Cancer patients are at high risk of co-morbid psychological problems: one third will develop major depression, generalized anxiety disorder or adjustment disorder (Maguire, 2000), and sub-clinical distress estimates range from 30% to 75% (Jacobsen, 2007; Galway et al, 2008). Previous research has explored the benefits of both psychoeducational and psychotherapeutic interventions to target distress, facilitated using a range of content and delivery methods (Stanton, 2006). Of these, Cognitive Behavioural Therapy (CBT) is most beneficial, but meta-analysis suggests that effects are limited to short term improvement (Edwards et al, 2008), and only where baseline symptomatology was high. CBT is a problem-focused intervention (Williams & Garland, 2002) which may limit effectiveness (Creer et al, 2010).

Third-wave therapies, including Acceptance and Commitment Therapy (ACT; Hayes et al, 2006) take an alternative approach, aiming instead to change an individual’s interactions with their thoughts (i.e. their function rather than content; Hayes et al, 2006). This is an important distinction as experimental and clinical research demonstrates that (a) challenging thoughts, (b) suppressing thoughts, and (c) the resultant experiential avoidance can, in fact, exacerbate symptoms of distress (Hayes et al, 2004; Longmore & Worrell, 2007). There are six core components to an ACT-based intervention including: mindfulness, acceptance, cognitive defusion, self-as-context, values, and committed action (Wilson & DuFrene, 2009). Together these contribute to an individual’s level of psychological flexibility.

ACT has a growing evidence base for a range of psychological disorders, including anxiety, depression and post-traumatic stress disorder (Powers; 2009; Ruiz, 2010; Vallestad et al 2011). Literature is also emerging for physical health populations, such as diabetes (Forrest et al, 2007), epilepsy (Hodgson et al, 2008; Hodgson & Storey, 2014), Fibromyalgia (Wicksell et al, 2013) and chronic pain (McCacken & Gutiérrez-Martínez, 2011) where improvements are reported for a range of outcomes including improved coping and quality of life, and reduced distress.

We identified only six studies exploring the efficacy of ACT within cancer samples; the majority present encouraging findings, but are limited by methodological weaknesses, thus reducing generalisability and implementation feasibility. Two recent studies (Rost et al, 2012; Feros et al, 2015) use improved designs and present stronger evidence for effectiveness. Given that broader literature also suggests that ACT can be more cost-effective, lending itself well to group or internet delivery (Luoma et al, 2012; Trompeter et al, 2014), short-form intervention (McCacken et al, 2015), and delivery by non-psychologists (Hawkes et al, 2012), there is a clear rationale for a programme of work developing ACT for cancer-related distress.

Aims and design: This study used a cross-sectional, quantitative methodology to explore correlation between psychological flexibility and patient reported outcomes in order to address intervention viability.

Procedure: 130 breast, colorectal, prostate and lung cancer survivors were recruited via a regional cancer centre (26% response). They were of mixed gender, diagnosis and cancer stage; a mean 61 years old; and a mean 207 days post diagnosis.

Results: Fifteen participants scored within clinical range for anxiety, and just six within clinical range for depression. There was expected variance in quality of life, benefit finding and perceived stress. Age, treatment intent and time since diagnosis were found to result in significant differences in outcome scores. These variables were, therefore, controlled for in later analyses.

Six out of the seven outcomes (all except benefit finding) were significantly correlated with levels of psychological flexibility. Regression models were tested for each outcome separately resulting in high effect size and powerful predictive models. In five of these models, inclusion of age and potential clinical confounders did not act to weaken the effects of psychological flexibility on outcome, nor did they result in significantly different levels of variance explained: this finding thus demonstrates the independent nature of psychological flexibility as a predictor of patient reported outcomes. For one outcome (negative mood), inclusion of age as a statistical control significantly improved the model, but this did not weaken the strength of psychological flexibility as a predictor (i.e. the effect was additive).

The size and number of significant outcome correlations was compared between psychological flexibility and other predictors assessed. Psychological flexibility correlated with 6 out of 7 outcomes, each of which with a large effect size. This was exceeded only by the mindful awareness. Five other predictor sub-scales also correlated with six outcomes, though in all cases, the effect sizes were weaker.

Conclusion: Psychological flexibility is a strong correlate of a range of important patient reported outcome variables, even after controlling for important clinical and socio-demographic characteristics. Interventions which can modify levels of psychological flexibility (e.g. ACT) may be beneficial to cancer survivors, and may have more generalisable outcome effects than other treatment modalities.

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