The Common-Sense Model of self-regulation of health and illness: how can we use it to understand and respond to our patients’ needs?

As Hill et al. point out in their powerful paper [1], there is often a difference between objective clinical and radiographic evidence of musculoskeletal disease activity or severity and the experience of pain, other symptoms and functional ability reported by the patient. For the patient, the greatest impact of the disease lies in the effect it has on their ability to continue with a ‘normal’ daily life and this will necessarily be their focus of interest. It is, however, increasingly important for us as researchers and healthcare professionals to understand how the perceptions, experience and impact of having a musculoskeletal condition might influence a patient’s interpretation and response to it, so that we, in turn, can respond more appropriately.

The model used by Hill et al. in their paper [1] to investigate these issues is varying known as the Illness Perceptions Model, the Illness Representations Model, the Self-Regulatory Model, the Parallel Process Model, the Common-Sense Model of self-regulation or simply as Leventhal’s model, after Howard Leventhal and colleagues [2–7] who championed research in this field. For ease, we will refer to it as the Common-Sense Model (CSM).

Leventhal started his research in the late 1960s and early 1970s looking at how fear messages in relatively acute situations might lead to people taking health-promoting actions such as wearing seat belts or giving up smoking [3]. He and his colleagues found that different types of information were needed to influence both attitudes and actions to a perceived threat to health and well-being, and these only lasted for short periods of time. In extending their initial model, Leventhal and colleagues wanted to know what adaptations and coping efforts might need to be made and maintained in those experiencing chronic illness. They proposed a hierarchically organized model of an adaptive system featuring the three main constructs of (i) ‘representation’ of the illness experience that might guide (ii) action planning or ‘coping’ responses and performance of these, followed by (iii) ‘appraisal,’ or monitoring of the success or failure of coping efforts [7]. The model has many similarities with other theories of problem-solving behaviour, such as the transactional model of stress and coping [8], wherein illness can be conceptualized as a stressful experience. A novel feature of Leventhal’s proposition was to delineate the active parallel cognitive processing of how people regulate their responses both to ‘illness danger’ (‘What is this health threat, what can I objectively do about it?’) and to the ‘illness danger’ (‘What is this health threat, what can I objectively do about it?’) and to the individual beliefs about the consequences of the condition and how this will impact on them physically and socially. These representations may only develop into more realistic beliefs over time.

(5) Curability/controllability: the beliefs about whether the condition can be cured or kept under control and the degree to which the individual plays a part in achieving this.

As people with a chronic illness like hand osteoarthritis obtain new information about their condition and evaluate their attempts to moderate, cure or cope with its effects, new representations are formed and develop based upon these experiences. Illness representations are in effect cumulative, with information being adopted, discarded or adapted as necessary. These representations are, therefore, expected to be linked to the selection of coping procedures, action plans and outcomes. For example, focusing on dietary content and control is a way people with osteoarthritis attempt to cure/control their symptoms [10].

It is important for clinicians to appreciate the multiple levels at which these representations operate and how they guide patients’ preferences for treatment and the behaviours in which they engage over time. Furthermore, representations will operate at an abstract and experiential level, and are likely to be weighted in importance in a different way to health professionals. For instance, patients’ expectations about the timeline for the effectiveness of medications are likely to develop from the abstract, e.g. ‘It will take 3 months for this treatment to start to take effect’ [3]. Although Leventhal and colleagues’ original research [6,3] used semi-structured interviews to identify the dimensions of illness representations, the utility of the CSM has been investigated extensively in recent years following the development of a questionnaire, the Illness Perception Questionnaire (IPQ) [11], which addresses the five dimensions detailed above. This questionnaire has been revised and expanded (and renamed the IPQ-R) [12], as applied in Hill et al.’s study [1].

Researchers have been keen to determine how illness representations might influence both coping and outcomes in a diverse range of chronic diseases, including chronic fatigue syndrome (CFS) [13], Addison’s disease [14], psoriasis [15], multiple sclerosis [16] and rheumatoid arthritis (RA) [17, 18]. The premise is that illness representations are related to coping efforts, and via these efforts to outcomes, i.e. coping acts as a mediator. However, research currently seems to indicate that illness representations may be associated with outcomes ‘relatively’ independent of the coping strategies used [19]. However, this conclusion must be cautious: the direction of relationships might not be clear-cut as accurate. These representations will be based on information gathered from personal experience as well as the opinions and discourses of significant others, health professionals and media sources, reflecting issues such as stress, environmental pollution and other pathogens.

(3) Time-line: the predictive belief about how long the condition might last, i.e. is it acute or is it going to be chronic? These beliefs will be re-evaluated as time progresses, and it has been suggested that ‘Inside every chronic patient is an acute patient wondering what happened’ [9].

(4) Consequences: the individual beliefs about the consequences of the condition and how this will impact on them physically and socially. These representations may only develop into more realistic beliefs over time.

(5) Curability/controllability: the beliefs about whether the condition can be cured or kept under control and the degree to which the individual plays a part in achieving this.

It is important for clinicians to appreciate the multiple levels at which these representations operate and how they guide patients’ preferences for treatment and the behaviours in which they engage over time. Furthermore, representations will operate at an abstract and experiential level, and are likely to be weighted in importance in a different way to health professionals. For instance, patients’ expectations about the timeline for the effectiveness of medications are likely to develop from the abstract, e.g. ‘It will take 3 months for this treatment to start to take effect’ [3]. Although Leventhal and colleagues’ original research [6,3] used semi-structured interviews to identify the dimensions of illness representations, the utility of the CSM has been investigated extensively in recent years following the development of a questionnaire, the Illness Perception Questionnaire (IPQ) [11], which addresses the five dimensions detailed above. This questionnaire has been revised and expanded (and renamed the IPQ-R) [12], as applied in Hill et al.’s study [1].

Researchers have been keen to determine how illness representations might influence both coping and outcomes in a diverse range of chronic diseases, including chronic fatigue syndrome (CFS) [13], Addison’s disease [14], psoriasis [15], multiple sclerosis [16] and rheumatoid arthritis (RA) [17, 18]. The premise is that illness representations are related to coping efforts, and via these efforts to outcomes, i.e. coping acts as a mediator. However, research currently seems to indicate that illness representations may be associated with outcomes ‘relatively’ independent of the coping strategies used [19]. However, this conclusion must be cautious: the direction of relationships might not be clear-cut as accurate. These representations will be based on information gathered from personal experience as well as the opinions and discourses of significant others, health professionals and media sources, reflecting issues such as stress, environmental pollution and other pathogens.

(3) Time-line: the predictive belief about how long the condition might last, i.e. is it acute or is it going to be chronic? These beliefs will be re-evaluated as time progresses, and it has been suggested that ‘Inside every chronic patient is an acute patient wondering what happened’ [9].

(4) Consequences: the individual beliefs about the consequences of the condition and how this will impact on them physically and socially. These representations may only develop into more realistic beliefs over time.

(5) Curability/controllability: the beliefs about whether the condition can be cured or kept under control and the degree to which the individual plays a part in achieving this.

It is important for clinicians to appreciate the multiple levels at which these representations operate and how they guide patients’ preferences for treatment and the behaviours in which they engage over time. Furthermore, representations will operate at an abstract and experiential level, and are likely to be weighted in importance in a different way to health professionals. For instance, patients’ expectations about the timeline for the effectiveness of medications are likely to develop from the abstract, e.g. ‘It will take 3 months for this treatment to start to take effect’ [3]. Although Leventhal and colleagues’ original research [6,3] used semi-structured interviews to identify the dimensions of illness representations, the utility of the CSM has been investigated extensively in recent years following the development of a questionnaire, the Illness Perception Questionnaire (IPQ) [11], which addresses the five dimensions detailed above. This questionnaire has been revised and expanded (and renamed the IPQ-R) [12], as applied in Hill et al.’s study [1].

Researchers have been keen to determine how illness representations might influence both coping and outcomes in a diverse range of chronic diseases, including chronic fatigue syndrome (CFS) [13], Addison’s disease [14], psoriasis [15], multiple sclerosis [16] and rheumatoid arthritis (RA) [17, 18]. The premise is that illness representations are related to coping efforts, and via these efforts to outcomes, i.e. coping acts as a mediator. However, research currently seems to indicate that illness representations may be associated with outcomes ‘relatively’ independent of the coping strategies used [19]. However, this conclusion must be cautious: the direction of relationships might not be clear-cut as accurate. These representations will be based on information gathered from personal experience as well as the opinions and discourses of significant others, health professionals and media sources, reflecting issues such as stress, environmental pollution and other pathogens.
With illness representations, scientific evidence is open to debate and disagreement. Patients may not be consciously aware of how good they are at testing their illness hypotheses, and with careful explanation and guidance they can be facilitated in constructing useful representations that assist in positive outcomes. Cognitive behavioral therapies (CBT) are growing in application within the UK healthcare system. In the field of rheumatology, positive results have been recorded for tailored CBT interventions among individuals with RA and systemic lupus erythematosus (SLE). In particular, reduced fatigue, depression and helplessness and enhanced use of active coping strategies have been facilitated in RA [24]. The illness representations model has been used explicitly to tailor similar CBT interventions in pilot studies led by psychologists. Among people with lupus, a self-selected controlled trial of an intervention programme by Goodman et al. [25] containing a module to explain and attempt to improve illness representations managed to enhance participants’ perceptions that treatment can control their lupus and reduced their perceptions of the emotional impact of their lupus and their overall stress. Among people who had recently experienced an acute myocardial infarction by Petrie et al. [26], perceptions of chronic time-line, serious consequences and lack of control were shown to be modifiable in a randomized controlled trial of an intervention, and this led to improved symptoms of angina and ability to return to employment. Expansion of this approach is ripe for individualizing existing patient ‘self-management’ education and given the extent of hand problems and the role of illness perceptions discovered in Hill et al.’s study [1], this would be an ideal condition with which to take this forward.

The ultimate goal, of course, for health professionals is to determine whether in understanding illness representations we might be able to predict certain outcomes that are then potentially alterable in a favourable way for the individual, the service provided and the social situation of the patient. For instance, in order to develop interventions to enhance adherence at cardiac rehabilitation, Whitmarsh et al. [20] used the IPQ to help them distinguish between people who attend frequently and those who attend rarely or not at all. It follows that illness representations form cognitions that are then potentially alterable. This is the premise upon which self-management groups such as the Arthritis Self-Management Programme and the Chronic Disease Self-Management Course are built [21–22]. Hence, disease outcomes might be positively influenced by cognitive-behavioural interventions.

Although there has been much use of the IPQ to examine the relationship between representations, coping efforts and outcomes, it may be more useful to look at how we might apply our knowledge about individual representations to guide the development of interventional programmes, as Hill et al. [1] and other researchers have noted.

A recent article by Stafford entitled ‘Isn’t it all just obvious?’ [23] made us reflect on the wider messages that Hill et al. convey in their paper [1]. As Stafford put it: ‘It’s all just common sense, but dressed up with big words to confuse people’ [23]. Indeed the core of the CSM is that people with an illness use common sense in constructing their representations based on their knowledge and experiences. People actively test out these common-sense hypotheses by their use of emotion- and problem-focused coping efforts, just as in our role as scientists we test our hypotheses in order to determine whether what we ‘think’ we know is justified. And as with illness representations, scientific evidence is open to debate.