

PERSPECTIVE

Listening is therapy: Patient interviewing from a pain science perspective

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ABSTRACT

The interview of a patient attending physical therapy is the cornerstone of the physical examination, diagnosis, plan of care, prognosis, and overall efficacy of the therapeutic experience. A thorough, skilled interview drives the objective tests and measures chosen, as well as provides context for the interpretation of those tests and measures, during the physical examination. Information from the interview powerfully influences the treatment modalities chosen by the physical therapist (PT) and thus also impacts the overall outcome and prognosis of the therapy sessions. Traditional physical therapy focuses heavily on biomedical information to educate people about their pain, and this predominant model focusing on anatomy, biomechanics, and pathoanatomy permeates the interview and physical examination. Although this model may have a significant effect on people with acute, sub-acute or postoperative pain, this type of examination may not only gather insufficient information regarding the pain experience and suffering, but negatively impact a patient's pain experience. In recent years, physical therapy treatment for pain has increasingly focused on pain science education, with increasing evidence of pain science education positively affecting pain, disability, pain catastrophization, movement limitations, and overall healthcare cost. In line with the ever-increasing focus of pain science in physical therapy, it is time for the examination, both subjective and objective, to embrace a biopsychosocial approach beyond the realm of only a biomedical approach. A patient interview is far more than "just" collecting information. It also is a critical component to establishing an alliance with a patient and a fundamental first step in therapeutic neuroscience education (TNE) for patients in pain. This article highlights the interview process focusing on a pain science perspective as it relates to screening patients, establishing psychosocial barriers to improvement, and pain mechanism assessment.

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Introduction

Chronic musculoskeletal pain (MSKP) is one of the most disabling health disorders in the world that causes personal, social, and economic burden (Vos et al, 2012). Our biological understanding of chronic MSKP has increased substantially (Moseley, 2007; Nijs et al, 2012), but in the majority of patients with chronic MSKP and dysfunctions, biomedical explanations are unable to fully appreciate the complex clinical picture of pain complaints, disability, and distress (Sterling and Kenardy, 2008; Yunus, 2007). Due to the complexity of chronic MSKP, a comprehensive biopsychosocial approach is required for assessment and treatment (Gatchel et al, 2007; Kamper et al, 2015). One emerging biopsychosocial treatment increasingly used by physical therapists (PTs) is therapeutic neuroscience education (TNE) (Louw, Diener, Butler, and Puente-dura, 2011; Louw, Diener, Landers, and Puente-dura, 2014). TNE as a treatment, is an educational approach focused on helping a patient understand their pain experience from a

neurobiology and neurophysiology (neuroscience) perspective, with the aim to produce a therapeutic effect (Louw and Puente-dura, 2013). The current best-evidence supports the therapeutic effect of neuroscience education with studies showing TNE providing strong evidence for reducing pain, disability, pain catastrophization, and limited movement (Louw, Diener, Butler, and Puente-dura, 2011; Moseley, 2002; Moseley, 2004; Moseley, Nicholas, and Hodges, 2004). In line with the emerging evidence for TNE, studies associated with the utilization of TNE have focused on a variety of disorders including: chronic low back pain (Moseley, 2002; Moseley, 2004; Moseley, Nicholas, and Hodges, 2004); lumbar surgery (Louw, Diener, Landers, and Puente-dura, 2014; Puente-dura et al, 2009); whiplash associated disorders (Van Oosterwijck, Nijs, Meeus, and Paul, 2011); and chronic fatigue syndrome (Meeus et al, 2010). With clinical application of TNE to various conditions, interest also shifted to a greater understanding of the educational delivery methods and content

(Gallagher, McAuley, and Moseley, 2013; Louw, 2014; Louw, Diener, Butler, and Puenteadura, 2011).

However, with the increased focus on TNE as a treatment, PTs may have shifted their focus too much on the treatment, leaving behind very important aspects of TNE, such as information gleaned from the interview and physical examination. In fact, it could be argued that a skilled interview which embraces and incorporates a biopsychosocial approach may be a key first step of a successful TNE treatment. The aim of this paper is to illustrate how a patient interview is far more than “just” collecting information, but rather a critical component to establishing an alliance with a patient and a fundamental first step in TNE. Also, this paper does not aim to describe a detailed, complete interview, but rather highlights a few key interview issues from a pain science perspective, like creating a therapeutic alliance, screening patients, establishing psychosocial barriers to improvement, and assessing pain mechanisms.

Therapeutic alliance

The alliance between PT and the patient can have a positive effect on treatment outcome (Ferreira et al, 2013; Hall et al, 2010). A biopsychosocial approach in healthcare needs the transformation of the interview toward patient-centered care, which holds the key to personal, responsive, and fulfilling communication between patients and clinicians (Roter, 2000). The PT therefore, first needs to know how the patient is doing, their perception of their own problem, how the problem impacts their life, and vice versa, and how their lifestyle impacts their problem (Jones and Rivett, 2004; Maitland, 1986). If this is not established, there could easily be a mismatch between the patient and PT which makes forming a therapeutic relationship very difficult (Ferreira et al, 2013). Patients have the right to information from their clinicians and clinicians have the obligation to convey it in an understandable and useful manner (Oliveira et al, 2012). A meaningful therapeutic relationship cannot occur without empathy, the ability to perceive and understand something of the patient’s experience of pain, vulnerability, suffering, and expression of appropriate concern. “Empathy is the perceptual ability and cognitive skill that establishes virtue and medical beneficence”, and provides the perceptual basis for clinical reasoning (Oliveira et al, 2012). By reducing clinical reasoning to its cognitive components, the larger context of the patient’s situation could be ignored, and the neurophysiological education approach could fail

to acknowledge that clinical reasoning is grounded in human perception (Darlow et al, 2013). Furthermore, a strong therapeutic relationship facilitates collaborative decision making, as it will make PTs aware of their patients’ views and preferred choices (Elwyn, Edwards, and Kinnersley, 1999). Understanding the patient’s unique experience is essential to discovery of the patient-specific beliefs and risk factors that will serve as the “target” when educating a patient about the biology and physiology of their pain experience in a TNE approach (Louw, Diener, Butler, and Puenteadura, 2011; Moseley and Butler, 2015).

During the initial interview, identification of patient expectation may also help guide the clinical application of TNE (Louw, Puenteadura, and Mintken, 2012; Moseley and Butler, 2015). Specifically, the exact intervention may not be as important as the individual expectation for the intervention (Bialosky, Bishop, and Cleland, 2010; Bishop, Mintken, Bialosky, and Cleland, 2013; Main, Foster, and Buchbinder, 2010; Maitland, Hengeveld, Banks, and English, 2005; Nijs et al, 2012). Outcomes, therefore, may not depend wholly on the type of treatment provided, but are influenced by individual attitudes or beliefs regarding the treatment. Manipulation of expectation is common in the placebo literature and suggests a causative effect of expectation on pain-related outcomes that may translate to the clinical management of musculoskeletal pain conditions (Louw and Puenteadura, 2014). Explaining pain in neurophysiological terms has been shown to produce such expectations (Louw, 2014). These expectations and beliefs are seen as part of the contextual factors involved in placebo or centrally-mediated mechanisms of treatment response.

Communication strategies utilized during the interview should enhance patient participation, contribute to patient engagement in problem-posing and problem-solving, and facilitate patient confidence and competence to make autonomous decisions. With good clinical communication, patients are more satisfied with the care they receive, there is a better recall and understanding of information, and healthcare professionals experience greater job satisfaction and less work stress (Bialosky, Bishop, and Cleland, 2010). Patients experiencing pain and attending physical therapy may be particularly vulnerable, and in certain circumstances are not able, or unwilling, to carry the sole burden of their medical decisions. Using both active and reflective listening skills allows the PT to accommodate individual patient preferences and help develop and further patient capacity for autonomous decision making (Hall et al, 2010).

Screening patients

In line with various national and international efforts for PTs to gain direct access (Boyles, Gorman, Pinto, and Ross, 2011; Flynn, 2003), much attention has focused on training PTs to screen for risk, and as an initial priority, to do no harm (Andersson et al, 2010). It is therefore imperative that PTs also recognize the need to screen individuals suffering from chronic MSK pain for safety (i.e. red flags) (Figure 1). Various red flags associated with MSK pain have been described and are well understood (Downie et al, 2013; Leerar, Boissonnault, Domholdt, and Roddey, 2007; Ross and Boissonnault, 2010; Sizer, Brismee, and Cook, 2007). Screening for red flags in accordance with direct access standards has also warranted an increased use of review of systems, to allow for a more comprehensive screen prior to interview, let alone physical examination and treatment (Goodman, 2010; Leerar, Boissonnault, Domholdt, and Roddey, 2007; Ross and Boissonnault, 2010).

Apart from red flags, prior to initiating the interview, the PT screen for is recommended psychosocial risk factors, which are also known as yellow flags, as barriers to recovery. In recent years, it has become apparent that these psychosocial risk factors may actually be the dominating factor associated with recovery (Linton and Nordin, 2006; Linton et al, 2005). The research of Hill et al. (2010 and 2011) indicates that, although it is important to assess psychological distress in patients seeking physical therapy care for pain, it may be unnecessary to complete multiple questionnaires (e.g. to specifically assess depression, stress, anxiety), to make this assessment. A simple, straightforward

assessment, such as the short STarT Back Screening Tool (Hill et al, 2010; Hill et al, 2011) or the Short Form Orebro Musculoskeletal Pain Screening Questionnaire (Linton, Nicholas, and MacDonald, 2011), prior to the interview may be all that is required. Both questionnaires may identify low, medium, or high psychosocial distress as a risk status (Zimney, Louw, and Puenteadura, 2014). This classification, associated with screening for risk, drives the proposed treatment, including the need to (or not to) include TNE, as well as the potential extent of the TNE needed. In the low-risk group, in which pain is associated with low levels of distress, suitable acute pain management and an abbreviated TNE may be the only intervention needed where the PT may educate the patient to encourage adaptive beliefs and behaviors. Over-investigating and over-treating this low-risk group may result in worse outcomes (Graves et al, 2012; Webster, 2013). For the medium-risk group, in which pain is associated with moderate distress levels, best practice management is proposed as suitable pain management, TNE, and targeted functional restoration (Hill et al, 2010; Hill et al, 2011). The high-risk group, in which pain is associated with high distress levels, requires special attention, directing management to reduce high levels of fear, anxiety, depressed mood, catastrophizing, and distress. TNE is well-designed to address these issues (Louw, Diener, Butler, and Puenteadura, 2011; Moseley, 2002; Moseley, Nicholas, and Hodges, 2004; Zimney, Louw, and Puenteadura, 2014), however, the patient may benefit from additional psychosocial management strategies such as referral to a mental health professional if the PT

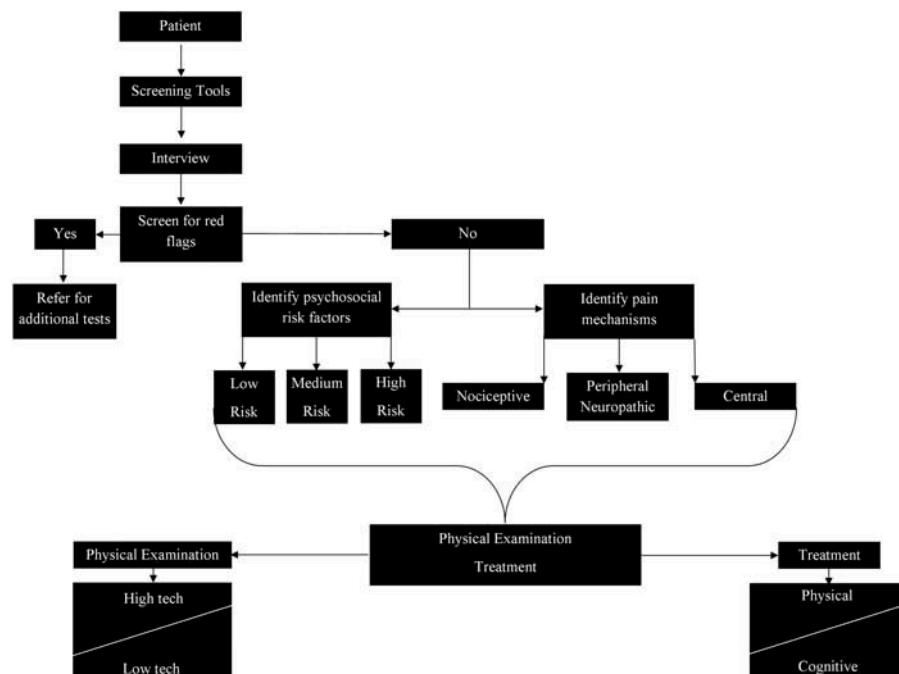


Figure 1. Flowchart of the screening process during an interview associated with pain science.

determines that the extent of psychosocial involvement is beyond their scope of expertise. Motivational interviewing techniques (Amrhein et al, 2003); careful explanations regarding biopsychosocial pain mechanisms pertaining to the individual (Gifford, 1998); exposure training for feared movements (George and Zeppieri, 2009); and restoration of normal movement based on the patient's fears, is the proposed intervention for this group (Hill et al, 2010; Linton, Nicholas, and MacDonald, 2011).

Traditional biomedical education has been shown to narrowly frame a PT's examination and treatment strictly into biomedical factors and as a result can have negative effects on the patient's beliefs and recommended activity levels (Domenech et al, 2011). Following a purely biomedical approach will prevent the PT from appreciating possible psychosocial risk factors and their contribution to the patient's presentation which is more reflective of a comprehensive biopsychosocial approach (Nijs et al, 2012; van Wilgen et al, 2014). This, coupled with research findings that psychosocial factors often are better predictors of pain, highlights the need for PTs to question patients to gain a better understanding of their unique psychosocial risk factors (Carragee, Alamin, Miller, and Carragee, 2005; Jarvik et al, 2005). Cognitive or psychological factors such as fear-avoidance, stress, anxiety, beliefs, expectations, catastrophization, hypervigilance, depression, and maladaptive coping should be considered during the interview as they have been shown to have a moderating effect on treatment outcomes (Linton, 2000; Main, Foster, and Buchbinder, 2010; Pincus, Burton, Vogel, and Field, 2002; Vlaeyen and Crombez, 1999; Wertli et al, 2014a; Wertli et al, 2014b). It is important for the PT to recognize that there is considerable overlap in these constructs (Campbell et al, 2013). An example of this overlap may be a patient demonstrating catastrophic thinking as a result of the stress and anxiety they feel in regard to their condition. The stress and anxiety may be the product of a stressful workplace, a punitive spouse, or an employer with poor management of workplace injuries. Therefore, lifestyle, and social factors such as work factors, family factors, culture, sedentary behavior, sleep disturbance, and inactivity also are important factors to understand the psychosocial contributions to the patient presentation (Björck-van Dijken, Fjellman-Wiklund, and Hildingsson, 2008; Edwards, Fillingim, and Keefe, 2001; Main, Foster, and Buchbinder, 2010; Mogil, 2015). The PT needs to be aware of the sensitive nature of these topics with some patients and therefore needs to use sound clinical judgment on when it is best to incorporate questioning in these areas. The

initial establishment of a therapeutic alliance with the patient will ensure that the PT considers their perceived level of rapport and trust with the patient prior to questioning the patient on sensitive topics the patient may initially be apprehensive or resistant to discussing.

Health care professionals can have a strong influence upon the attitudes and beliefs of patients (Darlow et al, 2013). PTs may influence their patients' understanding of the source and meaning of symptoms, as well as their prognostic expectations (Sloan and Walsh, 2010). Such information and advice could continue to influence the beliefs of patients for many years (Darlow et al, 2013). Messages increasing the "threat value of pain" could result in increased vigilance, worry, guilt when adherence was inadequate, or frustration when protection strategies failed (Louw, Diener, Landers, and Puenteadura, 2014). Alternatively, messages can provide reassurance, increase confidence, give helpful advice, and have an overall positive influence on the approach to movement and activity (Ferreira et al, 2013; Hasenbring and Pincus, 2015). Words have emotional power, and may impact the outcomes of treatment in medical settings. Studies have shown that orthopedic words trigger specific emotional reactions in healthy subjects, which are likely similar in patients with orthopedic conditions (Louw, Diener, Landers, and Puenteadura, 2014; Vranceanu, Elbon, and Ring, 2011). It is important to choose the best words that may influence perception of the condition and its causes, foster effective coping strategies, and ultimately impact response to treatment. During the clinical interaction, it is important to pick the most positive words; whether used to name or describe a condition, provide treatment recommendations, or generally communicate with patients in order to encourage adaptive beliefs and behaviors. In some cases, the words, descriptions, and explanations used during a consultation may in fact be more advantageous than the actual medical treatment provided (Louw and Puenteadura, 2014; Melzack, 2001). The PT should be aware of other contextual factors in the interview and treatment which can influence treatment effect or placebo mechanisms such as characteristics of the treatment (theatrics, visual complexity, and impressive theoretical explanations), patient and PT characteristics (status and gender), and the healthcare setting (home, clinic, hospital, room setup, threatening anatomical models, and posters).

Traditionally, subjective interview questioning in musculoskeletal health has focused on biomedical, biomechanical, and pathoanatomical factors (Nijs et al, 2012). While this is helpful, it limits the PT's understanding of the patient's unique pain experience and

shows disregard for contextual, lifestyle, and cognitive factors that contribute to an individual's pain experience. Kendall, Linton, and Main (1997) have created a mnemonic that can assist a PT in comprehensive questioning of psychosocial risk factors in a patient – ABCDEFW: Attitudes and Beliefs; Behaviors; Compensation Issues; Diagnosis and Treatment; Emotions; Family; and Work.

Table 1 displays the category of questioning, possible starter questions suggested by Gifford (2014), and the potential information that may be obtained in each area. These initial questions often require follow-up questions to clarify information in each category.

Assessing pain

Pain is a normal human experience, but also a powerful driving force to seek help (Gifford, 2014; Moseley, 2007). Many patients attending outpatient physical therapy services attend on the account of a painful experience. When patients consult a PT with a primary complaint of pain, pain needs to be assessed (Breivik et al, 2008). Traditional models have PTs asking questions about the location of the pain, duration of the pain, nature of the pain, quality of the pain, behavior of pain, and even intensity of the pain (Maitland, Hengeveld, Banks, and English, 2005). In pain science, it is now well established that a person experiencing pain develops widespread brain activity associated with the experience, referred to as the pain neuromatrix (Melzack, 2001; Moseley, 2003). What ignites the pain neuromatrix and ultimately the patient's pain experience is part of the individual nature of each person's pain (Puentedura and Louw, 2012). Traditional models use injury, disease, surgery, or emotional models to showcase the ignition of the pain neuromatrix. It should, however, be highlighted that the pain neuromatrix can be ignited by smell, vision, and words (Puentedura and Louw, 2012). It is believed that threatening words may ignite the pain neuromatrix, and the use (and repetitive use) of the actual word "pain" may cause and increase the activation of the pain neuromatrix (Louw, Diener, Landers, and Puentedura, 2014; Wilson, Williams, and Butler, 2009). Therefore, assessing pain needs to be done with caution. Even though a "pain rating" may be needed for third party payers, the astute PT should sparingly consider using the word "pain" in the assessment and be cognisant that the "manner in which they ask" about pain may influence a pain experience (Breivik et al, 2008). When considering pain ratings, PTs should also be aware that pain ratings are only subjective expressions of perceived pain and varies in different cultures (Edwards, Doleys, Fillingim, and

Lowery, 2001; Fortier, Anderson, and Kain, 2009), and gender (Fillingim, 2000; Fillingim et al, 2009).

When assessing a patient's pain, there is however, important "other" information that needs to be gathered, as it powerfully guides interpretation of the physical examination and decisions about treatment and what pain mechanisms may be dominant in the patient's presentation (Nijs et al, 2011; Smart, Blake, Staines, and Doody, 2010). In line with the emerging research in pain science, it is now well established that "pain is not pain." The biopsychosocial model of pain science has made scientists and PTs aware that in some patients the pain experience is predominately driven by nociceptive information and thus will have a more nociceptive dominant pain mechanism. In other patients, nociception by virtue of tissue healing, becomes less dominant, but biological and physiological processes in the peripheral nervous system becomes a dominant issue in a person's pain experience resulting in a possible peripheral neuropathic pain mechanism (Smart et al, 2012b). In yet another patient, peripheral nociceptive and neuropathic mechanisms are not the key issues associated with the development and maintenance of the pain experience, but more powerfully driven by the central nervous system, resulting in a dominant central pain mechanism (Smart et al, 2012a). The importance of being able to identify which of these three mechanisms are dominant, are likely more important clinically than "just asking a pain rating" (Smart, Blake, Staines, and Doody, 2010; Smart et al, 2012a; Smart et al, 2012b; Smart et al, 2012c). The aforementioned classification of pain by Smart et al. (2010 and 2012), has demonstrated an accurate preliminary classification of nociceptive, peripheral neuropathic, and central pain mechanisms (Table 2).

Therefore, given the screening proposals in this paper associated with red flags, psychosocial yellow flags and pain mechanisms, Figure 1 illustrates a potential start of a flow diagram associated with a pain science perspective. The PT who prioritizes TNE as a treatment option needs both guidance to determine which patients may be suitable for TNE and what the proper dosing is of the TNE intervention. Upon screening for psychosocial risk factors (low, medium or high) and taking into consideration the dominant pain mechanism (nociceptive, peripheral neurogenic or central), the PT can use that information to firstly, guide the physical examination and secondly, plan the treatment.

The physical examination should be based on the information gathered in the interview (Jones and Rivett, 2004). It is imperative that PTs, as they gain

Table 1. Potential questions for psychosocial risk factors in a patient utilizing the ABCDEFW criteria.

Topic area	Question	Information gained
Attitudes and Beliefs	What do you think is the cause of your pain?	<ul style="list-style-type: none"> • Fear/avoidance • Catastrophization • Maladaptive beliefs • Passive attitude toward rehabilitation • Expectations of effect of activity or work on pain
Behaviors	What are you doing to relieve your pain?	<ul style="list-style-type: none"> • Use of extended rest • Reduced activity levels • Withdrawal from ADLs and social activities • Poor sleep • Boom–bust behavior • Self-medication – alcohol or other substances
Compensation Issues	Is your pain placing you in financial difficulties?	<ul style="list-style-type: none"> • Lack of incentive to return to work • Disputes over eligibility for benefits, delay in income assistance • History of previous claims • History of previous pain and time off work
Diagnosis and Treatment	You have been seen and examined for your pain? Are you worried that anything may have been missed?	<ul style="list-style-type: none"> • Health professional sanctioning disability • Conflicting diagnoses • Diagnostic language leading to catastrophizing and fear • Expectation of “fix” • Advice to withdrawal from activity and/or job • Dramatization of back pain by health professional producing dependency on passive treatments
Emotions	Is there anything that is upsetting or worrying you about the pain at this moment?	<ul style="list-style-type: none"> • Fear • Depression • Irritability • Anxiety • Stress • Social anxiety • Feeling useless or not needed
Family	How does your family react to your pain?	<ul style="list-style-type: none"> • Over-protective partner/spouse • Solicitous behavior from spouse • Socially punitive responses from spouse • Support from family for return to work • Lack of support person to talk to
Work	How is your ability to work affected by your pain?	<ul style="list-style-type: none"> • History of manual work • Job dissatisfaction • Belief work is harmful • Unsupportive or unhappy current work environment • Low educational background • Low socio-economic status • Heavy physical demands of work • Poor workplace management of pain issues • Lack of interest from employer

Table 2. Clinical recognition of dominating pain mechanisms via signs and symptoms.

<p>Nociceptive Signs and symptoms easily recognized by clinicians. These symptom and examination clusters indicate individuals that have these features are 100 times more likely to accurately predict a clinical classification nociceptive pain in patients classified with this type of pain (Smart, Blake et al. 2012)</p> <ul style="list-style-type: none"> • Proportionate pain • Aggravating and easing factors • Intermittent sharp, dull ache or throb at rest • No night pain, dysesthesia, burning, shooting or electric <p>Peripheral neurogenic Symptoms and sign clusters identified indicating patients are 150 times more likely to have a peripheral neurogenic pain states (Smart, Blake et al. 2012)</p> <ul style="list-style-type: none"> • Pain in dermatomal or cutaneous distribution • Positive neurodynamic tests and palpation (mechanical tests) • History of nerve pathology or compromise <p>Central Sensitization Symptoms and sign clusters identified indicating patients are 486 times more likely to have a central sensitization pain state (Smart, Blake et al. 2012)</p> <ul style="list-style-type: none"> • Disproportionate pain • Disproportionate aggravating and easing factors • Diffuse palpation tenderness • Psychosocial issues
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clinical experience, adjust their examinations, especially in regard to pain science (Butler, 2000). For example, in patients with a more dominant nociceptive input mechanism with low or even medium risk, a physical examination can focus more on potential biomedical and biomechanical issues (often referred to as “high tech”), contributing to the pain state. In this group of patients the movement tests may often demonstrate the typical “on-off” behavior of mechanical or inflammatory-mechanical pain. In contrast, a patient with a high score of psychosocial risk factors and a dominant central pain mechanism should be approached using a physical examination with less emphasis on biomedical issues, but rather large, physiological movements, often referred to as a “low tech” examination (Linton, 1998). In this group of patients it is often difficult to find “the” pain of the patients, and the pain provocation movements often do not form an interpretable pattern to identify the structure causing the pain. A PT should also consider whether pain reproduction during the physical examination is an appropriate goal for someone in this group as it could create negative associations of physical therapy examination and treatment with pain and negatively impact a patient’s perception of physical therapy care as a result.

The same information regarding psychosocial risk factors and pain mechanisms can be used to guide the treatment plan. For example, central sensitization has been proposed as a key factor in determining if a patient needs TNE (Louw, 2014; Louw, Puentedura, and Mintken, 2012; Moseley, 2007), and has high psychosocial risk factors (O’Sullivan, Dankaerts, O’Sullivan, and O’Sullivan, 2015; Zimney, Louw, and Puentedura, 2014). This understanding of the importance of psychosocial factors and pain mechanisms should guide PTs to “go beyond” typical interview questions. While traditional interviews focus heavily on the intensity, duration, behavior and nature of the patient’s pain, questions more associated with the patient’s beliefs may be needed. More in-depth questions should include: the patient’s current beliefs regarding their pain; their perspective on their pain experience including treatment effects; and perspective on their outlook in regards to recovery. Table 3 showcases potential questions that may help a PT gain increased understanding of the patient’s experiences and beliefs (clinical experience of the authors).

In line with pain assessment, pain neuroscience research has also brought attention to the potential different role of body charts (George, Bialosky, Wittmer, and Robinson, 2007; Wand et al, 2013). Traditionally upon arrival at a physical therapy clinic a patient was given a “body chart” and asked to indicate

Table 3. Proposed more “in-depth” questions to explore a patient’s cognitions, beliefs, and experiences regarding their pain.

Proposed “in-depth” questions
<ul style="list-style-type: none"> • What do you think is going on with your [fill in area they are seeking help for]? • What do you think should be done for your [fill in area they are seeking help for]? • Why do you think you still hurt? • What would it take for you to get better? • Where do you see yourself in 3 years in regard to [fill in area they are seeking help for]? • What have you found to be most helpful for your [fill in area they are seeking help for]? • You have obviously seen many people seeking help. What are your thoughts on this? • What gives you hope? • What is your expectation of PT? • If I could flip a switch and remove all your pain, what things that you have given up on would you do again? • How has your pain impacted your family and friends? • Are you angry at anyone about your [fill in area they are seeking help for]? Tell me about it. • Has anyone made you feel like you’re “just making it up” or “it’s in your head”? Tell me about it.

where they hurt. The intent of the body chart was to establish the location of the pain (Maitland, 1986). It is now well established that there are functional and structural changes in the brain of people struggling with chronic pain, including structural changes in the primary somatosensory cortex (S1) (Flor, 2000; Flor, Braun, Elbert, and Birbaumer, 1997). The reorganization of body maps is well studied and reported via brain scan (Flor, 2000; Lotze and Moseley, 2007). One clinical manifestation alluded to in regard to altered cortical maps, is the inability and inaccuracy of patients in identifying the exact location of their pain (Bray and Moseley, 2011; Moseley, 2008). In line with this research it is now proposed that strategies such as two point discrimination, left/right discrimination, localization and body chart drawing may be useful in detecting cortical changes associated with structural changes of the brain (Louw, Schmidt, Louw, and Puentedura, 2015; Louw et al, 2015; Luomajoki and Moseley, 2011). Clinically it may be helpful for PTs to reconsider the use of body charts to develop a potential greater understanding of the extent of a person’s pain experience from a cortical representation perspective, potentially influencing physical tests needed as well as treatment (Catley, Tabor, Wand, and Moseley, 2013). For example, in a patient with localized, well-defined pain, it may infer a healthy representation of the affected body chart, while a more widespread drawing of a body chart may indicate a reorganization of the body chart (Figure 2). In the case of the more widespread pain a physical examination should include two-point discrimination and treatment likely to include

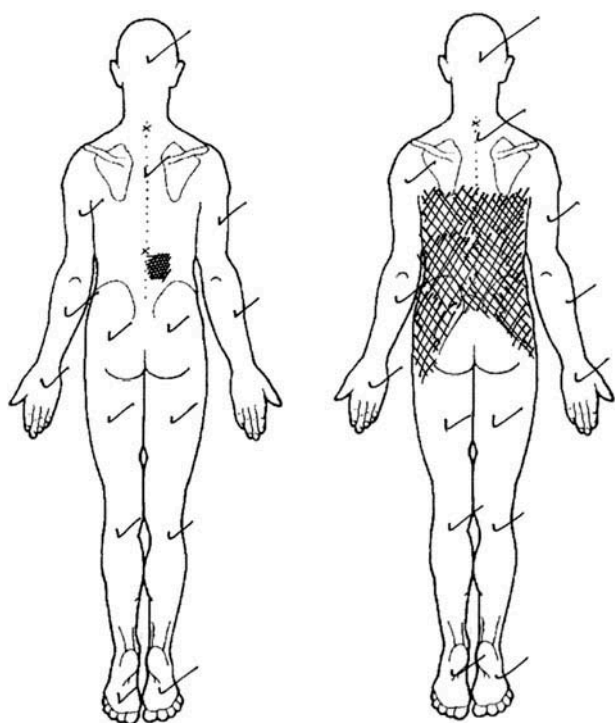


Figure 2. Contrasting body chart representations of pain (✓ indicates pain-free areas).

strategies aimed at restoring the cortical maps (i.e. sensory discrimination) (Catley, Tabor, Wand, and Moseley, 2013; Luomajoki and Moseley, 2011).

TNE during the interview

Examination findings should be clearly explained and conveyed to patients with the intent to reduce threat, share the plan of care and empower the patient. Traditional biomedical interviews have now expanded to include well-studied contributing factors shown to prolong recovery. Given the complexities of pain, this interview, however, is far more than “just” asking “where and how much do you hurt?” A skilled interview implies that the interview also helps with education, in essence “already” teaching the patient about their pain experience, including helping change poor beliefs regarding pain.

Conclusion

The interview, by virtue of creating a therapeutic alliance, prepares the patient for the physical examination and treatments. An approach to treating patients with pain and to reduce the burden on society should include: an initial triage to screen for serious pathology;

identification of the dominant pain mechanism/s (nociceptive, peripheral neurogenic or central sensitization), and assessment of psychosocial risk factors (Linton, 1998; Linton, 2000). A thorough subjective examination is key when it comes to the development of a working hypothesis, which in turn becomes the cornerstone of an effective plan of care. The subjective interview should also aim to identify maladaptive beliefs and behaviors that can be identified as a potential target of treatment. Traditional biomedical interviews have now expanded to include well-studied contributing factors shown to prolong recovery. Furthermore, the interview is centered on the patient, ensuring empathy, addressing concerns, and taking into consideration patient expectations. Each PT can agree; listening is therapy.

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