Original experimental

Action identification and meaning in life in chronic pain

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HIGHLIGHTS

- We developed a novel measure to assess action identification in chronic pain.
- The measure has high content validity and satisfactory reliability.
- Action identification is positively related meaning in life and optimism.
- Interference and action identification contribute independently to meaning in life.

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ABSTRACT

Background and aims: We explore the relationship between behaviour and cognition in chronic pain by applying Action Identification Theory (AIT). AIT holds that every action may be construed in several ways. High level construals confer greater meaning than lower level construals. When an action is interrupted a lower level, more concrete identity with reduced meaning is elicited. We hypothesized that interference of activity by chronic pain affects the meaning ascribed to activity and thus a person’s overall sense of meaning in life.

Methods: In Study 1, a measure of Action Identification in Pain (AIP) is developed. In Study 2, the AIP was administered to 47 chronic pain patients who also completed the Meaningful Life Measure and measures of pain interference, depression, acceptance and optimism.

Results: High levels of action identification were positively correlated with meaning in life and high levels of interference were negatively correlated with meaning in life. Contrary to expectation interference and action identification were not associated. Further analyses showed that inclusion of depression, acceptance and optimism eliminated the effect of pain interference but only optimism abolished the effect of action identification.

Conclusion: Chronic pain patients holding higher levels of action identification report a greater sense of meaning in life. Meaning in life is also associated with the amount of interference of behavioural activity. The anticipated relationship between action identification and interference was not observed. The present evidence suggests that interference and action identification contribute independently to a person’s sense of meaning in life.

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1. Introduction

Patients with chronic pain say things like, ‘I don’t think of tomorrow, I just take every day as it comes’. This suggests that chronic pain may prevent movement towards valued goals [1,2]. As engagement in relationships and occupation diminishes, a person’s sense of purpose, efficacy, self-philosophy and self-worth can be challenged. Other authors have suggested pain necessitates patients to revise their life goals and expectations yet the need remains for specific research into the cognitive-emotional processes underlying this link between meaning in life and adjustment to pain [3]. We chose to examine one such cognitive process: the way in which pain patients’ think about their everyday behaviour. To the best of our knowledge this is the first investigation of how thinking about what one is doing might relate to an overall sense of meaning in chronic pain patients.

In this article we report an initial study examining the relationships between the interference with life attributed to pain, the meaning ascribed to everyday behaviour and a person’s sense of
meaning in life. We used a theory of the cognitive representation and organization of behaviour, Action Identification Theory [4], to inform the development of the study. Action Identification Theory (AIT) states that any behaviour can be thought of in several ways: one person might construe that they are 'chopping vegetables', another might construe the same behaviour as 'cooking dinner' and third person might construe it as 'trying a new recipe'. Each mental construal holds a different level of meaning, ranging from cognitive representation of automatic movement sequences to representation of goal-oriented activities. Thus the construals can be arranged hierarchically in relation to personal significance and value. This hierarchical arrangement has been formally conceptualized in theories of the organisation of behaviour, e.g., control theory [5], and the cognitive representation of action, e.g., Action Identification Theory (AIT) [4], as illustrated in Fig. 1.

Briefly AIT proposes that mental construals of behaviour, or act identities, vary systematically. Low level act identities are more concrete, they concern the details and specifics of a behaviour indicating how it is done, e.g., the cyclist who is ‘pushing peddles’ [6]. High level act identities are more abstract and reflect a general understanding of the effects and implications of behaviour. These high level identities are more likely to reflect the implementation of one’s goals in accordance with personal values, e.g., the cyclist who is getting exercise in order to stay healthy. Adopting a high level identity brings about greater means of achieving goals, e.g., the cyclist may also swim or run in pursuit of getting exercise. AIT holds that three fundamental principles guide the level at which a person thinks about (construes) what they are doing: (1) behaviour is maintained with respect to its focally attentive or pre-potent act identity; (2) there is a tendency for higher level act identities to become pre-potent as people search for meaning provided by the context in which they are acting; and (3) when something disrupts an action and it cannot be maintained in terms of its pre-potent act identity, a lower level act identity becomes pre-potent [4,6]. AIT proposes that the pre-potent identity will change according to circumstances. At any one time the pre-potent identity can elicited in answer to the question ‘What are you doing?’ For example, the pre-potent identity when pressing a button to call an elevator may be ‘I am going to visit my friend who lives on the top floor’, but if the elevator is malfunctioning you might press the button several times and the question ‘What are you doing?’ will evoke an answer ‘I’m trying to call the elevator.’ The same act now has a different, more mundane, identity. AIT proposes that the pre-potent identity will change according to the circumstances in which one is behaving. Specifically, the more difficult an action is to maintain in terms of actual difficulty of the behaviour, familiarity with the behaviour, complexity of the behaviour and time taken to learn and enact the behaviour, the lower the level at which it is identified [7].

We conjectured that the extent to which pain interferes with behavioural acts will determine the degree to which a person consistently adopts low level meaning (principle 3). In other words, the habitual disruption to everyday behaviour caused by pain means low level identities become most accessible (pre-potent) as behaviour becomes more difficult to maintain. We surmise that repeated interference by chronic pain of activity changes the level at which a person identifies individual behaviours, in turn this reduces the extent to which the person finds meaning in life, as low level identities are devoid of personal meaning. This has implications for progress in attaining life goals and thus ability to maintain a continuous and valued sense of self [8].

2. Overview of studies

Understanding the linkage between behaviour and thoughts about that behaviour has long been a major aim of cognitive behaviour therapy. The well-known fear avoidance model has arguably been highly successful in identifying a particular subset of behaviour–thought relationships [9]. The preceding brief account of action identity theory suggests its possible application to further understanding the relationship between behaviour and thought and their consequences in a broader context. The account has been