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Empirical Research

Illness cognitions, cognitive fusion, avoidance and self-compassion as predictors of distress and quality of life in a heterogeneous sample of adults, after cancer

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ABSTRACT

Objective: This study explored the predictive power of illness cognitions, cognitive fusion, avoidance and self-compassion in influencing distress and quality of life in people who have experienced cancer.
Method: A quantitative cross-sectional design was used. 105 adults with various cancer diagnoses completed measures of cancer related thoughts, coping styles, self-compassion, cognitive fusion, distress and quality of life. Correlation, linear regression and conditional process analysis was used to explore relationships between predictor variables, distress and quality of life.
Results: Although predictors were individually related to distress and quality of life in theoretically consistent ways, regression analysis showed that cognitive fusion was the strongest predictor of anxiety symptoms, whilst cancer related cognitions and avoidant coping were the strongest predictors of depressive symptoms and quality of life. Threatening illness appraisals did not directly predict anxiety, rather cognitive fusion mediated this relationship. This path was also moderated by self-compassion, such that for those higher in self-compassion, the impact of threatening illness appraisals and fusion on anxiety was attenuated. Illness appraisals did not directly predict depressive symptoms, but their influence on depression was mediated by avoidant coping. For quality of life, both direct and indirect effects were observed. Illness cognitions, avoidance and fusion all directly influenced quality of life and this was not moderated by self-compassion.
Conclusions: Threatening appraisals of cancer, cognitive fusion and avoidant coping were found to be the strongest predictors of distress and lowered quality of life after cancer. Interventions focused on reducing cognitive fusion and emotional avoidance, such as Acceptance and Commitment Therapy should be further explored in this population. Threatening illness cognitions directly influence both anxiety and quality of life. Conceptualisations of cognitive modification strategies from within contextual behavioural science could be useful in exploiting this potential treatment target, whilst staying theoretically consistent.

1. Introduction

There are over 2 million people with a current or previous diagnosis of cancer in the UK (National Cancer Intelligence Network, 2010). These figures are rising due to a higher than expected incidence rate and increased survival rates (Maddams et al., 2009). Depression, anxiety and adjustment disorder contribute to longer duration in hospital, reduced adherence to medical care, reduced quality of life, and reduced survival rates (Bui, Bui, Ostir, Kuo, Freeman, & Goodwin, 2005; Colleoni et al., 2000; Pinquart & Duberstein, 2010; Prieto et al., 2002). Emotional disorders are found in up to 38% of cancer patients (Mitchell et al., 2011).

A number of psychological constructs have been established as predictors of distress. These include coping strategies (Carver et al., 1993), cognitive appraisals (Parle, Jones, & Maguire, 1996), rumination, worry and poor social support (Carver et al., 1993; Morris & Shakespeare-Finch, 2011). In particular, avoidant coping has been consistently found to predict poorer outcomes in terms of distress and quality of life (e.g. Stanton et al., 2012; Hulbert-Williams, Storey, & Wilson, 2015). Recently, constructs such as acceptance and mindfulness have begun to be explored (for a narrative review

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of this emerging field as applied to cancer, see Hulbert-Williams et al., 2015). These approaches represent a shift away from traditional attempts to change cognitions and behaviours to try and eliminate distress. Interventions based on these constructs aim instead to foster willingness to experience mental and physical events, as part of the human experience, which may then lead to a redirection of energies towards values-based living. Rather than attempting to modify appraisals, as in cognitive therapy, ACT uses a range of 'cognitive defusion' strategies. These involve perspective taking on distressing thoughts, unhooking thoughts as reasons for action or inaction and instead observing them as mental events (Gillanders et al., 2014). Interventions in this tradition also emphasise taking a kindly stance towards one's self in times of suffering, described as self-compassion (Neff, 2003). The current study examines predictors of distress and quality of life after cancer, and compares well established constructs such as avoidance, and illness cognitions to two constructs drawn from the acceptance and mindfulness tradition: self-compassion and cognitive fusion.

1.1. Self-compassion

Self-compassion means "being open to and moved by one's own suffering, experiencing feelings of caring and kindness toward oneself, taking an understanding, non-judgmental attitude toward one's inadequacies and failures, and recognizing that one's experience is part of the common human experience" (Neff, 2003). It has been recognised as an emotional regulation strategy important in adaptive reactions to illness (Terry & Leary, 2011). Previous studies have found self-compassion to be a significant predictor of lower levels of depression and anxiety in a study of adults with anxiety (Van Dam, Sheppard, Forsyth, & Earleywine, 2011) and a predictor of coping and well-being in older adults (Allen, Goldwasser, & Leary, 2011).

1.2. Cognitive fusion

Cognitive fusion is one of the six core processes of Acceptance and Commitment Therapy (ACT: Hayes, Strosahl, & Wilson, 2012). It describes a process where a person becomes excessively entangled in their thoughts, such that these thoughts dominate behaviour (Gillanders et al., 2014). Cognitive fusion has been demonstrated to be strongly related to avoidance behaviour, distress and other unfavourable outcomes across a wide range of physical and mental disorders (Gillanders et al., 2014), but has not yet been investigated in a cancer population.

1.3. Existing evidence for ACT following cancer

The evidence base for considering ACT as a potential intervention following a cancer diagnosis is small and not well developed, though shows some promise. The evidence is presented in a narrative literature review by Hulbert-Williams et al. (2015). In summary, there have been six published intervention studies, applying ACT with cancer patients. Two of these are case studies in breast cancer patients (Montesinos Marin, Hernandez Montoya, & Luciano Soriano, 2001; Karekla & Constantinou, 2010), one is a non-randomised controlled trial in a heterogeneous sample (Feros, Lane, Ciarrochi, & Blackledge, 2013), two are small randomised controlled trials ($n=12$) in breast cancer patients (Montesinos & Luciano, 2005; Páez, Luciano, & Gutiérrez, 2007) and the final paper is a randomised controlled trial of ACT compared to treatment as usual for 47 women with late stage ovarian cancer (Rost, Wilson, Buchanan, Hildebrandt, & Mutch, 2012). These studies have produced preliminary evidence that ACT is effective in reducing distress and mood problems and improving quality of life, following cancer.

1.4. Cancer, mindfulness and compassion

The evidence for the use of other mindfulness-based interventions for cancer patients is systematically reviewed by Shennan, Payne, and Fenlon (2011). This review shows that the evidence base for mindfulness based interventions is better developed than that for ACT, with Shennan et al. (2011) finding 13 papers that describe three randomised controlled trials, two non-randomised control trials, and five pre- and post-test designs. The findings collated across these studies suggest that mindfulness based interventions are effective at reducing distress and mood disturbance across diverse populations of cancer patients and that effects for quality of life are weaker.

There are no studies specifically investigating compassion oriented interventions in cancer populations, though the concept of compassion is recognised as potentially important, both in the mindfulness literature more broadly (e.g. Tirch, 2010; Neff & Germer, 2013), in relation to the important qualities of cancer care providers (e.g. Moody et al., 2013) and in relation to cancer patients' own responses to cancer (Pinto-Gouveia, Duarte, Matos, & Fráguas, 2014). Pinto-Gouveia et al. (2014) report a correlational analysis between measures of self-compassion and psychopathology in a heterogeneous sample of cancer patients. Results showed that increased self-compassion was associated with less depression, less stress and better psychological quality of life.

Compassion can be seen as a treatment target in its own right (as in Compassion Focussed Therapy; Gilbert, 2010), as an emergent feature of acceptance and mindfulness-based interventions (e.g. Tirch et al., 2014) and also as a mechanism of action of such therapies. Both of the reviews cited above (Hulbert-Williams et al., 2015; Shennan et al., 2011) call for greater theory building in the area of mindfulness and acceptance based interventions, in order that the promising effects of these interventions are better understood in terms of mechanism. Whilst controlled trials with mediation analyses are the gold standard method to test such hypotheses about mechanisms, cross sectional studies can provide useful initial findings prior to embarking on such complex studies.

1.5. Aims

The current study aims to compare self-compassion and cognitive fusion as predictors of distress and quality of life following cancer, in comparison to already established predictors such as avoidance and illness related cognitions. The contribution of this study is in clarifying the relative importance of different potential treatment targets and their inter-relations in predicting important outcomes such as anxiety, depression and quality of life.

1.6. Hypotheses

It was hypothesised that lower self-compassion and higher cognitive fusion would predict increased anxiety and depression and lower quality of life, after controlling for known predictors such as demographic and clinical variables, mental adjustment and coping styles. In addition, we sought to test a theoretically derived model in which appraisals of cancer as threatening would predict higher distress and lower quality of life both directly and indirectly via the process of cognitive fusion and avoidant coping. In addition we hypothesised that higher self-compassion would moderate the impact of these routes, buffering their effects on distress and quality of life.