How Well Do You Expect to Recover, and What Does Recovery Mean, Anyway? Qualitative Study of Expectations After a Musculoskeletal Injury

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**Background.** Expecting to recover from a musculoskeletal injury is associated with actual recovery. Expectations are potentially modifiable, although it is not well understood how injured people formulate expectations. A better understanding of how expectations are formulated may lead to better knowledge about how interventions might be implemented, what to intervene on, and when to intervene.

**Objectives.** The objective of this study was to explore what “recovery” meant to participants, whether they expected to “recover,” and how they formed these expectations.

**Methods.** This qualitative study used interpretive phenomenological analysis. Eighteen semistructured interviews were conducted with people seeking treatment for recent musculoskeletal injuries.

**Results.** Recovery was conceptualized as either (1) complete cessation of symptoms or pain-free return to function or (2) return to function despite residual symptoms. Expectations were driven by desire for a clear diagnosis; belief (or disbelief) in the clinician’s prognosis, prior experiences, other people’s experiences and attitudes, information from other sources such as the Internet, and a sense of self as resilient.

**Conclusions.** Expectations appear to be embedded in both hopes and fears, suggesting that clinicians should address both when negotiating realistic goals and educating patients. This approach is particularly relevant for cases of nonspecific musculoskeletal pain, where diagnoses are unclear and treatment may not completely alleviate pain.
Health recovery after musculoskeletal injuries is a complex issue, and there is growing recognition of the importance of psychosocial factors, such as recovery expectations, in this process. In this context, “expectations” refer to the belief that some future outcome is likely. Consideration of expectations and the impact of expectations has a long history in both psychology and sociology, such as in Tolman’s seminal work on the intervening role of expectancies in explaining the association between experience and behavior and Merton’s work in expectations and self-fulfilling prophecy.

A recent review of qualitative studies has examined the question of how beliefs and expectations held by individuals with musculoskeletal pain influence the health care process. That work identified important conflicts between patients’ beliefs and their physicians’ beliefs and, in particular, important differences in what patients and their physicians expect from the health care consultations. The importance of gaining a better understanding of expectations of patients with musculoskeletal injuries is further underlined by the view that early expectancies appear to serve as one of the mechanisms for the transition to recovery. This association is not clearly understood, although when patients have low expectations of an intervention, they are less adherent to that intervention. It is thought that some of the “placebo effect” (which can be defined as the symptomatic and physiological changes experienced by patients who believe they are receiving an effective treatment when they are actually receiving an inert treatment) might be a consequence of expecting to benefit from an intervention, which might partially explain the “nonspecific” effects of treatment. In a recent review of the literature on expectations and interventions for musculoskeletal pain, Blaas et al concluded that the intervention itself may matter less than the patient’s expectations for the intervention. However, expecting to recover from a musculoskeletal injury is associated with actual recovery even in the absence of a specific intervention. The best outcomes appear to be seen in those with reasonable expectations—neither too low, nor too high.

Psychological models of chronic pain and disability emphasize the importance of expectations early in a pain episode. For example, the fear-avoidance model posits that negative appraisals of pain can lead to expectations for the worst possible outcome (catastrophizing), which results in fear of movement, depression, activity disengagement, and ultimately more pain. Conversely, a more neutral appraisal of pain is associated with self-efficacy, which may be described as an expectation that one can do what is necessary to control the pain. In this example, positive expectations lead to adaptive coping and confrontation of pain, resulting in ongoing activity and less distress, disability, and pain.

Various mechanisms have been proposed through which expectations are formed. Janzen et al suggested a pragmatic, social learning/social cognitive theoretical approach to understanding health expectations. Similarly, Kravitz et al posited that patients’ expectations are influenced by their symptoms, their past experiences with health care, and their understanding of their illness. In both models, expectations are conceptualized as situation- and person-specific; potentially modifiable, changing over time and through direct experience and through other people’s suggestions and observations; and forming and evolving in relation with the person’s social or cultural context in a dynamic process where expectations influence the health consequences, which, in turn, strengthen or modify expectations.

These theories suggest that expectancies for recovery from musculoskeletal injuries will be influenced by a multitude of factors. Suggested factors include the circumstances, characteristics, and severity of the specific injury; previous direct experience with recovery from musculoskeletal injuries and other health problems; and prior knowledge and beliefs about pain and injuries (eg, anecdotes from friends, observations of other people’s recovery, stories in the media). Other suggested factors are personal or psychological characteristics and styles of cognitive processing, interactions with other people (eg, health care professionals and insurance adjusters), access to material resources related to health recovery (eg, access to particular types of health care, caps on health care utilization), and social norms and beliefs and cultural context.

These models are a good starting point. However, as yet little research has been conducted to explain how recovery expectations are actually established, despite theoretical conceptualizations and the call for such research. Quantitative studies have examined the concurrent associations between various factors and how well individuals with musculoskeletal disorders expect to recover. For example, marital status (eg, being single) is associated with expecting to return to work after an episode of low back pain. In a study of people with whiplash-associated disorders, those who were older, were women, and had higher education, higher income, lower pain intensity, and fewer prior pain problems had better expectations about recovery. It has been proposed that pain intensity may influence expectations through its impact on the ability to function, which, in turn, influences motivation to perform tasks. In a sample of people being treated for chronic pain, fear of movement or reinjury, receiving compensation, and using passive coping strategies were associated with poor expectations for treatment success. None of the studies of expectations for recovery in people with musculoskeletal disorders have specifically examined the roles of vicarious experience or other people’s expectations. However, it is reported that patients with cardiac disease who had recently undergone coronary bypass surgery had better expectations when they experienced either peer support from other people who had already recovered from cardiac surgery (vicarious experience) or when their spouse was confident about their recovery (other people’s expectations). Expectations for recovery are potentially modifiable, although at this point, they are still poorly understood. Understanding the basis of reasoning in the forma-
tion of expectations for recovery can lead to better knowledge about how interventions might be implemented, who to intervene with, and when to intervene. We conducted a qualitative study that explored how individuals with recent musculoskeletal injuries developed their initial expectations for their own recovery.

Method

Theoretical Approach

Our theoretical approach to this study was social phenomenology, which is grounded in the theoretical work of social science philosophers Berger and Luckman\(^\text{34}\) and Schutz.\(^\text{35}\) Phenomenology emphasizes the intent and motives underlying conscious behavior and the “taken for granted” common sense principles people use in making sense of their own experiences and other people’s actions. Social phenomenology also emphasizes the shared meaning of experiences through the principle of intersubjectivity, which refers to the idea that because the world is social and not private, the researcher and those being researched share its general meaning.\(^\text{36}\)

The specific qualitative methodology that we used was interpretive phenomenological analysis (IPA), which seeks to understand people’s lived experiences and how they make sense of their experiences.\(^\text{37-38}\) Thus, our study objective was to extract and describe commonalities in how injured individuals formulate their expectations for recovery.

Study Design, Participants, and Setting

We used a qualitative study design involving semi-structured, individual interviews. Participants were adults seeking treatment for a musculoskeletal condition of \(\leq 6\) weeks’ duration. We excluded people who were unable to speak English or Spanish. Given the ubiquitous nature of musculoskeletal disorders (eg, the lifetime prevalence of back pain is upward of 80%)\(^\text{39}\) and the fact that the first episode of pain frequently begins in childhood or adolescence,\(^\text{40}\) individuals with a recurrent episode of pain were eligible for inclusion.

Study recruitment was conducted in 2 outpatient facilities, both associated with New York University: a physiatrist clinic and a physical therapy facility. We used purposive sampling to ensure a wide range of injury types, backgrounds, and ages. Referral information of patients arriving at the clinic or physical therapy facility for appointments was screened, and potential participants were identified. Those who met our eligibility criteria were approached at this appointment by the study physical therapist (A.L.), the study was explained, study eligibility was confirmed, and consent was sought. The study physical therapist worked in both study settings but was not involved in direct patient care of participants. All participants provided written informed consent to participate and to permit audio recording of the interviews.

Data Collection

Interviews were conducted by the same person who recruited participants (A.L.) in a private office in the recruitment setting, generally immediately following consent to participate. The recruiter/interviewer was a physical therapist working in the 2 settings, although she was not directly involved in these participants’ clinical care. Interviews lasted 30 to 45 minutes and were audio recorded and transcribed verbatim. Participants were asked about 3 main topics: (1) what “recovery” meant to them, (2) how well and how quickly they expected to recover, and (3) how their expectations for recovery had been formulated. The questions were developed to elicit participants’ lines of reasoning in formulating their recovery expectations. Interviews were structured around the above topic areas rather than around a specific list of questions, and data collection took a flexible and iterative approach so that additional themes could be formulated within and between interviews. Thus, data collection and analysis stood in a reciprocal relationship until a point of theoretical saturation was reached, that is, no new insights were forthcoming.\(^\text{41,42}\) The process is consistent with social-phenomenology theory and IPA methodology.\(^\text{35}\) Because our main question related to the source of expectations, rather than the expectations themselves, we continued the interview process until we considered saturation to have been reached on sources of expectations.

A 2-step verification process was used for data collection. The first step was inter-respondent verification procedures, whereby respondents were asked about critical issues or anomalies raised by earlier participants. The second step was another on-site verification process, which consisted of tagged responses and probes to attain a more embedded sense of meaning and to ensure clarification, illustration, and expansion of ideas.\(^\text{36}\)

Data Analysis

We used thematic analysis within a constructionist framework\(^\text{44}\) in order to focus on the sociocultural context of recovery expectations. The analysis was guided by the following steps, although the actual process was recursive, rather than linear. After reading the transcripts as a whole, each interview transcript was reviewed line by line by the first 2 authors (L.C. and A.L.), and initial coding ideas developed. Initial codes were then generated through “open coding” (ie, we assigned words or ideas to meaningful groups [codes] that symbolized the processes and significant incidents through which participants have made sense of their experiences). Greater significance was placed on repetition (within interviews), on interviewees’ use of historical explanation, and on those statements laden with high degrees of emotion or emphasis. These codes were collated and sorted into themes representing the overarching combination of related categories of codes (axial coding).\(^\text{45}\) and a conceptual framework was developed in which categories were linked together. These themes were refined, named, and synthesized.\(^\text{44}\) As per IPA methodology, theme development was conducted across the entire data set, as opposed to within each interview. To verify the analysis, 2 authors (S.W. and J.T.) who had not previously been involved in the analysis confirmed the themes through an independent review of the transcripts. Finally, we met to discuss and agree on the final set of themes and synthesis.
### Role of the Funding Source
This study was supported, in part, by a grant from the Universities Occupational Safety and Health Education and Research Center (ERC).

### Results
The study sample consisted of 18 volunteers aged 27 to 68 years. The Table includes a brief description of the sample. Eleven participants were recruited at the physiatrist’s office, and 7 participants were recruited at a physical therapy clinic. Findings are reported in 2 sections: (1) what recovery means to the participants and (2) which sources the

<table>
<thead>
<tr>
<th>Participant Code</th>
<th>Age Range (y)</th>
<th>Sex</th>
<th>Location and History of Pain</th>
<th>Definition of Recovery</th>
<th>Expectations for Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>60s</td>
<td>Female</td>
<td>Head and neck pain</td>
<td>Pain cessation</td>
<td>Expects recovery to be slow</td>
</tr>
<tr>
<td>2</td>
<td>50s</td>
<td>Female</td>
<td>Hip, back, and leg pain</td>
<td>Return to function, residual pain</td>
<td>Expects good recovery from sciatica, but does not expect good recovery from back pain</td>
</tr>
<tr>
<td>3</td>
<td>60s</td>
<td>Female</td>
<td>Neck and back pain</td>
<td>Pain cessation</td>
<td>Expects will “probably” recover, but slowly</td>
</tr>
<tr>
<td>4</td>
<td>50s</td>
<td>Male</td>
<td>Knee and back pain</td>
<td>Ideally: pain cessation Would settle for return to function with residual pain</td>
<td>Expects recovery will be slow</td>
</tr>
<tr>
<td>5</td>
<td>20s</td>
<td>Female</td>
<td>Back pain (recurrence)</td>
<td>Return to function, residual pain</td>
<td>Uncertain expectations, but somewhat negative</td>
</tr>
<tr>
<td>6</td>
<td>30s</td>
<td>Male</td>
<td>Neck and back pain</td>
<td>Pain cessation</td>
<td>Uncertain expectations, but somewhat negative</td>
</tr>
<tr>
<td>7</td>
<td>60s</td>
<td>Female</td>
<td>Back pain</td>
<td>Ideally: pain cessation with radiographic confirmation Sufficient: return to function with residual pain</td>
<td>Positive expectations about reaching ideal recovery level</td>
</tr>
<tr>
<td>8</td>
<td>40s</td>
<td>Female</td>
<td>Back pain (first episode)</td>
<td>Pain cessation</td>
<td>Expects quick recovery</td>
</tr>
<tr>
<td>9</td>
<td>20s</td>
<td>Male</td>
<td>Shoulder and neck pain</td>
<td>Pain cessation</td>
<td>Uncertain expectations, but somewhat negative</td>
</tr>
<tr>
<td>10</td>
<td>30s</td>
<td>Male</td>
<td>Back pain (recurrence)</td>
<td>Return to function, residual pain</td>
<td>Expects to recover within about 2 mo</td>
</tr>
<tr>
<td>11</td>
<td>40s</td>
<td>Male</td>
<td>Back pain (recurrence)</td>
<td>Pain cessation</td>
<td>Expects quick recovery (less than 2 wk)</td>
</tr>
<tr>
<td>12</td>
<td>60s</td>
<td>Male</td>
<td>Foot pain (recurrence)</td>
<td>Pain cessation</td>
<td>Expects recovery will be a slow process</td>
</tr>
<tr>
<td>13</td>
<td>30s</td>
<td>Male</td>
<td>Back pain (recurrence)</td>
<td>Return to function, residual pain</td>
<td>Expects recovery to occur within 3 mo</td>
</tr>
<tr>
<td>14</td>
<td>50s</td>
<td>Male</td>
<td>Knee pain (prior orthopedic injury in different part of body)</td>
<td>Pain cessation</td>
<td>Expects to recover within about 6 wk</td>
</tr>
<tr>
<td>15</td>
<td>30s</td>
<td>Female</td>
<td>Back pain (recurrent)</td>
<td>Return to function, residual pain</td>
<td>Uncertain expectations, but somewhat positive</td>
</tr>
<tr>
<td>16</td>
<td>20s</td>
<td>Male</td>
<td>Back pain</td>
<td>Pain cessation</td>
<td>Expects that the pain cessation with normal activity will take up to a year, but does not expect to ever be able to lift heavy loads again</td>
</tr>
<tr>
<td>17</td>
<td>50s</td>
<td>Female</td>
<td>Neck pain (recurrence)</td>
<td>Ideally: pain cessation Sufficient: return to function with residual pain</td>
<td>Expects pain cessation eventually, but that it will take months</td>
</tr>
<tr>
<td>18</td>
<td>20s</td>
<td>Female</td>
<td>Knee pain (prior injuries in other body site)</td>
<td>Pain cessation</td>
<td>Positive expectations if she gets surgery. Does not expect to recover without surgery. (At the point of interview, no surgery was planned.)</td>
</tr>
</tbody>
</table>
participants drew on to formulate their expectations. Quotations from the interviews are followed by the participant’s number, sex, age range, and condition.

Meaning of Recovery

The main question here was, “What does ‘recovery’ mean to you?” Meaning of recovery can be summarized as (1) complete symptom cessation, with pain-free function, and (2) return to function despite residual pain.

Recovery is complete symptom cessation and pain-free return to function. For most participants, recovery primarily meant no pain and normal, pain-free function. This belief was cogently verbalized as follows: “When there’s no trace of pain... complete cessation of pain...yeah, no pain and normal range of motion” (participant 6, male, 30s, neck and back pain). Participant 12 (male, 60s, foot pain) summed it up by stating, “It’s fairly simple— it either hurts, or it doesn’t hurt.” In other words, if you still hurt, you are not recovered.

One participant (participant 7, female, 60s, back pain) took this one step further with the idea that not only does recovery involve a cessation of pain and a pain-free return to function, but “[I would also] have to be able to get another x-ray to see if I’ve improved.” Thus, for some participants, even being pain-free and having full pain-free function is not enough. The “real test” of recovery is medical confirmation through tests or radiography that the problem has resolved.

Recovery is return to function despite residual pain. An alternative view was that recovery means being able to manage or decrease the pain enough to function, although pain will still be a factor. Thus, the meaning of recovery resides in function; pain is auxiliary. This idea is exemplified by participant 13 (male, 30s, back pain): “To be fully recovered is...back to my normal routine, like working out...able to do my job... doing my normal everyday activities.”

Ideal versus sufficient recovery.

Most participants, regardless of whether their condition was new or recurrent, expected to reach their desired state of recovery, although many expected that recovery would occur slowly. However, some participants incorporated both concepts of recovery by distinguishing between the idealized “hoped for” recovery (cessation of pain with pain-free function) and “sufficient” or “good enough” recovery (ie, the ability to function despite the pain). This response was more typical among those participants with a prior history of pain problems— their definition of recovery was modified by prior experiences of incomplete pain resolution. As one participant stated:

[Sufficient recovery means] that I could walk without severe pain... and get back to things normally in my life and not have to worry about it... putting up with some restrictions and putting up with the pain as long as I can work through it. The ideal would be pain-free and have no problems (participant 7, female, 60s, back pain).

Thus, for some participants, there were 2 levels of expectations for recovery. Expectations for reaching a “hoped for” or ideal recovery differed from expectations for reaching a “good enough” or “sufficient” recovery.

Sources of Recovery Expectations

Participants were asked how they had come to formulate their recovery expectations. The resulting themes are not mutually exclusive, as participants frequently cited more than one basis for their initial recovery expectations.

Expectations determined by physician diagnosis, treatment.

One important theme was that expectations were determined by the diagnosis, especially when that diagnosis involved radiographic imaging. A clear example was participant 8 (female, 40s, back pain), who initially stated, when asked how quickly she expected to recover, “I have no idea; we have to figure out what exactly is wrong first.” She had earlier been given a positive prognosis by her physician and had improved a great deal since the onset of pain 2 weeks earlier, but her expectations were still unclear and were to be determined by radiographic findings. Providing more insight into the lines of reasoning she used in formulating her expectations, she expressed reservations about her physician’s assessment: “Well, I thought it was worse than his initial evaluation, so now we’ll see if there’s anything further with the x-rays.” When asked what her expectations would be if the radiographic investigations were normal, she was much more positive, saying, “If the x-ray is normal, then... within a month or so, I should be fine and back to normal.” Thus, even though she saw herself as essentially healthy and physically resilient, she required external, objective “proof,” over and above her own improvement and her physician’s positive prognosis. This need for objective proof was echoed by other participants.

The need for a clear message from their health care provider was important. For example, one participant stressed the importance of having both an open and communicative physician and a clear diagnosis in knowing what to expect for recovery:

I really need specifics. I respond well to them [and to] knowing exactly what the problem is... and I’d like my expectations managed. I’d like to know how much better I can expect to be. I don’t know right now... I’d like to know exactly what the problem is (participant 10, male, 30s, back pain).

This response suggests that not only are expectations formulated on 2 levels—one for “ideal” recovery and another for “sufficient” recovery—but they also arise through sharing of information and beliefs between health care provider and patient. For these and other individuals, knowledge is key. For example, one woman reported that only after the diagnosis was made did she formulate any expectations about her recovery. Before the diagnosis was made, this participant stated,

I’m not sure I had any specific expectation [before diagnosis] because I didn’t know what the problem was... [knowing] helps manage your expectations about how much you can recover (par-
Expectations After Musculoskeletal Injury

Even participants with a history of recurrent, benign pain problems similar to the current episode sought radiographic imaging and a diagnosis to reassure themselves that there was no dangerous pathology “this time.” For example, participant 9 (male, 20s) with recurrent, benign shoulder and neck pain reported that he was having investigations done because, “I just want to make sure that I don’t have a pinched nerve that is going to paralyze me.” Despite having experienced this pain before, he feared that this time, the pain might reflect a problem with devastating consequences. For him, recovery meant return to full functioning along with pain cessation, and in answer to being questioned about his expectations for that degree of recovery, he stated, “[Expectations are] 50/50 right now. I hope to recover, but if I don’t, it’s just something I have to deal with.” He differentiated “hoped for” recovery from the possible need to accept less. For him, expectations were strongly influenced by both fears and hopes.

Another participant talked about the reassurance provided by diagnostic imaging:

It gave me relief—confirmed it . . . in most cases, one doesn’t get an MRI [magnetic resonance imaging scan] right away, so that period before you get the MRI, most people—at least myself—I start to think negative (participant 14, male, 50s, knee pain).

For these and other individuals, having the diagnostic tests and the diagnosis was reassuring. However, some participants talked about becoming frightened by the findings of the radiography. Participant 7 (female, 60s, back pain) was initially frightened when her physician told her, after radiography, that she had disk “deterioration,” which led her to catastrophic thinking: “If one collapses, then all of them could. . . . I mean, that’s it. Your spine is done.” Her expectations for recovery at that point were so poor that she had “packed my bags, cleaned up my desk.” Subsequent interactions with another physician, who reassured her of a good prognosis, lead her to resume her formerly positive expectations, and she decided to continue working.

These stories highlight the idea that expectations in the early stages of recovery are fluid and highly influenced (both positively and negatively) by the treating health care provider. However, trust in the physician or in the treatment facility was also an important aspect in expectations. Participant 12 (male, 60s, foot pain) expressed positive expectations for recovery, explaining, “They [the treatment facility] really do a good job here, and so I’m satisfied that I’m going to get some good advice.” Participant 17’s (female, 50s, neck pain) positive expectations also were highly dependent upon the physician’s input, saying, “Well, the doctor I went to, Dr [X] said that the therapy will be targeted for my needs, and that [I] will have much, much less pain to no pain when [I’m] done.” She explained that, for her, trust in her physician was a major factor in her expectations: “The trust factor is helping me be optimistic, that I will recover.” For participant 14 (male, 50s, knee pain), initially poor expectations gave way to more positive expectations because of his faith in the rehabilitation clinic that he will be attending and a positive initial interaction with his physical therapist: “That information, the way it’s told and the knowledge . . . that just put me at ease and once again, gave me a positive outlook.”

Firm diagnosis and clarity of prognosis are often not possible in musculoskeletal disorders, and even those patients who understand this feel frustrated by it. Participant 5 (female, 20s, back pain), who has a recurrent history of low back pain, expressively stated:

[Expecting complete recovery] is unrealistic for the first time you see a physician . . . because I don’t see medicine as an exact science . . . doctors . . . form a hypothesis, they try something, it may or may not work!

However, even understanding that from previous experience, she still wanted a diagnosis and maintained that having this diagnosis would help her to have realistic expectations for her recovery. She expressed frustration with not knowing the reason for her pain, stating, “The lack of knowledge is just perplexing . . . . If he [the physician] is able to diagnose the problem or pinpoint the problem, I think that would go a long way . . . .”

This example underscores the role of cognitive processing in expectations. Like many other participants, this woman believed that having an understanding of the underlying problem would go far in helping her have realistic expectations for her recovery. These examples also provide a glimpse into the dynamic nature of expectations and the process by which they are formed.

Expectations determined by prior experiences with injury, health

Experiences with recovery from previous injuries or other health problems also influence how well injured individuals expect to recover. For example, participant 1 (female, 60s, head and neck pain) stated clearly, “I didn’t expect to recover . . . the prior injury influenced me . . . . I had anxiety based on my previous injury.” Likewise, other participants reported that they expect to recover slowly based on prior experiences with recovery. For example:

How does that [experience of prior injuries] affect? Years ago, I was expecting . . . one year . . . to be back to full health . . . . I started realizing that there’s no timetable. It could be 5 years, it could be 6 years (participant 9, male, 20s, shoulder and neck pain).

Yet, prior experiences with pain led to positive expectations for recovery as well. For example, participant 10 (male, 30s, back pain) expects to get better: “In 2 months . . . I guess anytime it has hurt in the past, it seems like it gets better in that period . . . . I never really had an injury that’s lasted very long.” Although participant 17’s (female, 50s, neck pain) positive expectations for recovery were strongly influenced by her physician’s reassurance, her anticipated time frame for this recovery also was based on prior experience: “I’ve had physical therapy in the past, and that’s usually the magic window . . . about 3 months of treatment.”
Expectations with nonmusculoskeletal health conditions also had an influence. Participant 12 (male, 60s, foot pain), seeking health care for foot pain, reported that having previously recovered from a stroke affected his current expectations and helped him “overcome new obstacles.”

However, prior experiences with musculoskeletal injuries can lead to greater fear when the current injury is perceived as more serious than prior injuries. Participant 18 (female, 20s, knee pain) expressed alarm about a current injury because it felt more severe:

“I’ve had strains before, so I kind of know what that feels like, but I’ve never had this before . . . I don’t feel like this is something that is going to get better by itself, because it’s so unpredictably painful.”

Expectations influenced by others’ experiences, expectations, and attitudes. Several participants cited other participants’ injury-related experiences, expectations, and attitudes as influencing their own expectations. This finding can be either reassuring or frightening. For example, participant 18 (female, 20s, knee pain) expressed very positive expectations for her recovery if she were offered a particular treatment for her knee because: “I’ve heard from people who’ve had a similar treatment they say they could walk . . . a day or 2 later.”

Yet, other participants’ experiences also had a discouraging or frightening effect. For example, participant 3’s (female, 60s) expectations for recovery from neck and back pain were poor, in part because of her husband’s negative experiences with back injuries. She described her expectations for recovery as:

“Not very high . . . The only reason I know really anything about it besides looking online is that my husband has severe [back pain] from the car accident he had . . . I realize how frustrated he is about recovery, so I think that influences [my expectation].”

Another participant cited his mother as the primary influence in his expectations for recovery from back pain. His expectations were embedded in the fears passed down from his mother:

“My mom says, you can’t ever lift anything again because of this . . . . She’s experienced back pain of her own, and she says this is something that can change the course of the things you do for the rest of your life. If you’re not careful, you exacerbate this injury (participant 16, male, 20s, back pain).”

Some interviewees attributed an improvement in their own expectations to having experienced positive attitudes and support from other people or in realizing that other people have struggled with similar problems. For example:

[Expectations and attitude improved by] the experience of discovering that you’re not alone and having these problems . . . doesn’t necessarily go away, but it helps to know that other people have struggled and attempted to live with whatever handicap they end up with (participant 12, male, 60s, foot pain).

Yet, other participants were negatively affected by the attitudes of family and friends. For example, while believing that recovery is primarily up to her, participant 15 (female, 30s, back pain) stated that other people have a positive influence if supportive, but a negative influence if they cause stress.

“But I noticed that if you’re stressed on a job or [by] family or friends, that hinders your therapy . . . . Some people tend to make the situation worse.”

On the other hand, some participants stated clearly that other people’s expectations and attitudes had no influence. For example, when discussing the influence of other people’s expectations, participant 8 (female, 40s, back pain) replied, “None. It’s really up to you to get better.”

Expectations determined by personal knowledge or external sources of information. Some participants cited their educational or professional backgrounds as influencing their expectations for recovery. For example, as a health care provider, participant 13 (male, 30s, back pain) indicated that his knowledge and continuing education had influenced his expectations: “I think part of it [source of expectations] is that I’ve read some research on low back pain and how well people do recover.”

Other participants formulated their expectations through seeking out information from various sources, primarily the Internet. For example, participant 3 (female, 60s, neck and back pain) reported that online information improved her expectations: “Just reading online, you know, looking up every symptom I have and trying to self-diagnose . . . . more secure knowing something can be done.”

Expectations influenced by self-perception: “Who I am influences what I expect.” A different type of influence on recovery expectations was related to how participants saw themselves. For example, some participants described their recovery expectations as being influenced by their own self-described resilience and determination and having a drive to be part of the solution. For these individuals, having a sense of control, being proactive, and being positive were described as key determinants of their expectation that they would recover well and quickly. Some participants reported that information about the injury and rehabilitation process was important because it facilitated their sense of resilience. For example, one participant explained the source of his positive expectations: “I feel that your mind-set is your greatest asset because that will help you recover (participant 4, male, 50s, knee and back pain).” However, at the same time, this same participant spoke of the need to also be armed with information: “People need to know what’s wrong.” This individual believed that what he saw as his own intrinsic characteristics were important in determining his recovery expectations but reported that he still needed the external information of a diagnosis and treatment recommendations. Another participant explained that her positive expectations arose from a sense that she was able to manage and control her own recovery:
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I like knowing what’s going on with myself, my body. I think it’s very important to know that; it’s the way I function. I love knowing things, and being proactive in this way helps me. It keeps me positive. . . . Where does that expectation of recovery come from? Probably some kind of deep-seated hope that exists in people (participant 3, female, 60s, neck and back pain).

Other participants did not mention the need for external knowledge. They described their positive expectations for recovery as being a result of their own determination and personal characteristics. As participant 7 (female, 60s, back pain) indicated: “[My positive expectations] come from myself, my inner self. Because I’m very positive. A lot of the healing in your body—you could do it yourself. . . . If anyone wants to recover from an injury, they need to focus on it, and that’s the only way you become better.”

Even those who expected slow or incomplete recovery saw this as being achieved through their own will and effort. For example, participant 12 (male, 60s, foot pain) was doubtful that he will reach his “hoped for” cessation of pain but declared himself determined to be in control and to carry on. He described his expectations as positive because: “I am the kind of person that, if it never gets better, the hell with it, I’ll just keep going, because I’m not going to let this stop me.”

Discussion
The aim of the current qualitative study was to report how individuals in the early stages of dealing with a musculoskeletal condition formulate their expectations for how well they anticipate recovery. We also investigated the participants’ view of what recovery entails and what their expectations were for reaching this state. In summary, participants spoke of recovery as involving either complete cessation of symptoms along with pain-free function or ability to return to usual function despite residual pain. The most commonly cited influences on expectations at this early stage of recovery, regardless of injury type, were physician diagnosis and radiographic imaging findings. Other influences on expectations were prior experiences with injury; general health perceptions; a sense of resilience; information from the Internet or other sources; and people’s expectations, attitudes, and experiences.

What Is Recovery?
The definition of recovery as either complete cessation of pain with pain-free function or recovery of function, even with residual pain, is in line with prior qualitative findings in studies of chronic pain samples. In the study by Beaton et al., there were 2 additional meanings of recovery: “readjustment” of one’s life to accommodate persistent symptoms and “redefining” the meaning of health. These latter definitions did not emerge in the current study; however, it seems likely that those conceptualizations of recovery evolve as pain problems persist with no resolution. Pain recovery was also the desired physical therapy treatment outcome in a quantitative study of people with acute or subacute symptoms.

In the current study, there were also spontaneous reports of a clear differentiation between ideal recovery (generally described as complete cessation of symptoms) and adequate recovery (generally described as a return to function, but with residual symptoms). Interestingly, all of those participants who conceptualized recovery as a “return to function despite residual symptoms” were experiencing a recurrence of a particular pain problem rather than a new pain problem. However, the idea that recovery necessarily means a complete cessation of pain was held by both participants with and without a history of similar pain problems. That most participants expected to recover (albeit slowly) aligns with quantitative studies of recovery expectations in people with recent musculoskeletal conditions.

Expectations and Hopes
The findings also highlight a distinction between hoping or wishing for an outcome (eg, complete symptom cessation), knowing that it is unlikely to occur, and an expectation that a particular outcome (eg, function with residual pain) is likely. Wiles et al suggested that this distinction can be thought of as “hope as a want” versus “hope as an expectation.” These authors make the point that this distinction is important to consider when balancing hope as a positive force as opposed to an unrealistic and potentially damaging construct (eg, when it leads to disappointment and failure to adapt). Similarly, Lohne and Severinsen discussed the idea of hope as “big hopes” (those hopes that are possible but not probable) and “small hopes” (a more probable outcome). Using this paradigm, they suggested that the pathway between wishing for an outcome and expecting that it will occur is partly mediated by whether interim outcomes along that pathway are fulfilled. That is, to the extent that improvements occur, “hope as want” is transformed into “hope as expected.” Thus, hope for recovery itself becomes a way of coping with a health problem. This explanation implies that, with time or recurrences of a health condition, hopes will reflect more probable outcomes, that is, hopes (wishes, or “big hopes”) become more like “little hopes,” or hopes as expectations. In this sense, expectations are embedded within an understanding of what hope means, which may explain why participants with a recurrent pain problem were more likely to define recovery in terms of function, accepting a possible incomplete resolution of the pain. They may wish that pain and dysfunction would go away (a “big hope”) or a want, but they modify their expectations to involve an outcome that is less than this (a “little hope”). Given the growing evidence that musculoskeletal disorders are likely to be recurrent and frequently have incomplete resolution, this distinction seems quite relevant for conceptualizing recovery.

Sources of Recovery Expectations
As theory would suggest, sources of recovery expectations cited by the study participants were broad-based. For example, theory suggests that recovery expectancies for recovery are likely to be influenced by the characteristics of the specific injury and by interactions with health care providers. This suggestion is exemplified in the current study, and is perhaps to be expected in this sample of persons seeking health care soon after...
the onset of a musculoskeletal condition. At this early stage of dealing with an injury, these health care seekers’ expectations for recovery were most prominently driven by diagnosis, especially when that diagnosis involved radiographic confirmation. Many participants expressed reservations about their physician’s judgments in the absence of radiographic evidence. Although trust in one’s health care provider has been shown to have an important impact on health care outcomes, such trust is conditional and needs to be developed.53 Perception of how one’s health care providers use medical technology is a crucial element in one’s trust in that provider.54

Yet, that is a potential source of disconnection between the patient and the health care provider. In many musculoskeletal conditions, the etiology is uncertain. For example, fewer than 20% of patients with shoulder pain have physical signs or recognized pathology.55 In a clinical setting, the focus is often on ruling out serious structural disease rather than ruling in definitive diagnoses.56,57 Evidence-based guidelines promote examination and patient history, rather than imaging, to rule out serious disease.58 For many musculoskeletal complaints, a definitive diagnosis is an unattainable goal, with or without diagnostic testing and imaging. In addition, although patients clearly expected radiography, current practice guidelines for managing low back, neck, knee, and ankle pain consistently advise against routine imaging.59–62 Thus, patients’ expectations of having radiographic testing may not be met, which may not, in itself, affect satisfaction with health care.63 However, for those patients who see radiography findings as the major determinant of how well they expect to recover, not receiving imaging may lead to uncertainty in recovery expectations.

Models describing possible sources of expectations also suggest the importance of prior experience of having recovered (or not recovered) from prior injuries or other health conditions, knowledge and beliefs about musculoskeletal injuries (anecdotes from friends and family, media, Internet, and other sources), and personal characteristics. These sources of expectations were all endorsed by study participants. Additionally, the sources of expectations were not mutually exclusive, thus, individuals’ expectations were often affected by more than one of these factors.

**Clinical Relevance**

On a practical level, positive yet reasonable expectations may arise through clinicians and patients negotiating realistic goals. This may be an important step in helping patients cultivate effective ways of coping and improving their overall outcome satisfaction. Given that expectations appear to be embedded in both hopes and fears, it seems reasonable to suggest that clinicians ask about hopes and fears directly to increase the likelihood of effective communication and early correction of misperceptions. In particular, an open discussion of the patient’s “little hopes” may guide the collaborative construction of attainable short-term goals and facilitate a productive and trusting partnership. Early education, open channels of communication, and partnerships between the patient and the health care provider might be one of the best tools for clinicians to understand patients’ hopes, fears, and expectations. This is particularly true for cases of nonspecific musculoskeletal pain where, although the source of the pain is unclear, diagnostic imaging is not indicated, and the pain may not always be completely alleviated with treatment. In such cases, concrete, clear, and consistent information can help the recovery process, even in the absence of a specific diagnosis. Early patient education is shown to have a lasting effect in reassuring patients and decreasing health care utilization.64 Such information to the patient should address the exclusion of serious disease, while recognizing and addressing the problem of ongoing pain, and discussions should include clear lifestyle advice and reasonable expectations on time lines and evidence-based treatment.65,66

**Strengths and Limitations**

This study adds to the literature by exploring the lived experience of how those with recent musculoskeletal injuries formulate their expectations of recovery. This information augments theoretical conceptualizations and deepens the quantitative findings of expectations. This study used in-depth interviews with participants of varying ages, diverse backgrounds, and a variety of recent-onset musculoskeletal conditions for which they were seeking treatment. Satisfaction was reached with 18 participants. The analysis was conducted using the commonly accepted IPA methodology and was verified by 2 authors not involved in the initial analysis. However, the study also had some limitations. It was a cross-sectional investigation, not designed to track changes in expectations over time. We sampled from 2 settings, but both settings were associated with New York University, so findings might have been different outside of these settings. In addition, this study did not explore recovery expectations in people with more persistent musculoskeletal conditions, in those who were not seeking treatment, or in those seeking treatment other than physiatry or physical therapy.

In conclusion, this study showed considerable variability in the meaning of recovery, in recovery expectations, and in factors that influence these expectations. Patients’ expectations of recovery were influenced by a variety of modifiable and nonmodifiable factors: their health care providers’ prognosis, prior personal history or family members with musculoskeletal disorders, information from other sources about their disorder, and their sense of their own personal characteristics, such as resilience.

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