Work-Related Musculoskeletal Disorders and the Culture of Physical Therapy

Background and Purpose. Knowledge, skills, relationships, and attitudes of caring and working hard are all thought to be valued by physical therapists. This article explores how physical therapists see themselves, in light of some of these values, when they experience work-related musculoskeletal disorders (WMSDs). The article also explores the ways in which these values may compete with each other, and it suggests how this may contribute to the onset of WMSDs and to therapists' behavior following a WMSD.

Subjects and Methods. Eighteen therapists who had made a career change after a WMSD participated in interviews that were designed to gain insight into the attitudes and beliefs of therapists who had had a WMSD. Results. Participants did not anticipate WMSDs, and they typically believed their physical therapy knowledge and skills would have prevented WMSDs from occurring. They saw themselves as knowledgeable and caring and indicated that these characteristics were highly valued by the profession. Their need to demonstrate these attributes sometimes resulted in behaviors that contributed to the development of their WMSDs and made them worse after their onset.

Discussion and Conclusion. The cultural values of physical therapists may make it difficult for them to do their jobs in a way that minimizes the risk of WMSDs. The study identified a potential conflict between the therapists' need to (1) demonstrate their ability to work hard and care for their patients and (2) appear knowledgeable and skilled by remaining injury free. [Cromie JE, Robertson VJ, Best MO. Work-related musculoskeletal disorders and the culture of physical therapy. Phys Ther. 2002;82:459-472.]

Key Words: Culture, Musculoskeletal injury, Physical therapy profession.

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Many physical therapists experience work-related musculoskeletal disorders (WMSDs).\textsuperscript{1-7} Investigators in studies of physical therapists in Europe,\textsuperscript{6,7} North America,\textsuperscript{1,3-5} and Australia\textsuperscript{2} used different definitions to describe WMSDs and reported a variety of prevalences for musculoskeletal disorders. For example, investigators in a British study of 212 physical therapists reported a 12-month prevalence of low back pain (LBP), which was defined as "any intermittent or constant pain in any area of the back for three or more days" of 38\%.\textsuperscript{6} A lifetime prevalence of LBP, which was defined as "pain below T10 and the lowest ribs which lasted three or more days," of 29\% was reported in a study of 500 Californian therapists.\textsuperscript{4} In a more recent American study of all graduates of a particular physical therapy program, Bork et al\textsuperscript{5} defined LBP as "job-related ache, pain, discomfort, and so on" reported an annual prevalence of 45\%. In an Australian study of 536 therapists, Cromie et al\textsuperscript{2} defined LBP as "job-related ache, pain, etc" and reported a prevalence of 62.5\%. The researchers in both of these more recent studies\textsuperscript{2,5} also examined the annual prevalence of WMSDs in body areas other than the low back, and they reported WMSDs in the neck (24.7\% and 47.6\% for Bork et al\textsuperscript{5} and Cromie et al\textsuperscript{2} respectively), shoulders (18.9\% and 22.9\%), upper back (28.7\% and 41\%), wrist and hands (29.6\% and 21.8\%), and knees (10.9\% and 11.2\%). The Australian researchers also reported an annual prevalence of thumb pain of 33.6\%.

In another recent study in the United States of 500 physical therapists, Holder et al\textsuperscript{6} reported a lower prevalence of WMSDs (neck: 5.8\%, upper back: 7.4\%, wrist and hands: 7.1\%, and low back: 19.8\%); however, their results are not directly comparable because they defined their WMSDs as occurring over a 2-year period and as a "job-related musculoskeletal injury." The majority of these researchers agree on one finding: they found that the first episode of WMSD occurred within the first few years of practice\textsuperscript{2,5} or among younger therapists.\textsuperscript{5,6} Bork et al\textsuperscript{5} and Scholey and Hair\textsuperscript{6} observed that physical therapists' knowledge and expertise did not grant them immunity from WMSDs. Although this irony is noted, the literature offers no explanation for the occurrence of this discrepancy between therapists' knowledge and expertise and the documented prevalence of WMSDs. Bork et al\textsuperscript{5} and Moulmphy et al\textsuperscript{1} referred to inexperience as a possible contributing factor, which is consistent with the general finding on the timing of WMSD onset.

The importance of WMSDs to the physical therapy profession was indicated by Cromie et al\textsuperscript{2} who reported that 1 in 6 Australian therapists working in all areas of physical therapy practice made a career change because of WMSDs. The purpose of our study was to investigate the experiences of this group of therapists and to explore issues of importance to them. This article describes a qualitative study in which therapists discussed their experiences with WMSDs. We attempt to identify attitudes the therapists held that could contribute to their occurrence and severity. We believe that physical therapists view themselves as being knowledgeable, capable, caring, and hardworking. We explore how these traits may contribute to the occurrence of WMSDs. We also attempt to provide some insights into how these traits may conflict at times, leading to a dilemma where a therapist is unable to demonstrate all of these traits simultaneously.

### The Culture of Physical Therapy

We believe that understanding the important issues for physical therapists with WMSDs requires some awareness of the context in which they work. Cant and Higgs\textsuperscript{8} contended that there is a culture specific to the physical therapy profession. They asserted that professions have a distinct professional culture, and they described professional socialization as the process of being inducted into this culture. They implied that the overt learning in the curriculum is only part of the process, that students also need to learn the "hidden curriculum."\textsuperscript{8,9} They indicated that many of the characteristics and values common to physical therapists become increasingly evident.

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in students as the socialization period progresses. Cant and Higgs defined professional behavior as consisting of learned values and codes of behavior and "occupational morality."8(p17)

The actions of inexperienced physical therapists are, Richardson9 claimed, strongly influenced by the working environment and the perceptions of senior colleagues. She postulated that the workplace culture of physical therapy develops through a continuous process of professional influence and interaction. She also argued that physical therapists working in a social group, such as a physical therapy department, behave in a way that contributes to the "shared understanding of what is going on."9(p173). She suggested that members of the group will think similarly and, by their actions and interactions, reinforce behaviors that are acceptable to the group. These interactions and influences may convey underlying expectations and values that determine how a therapist behaves in a given situation. Lopopolo stated the same thing more strongly, suggesting that the members of work groups overly "attempt to influence individuals to conform to group expectations about how roles should be enacted."10(p138)

Richardson's9 model describing the development of a physical therapy workplace culture is based on educational activities leading to knowledge and practical skills, and enabling therapists to develop treatment goals. She contended that the views and expectations of senior members of the profession may act to influence the professional development of newly graduated physical therapists. She argued that this process through which the culture of a physical therapy workplace is developed is often unconscious.

If the physical therapy profession has a culture that influences the behavior and values of its members as Cant and Higgs8 and Richardson9 suggested, this raises the question of whether the culture also influences the therapists' response to their WMSDs. In this article, we briefly discuss some of the cultural values and attitudes of the physical therapy profession that have been identified in the literature, and we suggest how they may influence the behavior of physical therapists toward their own WMSDs and the WMSDs of their colleagues.

The idea that specific knowledge is central to physical therapist practice has been discussed by a number of researchers.11-13 The body of knowledge in the physical therapy profession includes both knowledge of the content or subject matter of physical therapy and practical knowledge of techniques and skills. Some authors believe that both types of knowledge are critical to the concept of expertise in physical therapist practice.14 One of the areas in which physical therapists have specific knowledge is musculoskeletal disorders and their nature, causes, and management.15(p59-57) Beeston and Simons13 asserted that therapists' specific knowledge should be consistent with their values.

Physical therapists often practice based on a belief in a specific etiology and, hence, a cause for illness.16 Other paradigms such as the Nagi model of impairment also underpin much of physical therapist practice; however, even when this occurs, we contend that physical therapists look for and treat the physical impairment in order to minimize disability and handicap. This means that many therapists believe it is logical to expect that WMSDs have an identifiable cause and, therefore, that WMSDs can be prevented by dealing with that cause. This model of physical therapist practice is consistent with the concept of a "right" or "proper" way to perform tasks which minimizes the risk of WMSDs. For the purposes of this article, this is considered a major construct of physical therapist practice.

A second major construct of physical therapy culture is the idea that physical therapists are caring and hard-working. They place a high value on hard work17 and on caring and relationships with their patients and colleagues. Therapists also value seeing patients as individuals within a social context and enabling them to take responsibility for managing their own condition.18

In a theoretical model of expertise in physical therapy, Jensen and colleagues19 proposed that 1 of 4 defining dimensions was the attribute of caring and commitment to patients. They considered that one of the characteristics of expert practice in 4 different specialty areas (orthopedics, pediatrics, geriatrics, and neurology) was that it was patient-centered. They believed this included a strong commitment to doing what was best for the patient and taking on an advocacy role when necessary. Expert therapists were described as loving their work and having compassion and commitment. Beeston and Simons13 also identified this high value on patient-centered practice as an important frame of reference in the practice of neurological rehabilitation.

Therapists also value provision of care that informs, supports, respects and enables their patients.20 Curtis et al21 reported that therapists showed compassion and a willingness to help their patients, particularly when a patient was perceived as not responsible for his or her condition. It is unclear how this emphasis on caring is exemplified when the therapists themselves are the patients.

The literature shows that knowledge, skills, relationships, and caring are all valued in physical therapist practice. In this article, we explore how physical thera-
pists see themselves, in light of some of these values, when they experience WMSDs. We also explore the ways in which these values may compete with each other and suggest not only how this competition may contribute to the onset of WMSDs but also how it contributes to therapists' behavior after a WMSD has occurred.

Method
The aim of this qualitative study was to investigate the experience of a group of physical therapists who made a career change because of their WMSD. Qualitative methods allowed us to investigate the viewpoints of the participants and attempt to determine the meaning that those with the WMSD attach to the condition. Central to this approach is the belief that each person's experience illustrates a different aspect of the shared experience and thus allows for multiple realities to coexist, no one of which can be considered the \textit{objective} truth.\textsuperscript{22} The different meanings do not compete on the basis of truth; instead, each meaning can be used to make sense of the total experience.\textsuperscript{23}

Qualitative methods emphasize the range of informants' experiences, including atypical experiences. Consequently, we believe reliability and validity as they apply to quantitative methods cannot be used to judge qualitative research. There is, however, still a need to ensure the caliber and trustworthiness of qualitative research. Krefting\textsuperscript{24} proposed several strategies to ensure the caliber and trustworthiness of qualitative research: (1) sampling to ensure that a range of experiences is presented, (2) transparency by clearly documenting methods and procedures, (3) examination and verification of the analysis by other researchers (peers), (4) examination of the analysis by the participants (member checking), and (5) presentation of the data using rich descriptions to allow the reader to judge the transferability of the findings. We used these strategies in an effort to ensure the credibility of our study.

Interview Study
Use of interviews were the chosen method because we wanted to understand the meaning participants assigned to their experiences in the context of their daily lives.\textsuperscript{25} The purpose of the interviews was to gain an understanding of therapists' experiences with WMSDs and why they were making a career change. Interviews were conducted between January and April 1999 and lasted between 45 and 90 minutes. For their convenience, the participants chose the interview setting. These included the participants' home or workplace, and the university.

Sampling. Rather than randomly selecting participants for this study, we used a sampling process in which we intentionally sought participants who had made, or were the process of making, a career change in response to WMSDs. This was done so that information could be obtained from what we considered information-rich therapists. Therapists who changed careers for other reasons were not interviewed. Physical therapists who might provide rich data were recruited through the researcher's network of colleagues at work and through the professional association, by advertising in a physical therapy newsletter, and by word of mouth. All potential participants who were invited to participate agreed to do so. The interview format allowed the participants to express their attitudes and experiences, and the loosely structured schedule of questions was designed to encourage participants to introduce topics of particular interest if they so desired.\textsuperscript{26} The Appendix contains the outline of the interview schedule.

Participants. Eighteen physical therapists participated in the interview study. We stopped recruiting new participants at this point because, in our opinion, the analysis of transcripts did not yield new categories. Fifteen participants were women and 3 were men, ranging in age from their early 20s to more than 50 years. All had made a \textit{career change}, defined as: (1) a change in the specialty area of practice (eg, orthopedics to women's health), (2) a change to a less physically demanding role within the specialty area (eg, changing from a hands-on treatment role to teaching and research), (3) leaving the physical therapy profession to work in an alternative job, or (4) being unemployed. A summary of participants, including their study "names," is presented in the Table. All participants were living in Australia at the time of the interviews. Two participants had trained as therapists in countries other than Australia, and 2 others had undertaken postgraduate study at a university outside Australia. Ten participants were younger than 30 years of age at the time of the initial onset of the WMSD that resulted in a career change. Before injury they worked in a variety of areas, including private practice, pediatrics, orthopedics, neurology, and rehabilitation and general hospital work. Following the onset of their WMSD, 2 participants left the profession altogether, 1 was studying full time, 1 had retired, and the remaining 14 were employed as physical therapists in an alternate capacity. Their new areas of practice included women's health, ergonomics, occupational rehabilitation, academia, and research.
## Table.
### Participant Summary

<table>
<thead>
<tr>
<th>&quot;Name&quot;</th>
<th>Injury</th>
<th>Age (y)</th>
<th>When Injury Occurred</th>
<th>Cause of Injury/Area of Work/Current Situation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denise</td>
<td>Shoulder, neck</td>
<td>40s</td>
<td>Unexpected movement by patient; now retired</td>
<td>Cumulative effect of external lifting; now retired</td>
</tr>
<tr>
<td>Jane</td>
<td>Neck</td>
<td>20s</td>
<td>Struggles to balance symptoms with ADL</td>
<td>Cumulative effect of heavy lifting; now retired</td>
</tr>
<tr>
<td>Janet</td>
<td>Thoracic spine, lumbar spine</td>
<td>20s</td>
<td>Now consulting (some manual therapy)</td>
<td>Patient handling; patient fall</td>
</tr>
<tr>
<td>Carol</td>
<td>Low back</td>
<td>20s</td>
<td>Manages symptoms, but cannot return to previous area</td>
<td>Now consulting (some manual therapy)</td>
</tr>
<tr>
<td>Cathy</td>
<td>Upper limb</td>
<td>40s</td>
<td>Manages symptoms because of flexible work environment</td>
<td>Now studying to move into desk-based role</td>
</tr>
<tr>
<td>Beth</td>
<td>Low back</td>
<td>30s</td>
<td>Manually handling patients</td>
<td>Now studying with a view to moving into desk-based position</td>
</tr>
<tr>
<td>Emma</td>
<td>Low back</td>
<td>20s</td>
<td>Suffers from flexed postures with static holding</td>
<td>Manually intensive work; now consulting</td>
</tr>
<tr>
<td>Andrea</td>
<td>Low back</td>
<td>20s</td>
<td>Cumulative effect of manual therapy</td>
<td>Now works as a consultant</td>
</tr>
<tr>
<td>Sharon</td>
<td>Neck</td>
<td>40s</td>
<td>Cumulative effect of flexed postures with static holding</td>
<td>Not currently working as a physical therapist</td>
</tr>
<tr>
<td>Louise</td>
<td>Thumb, knees</td>
<td>40s</td>
<td>Cumulative effect of manual therapy</td>
<td>Now works in a desk-based role</td>
</tr>
<tr>
<td>Liz</td>
<td>Thumbs/hands</td>
<td>30s</td>
<td>Cumulative effect of manually intensive work</td>
<td>Now works as a consultant</td>
</tr>
<tr>
<td>Peter</td>
<td>Shoulder</td>
<td>30s</td>
<td>Cumulative effect of manual therapy</td>
<td>Now works in a desk-based role</td>
</tr>
<tr>
<td>Michael</td>
<td>Upper limbs</td>
<td>20s</td>
<td>Cumulative effect of manual therapy</td>
<td>Now works as a consultant</td>
</tr>
<tr>
<td>Debby</td>
<td>Low back</td>
<td>20s</td>
<td>Cumulative effect of manual therapy</td>
<td>Now works as a consultant</td>
</tr>
<tr>
<td>Kate</td>
<td>Low back initially, now upper limb</td>
<td>20s</td>
<td>Cumulative effect of manual therapy</td>
<td>Now works as a consultant</td>
</tr>
<tr>
<td>James</td>
<td>Low back</td>
<td>20s</td>
<td>Cumulative effect of manual therapy</td>
<td>Now works as a consultant</td>
</tr>
<tr>
<td>Ros</td>
<td>Neck</td>
<td>30s</td>
<td>Cumulative effect of manual therapy</td>
<td>Now works as a consultant</td>
</tr>
<tr>
<td>Sue</td>
<td>Low back, thumbs</td>
<td>20s</td>
<td>Cumulative effect of heavy manual handling</td>
<td>Now works as a consultant</td>
</tr>
</tbody>
</table>

*ADL = activities of daily living.*
Reporting of findings. The data are presented using the words of the participants, which are considered in qualitative research to be "low-inference data." Using the language of participants in our opinion allows the reader to determine the accuracy of the analysis and the degree to which it applies to other situations. In this article, direct quotes from participants are followed by the participant's study name and the page number of the transcript on which the quote can be found.

Data Analysis

Data analysis was carried out in a sequence of steps described in the Figure. Although the steps are presented sequentially, some were revisited during the analysis to help clarify and interpret the data. For example, as a new category was identified, previous transcripts were examined to determine whether any material might reasonably be coded into that new category.

Member checking refers to the process of returning the material to participants to verify the transcription and the analysis. Member checking was done twice in our study (steps 2 and 8, Figure). The first check verified the accuracy of the transcript and was made to ensure that participants had not omitted any important aspect of their experience. The second stage was included to ensure that participants felt that the results represented their perspective on the career change.

Results

Three major themes were identified from the data: the culture of physical therapy, loss, and future directions. This article deals with the first of these themes: the culture of physical therapy. Participants in this study expressed 2 major beliefs inherent in physical therapy culture. The first belief was that physical therapists are knowledgeable and capable. This belief was expressed as an expectation that participants would not experience a WMSD because they knew the "right" way to perform tasks and could execute them. If a problem did occur, it would be minor and self-correcting. A reluctance to talk about WMSDs if they occurred was associated with this expectation.

The second belief was that therapists are caring and hardworking. Participants expressed this as feeling pressured to work when they were injured. This belief manifested itself as feeling of pressure to give precedence to the needs of the patient over those of the physical therapist. Participants also described feeling pressure from colleagues and patients to be caring and hardworking, even when it could be detrimental to their own health.

Participants' comments were consistent with the literature, which originated in other populations of physical therapists. This finding suggests a work culture in physical therapy that values knowledge, skills, and caring. Therapists' beliefs may partly explain the ways that they responded to and managed their WMSDs.

Knowledgeable and Capable

Preinjury. Physical therapists value their specialized knowledge and skills. The notion of the "right" way to perform tasks was central to the idea of the therapist as knowledgeable and capable. To define a "right" or "proper" way implies a known cause and that adopting the "right" practice enables the practitioner to avoid what is known to be harmful. We contend that this assumption cannot be justified. There are, for example, several different schools of thought about correct lifting techniques. However, the idea of a "right" or "proper" way, specifically known to physical therapists, is suggested in the physical therapy literature. For example, Mierzejewski and Kumar and Molumphy et al suggested that the reason younger therapists had a higher prevalence of LBP was that they did not use "proper" patient handling techniques. Although inexperience may well be a factor in the onset of LBP, the statement also implies that there was a right way for these therapists to handle patients and that it was not used. This belief in a "right" way, expressed by participants as a means of preventing WMSDs, ignores the ergonomic data that suggest that the job needs to change rather than the worker.

The therapists in our study believed that knowledge and experience had a preventive benefit. Beth observed that she "was always very careful" and had "managed for so many [8] years" and thought she could "keep going with what she'd been doing, which was being careful, making sure she kept herself reasonably fit, and ... not doing anything silly" (Beth: p 4). Stubbs et al cautioned against using this as a strategy to prevent WMSDs, commenting that intrinsically unsafe work cannot be made safe by training (improving knowledge about the job).

Some participants expected that they would not become injured because they were physical therapists. They discussed other occupational groups as being susceptible to back WMSDs, but saw themselves as somehow different, with different expectations applying. For instance:

"You got pretty tired, but you know, you could manage just about anything. No, you really ... thought nurses might get problems lifting, but you didn't think you would ..." (Jane: p 10)
1. Interviews tape recorded and transcribed in their entirety by the researcher (JC).

2. Member check 1: Transcripts returned to participants to check for accuracy and to add any comments.²⁸

3. Transcripts coded by placing a word(s) adjacent to text, capturing the meaning of each passage.²⁹ Some passages had more than one code to describe the data.

4. The codes were grouped together under headings with similar or related meanings and designated as categories. This reduced the number of groupings.²⁷

5. These categories were peer checked by co-researchers independently coding a sample of transcripts.

6. Similar categories were grouped together as thematic categories. At this stage, the researcher identified relationships and interactions among the categories.

7. Quotes illustrating the thematic categories were organized into separate files, and all data were accounted for in this way. Each file contained quotes from the participants that illustrate the relevant theme.

8. Member check 2: The thematic categories were synthesized into a narrative summary, to reflect the experiences and interpret the meaning of the experiences of participants. This was returned to participants for member checking, and their responses were recorded.²⁸ Participants indicated parts of the summary with which they strongly agreed or disagreed. Participants concurred with my interpretation of the data and reported they felt their experiences had been accurately represented. For example, Jane said:

   Thank you for the opportunity to comment on your study. My overall reaction was one of overwhelming agreement.... I appreciate being part of the study because even at this late stage it has helped relieve me of the perhaps ridiculous feeling of being the "only one" to be injured.

9. Further analysis condensed the thematic categories into 3 major themes. This study presents one of these major themes.

Figure.
Analysis of interview data.
I can’t recall any of my colleagues having hurt their back. The wardsmen often hurt their back. But (as physical therapists) pride ourselves on not having hurt our backs... That was a very strong feeling... It’s just one of those attitudes you pick up, as the junior. That you can do it better, you can do it correctly. It was... there was a correct way, and the nurses got their backs hurt, the physios didn’t, you know what I mean? (Janet: pp 5, 10)

I was certainly aware that it was a high-risk situation. But I felt, “I’m a physiotherapist, I know how to deal with it. I know what the risks are, and I know how to minimize the risks.” (Beth: p 12)

The interviews indicated that participants believed that WMSDs could be prevented as long as they had the “right” technique or performed in the “correct” way.

The culture [is]... it doesn’t matter what size you are, it doesn’t matter whether you’re male or female, it’s the technique, the way... If you’ve got the technique right... and you’re using your body correctly, it’s not going to put strain on you.” (Debby: p 7)

Debby mentioned that her larger (male) colleagues gave “absolutely no consideration for the fact that you were much smaller, and obviously weaker than the blokes [men] in the course.” She described the “culture” as “very much ‘you can do anything... don’t give me the excuse that you’re a small female’” (Debby: p 8). The net effect of this kind of comment was to underestimate the difficulty that people with different body types may have with aspects of manual therapy, and it may have given therapists the impression that if they had difficulty in performing a technique, they were doing it incorrectly.
The underlying assumption behind such comments is that the problem is with the therapist rather than the technique.

This belief in the “right” way as a protective mechanism led participants to feel that they would remain uninjured, even when they acknowledged that there were circumstances in which the “right” way would not be an effective preventive strategy for other workers. Janet said:

I feel that if I can manage all the circumstances, I can get through without hurting myself. If I have hurt myself, I haven’t done something quite right. But when I relate that to... workers, I can see that there are setups, that no matter how well they do it, because they’re doing it so much and so often, they’re going to be injured... But I think for myself. I like to think I’ve got the situation under control. (Janet: p 12)

Not only does this belief in a right way as a preventive strategy give therapists a false sense of security, it has moralistic overtones that assign blame if a WMSD occurs.

If you do the thing the right way, you won’t get injured. I think that’s probably what I thought... Now that I’m older and wiser, I know you’re reducing your risks of injury, but I think back in student days and early practice days you’d think you’re doing it the right way, nothing will happen. It’s not as simple as that... You just think “as long as I’m a good girl and do it the right way, I’ll be all right.” (Jane: pp 10–11)

Jane highlighted a moralistic aspect of the concept of a “right” way with her use of the phrase “as long as I’m a good girl and do it the right way” (Jane: p 11). The logical extension of this idea that there is a right and wrong way to perform tasks is the idea that if the therapist experiences a WMSD they must have done something wrong. This was expressed by Janet (p 11), who was unable to work out what she had done wrong but “knew” it was her “fault” because she had the injury.

When I hurt my low back, walking that guy, I felt I’d done it wrong, but I couldn’t for the life of me work out why. But I still had the injury, so I knew that it was my fault. (Janet: p 11)

The belief in a “right” way, and the subsequent assumption of wrongdoing (with its associated moralistic overtones) if WMSDs occur, may be a reason for the participants’ reluctance to discuss the issue.

And it’s almost if something does go wrong, I’ve done something wrong, so therefore it is a bit of a failure-type thing. (Liz: p 11)

For physical therapists to discuss WMSDs was apparently to admit that they failed to live up to the standard required of a physical therapist. Debby spoke of pressure to be “strong and able to do everything... in order to pass... you have to be able to do everything yourself... I got that sort of vibe [sic] when I was a student.” (Debby: p 6)

Not only did therapists see themselves as unlikely to experience injury because of their knowledge, they perceived themselves as being fit and able, both as a by-product of youth, but also because the work itself had made them physically able. This comment by Janet exemplifies the expectation, expressed by the participants, that they would not experience WMSDs:

You do a lot of physical work. You know, I was very strong from having done it. And I suppose I just
assumed that I could do it. . . . But certainly you were always lifting them (patients) around, you wrestle with them on the floor, you know . . . it was very hard physical work. I mean, I had big shoulders on me then, and big muscles. And you were young. So, yeah, you considered yourself invincible. Don’t know you’re going to hurt yourself. Certainly wouldn’t do it now. (Janet: p 4)

Some participants felt that their youth and fitness would afford them a degree of protection from WMSDs (Andrea: pp 5–6 Carol: p 4; James: p 2; Michael: p 3; Debby: p 6; Janet: p 4; Jane: p 10). Michael and Debby expressed this as a feeling that they were “invincible.”

I mean, it’s a difficult age group [20s], because you do think that you’re invincible when you’re not injured. I was probably as guilty of that as anyone. . . . I think it’s one of those things, when you’re 21, and you really feel invincible. . . .(Michael: pp 3, 9)

I was a bit foolhardy when I was younger, and . . . thought I was a bit infallible, you know, a bit invincible really. . . .(Debby: p 6)

Work-related musculoskeletal disorders were not only seen as improbable, but also as undesirable. As Carol said, physical therapists “were meant to be fit . . . you weren’t meant to be injured” (Carol: p 4).

Although many participants in this study believed that their knowledge would help prevent injury, Andrea cautioned that:

The way the whole system’s structured, you’ve got to see patient after patient after patient. And you can’t have a bit of a break.

She felt this made it difficult for individual therapists to act to avoid WMSDs. She added:

You might have all the knowledge of how your back injures, but . . . having no control over your environment is a huge factor. (Andrea: pp 15, 18).

In addition to the participants’ expectation that they would not experience WMSDs because of their specialized knowledge, non-physical therapists also had this expectation. Beth was aware of the perception of others: “They’re going, ‘You’re the expert in lifting,’” and because she accepted that, she felt “it was my responsibility, and if something [went] wrong, I’d got no one to blame.” Thus, when the injury occurred, she described feeling that “I should have known . . . or I should have minimized the risks further . . .” (Beth: p 12). She identified that “it was her fault that [she] got this injury” (Beth: p 11). Andrea encountered a similar attitude from others, saying, “You should have known. You’re a physio [physical therapist], you should know what’s bad for your back.” (Andrea: p 18).

Injury. Following the onset of a WMSD, participants seemed to rely on their knowledge to self-manage their injury. Rather than seek formal treatment, participants tended to self-treat (Peter: p 4; Carol: p 1; Sue: p 3; Cathy: p 4; Debby: p 4; Liz: p 3; Kate: p 3; Jane: p 7). This is possibly an indication of the belief that the WMSD was minor and of little long-term importance.

It’s not as if recently there’s been a treatment that’s been helpful. There hasn’t been. I manage it with TENS [transcutaneous electrical nerve stimulation] and just my own self-help remedies. (Kate: p 3)

I never, I never went to a doctor, I never took any medications such as pain relief or anti-spasm . . . any form of anti-inflammatories, or any form of muscle relaxants, and I never took time off. . . . I wasn’t going to trust a physio [physical therapist] . . . I self-treated. . . .(Sue: p 3)

Treatment-wise, I really didn’t do much. I had a little bit of physio [physical therapy], for a short period of time. . . . Other than that, I just used my own knowledge, I guess . . . Most of the time, I self-treat. (James: p 3)

Beth mentioned she managed her symptoms by getting informal treatment from a colleague and by self-managing.

If I came home and I thought, ‘Oh, my back’s a bit sore today.’ I was sharing a house with a private practice physio [physical therapist], so I’d leap up on the dining room table and he’d give me a few mobes [sic] if I said my back was really sore. So that sort of thing . . . I really dealt with it by doing exercise. Or I’d, you know, lie down on the floor and watch telly [sic]. I’d think, “Oh, no, my back’s a bit sore to sit tonight.” (Beth: p 6)

The purpose of this informal way of managing their WMSD appeared to be so that the participants could continue caring for their patients, a culturally desirable occupation.18,19 The assumption that they could look after themselves may reflect the participants’ possible belief that they were self-aware and knowledgeable enough to manage their WMSDs themselves. Alternatively, participants may have underestimated the severity of their WMSDs and the need to have them formally managed by a health care professional. A possible consequence of managing WMSDs in this way is that thera-
Pists may receive less-than-optimal treatment and management of their condition. This is an issue for further investigation.

Postinjury. Despite the expectation that a WMSD would not occur, participants did experience WMSDs. After the onset of a WMSD, participants tended to deny its severity. They assumed their injury would be minor and self-correcting. As Jane put it, “I’ll be right in a day or two” (p 4). This expectation could perhaps be another expression of the sense of invincibility mentioned earlier. Beth refused to “even consider that it would be a long-term problem. Or that [she] would not be able to continue practicing as a clinical physio [physical therapist].” (p 10)

I remember my mother saying, “Oh well. That’s it then. You’ll have to do something else.” [I said], “What are you talking about? Of course I’ll be fine.” And so a lot of the time I was just like [sic], “No, no, no. I’ll be fine. I’m not going to be one of those people who’s got a long-term back problem or who needs surgery. I’m sure if I just do these exercises, and have a bit of physio and have a bit of a break. I’ll be fine to go back again.” (Beth: p 10)

The reluctance to accept being injured is similar to that described by McKevitt and Morgan35 in their study of the experiences of physicians with an illness. They reported that their participants were reluctant to identify illness in themselves. Similarly, Cathy described “ignoring all the signs” (p 3). The reason she gave for this was that she “loved [her] work. And that was something that was not going to go” (p 4). As Carol put it, “I didn’t want to admit that I was [as] injured as I was” (p 1).

The practice of continuing to work, even though their symptoms suggested that they should perhaps change their behavior, was used by some participants as a way of pretending that the injury was not as important as it really was—that is, as a form of denial. This was Cathy’s experience, when she decided that she “wasn’t going to relate” her symptoms to her work, because she “loved her work. She attributed her symptoms to “tennis” and “a lot of things, recreational things.” She found that she “couldn’t play golf” but “was not going to give up [her] work” (p 4). Similarly, Ros tried “umpteeneen things” before she got to the stage where she knew she had to “alter her life” and had to address her work (p 3).

Although the literature documents the extent of WMSDs in physical therapists,1-3 individual therapists did not expect to experience WMSDs. The cultural context of physical therapy where participants believed that “doing it right” was an effective preventive strategy, and the expectation that they would not experience WMSDs meant that some participants were surprised by their own injuries (Jane: p 10; Janet: p 5). “It never occurred to me that it could compromise my back” (Andrea: p 6).

Janet described her injury as a “shock” because as “physios [physical therapists] we pride ourselves on not having hurt our backs.” She was shocked “that it was so severe. A shock that it didn’t just suddenly get better. And I had to give up [field] hockey. That was a big shock.” (Janet: p 5).

This expectation is not unique to physical therapists; other groups of workers express similar expectations.3435 The expectation expressed by the participants that they would not experience WMSDs was consistent with the prevailing assumption that physical therapists are “strong and 100% fit to be able to perform their duties.”36(p356) Participants’ surprise and shock at the extent and severity of their WMSDs is perhaps inevitable, if the underlying professional cultural beliefs are that physical therapists are knowledgeable and capable and, therefore, do not get injured and, if injury occurs, it will be minor and self-correcting.

In addition to the attitude of “I’ll be right” (Jane: p 4) and the preference for self-managing, participants did not speak of their WMSDs to others (Sue: pp 7-8; James: p 15; Peter: p 7; Beth: p 16; Janet: p 12). As Jane put it, “there’s just no future in [talking about] it. There’s just no personal gains to be made” (p 12). Ros felt unable to discuss her WMSD with colleagues because “I’m the one who’s got the problem” (p 10). She spoke of feeling “alone” (p 15) in her experience and “isolated” (pp 14, 15).

When I read your article in the . . . newsletter, I thought, “Oh God, I’m not the only one.” And I mean, I know I’m not the only one, but to see actually it in print, . . . I just thought, “I must contact that woman straightaway.” Sometimes you feel like you’re in a sinking ship, like you are the only one. And . . . “I’ve got to change my job” and . . . “Why?” and . . . “There must be others out there, where are they?” . . . you sort of feel very isolated. (Ros: p 14)

Participants did not want their peers to view them as unable to manage their injury (Debb: p 6; Jane: p 12; Sue: p 10). At the time that Beth injured herself, she “knew no one who had a back injury” and reflected that “if she had ‘known another physio [with a similar injury], it would have made it easier for me.’ Because she knew of no one else who had had a similar experience, she felt ‘this hasn’t happened to anyone else, and therefore, I’d better get myself back as quickly as I can, because everyone else is coping’ (pp 14, 15).
These comments indicate that participants believed the problem of WMSDs in physical therapy was an individual one. The statistic that 1 in 6 therapists confront the issue of making a career change because of their WMSDs indicates that the experience is not unique. It is surprising, therefore, that these therapists were unaware of others who had faced or were facing similar situations. A possible reason for this was their reluctance to discuss their WMSDs.

I had a lot of difficulty working, and most people around me didn’t know that I was having difficulty... it was something I was very good at hiding...1 didn’t tell anybody, but generally [I did] not make a big deal of it. I suppose... even if I had to wear my TENS [unit], I’d keep it hidden... (Jane: p 12).

Participants, it seems, did not speak about their WMSDs because they felt it might compromise their current and future employment. Sharon said:

... I felt... “OK, I’m 44, and... on the scrap heap basically... I mean, why would they take on somebody that was perhaps a liability?” (p 18).

This was not only an issue for participants who sought employment from others, it was also identified as a potential problem by Peter, a self-employed private practitioner.5

I never spoke about it... If you’re... running a clinic... if you do start to complain or if people start to relate things to your physical status, that may affect the clinic as well. (p 7)

This reason for not talking about WMSDs may be well founded: therapists are at risk of being discriminated against if they are known to have a (potentially disabling) injury or disability.67 The negative responses elicited when the subject is brought up for discussion may provide a disincentive for therapists to discuss WMSDs.68

Hardworking and Caring

In our opinion, the second major aspect of the culture of physical therapy, which was identified in the interviews, showed participants’ perceptions of themselves as caring and hardworking. These perceptions were sometimes at odds with the desirable trait of being knowledgeable, because participants did things that they knew might be harmful to themselves in the interests of working hard and caring for their patients. Participants’ comments illustrated how they placed the needs of their patients ahead of their own and how their behavior was influenced by their perception of themselves as caring and hardworking.

Sue observed the tendency of putting her patients’ needs ahead of her own. She identified physical therapy training as instilling in therapists a sense of “responsibility to patients” to the extent that:

Our pain is much, much less than their pain. And we carry on regardless... You’ve got to put the brave face on, you’ve got to work long hours, you’ve got to be this perfect little giver. (p 6)

This sense of “responsibility” Sue spoke of is similar to a “sense of duty” expressed by physicians39 and is perhaps not surprising in the light of the high value that physical therapists place on caring.11,18

Sue and Emma both spoke of needing to be seen by their peers as working hard and making a significant contribution. Sue identified herself as the “typical physio [physical therapist], keen to please, keen to do my job well,” and she commented that she not only wanted to “give them the best that I could” but also did not want “colleagues to see that I was doing anything less than the best that I could” (p 10). Emma echoed this awareness of the perception of peers and the need to “just have to... work really hard” to the extent that she found it difficult to even tell others that she was taking time off on a regular basis (p 14). As Sue put it, “We have this ethos that we have to work hard and exhaust ourselves basically” (p 2). The participants’ need to work hard and deliver high-quality service to their patients (Sue: p 10; Emma: p 8) was consistent with Jacobson’s description of physical therapists as “industrious and hardworking.”17,18

The participants’ sense of responsibility to their patients and the traits of caring and working hard was expressed by continuing to treat their patients even when they themselves were unwell.

I used to just go into the back of the room and do my exercises, and then go back and see a few more patients. You know... nothing stopped me from working. I was able to just still work... (Cathy: p 4)

Liz observed that “ideally, you probably would have not worked on those days when you... did have pain, and you knew that you were... perhaps, making it worse.” However, she commented that “when you’re... self-employed, you tend to just do it. There’s no one at that short sort of notice that you can call in.” (p 6). This implies that she may have wanted to take time off to manage her own condition, but because the needs of her

5 “Peter’s” work situation is disclosed with his permission.
patients were deemed to be more important than her own, she continued working.

I'm a sole practitioner myself, and there's certainly much more pressure on you to be there. There's no one there if you're ill. You [have to] go in when you're ill. And I mean I've had times when ... I've gone in and treated my private patients. And between patients, I've lain down on the bed and almost gone to sleep ... because there's no one there to take up the load. So I think you push yourself a bit more ... So I think ... [that] you can be a bit more vulnerable as a solo practitioner. (Debby: p 12)

There was an expectation that therapists would work hard not only because they cared about their patients, but also because they were paid to do so. Andrea told of feeling pressured to work because that was what was expected—treating patients even though she had symptoms herself.

I had worse back pain than what this patient did... I can't believe I did it. I don't know why I did it. It was just ... the pressure. That was what I was expected to do, because I was at work. That was what I was getting paid for. (p 20)

Michael identified long hours as an expectation of the job, which he calls "ridiculous."

I think definitely the long days ... Tuesday was probably a bit ridiculous really ... Often, I'd be going just hammer and tong, eight o'clock in the morning through to finish with my last patient, get them out of the door at about 9:30 [pm] with about 15 minutes, half an hour for lunch. So it was just ... too much. ... (p 3)

Carol spoke of being reluctant to challenge the prevailing expectations because of her inexperience as a physical therapist. She said:

You were confronted with this dilemma, that the hospital procedure said ... But that was what was expected, so you didn't challenge it ... It was a bit confronting ... to get to your first job and have a different set of rules. And we were only first years out, everybody else had done this ... The culture was you did as you were told. So you didn't rock [the] boat. (pp 8-9)

Inexperience as well as wanting to please colleagues and employers led some participants to act in accord with patients' (or relatives') expectations. Michael had an upper-limb injury and giving a massage increased his discomfort. However, he responded to his patients' expectations despite his awareness that the treatment was not likely to be effective. As he put it:

Everyone likes being massaged. So I think I got sucked into the habit of probably [giving massages] ... even [to] the patients, who ... I knew [weren't] really going to ... [get helped] that much [by the massage]. I'd still do it, just because I knew that [it] was something that pretty much everyone likes when they get treated. So I did a hell of a lot of massage. (p 3)

Conflict between being knowledgeable and capable and being caring and hardworking. Participants' reports of working when they were injured and the expectations of employers, colleagues, and patients illustrate a conflict that could arise between therapists' knowledge of what was best in terms of caring for their own health and the need to demonstrate their hardworking and caring nature.

Although they were often not overtly expressed, these 2 sets of beliefs—of therapists as knowledgeable and capable and of therapists as caring and hardworking—are pervasive enough to form part of the culture of the physical therapy profession. Within the profession, these beliefs give rise to a pressure to conform. The literature supports the existence of a working culture within the physical therapy profession, which defines behavior acceptable to the group, and an understanding of the roles and responsibilities of the members of the profession. Our study supports the notion of prevalent expectations and beliefs within the physical therapy profession. It provides evidence that these expectations and beliefs influence attitudes about, and responses to, WMSDs when they occur.

These cultural beliefs form a prevailing expectation that therapists will act in ways that demonstrate high levels of skill and knowledge as well as hard work and caring. This expectation, as manifested by the therapists in this study, is congruent with Richardson's assertion that physical therapists, by their actions, reinforce behaviors that are acceptable to the group. If senior members of the profession hold this expectation and thus exert pressure, inexperienced therapists may well feel obliged to act in a way that demonstrates the desirable values.

In our opinion, inexperienced or underconfident therapists may find themselves in a no-win situation. If they fail to put the needs of their patients first, they may be seen as uncaring or lazy. If they do put the needs of their patients first and subsequently experience an injury, they may be perceived as incompetent. This situation could explain why the participants in this study reported behavior that demonstrated their care and hard work.
toward their patients, but which came at a personal health cost.

Having a high level of knowledge and skill is valued by the profession, and one of the ways of demonstrating this is to remain uninjured. This interpretation may help explain the observed reluctance of physical therapists to talk to others about their WMSDs. Caring for the patient is also highly valued, and our data suggest that this can sometimes take precedence over caring for oneself as a therapist.

Participants in our study appeared to exemplify how the culturally desirable traits of being knowledgeable, capable, and caring and of working hard have the potential to conflict. This was particularly clear when the participants knew that what they were doing was potentially harming them, but they did it anyway.

Limitations and Further Research

Our findings are specific to the 18 therapists who participated in the interviews. The interviews were carried out in Australia, and the findings may not be applicable to other populations of physical therapists. Therapists in other countries are operating within their own broader culture and may have differing values and experiences as a result. However, our extensive use of participants’ words enables the reader to infer the applicability of the findings to their own situation. Participants’ experiences provide insight into aspects of the physical therapy profession and its culture that may influence the development of, and responses to, WMSDs. Nevertheless, further research to determine the applicability of these findings in other populations is needed.

Our data raise several other issues for further investigation. Further research is needed to investigate the current strategies used by therapists to prevent their own injuries. A possible reason that the “right” way has been ineffective in preventing WMSDs may simply be that the “right” way has not yet been identified. The Occupational Safety and Health Administration identifies the need for a number of interventions in managing ergonomic risk. These include hazard identification and reporting, job hazard analysis and control, training, management of WMSDs, and program evaluation. It would seem prudent for the physical therapy profession to identify, assess, and control aspects of therapists’ jobs that increase the risk of WMSDs. Further research is necessary to identify particularly risky aspects of physical therapy work, and this research is likely to indicate that specific tasks may need to be changed. This is an important first step in the process of minimizing the incidence of WMSDs among therapists.

These findings also have implications for the teaching of beginning practitioners. It is appropriate for the physical therapy profession to consider the beliefs and values it is conveying to its newest members and to ensure not only that they are socialized into caring for their patients, but also that they are taught the importance of caring for their own bodies.

References

Appendix.

Initial Schedule of Questions
This schedule is intended as a guide only, to ensure the interviewer covers all relevant aspects of the work-related musculoskeletal disorder. The nature of qualitative research means that as new data emerge, different aspects of the interview may increase or decrease in emphasis and new areas may be investigated. It is expected that areas other than those covered in this guide may be included in the interviews.

Personal/Demographic Information
Age
Sex

Work History
Years of practice as a physical therapist, areas of practice
Current or more recent practice
Other relevant information

• Tell me about your work history and how injury fit into that

Causes
• How did injury occur? What caused it? Did it occur in the course of your normal work? Were there unusual circumstances surrounding the injury that may have affected the nature or extent of the injury?

• What contributed to it?

• What exacerbated it?

• What aspect of the causal factor was important in the onset of the injury? For example, if lifting was the cause, was it the excessive weight? The frequency of lifting? The amplitude? The posture in which it occurred?

• Was there a point at which you recognized that: You were at risk of injury? You would have to change your area of practice or leave altogether?

• Do you have any other comments about the causes of your injury?

Management
• How did you manage your injury?

• Were there any skills or attributes that you had acquired as a physical therapist (or student) that helped you manage your injury better than if you had come from a different professional background?

• What would you have done differently with the benefit of hindsight?

• Did you have treatment for your symptoms?

• Do you have any other comments about your injury or the way in which it was managed?

Resolution
• How much experience had you had as a physical therapist when you made the decision to change area of practice?

• How did you choose an alternative? Was your prior experience an advantage? How?

• Did your training give you any advantages in choosing what area to go into or changing?

• Were there any skills or attributes that you had acquired as a physical therapist (or student) that helped you change the area in which you practiced?

• Do you anticipate that you will make other career changes because of injury? Do you expect that you will ever practice in the original area that you left because of injury?

• Do you have any long-term limitations because of your injury?

• Are there any things you can think of that would have made the transition (both choosing and changing) easier?

Do you have any other comments?