years. Two participants had undergone surgery for back pain. Four had participated in an exercise/learning group organized by the hospital's Department of Physiological Medicine. This group uses exercise as well as group discussions and educational tools as approaches to keep patients employed or returned to work.

[Please, insert Table 1 here]

## Data collection and analysis

The interviews were held at a meeting room at the Research Center. One author ED, interviewed the participants using an open-ended interview guide (19). The guide was developed with thematic questions concerning pain related to general activity, at work and during exercise. The main questions were: 'Please try to describe your pain', 'Please try to describe your activities during an average day', 'In what situations do you feel the pain?', 'What are your thoughts and feelings about the pain?', 'What is the hardest part of being in pain?' Participants were also asked about family traditions, family history of pain, work and their experience with the health care system. They were encouraged to share their experiences by stories and examples. The interview guide functioned as a framework, but as issues arose then relevant concerns and related themes were explored. The interviews, which were approximately 60 minutes long, were audio-tape recorded and then transcribed verbatim by a professional secretary. Notes were taken during and after the interviews, and an audit trail was kept to have a record of the researchers thinking and demonstrate the rigor in the research methods (21).

Data ( about 68 000 words) were analyzed using an interpretive approach, described by Malterud (18;22). The focus of the analysis was to look for the participants' descriptions and explanations of pain associated with different activities and how fear was expressed in these circumstances. The analyses started with the first four interviews. Following the principles described by Malterud (18) data were read independently, and then discussed, by two of the authors (ED and TH) to obtain an impression of the main themes (22). These themes were pursued during the subsequent interviews. Each interview was searched for meaning units, which represented relevant aspects of the participants' experience with activity related pain. The meaning units formed codes which captured phenomena in one or a few words. The data within each code was further condensed and compared within and across interviews to form categories (22;23). To structure the data re-reading and discussing alternative interpretations were necessary analytic strategies. An iterative process, meaning moving back and forth between design and the data was

used throughout the whole research process (22). An example of analysis illustrating the development of the subcategories and categories is presented in Table 2. A preliminary summary of findings were read and discussed by three authors (ED, TH and AD). Peer discussions were held throughout the analyzing process, also with other members of the research team who were not data collectors. Discussions were also held with the health professionals who treated the patients at the Department of Physical Medicine including physiotherapists and physicians, and researchers from other professions. Finally, each interview was re-read to assure that all important patterns had been captured. The data were saturated meaning that findings about the explored phenomena were rich (24) and no new data emerged from re-reading of the interviews.

[Please insert table 2 here]

## FINDINGS

The major theme was *staying active despite pain* and the three sub themes were *interpreting signals from the body, from uncertainty to self-knowledge* and *participating in social life*. This major theme best described why, despite sometimes increased pain during physical activity, most participants continued to be active through exercise, leisure time activities and work.

Table 3 shows the relationship between the subcategories, categories, subthemes and the main theme.

[Please insert table 3 here]

## Interpreting the signals from the body

Pain was a signal from the body to self, and was subject to ongoing awareness and interpretation. When pain was associated with physical activity, it was mainly understood as a physiological problem rooted in body dysfunction. Whereas, sometimes general everyday pains were described as connected to 'stress' or 'tension': "In a work situation when I feel uncertain and nervous I really feel my muscles strike" (No. 7). A single mother, struggling with finances said:

I do not get afraid [when pain is strong...] but everything that's hard and difficult becomes even more hard and difficult. And when it really hurts I think to myself: 'you're struggling with a lot here now, X [saying her name]'. (No. 6)

This participant attributed her pain to both physical and emotional causes. She described in detail the bio-mechanical structures in her painful area, and explained how bone rubbed against bone during physical activity. As well as a physical cause, she explained the close connection between pain and her bad feelings about her life. This dual explanation of the physical and emotional causes of pain was common among patients with a long history of pain.

### *Differentiating between the 'body' and 'me'*

When the participants described the relationship between their pain and their bodies, they used terms such as 'take the signals' and 'my body tells me'. There seemed to be a 'real me' and a 'body me' and it was important for the 'real me' to listen to the 'body me'. These signals had diverse meanings and learning about them was an important aspect of staying active. To understand the meaning of the pain signal, it was important to 'read the signs' correctly.

I have been biting my teeth and going on. And maybe that's a mistake; I haven't been reading the signs well enough. (No. 5)

### *Negotiating with the 'body me'*

Some participants described how they tried to overrule the body by ignoring the signals, and in that case there was a dialogue between the 'body me' and the 'real me.' If the body signal was ignored, it could have serious consequences as the pain could intensify. One participant indicated that she refused to pay attention to her body hoping this would diminish the pain:

The pain is my enemy and I don't need to talk to my enemies. I imagine that if I don't give it response it will not answer back to me. (No. 1)

Conversely, she described how she learned to recognize the pain not so much as an enemy, but as a signal to move or to calm down. In response to this signal, she choreographed her movements during work and activities of daily living so that she could carry on with her activities:

If I have been sitting on the couch too long I get a signal from the body saying: 'Now you have spent too much time on the couch, you have to get up and do something. My body tells me that it is enough. (No. 1)

Attending to the body was a process of learning about when to extend oneself and when to rest. Self-critique sharpened attention to pain symptoms while participants learned that signals from the 'body me' cannot be overruled.

### From uncertainty to self knowledge

Participants indicated that the influence of time, experimenting and learning about their pain were moderating factors in developing an understanding about their pain and lessening their fear of activity.

### *Influence of time*

Initially, pain signified potential danger. Participants who experienced a sudden onset of intense pain were frightened especially when the pain was followed by other symptoms, such as numbness. “When this first happened to me I thought: Will I ever walk again?” (No.10). Over time, the interpretation of pain seemed to change. Participants who experienced long term pain with exacerbations and remissions, interpreted activity related pain as a signal to rest, and pain in general as a response to emotional distress. When participants were uncertain about the meaning of the pain signals and when they considered the future, they became fearful. When this participant was asked if she ever felt frightened about her pain, she answered:

Maybe a little bit. You think – will it pass or not, things like that. But I have a sense of humour that helps me. Sometimes I bend over, and I’m stuck – I cannot rise again. And then I laugh rather than get afraid, because I know it will pass. A little more, maybe, [afraid] when I think about..... Will the pain ever go away? (No. 1)

### *Experimenting, developing trust & acquiring knowledge*

As pain lost some of its threatening power, some participants indicated that they experimented and learned what worked. From this experimentation, they learned to trust their bodies. When physical activity was perceived as beneficial, they eventually established an exercise routine even if it contradicted the health care professionals’ advice. In those situations their bodily experience overruled medical advice, and provided the guidelines to improvement.

I was supposed to take it easy..., but you have to be moving. Being stuck in a chair made the whole thing worse... Moving – whatever sort of activity... To me it worked well to stay active, so that’s what I did.  
(No. 8)

To some, the hospital's treatment group also provided skills and knowledge which diminished participant's uncertainty:

It was really good to learn that you have to find out for yourself what you can manage... The way I understand it, I won't destroy anything in my body [by being physically active]. (No. 7)

### *Seeking explanations*

Uncertainty about the meaning of pain signals made participants worried about the safety of their physical activities. The participants, especially in the early part of their pain experience, were looking for explanations and objective proof about what caused the pain. A physical explanation (such as an X-ray showing a herniated disc) was described as a "tremendous relief...., like a 100 kilos fell off my shoulders" (No. 8). A diagnosis, especially if accompanied by objective proof, seemed to provide participants with an incentive to learn as well as legitimizing their pain. The previous quote is from a man who waited for 5 months to get an X-ray. When asked why he did not read about his condition earlier he answered: "What would I read about? I did not know what it was."

### Participating in social life

#### *Pain and social situations*

Pain affected many social situations and social roles. The amount of pain that participants were willing to endure was related to how important that activity was to their social roles. Male participants valued work and being regarded as trustworthy employees able to support their families. The women were particularly concerned that children did not suffer because of their mother's pain. A single mother, with a long history of back-pain, was dejected about the amount of time and effort she put into being a 'normal' mom:

I am not a person who easily gives in. That's why I think it is so unfair – why me? There are so many things I could have done. And this pain ruins

so much [for me]. I have been suffering through many camping trips with my children. (No. 4)

By calculating and planning all daily activities, physical or otherwise, participants ensured their ability to participate in social and occupational roles. All activities, from basic daily routines to major events, were gauged to consider the intensity and duration of pain that might follow. Attending to pain symptoms and calculating how to do the necessary everyday tasks with minimal pain consumed considerable energy and time. Depending upon the nature of the activity, sometimes they chose pain as an acceptable risk.

Sometimes I know maybe I have lifted something heavy and though I try to do it carefully, I know the risk about the following day being painful. But then I think; that's OK, yes.... I know it is happening and I have to cope with it for a day or two, and then it's over. (No. 3)

#### *Experiencing benefits of physical activity*

Several participants described their childhoods as physically active, and they were accustomed to outdoor activities such as skiing and hiking. Consequently, they tried to exercise on a regular basis and described a variety of activities including swimming, biking, and weight-lifting. Some participants also described that during a period of physical activity pain would disappear. Walking was their main exercise which seemed to bring relief through gentle movement and gradually warming muscles.

While some of the participants considered exercise as a pleasure in itself, others were more concerned with the exercise as a beneficial activity and part of a healthy lifestyle. Several participants had parents and siblings with similar pain problems. This familial tendency was a concern as they feared their children would suffer similar pain problems. A father, who suffered from back pain, commented that his son had a similar complaint, but he 'kicks him out to play', as his mother did to him as a child.

### *Differentiating the quality of pain*

Exercise-related pain had a contextual aspect as participants were able to differentiate between pain during exercise, activities of daily living and work. This phenomenon was most evident when the work situation was sedentary, stressful or required heavy lifting. For example, two of the most active participants lifted weights for exercise, but both complained that lifting at work was painful. When pain occurred in an exercise situation, it was often a familiar and anticipated phenomenon and was viewed positively.

The pain is very different, depending on where I feel it, from which part of the body. None of them [bodily pain] feels good. It's a totally different thing if I exercise. Those are good pain[s]. (No. 1)

## **DISCUSSION**

### Interpreting signals from the body

Pain in everyday life may have diverse meanings, and a common perception is that pain is a sign of damage and thus danger (25). The interpretation of pain as a dangerous sign indicating damage may be a serious threat to self, and making a distance between the pain and self may bring consolation (26). Osborn and Smith in their research of the experience of low back pain described how pain in everyday activities is a reminder of the painful body, hence the painful body is dejected or alienated, to preserve the preferred self. They introduce the construct 'Not me' to describe how the painful body or body part is separated from self. This concurs with our findings of the 'body me' (Not me) and the 'real me' (preferred self). In our findings as well, sometimes making a distance between the 'body me' and the 'real me' seemed to provide a strategy to manage pain related fear. However, the negotiation between self and the body – the ongoing symptom attention, interpretation and activity regulation – seemed to be a way to include the body and the body's language (pain) as a part of self. Negotiation implied the recognition of the body's signals, and the possibility to act upon these signals. Thus, interpreting signals and

negotiating with self seemed to enhance the participants' perceived control, thus reducing fear related to activity.

#### From uncertainty to self-knowledge

An interesting result is participants' descriptions of learning by experimenting and through their own bodily experience. The learning process involved the re-interpretation of pain signals from dangerous to other diverse meanings. According to the theory of fear avoidance a vicious circle of pain and activity avoidance develop in some pain sufferers contributing to the chronification of pain and physical disability (10). Fear is a natural reaction to pain, and the meaning of pain influences how it is experienced (27). To re-interpret pain as a non-dangerous signal thus is a challenging change. The importance of personal bodily experience is described by other researchers, who emphasise how (positive) bodily experience and reflecting upon those experiences can open new perspectives and provide incentives to change and to learn to make your own limits (28-30). For many participants the main incentive to change their perceptions of activity related pain was to experience what they were able to do, despite pain, and how they were able to manage more successfully as time passed. For participants in this study, fear of pain consequences seemed to be most evident during their first experience of pain. Thus it seems like fear of movement was a result of pain provoked by activity, and the fear diminished as they learned how to cope with pain.

#### Participating in social situations

Participants placed a high value on being able to participate in social situations but this presented a dilemma as they were conflicted between the desire to be taken seriously as a person with special needs and the desire to be included in social situations as a healthy person. To be considered a person with special needs, they had to present symptoms – show their pain and discuss it. Being too 'sick', however, would exclude them from their social roles and emphasize their limitations. For most part, participating in their social

life outweighed pain related fear of activity, but calculating the pain and planning activities of daily living was a necessary strategy. In this contextual perspective low back pain as an example has been described as ‘an ongoing process, conditioned by the relationship between the person and his/her environment’ (3)(p.29). The concept ‘field of disease-actions’ describes how individuals develop an understanding of how to manage the disease by self-monitoring and regulating activity and thus controlling its manifestations and symptoms. Attention to symptoms in different social situations helps build personally valid disease models, based on everyday life. Different situations in every day life, that demand involvement in the sense of an activity, contribute to an individual’s changing life story (3). In this perspective the findings in this study indicate that staying active represents an important and pervasive tradition that enables individuals to express joy in living, be determined to carry on despite the pain, and is the key to participation in valued life roles. Through symptom attention and by modifying activities participants were able to take part in leisure time and other general activities despite, at times, paying the price of increased pain. Similar findings are presented by Borell et al who describes how chronic pain sufferers endure pain to be actively engaged in various social contexts with, and for, others (31). Not complaining and doing your best to participate were recurrent themes among participants in the present study as well.

### Staying active despite pain

Despite some uncertainty about how to interpret the pain, the participants remained physically active, although sometimes they moderated their activities. When they did restrict their movements, it was a calculated choice that weighed the importance of an activity against a predicted painful outcome. Thus, avoidance of pain in some situations was evident, but the question whether they avoided activity because of fear remains unclear. These results concur with others who found that avoidance of activity is rooted in the fear of provoking pain, not necessarily the fear of injuring the body, and thus maladaptive movement is established (7;32). Other studies present a more nuanced perception of pain related to movement within different cultures (16). Some participants perceived pain as less distressful

in exercise than in work situations. A proposed difference between exercise and the work situation is lack of control. At work, refusing or planning what and when you will lift is not optional as it is in a health-studio. It is reasonable to assume that being able to control the situation which normally provokes pain, reduces pain-related fear and consequently reduces perceived pain (33;34). Fear of pain, as well as fear of the unknown is common in many situations (35;36).

## IMPLICATIONS FOR PRACTICE

Fear of pain is a phenomenon that may be expressed through variable experiences, and worries and fear for the future evidently is important to patients with chronic musculoskeletal pain (37). If fear of pain associated with the future is a barrier to activity, it is important for patients to learn that activity does not ruin the body. Results in this study indicate that time and learning played a role in moderating the fear of pain and movement. The combination of learning and group participation may decrease pain and fear of movement as well as strengthening the ability to manage pain through increased physical activity and trust in personal experience (12;38;39). Therefore, discussions and practicing in the context of guided group treatment may offer a chance to reflect upon what symptoms mean and how they can be managed. Having a diagnosis, or at least an explanation for their pain, may be the first step in making meaning out of an unclear and frightening situation (40).

Patient's expertise should be included in treatment regimes relevant to patient's everyday life. Cultural norms and values may well be influential in the interpretation of painful physical activity, and should be taken into consideration when addressing this issue in the clinical setting. The participants in our study mentioned walking and taking part in outdoor life as a main leisure time physical activity. These are activities which seem to be preferred in the general population in Northern Norway (41), and may be well suited in rehabilitation treatment. If possible, work situations should be modified to include choice and control as these were important to the participants. Patient's own histories should be an integrated part of caring for patients with musculoskeletal pain. Health care provider's disbelief in patient's

competence to make decisions on their own behalf may occur as a significant problem to patients with chronic illness (42). Failure to comply with medical recommendations may be a logical, rational and thoughtful process (40), and should be discussed respectfully with patients.

## METHODOLOGICAL AND ETHICAL CONSIDERATIONS

The study's limitation and some of the methodological and ethical issues merit discussion. In qualitative research a relationship is established between the researcher and the participant; which presents some ethical problems. One potential problem may be the participants' expectations that they will receive help in some way (43). The researcher advised the participants that she did not provide any treatment and the interviews took place in a building separated from the clinic. Yet, the researcher's experience as a therapist made interviews sometimes challenging, as the role of the interviewer and the therapist is quite different, yet the same issues arise. The intimate atmosphere of an interview situation may lead participants to reveal information (19;43). In the present study, some participants gave information on private, sensitive matters. This information was not used, and confidentiality maintained throughout the research process.

Purposeful sampling gave diversity to the data with respect to the participant's pain and exercise habits (23), and the data were saturated in the sense that they gave rich descriptions of the phenomenon (24). However, for example patients with a shorter history of pain, and a follow-up interview, would have provided information especially about the time dimension, which seems important in this study. The semi structured interviews were suitable in this case, as the topic was defined, yet provided openness to deviate from the topic. Hence, thick descriptions of the participants' experience of activity related pain were obtained. However, as the pain experience permeated the participants' lives, it was sometimes challenging to define the most relevant data. The researcher who interviewed the participants, is a nurse experienced with pain treatment. This is a strength of the study's trustworthiness as it enhances the researcher's ability to capture the realities of the participants' stories (44).

However, it may also introduce some problems as the researcher will be influenced by previous knowledge and experience, and preconceptions are not always clear to the researcher. Peer discussions about alternative interpretations of the findings thus were important tools to enhance rigor in this study. To further address credibility in the interpretive process, categories and themes constructed from the data were linked to existing literature (24). This study took place in Norway, where staying active is regarded desirable as a life style and physical activity is promoted by health care authorities (45). We suggest that this is an important context when interpreting the results. However, musculoskeletal pain is a problem in many western societies and we think the results of this study may be transferable to similar settings.

## **CONCLUSION**

There were two important incentives for participants to stay active despite pain. One was the experience and perception of physical activity as beneficial, and the other was that activity was the key to participating in social life. The participants' pain experience and interpretation of the pain signal, including fear, differed according to situation and time. Experimenting and learning seemed to make fear avoidance behavior less evident. This required symptom attention and activity regulation, thus calculating and planning became an integral part of everyday-life. Hence, a contextual view of pain related to physical activity and pain-related fear is supported by the findings. The different dimensions of pain-related fear should be further investigated to bring a deeper understanding of patients' perspectives.

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**Table 1 Description of participants**

<b>Participants, gender and age</b>	<b>Main pain location</b>	<b>Duration of pain</b>
Female, 31 years	Pelvic pain	6 years
Female, 39 years	Low back/leg	> 10 years
Female, 45 years	Low back/pelvic and neck	8 years
Female, 43 years	Neck/arm	4 years
Female, 50 years	Neck/arm	> 10 years
Male, 43 years	Neck/head	> 10 years
Male, 47 years	Neck/shoulder/breast/low back	> 10 years
Male, 36 years	Low back/leg	5 years
Male, 36 years	Low back/leg	6 years
Male, 33 years	Low back	1 year

**Table 2** Example of analysis

<b>Meaning unit</b>	<b>Condensed</b>	<b>Subcategory</b>	<b>Category</b>
<p>“And then I think..., when they explain this to me..that you are in pain because of this and that..I think that’s fair. OK, I accommodate to that.”</p>	<p>She accommodated to the situation when she had an explanation.</p>	<p>Following medical advice.</p>	<p>Experimenting and developing trust</p>
<p>“I was supposed to take it easy...but you have to be moving. Being stuck in a chair made the whole thong worse...Moving – whatever sort of activity... To me it worked well to be active, so that’s what I did.”</p>	<p>He was advised to take it easy, but stayed active.</p>	<p>Not following medical advice</p>	
<p>“So even, through many years, I have experienced that my back hurts; I do not get worse from it.. [activity]. It has always worked fine. That is why I know my body won’t get injured even when I am by pushing myself, and I go on with it.”</p>	<p>He experienced that it worked fine to be active, the back pain did not worsen</p>	<p>Learning from own experience.</p>	
<p>“It was really good to learn that you have to find out for yourself what you can manage...The way I understand it, I won’t destroy anything in my body [by being physically active].”</p>	<p>He learned that he will not injure his body by staying active.</p>	<p>Learning from others</p>	

**Table 3** Categories and themes of activity related pain in patients with muscle pain

Sub Categories	Categories	Sub themes	Main theme
Pain as bodily dysfunction. Pain as emotional distress.	Differentiating between the “body” and “me.”	Interpreting signals from the body	Staying active despite pain
To do what the body tells you. Not to do what the body tells you.	Negotiating with the “body me”		
Fear of pain Fear of future	Influence of time	From uncertainty to self-knowledge	
Medical advice Learning from self and others.	Experimenting and developing trust		
Wondering about symptoms. Uncertainty.	Seeking explanations	Participating in social life	
Taking care of the family. Being trustworthy at work. Doing what is expected. Accommodating to the situation. Managing by oneself.	Pain and social situations		
Physical activity as healthy. Physical activity as necessary	Experiencing benefits of physical activity		
Pain at work. Pain on exercise. Pain at leisure time activities.	Differentiating the quality of pain		