

# Body-mindfulness in physiotherapy for the management of long-term chronic pain

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Western health professions are trying to become more effective in helping patients to manage chronic pain and, as a result, are looking to complementary and alternative methods, often originating from the east (Asia). The physiotherapy profession, however, appears to be at a critical juncture in its development, whereby incorporation of too much holistic treatment may destabilise 'the body as a machine' concept, a concept that has long been the profession's major basis for its rationale for treatment. Yet, a large amount of recent literature has warranted the need for physiotherapists dealing with chronic pain, to understand the psyche as unseparate from the soma in order for treatment to provide a lasting effect. Such understanding puts large emphasis on physiotherapeutic intervention being placebo- or nocebo-based, thus implying that intervention will often become a necessity in order to tolerate pain, or, become a conduit that exacerbates the pain. This is supported by evidence indicating that both modality intervention and psychological intervention are one of the key inhibitors to those with long-term chronic pain effectively managing their condition independently. Body-mindfulness practice, stemming from an ancient Indian form of meditation, is a process adopted recently by behavioural therapists in the West to ease psychological disorders. It claims to bridge the intervention conundrum in those suffering with long-term chronic pain. Body-mindfulness practice might, therefore, prove useful as a self-empowerment process in addition to being an antidote to dependence or exacerbation from physiotherapy treatment intervention. The physiotherapy profession has been looking for ways to merge the conceptual understanding of the 'body as a machine' with holism and is keen to do this without sacrificing its highly regarded professional status. Body-mindfulness practice appears to be a middle road that blends unreactive awareness to the grounded reality of arising physical sensations, healing the Cartesian split of the psyche from the soma. In addition, physiotherapists appear to be well suited professionals for guiding body-mindfulness practice due to their ability in assessing the fundamental aspects required for the process to unfold.

**Keywords:** body-mindfulness practice, chronic pain

## Introduction

Recent years have witnessed a marked increase in the number of complementary and alternative therapies (CATs) entering the remit of the physiotherapy profession. Most of these CATs are considered traditional 'Eastern' methods of treating physical ailments.<sup>1-12</sup> When comparing Western and Eastern healing paradigms, however, it becomes apparent that the characteristic philosophies underpinning

them differ considerably. The main difference is that Western philosophy is founded by structured reductionism, whereas the Eastern philosophy derives from dynamic holism.<sup>13</sup> Furthermore, due to these philosophies supporting different perspectives, individual perceptions of their value fall into the danger of regarding one as superior to the other. Such philosophic perspective with regard to helping chronic pain conditions, has led to long, and

seemingly fraught, debate.<sup>14–18</sup> Conversely, recent studies, investigating the benefits of integrating the two therapeutic paradigms, have provided positive results for improving individual health. These findings have alerted many professional health bodies to the potential for accelerated recovery from certain conditions, especially chronic pain, by combining Eastern CAT and Western orthodox interventions.<sup>19–23</sup> Open mindedness, by health professionals, to the possible fruits that interventions born from this merging of Eastern and Western paradigms, may therefore help some of those suffering with chronic pain. One such intervention (some may debate the word ‘intervention’ by instead referring to it as a process of non-intervention) that has recently received considerable attention for managing chronic pain is a process ‘mindfulness practice’ (MP).<sup>24</sup>

Caution must be exercised, however, when applying the word mindfulness in the context of attempting to optimise health in the ‘whole patient’. One reason for this is that mindfulness is a term often used in place of the word meditation, whereas it is actually the foundational aspect of meditation.<sup>25</sup> Those familiar with the practice would usually refer to it as the essence of meditation without intentionally adding the esoteric frills of ritual and imagination, etc. (Endnote 1). In addition, the term ‘mindfulness’ appears to misguide the perception of those who employ it as an intervention, due to the body (soma) not being implied by the term. Such failure to conceptually incorporate the soma may well result in a gross misunderstanding of how to facilitate the optimum application of MP; this is because the suffix ‘fulness’ refers to the awareness of a full and unseparate body–mind complex. This understanding has implications for those health professionals who are currently adopting the process as part of their practice, i.e. predominantly those practicing in the psychotherapy setting, as they often lack the knowledge and insight of working with the body, unlike professionals such as physiotherapists.

Therefore, the following discussion will attempt to elucidate whether body therapists such as physiotherapists are suitable practitioners for employing MP as a management for chronic conditions such as long-term chronic pain. In addition, the study will question whether the physiotherapy profession is prepared to embrace a holistic approach such as MP as part of its scope of practice.

#### *The physiotherapy profession and its aversion to holism*

Notwithstanding the possible benefits obtained by blending Eastern and Western healing paradigms,

two aspects integral to the Eastern CAT ethos, namely holism (Endnote 2) and placebo/nocebo (Endnote 3), warrant inspection with regard to their potentially influential effect on the development of the physiotherapy profession.<sup>26</sup> Nicholls and Larmer<sup>27</sup> suggest that the physiotherapy profession is at a critical juncture in its development, whereby incorporation of too much holism into its intervention approach might sacrifice its highly regarded professional status. They argue that the foundation of the profession’s identity is formed by the concept of the body as a machine, and by readily adopting holistic approaches into its treatment repertoire, the profession is at risk of diminishing the integrity of this valued foundation. Nicholls and Cheek<sup>28</sup> provide a historical explanation for this perspective by identifying that the profession was propelled into being by a need to govern the massage practices taking place in the late 19th century. Such regulation was achieved by a small group of female masseurs adopting the biomedical model and constructing a method of physical rehabilitation, thus detracting from the sensual/holistic focus of the body massage healing and its link with prostitution (at least at that time). Therefore, by readily welcoming what might be regarded as nebulous, holistic healing approaches for treating conditions such as chronic pain, the physiotherapy profession is potentially diluting its integral reductionist construct of the body as a machine and, in turn, might be in danger of losing its distinctive standing and considered a generic healing vocation.

#### *Contemporary perspective of the psyche-soma*

Regarding the ‘body-as-a-machine’ in isolation from the psyche, however, has for some time been viewed as short sighted, especially in the field of treating chronic pain.<sup>21,29–36</sup> Furthermore, Nicholls and Larmer<sup>27</sup> propose that the physiotherapy profession might be required to adopt a fresh holistic approach to keep in line with emerging evidence and healthcare policy. This is reflected by a wealth of recent literature that has persuaded Western health authorities to become aware of the need to focus on the psyche and the soma when dealing with chronic pain.<sup>30,33,37–44</sup> As a consequence of this development, New Zealand health authorities have recommended that physiotherapy practices make attempts to amalgamate with clinical psychologists familiar with using behavioural therapies, in exchange for accredited endorsement of their chronic pain rehabilitation programmes (e.g. Accident & Compensation Corporation, NZ).<sup>45</sup> Cognitive and behavioural

therapies, such as traditional cognitive behavioural therapy (tCBT; Endnote 4) appear to be necessary inclusions for the physiotherapy profession to accept as part of the treatment approach for chronic pain. The recommended symbiosis of psychosocial-therapy and physiotherapy (PPT) inevitably disturbs the physiotherapy profession's foundational concept of the body as a machine,<sup>46</sup> but does not oppose literature identifying the body-mechanics having a role to play in the production, maintenance, exacerbation and/or alleviation of chronic pain.<sup>47-51</sup> The clinically applied PPT approach, therefore, fits nicely with integrative concepts such as the biopsychosocial model.<sup>52</sup>

#### *Physiotherapy reasoning, placebo and nocebo*

The PPT amalgamation does, however, pose a problem with regard to the weight of (purely) biomechanical evidence that physiotherapy has incorporated and built upon for its clinical reasoning model. The challenge is that the more one theoretically combines body and mind, the greater the support for the proposition that psychological influences are related to the outcome of orthodox physiotherapy intervention (Endnote 5), especially given the subjective appraisal of chronic pain.<sup>53-55</sup> With such evidence emerging to support this theory,<sup>56,57</sup> it may be postulated that the reduction of chronic pain following orthodox biomechanical intervention is based largely on a placeboogenic response and, in the case of exacerbating pain, a noceboogenic response.<sup>58,59</sup> A contentious issue, therefore, arises: if the intervention used is shown and known to be largely placebo-based by the evidence-based physiotherapist, then the intervention, explained by the therapist and accepted by the patient solely on the basis of its biomechanical effects could be viewed as a benevolent lie.<sup>60-63</sup> So the physiotherapy profession, by holding on to a reductionist perspective to maintain its professional status, invites the question of whether such a standpoint is ethically acceptable from the point of view of the optimal welfare of the chronic pain sufferer, as well as the trust from the patient as an individual.<sup>64,65</sup> Moreover, if the physiotherapy profession does not come to terms with strong evidence placing emphasis of intervention outcome on placebo response, then it could be seen as basing treatment effect solely on theoretically derived biomechanical concepts which reinforce the idea of body as a machine. Furthermore, continued subordination of other healing paradigms, such as those originating in the East, and reluctance by the physiotherapy profession to

incorporate them as potential interventions because of their non-biomechanical rationale, could be considered hypocrisy.<sup>66-68</sup> Finally, if the placebo response is asserted as being a major conduit to chronic pain recovery following exposure to an orthodox physiotherapy intervention, an underpinning similarity between Western and Eastern healing paradigms becomes evident, i.e. the likely incorporation of autosuggestion, belief, classical conditioning and/or expectation (Endnote 6).<sup>59,69-72</sup> It, therefore, seems pertinent and timely for the physiotherapy profession to embrace an amalgamation of PPT and Eastern paradigm (EP) intervention (PPTEP), to avoid the possibility of adopting an unethical as well as contradictory perspective, and utilise a potentially effective symbiotic form of intervention for chronic pain sufferers.

To suggest an approach to intervention based upon placebo might initially appear inappropriate or unethical. The term placebo, pointing originally to a positive state ('to please'/'it will please'), has become increasingly distanced from its original etymological derivation.<sup>73,74</sup> Due to the heavily negative connotations ascribed the term, mainly by the pharmacological fraternity, it has been suggested that the term 'placebo effect' be positively renamed to that of 'remembered wellness'.<sup>75</sup> Interestingly, this term adds a new perspective to PPTEP understanding, as it implies there to be an unharmed healthiness integral to the individual that can at times be forgotten, causing a disharmony between the mind/body.<sup>76</sup> It is, therefore, proposed that PPTEP interventions have the capacity to invoke a placebo effect sufficient enough for a patient with chronic pain to remember their inherent unaffected wellness, i.e. the intervention effectively becomes a positive reminder. This understanding underpins a large aspect of the Eastern philosophical basis of healing involving touch, movement and/or meditation.<sup>13,77-80</sup> Such a notion implies that the physiotherapy profession is perfectly placed to accept and, given adequate additional training, effectively administer PPTEP for treating chronic pain by encouraging a patient's memory of wellness.

#### *Long-term chronic pain and the treatment-intervention trap*

The positive new term poses another problem, however: that is, in order for a chronic pain patient who is receiving PPTEP intervention to remember their inherent wellness, patient perceived treatment must be administered and/or suggested. This is likely to lead the patient into thinking that the treatment intervention is the reason for their recollection of wellness, which, according to Benson,<sup>76</sup> is already

there, thus potentially exacerbating reliance upon the treatment intervention to maintain freedom from the pain. Such modality and/or psychological intervention may then be considered a distraction from the pain that is present, a situation that is not helpful in the management of long-term chronic pain (LTCP; Endnote 7).<sup>81–86</sup>

Nevertheless, in order to treat chronic pain, PPTEP must encompass some form of patient-perceived mediation for it to be considered a treatment. From an objective point of view, this is because a treatment intervention is required for an outcome to be assessed – ‘better’, ‘same’ or ‘worse’. Yet, according to Hayes *et al.*,<sup>87</sup> the patient-perceived treatment intervention itself is likely to become one of the major contributing factors for a person ‘with’ LTCP to suffer and continue to suffer. Hayes *et al.*,<sup>87</sup> expand on this assertion by explaining that patient-perceived interventions (physical and/or psychological) serve to inform/reinforce to the LTCP patient that the condition affecting them is real, and an enemy to fight, change and/or hide from. Furthermore, whilst PPT strategies aim to enable patients to cope and control LTCP actively, recent reviews and studies demonstrate how counterproductive this approach may be if it employs a patient-perceived treatment that reinforces the reality of their condition.<sup>83–86,88–93</sup> Despite this evidence, the psychological rationale as part of current PPT understanding has not led to a change in its method of treating LTCP, which emphasises interventions focused on changing thoughts and feelings about pain and distracting awareness from it (Endnote 8).<sup>30,74,94–96</sup> In addition, a column in a recent physiotherapy newsletter, entitled *Active for life! The role of the physiotherapist in the war against chronic disease*, illustrates how the physiotherapy profession is generally promoting the use of control strategies to fight, change and/or distract from LTCP.

Evidence has, admittedly, demonstrated how effective the tCBT-based PPT approach is in helping those suffering chronic pain and avoiding function because of fear (kinesiophobia).<sup>97–99</sup> Yet the evidence, as stated, also indicates that promoting a generic PPT approach, using control and rationalisation strategies, could invoke a trend leading to the LTCP patient becoming ‘treatment dependent’, by going from practitioner to practitioner and reinforcing her or his pain condition.<sup>100</sup> In the LTCP population such a dependence upon perceived treatment intervention could fuel resistance to long-term remembered wellness; thus, any patient perceived treatment

intervention might now be regarded as a potential nocebo.<sup>101</sup> Individuals presenting with LTCP, therefore, seem to be recalcitrant to lasting benefits from a placebo whilst potentially embellishing its short-term effects, and appear susceptible to the nocebo effect during and/or following a PPT intervention. So, if patient-perceived treatment is potentially counter-productive to LTCP management, should the physiotherapy profession not abandon orthodox biomechanical and PPTEP intervention for treating LTCP and instead do nothing (Endnote 9)?

#### ***Body-mindfulness – a possible solution?***

Interestingly, within the EP of treating LTCP, a foundational form of meditation has for centuries claimed to bridge the placebo/nocebo and patient-perceived treatment intervention conundrum.<sup>102</sup> Yet throughout this time, it has been negatively influenced considerably by belief and cultural superstition,<sup>13</sup> thus itself turning into a prime candidate for becoming a placebo/nocebo effect. Recent scientific investigation, however, appears to have extracted the EP method from its appendage ritual, imagination and dogma to expose the original process claiming to provide benefit for those suffering with a chronic condition.<sup>88,103–110</sup> More importantly, the uncovering of this foundational practice has also revealed that, once understood by the patient, effects come about by the nature of non-intervention.

A process termed ‘mindfulness practice’ (MP) has, consequentially, been incorporated into behavioural therapies as one of the major components helping patients accept affective sensate experience and function according to values in spite of its unpleasant presence.<sup>87</sup> Interestingly, the MP process is based almost entirely on the patient becoming aware of bodily sensation.<sup>25</sup> This would indicate that body-mindfulness practice (BMP) may be a more appropriate term to use. Any external guidance, therefore, would ideally be from an expert in the understanding of the body, i.e. a physiotherapist.

A physiotherapist would be able to provide guidance in terms posture and breathing methods (see Appendix), as a key component of the process is for the patient to become non-reactive during fairly long periods of sustained posture. Furthermore, the physiotherapist would have training in observing and facilitating relaxation and ideally be well versed in teaching body-awareness from an exercise perspective. The importance of a physiotherapist being a key facilitator in BMP for LTCP patients becomes clear when one considers that a patient is ultimately coming to terms with accepting gross, unpleasant

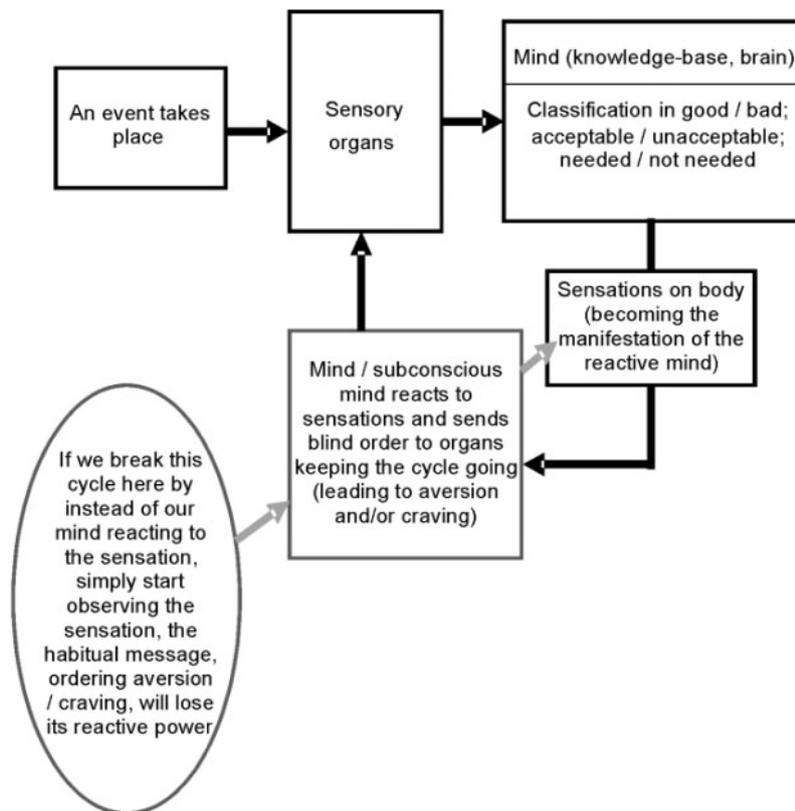
sensations, i.e. pain. This becomes even more apparent when one recognises that a patient may occasionally have a biophysiological complaint that should not be ignored, e.g. a compressed nerve causing paraesthesia; in such cases a physiotherapist can assess, confirm and advise on a posture to relieve pressure or recommend stopping the practice. Such posture-related problems readily occur in addition to unregulated breathing related to anxiety or other emotions rising in the patient's field of awareness during the stillness that is required during BMP. Again, a physiotherapist is ideally suited to advise on breathing techniques, potentially enabling relaxation and a feeling of well-being in a patient. Finally, perhaps the most important aspect a physiotherapist could provide as part of BMP is the ability to assess a patient's reactive state of mind by physical palpation of its manifestation in the body, i.e. isolated or global muscular tension, and thus be able to gauge what level of BMP would be most appropriate (see Appendix). Physiotherapists, therefore, appear to be just as well suited, or perhaps even better suited, than an expert in the sole understanding of the functioning psyche.

***What exactly is BMP and how can a physiotherapist provide reason for how it works?***

Body-mindfulness is a loose term used to offer understanding of a particular aware 'state of being' as opposed to an unaware 'state of mind'.<sup>111</sup> To understand what is meant by an aware state of being, it is easier to explain what it is not, i.e. a state of mind known as mindlessness.<sup>112</sup> In this way, body-mindfulness can be contrasted to states of mindlessness such as pre-occupation with fantasies, plans, memories, guilt, worries, boredom and behaving automatically without awareness of one's outward speech or actions, and inwardly of one's mental and physical reactions.<sup>103,113,114</sup> The body-mindful state of being is also not an analysis of thought, or an accumulation of knowledge.<sup>115</sup> The body-mindful state of being is, however, said to be a heedful present moment awareness of the various states of mind and sensate experiences that give rise to thoughts, feelings and moods, resulting in less energy directed on perpetuating them and more on the reality of the unfolding conscious moment.<sup>116</sup> Such a mindful state is said to be optimised by an individual using the process of equanimous (unreactive) observation of their own ordinary bodily sensations (including pain).<sup>117</sup> These physical sensations are said to be the reflection of the mindless or mindful state, and are in and on every aspect of our bodies, with or without

pathology, constantly coming to be and ceasing to be, all of the time.<sup>118,119</sup> Body-mindfulness practice might, therefore, be considered a homeostatic process of inviting present awareness to cast light on that which is unaware of change, thus realising the impermanent nature of physical sensations (including pain).

In order to illustrate the process (also see Appendix), one might consider an event such as an individual falling down on an outstretched hand and spraining or fracturing their wrist. The sensory organs bring awareness to the event, e.g. the nociceptors transmitting signals and/or the eardrum relaying the sound of an audible crack, etc. The evaluative mind, receiving this information, will classify the situation as good/bad, acceptable/unacceptable, etc. Awareness of sensations on the body will then localise to the area of insult and diminish its focus on areas peripheral to it.<sup>120</sup> Whilst this is taking place, the subconscious mind takes a reactive snapshot of the process from sensory reception onwards (Fig. 1). This is helpful, as it will provide a memory of aversion to re-enacting the events leading to the fall, in addition to a reinforced need to protect the injured area and a dislike to putting the affected joint in certain positions. Yet the subconscious mind, that remains unobserved (Endnote 10), is vulnerable to react habitually, emotionally, mentally and/or physically, to what the knowledge-based mind perceives as unpleasant, as if the event is continually occurring.<sup>121</sup> This is then likely to be fuelled by reactive fear of, in the case of the example, movement, and desire to ease/rid and/or substitute the unpleasant accrual of isolated sensations, in the case of the example – pain. Consequentially, the fear and/or desire fuelling the cycle will lead to aversion of the unpleasant sensation and/or craving to substitute the unpleasant sensation with a sensation which is pleasant.<sup>122</sup> So the longer the reactive mind is unobserved, the more distanced the reaction will be to observation; thus, to try and change the habit pattern of the mind, as tCBT attempts to do, will be attempting to alter a reaction that has not been witnessed with equanimity. Moreover, craving to exchange the unpleasant for pleasant, or simply ease the unpleasant, is still an unobserved stimulus adding to the vicious cycle (Fig. 1). For example, a LTCP patient accumulating the craving for a physiotherapist, to ease or rid his or her pain, is already adding to the vicious cycle. Psychoanalysis of such extenuated desire, by patient or externally by a therapist, will not be witnessing the



**Figure 1** An illustration of the reactive vicious cycle leading to chronic condition and the way that unreactive observation of physical sensations can break the cycle

sensate result of the subconscious desire. Rather, the conscious focus will merely be on a theoretically manufactured construct of thought as opposed to the reality of the sub-conscious manifestation in arising and passing sensations.<sup>112</sup> In contrast, if an individual regards psychoanalysis as a concept-produced distraction to the immediate solution, personally directed observation can be cast upon physical sensations, i.e. the manifested reality. This is the crux of the matter, as the sensations reveal their impermanent nature when they are witnessed without reaction, no matter how permanent they may at first appear, due to the mind having to attend to the immediate reality of how sensations are constantly changing. Thus, instead of subconscious memory continually renewing the chronic cycle, the reality of a conscious present momentary unfolding can take its place.

To summarise, the mere observation of physical sensations is the proposed process of becoming consciously aware of the impermanent nature inherent with sensations, consequentially breaking the subconscious chronic cycle of reaction.<sup>123</sup> Such equanimous observation of unimagined sensations arising in and on the body (e.g. pain, heat, cold, dryness, pressure, tingling, etc.) is proposed to become the key to being

fully aware of the reactive mind and its exacerbating pre-occupation with the cyclical pattern leading to negative thoughts and feelings.

BMP can, therefore, be likened to science, as it allures individuals to be curious, to make new discoveries of observation and, like good science, fosters openness and an accepting stance toward new wisdom and insight, despite arising conditions such as pain (Endnote 11).<sup>123</sup>

In addition to the conceptual explanation of BMP, literature pertaining to the psychophysiological analysis of mindfulness effects has provided evidence of there being a concurrent shift in brain wave patterns.<sup>124-126</sup> This evidence has been supported by functional magnetic resonance imaging demonstrating the way that neurotransmitter activity alters following a period of guided BMP practice.<sup>127,128</sup> Theory and evidence, therefore, appear to be converging to cast light on the validity of a beneficial process that the physiotherapy profession might be wise not to ignore.

Finally, when reflecting on the disadvantages that the placebo/nocebo effect potentially has on those with LTCP, one may consider the patient's dependence upon the BMP process as being a barrier to management of the condition. This is, of course, true

if the process is regarded as an intervention. Yet, who is it that is actually intervening: is self-observation of a reactive mind an intervention? Admittedly, a process providing advice on a patient's posture, in addition to methods on how a patient can normalise breathing, alongside guidance on how to become aware of bodily sensations is introduced. Yet, no self-effort or continual re-appraisal is required once these are re-established. Ironically the only effort would be in continuing the reactive process. For example, we all breathe, albeit irregularly, when the mind is in a reactive state; we all sustain posture for a duration, yet fidget when a subconscious reaction overwhelms us; and we all have bodily sensations, some of which we are distracted from and others we find are multiplied when the vicious cycle of unawareness is in control. The BMP process is thereby an entry into a natural effortless conscious state of being, reliant only on the self-aware observation of physical sensations that reflect a subconscious reactive mindset.

It can be seen, therefore, that a physiotherapist need not be an expert with how to analyse and alter thoughts and feelings in order to guide the process. In fact, it is possibly better that this kind of expertise does not itself become a reactive element imposed on the BMP process. Nevertheless, a therapist practicing the process themselves might be advised so that she or he is thoroughly conversant with the process and aware of the inherent vicious cycle that we all house to a greater or lesser degree.

## Conclusions

The physiotherapy profession has recently been looking for ways to merge the conceptual understanding of the body-as-a-machine with holism and is keen to do this without sacrificing its highly regarded professional status. Body-mindfulness practice appears to be a middle road that blends awareness of arising sensations into the concept of mind-body, thus potentially healing the Cartesian split of the psyche being separate from the soma.

Clearly, those physiotherapy interventions shown to provide modulation effects on pain should be utilised, especially interventions that wean fear from functional movement. Yet, the evidence is asking that these interventions be used in moderation and with the understanding, by both patient and therapist, that it is likely to contain the elements of a placebo and/or nocebo. Body-mindfulness practice might, therefore, prove a useful antidote to dependence (or exacerbation) from treatment intervention. It may sequentially blend in well with awareness-based

physiotherapy interventions such as Pilates, McKenzie techniques, balance training, breath control and focused exercise, etc.; in addition to holistic sensation-based manual therapies such as massage, trigger pointing and fascial bodywork, or EP treatments such as acupuncture, Tai-chi and Qi-gong. All of these physiotherapy interventions could potentially be optimised with BMP, especially by incorporating the eleventh stage of BMP (see Appendix). The prior ten stages might, therefore, be most beneficial if practiced before inclusion of a physiotherapy intervention. Then, if acceptance of pain and ability to perform function increases, the modality based intervention should be tapered off and ceased at the earliest opportunity whilst continuing BMP and capitalising on guidance with relevant function. A physiotherapist is used to incorporating and tapering these interventions (Endnote 12). Moreover, a physiotherapist is in an ideal position to be able to assess and re-assess levels of somatic tension, breathing and posture. Physiotherapists would, therefore, seem to be well suited for guiding the BMP process in a manner that is not reactive to concepts of psychoanalysis but responsive to the objective representation of the practicing patient.

Following this discussion it is hypothesised that by mindfully placing an aware acceptance on arising sensate experience, good or bad, pleasant or unpleasant then the chronic pain patient might form a commitment to travelling the functional path regardless of the pain. This hypothesis is supported by the evidence demonstrating that pain which is accepted will lose its ability to control an LTCP patient's life and thus reduce its effect on a patient's behaviour. Physiotherapists willing to step outside of their own biomechanical conditioning might find BMP a valuable process with which to become familiar in helping to empower a patient. Pain reduction resulting from BMP is, however, not a patient- or therapist-desired goal; instead, the recognition of increased personal values being followed is a welcomed aspect of the process. Any initial, future research investigating the effects of BMP in the LTCP population should focus on a patient's qualitative perspective of whether pain acceptance has altered.

Encouraging the incorporation of BMP, before, during and after commencing PPTEP intervention, to prepare a patient for a physical treatment intervention, may then serve to provide insight into the real benefits of treatments used to support the scope of the physiotherapy profession and perhaps help make its future a little clearer, at least in the field of LTCP.

Further questions arise from this discussion. One of these is that of whether it is important, or even a pre-requisite, for the therapist to also practice BMP. This is one question that may motivate further discussion. It is my view, shared by a number of the authors referenced, that a practitioner hoping to guide this process must be well versed with all of the stages set out in the Appendix. Such personal practice may also help prevent a guru type of mentality pervading the interaction with a patient, as BMP is, in essence, a process of becoming more open and comfortable to the unknown present rather than more closed. A guru would tend to reside on a step above, whereas this is an equal platform of mutual practice open to the changing sensations within the body/mind complex.

## Appendix

### *Body-mindfulness stages*

This is certainly not an exhaustive list of steps that are reported to improve body-mindfulness. Nevertheless, the stages outlined below are the essence of the generally accepted methods empirically shown to enhance BMP.<sup>129-131</sup>

#### **Concentration phase**

##### *Stage 1: 10-minute breath counting (week 1)*

Sitting on a chair, or on the floor, in a quiet room with a straight back, arms relaxed on the lap and eyes and mouth closed, breath normally in through the nose and then count 'one' on the out-breath. When 'ten' is reached return to 'one'. If at any point during this 10-min period, the concentration of counting is lost due to a distracting thought or feeling then return to 'one' and start again.

##### *Stage 2: Breath concentration (week 2)*

Sitting in the same posture in the same environment focus attention on breath and instead of counting notice which nostril it is entering and the sensation the breath causes at the area inside the nostrils, e.g. warm, cool, ticklish, annoying, painful or even nothing at all. If a thought or feeling distracts this attention gently focus the attention back to the breath.

##### *Stage 3: 20-minute sensation concentration/awareness (week 3)*

In the same posture and the same environment, focus attention to the area just below the tip of the nose and become attentive/aware of the sensation here along with any sensation brought about by the flow of the breath. If a thought or feeling distracts this

attention/awareness gently focus the attention/awareness back to the sensation.

#### **Awareness phase**

##### *Stage 4: Patchwork surface sensation awareness (week 4)*

In the same posture and the same environment, take the awareness to one cheek, then the other cheek, then the chin, then the neck and so on, patch by patch, until all of the body has been covered. If a thought or feeling distracts from this awareness then gently allow the awareness to come back to the sensation patch that was last reached.

##### *Stage 5: Accelerated patchwork surface sensation awareness (week 5)*

As stage 4 but faster and on both sides of the body.

##### *Stage 6: 45-minute whole surface of body sensation awareness (week 6)*

As stage 5 but allowing awareness of the sensations arising throughout the whole of the surface of the body.

##### *Stage 7: Internal patchwork awareness of sensation (week 7)*

##### *Stage 8: Accelerated internal patchwork awareness of sensation (week 8)*

As stage 5 but faster and inside both sides of the body.

##### *Stage 9: 1-hour entire body awareness (week 9)*

Allowing awareness of the entire body.

#### **Concentrative and awareness phase**

##### *Stage 10: Thought/feeling awareness (week 10)*

Purposely evoking a thought/feeling and observing it.

##### *Stage 11: Simple daily activity whilst allowing awareness of sensations and thought/feelings (week 11)*

This involves a choreographed set of simple chores that would be done in the day to day running of a less complex life whilst allowing awareness to observe sensations of the body and thoughts/feelings of the mind as they arise. This could be a set task for the patient/student to implement one day at the weekend. Relative limitation of interaction is best at this stage.

##### *Stage 12: Complex activity whilst allowing awareness of sensations including thoughts and feelings (week 12)*

This is the last of the stages for the patient and involves reading, listening and interacting whilst reflecting and reasoning in action. This complex cognising is allied with allowing awareness of the sensations and thoughts and feelings (the amalgamation of which may be termed the 'perceived felt sense').

This representation of the process is merely a simplistic illustration of what each stage would incorporate. The information omitted from the process is better inputted as the process unfolds in reality.

The twelve stages, in the above order, have been put to the test with my personal practice of BMP. This has resulted in my recognising how important personal practice of each stage is in realising how reactive the subconscious mind actually is, even when chronic pain is not an issue. Incidentally, I find myself particularly tested by the twelfth stage in the BMP process.

There are further 'stages' which do not require a review as they are not directed at aiding the management of pain.<sup>121</sup> I have facilitated the BMP process with chronic pain patients without qualitative or quantitative analysis and, therefore, must be aware that all beneficial outcomes are at present anecdotal. Nevertheless, personal and collegial anecdotal evidence, following the implementation of BMP thus far, has been extremely promising regarding the relationship for enabling patients to manage pain (chronic and acute).

A noteworthy point should be mentioned with reference to Individuals presenting with an observably disturbed behaviour that is likely to be externally disruptive. If this behaviour worsens during the BMP, they should be advised to discontinue the practice and, if considered relevant, referred to an appropriate professional. This is due to the unobserved reactivity being beyond self-observation which may, therefore, require external intervention.

#### **A final note**

Although the BMP outlined may resemble the ancient mindfulness practice of Zazen and/or Vipassana,<sup>118,132,133</sup> it is but a practical initial step to obtain greater clarity of the impermanent nature of sensations. Both Zazen and Vipassana practice are advanced methods taking the mindfulness practice much further, to enable a deepening of spiritual awareness. For example, in order to practice Vipassana, a structured environment is considered a prerequisite, with a schedule that allows an individual to be completely silent and an environment that provides for minimal distractions for long durations of time. In addition, a strict moral code of conduct is considered essential. This is so that a person can be optimally vigilant of deeply engrained reactive conditioning in order for the awareness of subtler sensations to arise. Conditioning of this deeper nature may be uncomfortable when awareness of it comes to pass. Therefore, a centre that has experience of how to guide an individual to persevere through this discomfort, and not run away from it, is of upmost importance. The BMP is a very mild form of this type of practice but cannot be considered

Vipassana due to its ability to unveil only very superficial conditioned reactivity. Nevertheless, without this kind of training being undertaken, by the physiotherapist, the BMP process is open to being guided in a superficial fashion and the deeper understanding of its relevance to easing suffering will not be clear.

#### **Endnotes**

1. The ancient Indian practice of Vipassana appears to hold the main aspects of mindfulness practice, focusing on mastery of the mind and awareness of the sensations arising in the body.<sup>121,134</sup>
2. Holism, in this context, meaning that 'nothing exists in an isolated and independent way, i.e. to really know a "thing" one must know all of its relations';<sup>135</sup> thus interventions are directed at restoring balance between such relationships.
3. Placebo, in this context, refers to the beneficial psychoneuroimmunological response during/ following therapeutic intervention and nocebo to the exacerbating response. Many of the complex Eastern-derived CAT interventions used for chronic pain are regarded as being able to provide a high level of placebo effect.<sup>136</sup>
4. A behavioural therapy described as a psychosocial approach to bypass the body-mind split.<sup>137,138</sup>
5. Nicholls and Larmer<sup>27</sup> might well have been referring to this point in their discussion.
6. This does not suggest that Eastern approaches do not hold a valid method of influencing the healing process other than the placebo response.
7. Recalcitrance to treatment for chronic pain is a well known problem, especially in LTCP.<sup>139</sup>
8. A method tCBT refer to as active patient control in order to cope with chronic pain.
9. Recent studies have implied that the most effective form of intervention for managing chronic pain is not providing an intervention.<sup>99</sup>
10. Observation in this context refers to the body-mindful awareness of ordinary physical sensations (see Appendix).
11. The therapist might be wise, therefore, to adopt such an approach, as well as the patient, so that the full spectrum of reasoning processes can be utilised appropriately and the limitation of their use realised.<sup>87,140</sup>
12. Although physiotherapists are prone to labouring intervention with LTCP patients because of

being required to intervene until the pain is under control.

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