

Research Project Portfolio

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Acceptance and Commitment Therapy for adults with head and neck cancer
experiencing psychological distress: A hermeneutic single case efficacy design
(HSCED) series

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Doctorate in Clinical Psychology

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Thesis Abstract

Background: Individuals with head and neck cancer (HNC) suffer with varying degrees of functional impairment, threats to life and reduced social functioning. They are at an elevated risk of experiencing clinical levels of psychological distress (i.e. anxiety and depression) (Hammerlid & Taft, 2001; Rogers, Ahad, & Murphy, 2007). The cancer-psychotherapy research base largely consists of trials that either regard cancer patients as a homogenous group or focus on patients with the most common cancer sites (e.g., breast). This has resulted in an under-representation of HNC patients (Chong Guan et al., 2016).

Acceptance and Commitment Therapy (ACT) has an emerging evidence base for cancer populations (Hulbert-Williams et al, 2015). It is important to test and refine psychotherapy interventions: examining whether effectiveness of ACT extends to those with HNC and – importantly – investigating the processes by which ACT interventions may contribute to positive outcomes (Moyer et al, 2012).

Method: A hermeneutic single case efficacy design (HSCED) series is a pragmatic, systematic method for understanding change processes in psychotherapy; while enabling an investigation of repeatability of effects (Elliot 2002; Elliot et al, 2009). Three adult clients with a diagnosis of HNC were recruited from National Health Service (NHS) hospitals and engaged in six sessions of ACT. A detailed matrix of quantitative and qualitative clinical data were collated ('rich case records') and subject to critical analyses by three independent psychotherapy experts ('judges') who identified change processes, and determined the outcome for each client.

Results: Judges unanimously concluded that all clients showed good outcomes; specifically they progressed towards therapy goals and experienced reliable reductions in psychological distress. Judges systematically considered non-therapy factors and attributed client's changes to their experience of therapy. ACT-specific processes and a strong therapeutic relationship at least partially mediated change for all clients; albeit to different degrees. Moderating client variables were: client motivation, effort and openness to therapy; cognitive intelligence and reflective capacity, and ability to build a trusting relationship and to draw strength from others.

All clients behaviourally demonstrated improvements in flexibility through increased valued-action.

Discussion: The HSCED enabled a dismantling of therapy components to understand change processes for people with HNC. A strong therapeutic bond and alliance in combination with client characteristics of motivation to do something differently and appropriate expectations appeared to provide a context in which ACT was an effective intervention. Reliable distress reduction (and movement towards behavioural goals) occurred for these clients without therapeutic aims to change or alter their distressing thoughts. This has important theoretical implications for understanding the potential utility of acceptance-based approaches that may authentically validate individuals with cancer, many of whom suffer with ongoing impairment and a realistic possibility of illness reoccurrence. The study findings appear to support a 'moderate' common factors position on psychotherapy effectiveness, as described by Sprenkle and Blow (2004). This asserts that the contribution of common therapy processes and model-specific techniques is not a rigid either/or; rather, there are types of problems, clients and circumstances for which a particular model is well-suited. The replication of positive changes between clients in this study demonstrates case-to-case transferability of the intervention model (Schwandt, 1997). Future research would benefit from assessing longer-term ACT interventions and examining how individuals at the pre- or mid-treatment stage of cancer could benefit from ACT.

Statement of Contribution

Thesis	
Project Design	Nicolle Morris; supervised by Dr Nima Golijani- Moghaddam, Dr Sanchia Biswas and Dr Anna Tickle
Application for Ethical Approval	Nicolle Morris; supervised by Dr Nima Golijani- Moghaddam, Dr Sanchia Biswas and Dr Anna Tickle
Participant Recruitment	Dr Sanchia Biswas and Emma Hallam (Radiographer) identified and contacted participants
Data Collection	<p>Nicolle Morris administered research intervention and collected data; supervised weekly by Dr Nima Golijani- Moghaddam.</p> <p>Dr Sanchia Biswas arranged the practicalities such as hospital room bookings and resources.</p> <p>Nicolle Geach facilitated the change interviews with participants.</p> <p>Dr Nima Golijani- Moghaddam created the Qualtrics survey for adjudication.</p>
Data Analysis & Write-up	<p>Dr Nima Golijani- Moghaddam assessed ACT intervention fidelity.</p> <p>Dr Nima Golijani- Moghaddam, Dr Sanchia Biswas and Dr Anna Tickle formed an analysis team who reviewed the rich case records and affirmative and sceptic cases which were developed by Nicolle Morris.</p> <p>Dr David L Dawson, Dr Sam Malins and Dr Rohan James Naidoo were independent psychotherapy 'judges' who analysed case records and provided their opinions.</p> <p>Dr Nima Golijani- Moghaddam, Dr Sanchia Biswas and Dr Anna Tickle read drafted sections of the write-up.</p>

Journal Paper¹

¹ This journal paper has been prepared for submission to the journal of contextual and behavioral science (JCBS); see appendix K for author guidance.

Acceptance and Commitment Therapy for adults with head and neck cancer
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Journal Abstract

Background: Individuals with head and neck cancer (HNC) are at risk of experiencing significant psychological distress (i.e. anxiety and depression). There is a need to test and refine psychotherapy interventions for this population. *Aim:* The study examined change processes and outcomes for three adults with HNC who engaged with Acceptance and Commitment Therapy (ACT). *Method:* An adjudicated hermeneutic single-case efficacy design (HSCED) was used to enable a multi-level exploration of change. Rich case records (a matrix of quantitative and qualitative clinical evidence) were subject to critical analyses by three independent psychotherapy experts ('judges') who identified change processes, and determined the outcome for each client. *Results:* Judges unanimously concluded that all clients showed good outcomes; specifically they progressed towards therapy goals and experienced reliable reductions in psychological distress. Judges systematically considered non-therapy factors and attributed client's changes to their experience of therapy. ACT-specific processes and a strong therapeutic relationship at least partially mediated change for all clients; albeit to different degrees. Moderating client variables were identified. *Conclusions:* Findings provide evidence that ACT can be an effective intervention for individuals with HNC experiencing psychological distress. Clinical and research implications are discussed.

Key words

Acceptance and Commitment Therapy, Cancer, Psychological Distress, Hermeneutic Single Case Efficacy Design

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Highlights²

- Evaluation of the effectiveness of a 6-session ACT intervention for adults with HNC experiencing clinical levels of psychological distress.
- This study found evidence that ACT can be an effective intervention for facilitating reliable and significant improvements in psychological distress and value-driven behavior.
- Mediating change processes included ACT-specific and therapeutic relationship factors.
- Moderating change processes included client factors such as motivation and openness.
- Clients did not identify any hindering aspects of the ACT intervention; although clients indicated a desire for more sessions.
- Future research is needed to assess transferability of single-case findings and to assess longer ACT interventions.

² Highlights from the study are a feature of the journal paper as per author guidance- including American spelling

Introduction

Cancer can be a life-threatening illness affecting both physical and psychological health. Approximately one-third of cancer patients will experience psychological distress throughout diagnosis, treatment and recovery (Maguire, 2000; Mitchell, Ferguson, Gill, Paul, & Symonds, 2013; Singer, Das-Munshi, & Brähler, 2009). Psychological distress is commonly defined as a state of emotional suffering characterised by clinical levels of depression and anxiety (Drapeau, Marchand, & Beaulieu-Prevost, 2012). Head and neck cancer (HNC) includes cancers of the mouth, throat, nose, sinuses, salivary glands and middle ear. HNC accounts for 3% of malignancies in the United States, and 4% of the cancer incidence in Europe (Siegel, Miller, & Jemal, 2017). HNCs often require a combination of surgery, radiotherapy and chemotherapy (Marur & Forastiere, 2008).

Cancer-psychotherapy research largely consists of trials that either regard cancer patients as a homogenous group or focus on patients with the most common cancer sites (e.g., breast). This has resulted in an under-representation of HNC patients (Chong Guan et al., 2016). Individuals with HNC experience unique challenges such as functional impairments related to speaking, breathing, swallowing, taste, and smell – as well as residual pain, fatigue and physical disfigurement (Frampton, 2001; Hulbert-Williams, Storey, & Wilson, 2015)³. HNC has an elevated potential for traumatic impact relative to other cancers; the prevalence of depression is estimated to be between 8% to 29% and anxiety between 17-22%; with variations according to HNC site and treatment stage (Krebber et al., 2014; Neilson et al., 2013). Effective psychological interventions are therefore necessary (McDonough, Boyd, Varvares, & Maves, 1996; NHS, 2004; Volkova, 2010)⁴.

Cognitive-behavioural therapy (CBT) is the most studied psychotherapy for people with cancer (Chong Guan et al., 2016; Fawzy, 1995; Greer, 2008); however, positive effects are limited to the short-term (Mustafa, Carson-Stevens, Gillespie, & Edwards, 2013) and support for the putative contribution of thought-challenging is weak (Burns & Spangler, 2001; Longmore & Worrell, 2007). There is insufficient evidence that CBT reduces distress or improves the

³ See extended section 1.2 and 1.3 for descriptions of HNC and treatment

⁴ See extended section 1.4 and 1.5 for research relating to anxiety, depression and psychological impact of HNC

quality of life for people with HNC (Calver, Tickle, Moghaddam, & Biswas, 2017; Semple et al., 2013). Investigations of alternative, acceptance-based approaches show consistent associations with adaptation to cancer and improved well-being, and cancer-related distress (Baer, 2003; Carver et al., 1993; Piet, Würtzen, & Zachariae, 2012; Stanton, Danoff-burg, & Huggins, 2002). These approaches encompass the dialectic of acceptance (of unwanted thoughts and feelings) and change (of behaviour to improve quality of life) (Eifert & Forsyth, 2005); broadening outcomes from purely symptom reduction. The promising findings for acceptance-based interventions, which target/undermine avoidant responses to stressors, are consistent with broader evidence that avoidance-based coping strategies are strongly associated with increased psychological distress among HNC patients (Morris, Moghaddam, Tickle, & Biswas, 2017).

Acceptance and commitment therapy (ACT) aims to promote 'psychological flexibility'- the ability to contact the present moment more fully, enabling a change or persistence in behaviour that serves valued living (Hayes, Luoma, Bond, Masuda, & Lillis, 2006). This is established through six interrelated processes: acceptance, cognitive defusion, being present, self-as-context, values, and committed action⁵. Preliminary evidence suggests that psychological inflexibility positively correlates with psychological distress (Hulbert-Williams & Storey, 2016). ACT has an emerging evidence-base supporting effectiveness for treatment of anxiety, depression (Ost, 2014; Ruiz, 2010) and illness-related distress (McCracken & Gutiérrez-martínez, 2011). Preliminary studies with cancer patients have provided initial evidence that ACT can improve psychological outcomes in this broad population (Hulbert-Williams et al, 2015)⁶. Recent systematic review evidence demonstrates that ACT can lead to significant improvements in psychological distress for adults with cancer and chronic physical health conditions; however positive results are not consistently found and the methodological quality of studies is varied ; González-Fernández & Fernández-Rodríguez, 2018; Graham, Gouick, Krahé & Gillanders 2016). The evidence demonstrates a need for further investigation of the effectiveness of ACT using methodologically sound design. It is important to

⁵ See extended section 1.9 for detailed description of ACT processes.

⁶ See extended section 1.6.1 and 1.6.2 for CBT and ACT evidence-base for anxiety, depression and cancer.

build on the evidence to date and – importantly – investigating the processes by which ACT interventions may contribute to positive outcomes (Moyer et al., 2012). Although ACT makes specific predictions about active change processes, process-outcome links have been under-examined in research to date. Investigation of change mediators and moderators will enable greater understanding and refinement of intervention effectiveness, where evidenced⁷.

Randomised controlled trials (RCTs) fail to offer conditions under which causal inferences can be made about individual cases, rendering them inappropriate for evaluating complex therapy processes (Carey & Stiles, 2016; Deng et al., 2012; Elliott, 2002; Wall, Kwee, Hu, & McDonald, 2017). This study aims to employ an adjudicated single-case efficacy design series (HSCED; Elliott, 2002; Elliott et al., 2009) to investigate the effectiveness of ACT; specifically examining multi-level change processes. This systematic and pragmatic approach overcomes issues associated with other case-study methods, such as ‘narrative smoothing’ and anecdotal evidence (McLeod, 2010b). Furthermore, its expansion to accommodate three cases in one investigation enables generalisation beyond the single-case (McLeod, 2010; McLoone, Menzies, Meiser, Mann, & Kasparian, 2013; Wall et al., 2017)⁸.

Method

Design⁹

The adjudicated HSCED is guided by three fundamental questions: (i) Did the client change over the course of therapy? (ii) Is therapy the generally responsible for the observed changes? (iii) What specific events or processes facilitated observed changes? A comprehensive pool of process and outcome data is generated for each client (i.e. ‘rich case records’) and affirmative and sceptic briefs are collated. A further level of systematic judgement is added whereby independent expert psychotherapy researchers act as ‘judges’ to determine and attribute client outcomes; drawing on the multiple sources and types of evidence in the rich case records (Elliott et al., 2009)¹⁰.

Clients and Ethics

⁷ See extended section 1.7 for ACT philosophical and theoretical basis and section 1.8 for ACT rationale.

⁸ See extended section 2.1 for single case rationale.

⁹ See extended section 2.6 for author’s epistemological position.

¹⁰ See extended section 2.2 for detailed description of HSCED development and procedures

The clients, who were given pseudonyms, 'Tim', 'Paul' and 'Joe' were recruited from two National Health Service (NHS) hospitals. They met the following inclusion criteria: (i) aged over 18 years; (ii) clinical diagnosis of head and neck cancer¹¹ (iii) caseness level of psychological distress (that is, those who exhibit a score of >8 on GAD-7 and >10 on PHQ-9). Clients would have been excluded if they: (i) were already receiving psychotherapy; (ii) had insufficient English to engage in therapy. Clinicians within the treatment hospitals provided study information to eligible patients. Individuals who expressed interest were contacted by the lead researcher. One client declined to participate at this stage. Three, White-British male clients consented and completed all aspects of the study, with the exception of unreturned follow-up data in one case (Paul). Ethical procedures were approved by the National Health Service (NHS) Local Research Ethics Committee¹².

Therapist and Intervention Integrity

A practitioner-researcher model was used, whereby the therapist was also a researcher¹³ (McLeod, 1999; Elliott, 2002); this was made transparent to clients. The therapist/researcher was a trainee clinical psychologist¹⁴ who had undertaken advanced ACT training and received ACT supervision with a clinical psychologist throughout intervention delivery. ACT fidelity was assessed by the second author using a coding system that has been employed in previous studies: the frequency and depth of coverage of major ACT components and non-adherent components are rated on a 5-point scale (Plumb & Vilardaga, 2010; Twohig et al., 2010). Across sessions, no non-adherent or antithetical items were observed; moreover, high ratings were obtained for overall competence (Mdn = 5; Inter-quartile range, 5 to 5) and overall manual adherence (Mdn = 4, Inter-quartile range, 4 to 4.75) – where higher ratings (out of 5) indicate greater competence and adherence respectively.

Analysis team

This team comprised of the remaining three authors who are clinical psychologists (with varied theoretical orientations) experienced in psychotherapy and research. The team were involved in supervising the

¹¹ Individuals with any stage of cancer of the head or neck region; see earlier defining criterion.

¹² See section 2.7 for ethical considerations and procedures.

¹³ The therapist was the first author

¹⁴ See section 2.4 for additional therapist details.

research project and cross-examining the case records and affirmative and sceptic briefs.

Judges

Three independent clinical psychologists (Dr Sam Malins, Dr Rohan James Naidoo and Dr David L Dawson) were invited and agreed to act as 'judges' for the study because of their interests in assessing psychotherapy effectiveness. They were selected based upon their experience, varied theoretical orientations and prominence in clinical research. This included: psychotherapy in a physical health context; working within a psychodynamic model; and specialist knowledge of delivering and researching ACT.

ACT intervention and data collection

Each client engaged in six weekly sessions¹⁵ of ACT. A published ACT protocol, 'Better Living with Illness'¹⁶ (Brassington et al, 2016) was used flexibly to guide the intervention. The therapist took an active and responsive role in targeting inflexible processes 'in flight' – as it is through targeting these processes (as they arise for a given individual) that the therapy is theorised to promote psychological flexibility and produce beneficial effects. Experiential exercises, metaphors, discussions and homework were integral aspects of the intervention; again, these were used in a protocol-informed but process-driven manner. Major process-led ideographic adaptations of intervention focus are documented in the results¹⁷.

The therapist gave participants questionnaires at the beginning of sessions; these were completed in the room for practicality reasons. At the end of each session, the therapist gave a session-rating questionnaire (as detailed in measures section). The therapist gave this questionnaire with an envelope to account for socially-desirable responding.

Quantitative measures

¹⁵ Session length ranged from 1-1.5 hours.

¹⁶ The 'better living with illness' manual includes specific techniques and resources tailored to chronic physical health conditions.

¹⁷ See section 2.3 of extended paper for specific details of the ACT intervention.

A set of self-report measures was used to track change in variables of interest. These were measures of psychological distress, psychological flexibility, therapeutic alliance and relationship, and client problems. Table 1 provides a descriptive overview of the measures used.

Table. 1 *Description of quantitative measures*

Measure & author	Aim	Item scaling & directionality	Reliability & validity	Frequency of administration
Generalised anxiety disorder questionnaire (GAD-7) Spitzer, Williams, & Kroenke (1999)	Anxiety symptoms	7 items; 4-point Likert scale (range; 0-3); Higher score indicated higher levels of anxiety; 5-10=mild 11-15=moderate 16-21=severe	IC; $\alpha = .92$ High sensitivity and specificity (Spitzer, Kroenke, Williams, & Löwe, 2006)	Baseline Session 1 Session 6 1 and 3-month follow-up
Patient health questionnaire (PHQ-9) Spitzer, Williams, & Kroenke (1999)	Depressive symptoms	9 items; 4-point Likert scale (range 0-3); Higher scores indicate higher levels of depression; 5-9=mild 10-14=moderate 15-19=moderately severe 20-27=severe depression	IC; $\alpha = .89$ Good validity (Kroenke, Spitzer, & Williams, 2001)	Baseline Session 1 Session 6 1 and 3-month follow-up
Acceptance and action questionnaire (AAQ-II) (Bond et al., 2011)	Psychological flexibility	7 items; 7-point Likert scale; (range 1-7); Higher score indicating greater inflexibility	IC; $\alpha = .84$ Adequate validity (Bond et al, 2011)	Beginning of each session 1 and 3-month follow-up
Personal questionnaire	Client problems	Up to 10 client-generated	IC; $\alpha = .80$	Beginning of each

(PQ)		problem statements,	Strong correlations with	session
Elliott, Mack, & Shapiro,		rated on a 7-point Likert	standardised outcome	
(1999)		scale (range 1-7); higher	measures (Elliott,	
		score indicating a greater	Wagner, & Rodgers,	
		problem	2012).	
Session rating scale	Therapeutic alliance:	4-item visual analogue,	IC; $\alpha = .93$	End of each session
(SRS)	(therapist respect &	calculated (range 0-40);	Good concurrent validity	
Duncan et al (2003)	understanding, relevance	higher score indicating a	(Campbell & Hemsley,	
	of topics, client-	more effective	2009; Duncan et al.,	
	practitioner fit)	relationship	2003	

Note: IC: Internal consistency

Change Interview (CI)

A semi-structured CI (Elliott, Slatick, & Urman, 2001) was the main source for obtaining client's views about their experience of therapy, including change processes and a consideration of what may have facilitated and hindered change (if change occurred). Interviews were conducted by an independent researcher, one week post-therapy¹⁸.

HSCED Analysis

Stage 1. Rich Case Records

A comprehensive dataset was collated for each client, in line with Elliott's (2002) description of types of direct evidence (e.g. substantial change in problems, outcome-process mapping). The following procedure was followed for each case:

- i. Collating contextual client and therapist information
- ii. Analysing quantitative process and outcome data
- iii. Collating and re-organising client's qualitative descriptions of therapy into Elliot's (2002) categories of change (*data were not subject to any further thematic analysis, so as to allow judges to interpret the data*)
- iv. Gathering evidence for and against change in client goals¹⁹; using data from session recordings, therapist case notes, and CIs.
- v. Gathering evidence for and against shifts in the six processes of psychological flexibility; using data from session recordings, therapist case notes, and CIs.

Rich case records were systematically evaluated by the analysis team to develop affirmative and sceptic arguments. Drawing on Elliot's (2002) descriptions of types of evidence (appendix J) affirmative brief aimed to persuade the judges that (i) the client changed substantially during therapy, and (ii) this change was caused by participation in ACT. The sceptic case drew on alternative explanations of the data to cast doubt on any apparent change and the affirmative brief. It aimed to persuade the judges that (i) the client did not

¹⁸ See section 2.5 for rationale and additional details of quantitative and qualitative measures.

¹⁹ Goals were generated using client-generated problem statements (as noted in personal questionnaire)

change substantially over the course of therapy, and (ii) any minor changes were caused by non-therapy factors.

Stage 2. Adjudication

The author communicated with the judges by email. Judges were sent the rich case records and change interview transcripts. They were asked to first critically examine the rich case records and affirmative and sceptic arguments²⁰. Judges then answered a series of semi-structured adjudication questions about their views on the extent and type of client change and the evidence that mattered most in reaching their conclusions.

Results²¹

Abridged Results for Tim

Context and Focal Problems

Tim was a 55-year-old man at the post-treatment stage of tonsil cancer. He was treated with chemo-radiotherapy and surgery. Physical side effects included pain, mouth dryness, difficulty swallowing, and fatigue. Tim had no pre-existing mental health diagnoses, although he had received CBT several years previously due to work-related stress. Tim was married with adult children; he held a senior position at a large organisation. A phased return to work following cancer treatment was unsuccessful. At referral he had begun a second phased return; however he was struggling with intense physical symptoms of anxiety and could not concentrate at work, which was threatening his job. Tim believed that he had not processed the trauma of his cancer experience

Major Adaptations to ACT Protocol

Key aspects of the formulation were experiential avoidance of anxiety and sadness, fusion with thoughts about losing control, and self-doubt. Tim had an unstable sense of self related to changes in identity, roles, and abilities (self-as-content). While Tim knew what was important to him in life (values), control-based coping strategies (e.g. distraction, trying to think positively, avoiding

²⁰ Judges were asked to view and rate each case in a different sequence to reduce order effects.

²¹ See extended section 3.0 for additional rich case record data and analysis, and original affirmative and sceptic cases.

unpleasant emotions) had become increasingly restrictive and barriers to valued-action. Crucial areas of focus were defusion, self-as-context, and acceptance.

Quantitative results

Table 2. *Tim's psychological distress and flexibility ratings*

Outcome measures	Cut off	RC min	Baseline	Pre	Post	1-month	3-month
PHQ-9	>9	6 (↓)	18	14	6 (+)	2 (+)	0(+)
GAD-7	>7	4 (↓)	18	17	9 (+)	6 (+)	3(+)
AAQ-II	>26	10.62(↓)	-	36	24(+)	20(+)	19(+)

Note. RC; reliable change (i.e., minimum change-score required to demonstrate statistically reliable change [at 95% confidence]); Cut off; caseness threshold for determining clinically significant symptoms; PHQ-9; patient health questionnaire; GAD-7; generalised anxiety disorder questionnaire; AAQ-II; acceptance and action questionnaire; Values in bold fall within the clinical range; Arrows (↑/↓) indicate direction of improvement desired change (improvement) for each measure; (+) denotes *reliable improvement* in relation to first available score; (=) denotes *no change* in relation to first available score; (-) denotes *reliable deterioration* in relation to first available score.

Table 3. *Tim's process ratings*

Process measure	S1	S2	S3	S4	S5	S6
AAQ-II	36	34	31	27	24	24
SRS	40	40	40	40	40	40

Note. S; session; AAQ-II: acceptance and action questionnaire; scores range from 7 to 49, with higher scores indicating greater psychological inflexibility; SRS: session rating scale; maximum score of 40; score less than 36 indicate potential concern in the therapeutic relationship.

Table 4. *Tim's problem ratings*

Personal Questionnaire	Cut off	RC min	S1	S2	S3	S4	S5	S6
1. Inability to focus and frequently losing concentration	>3.25	1.67 (↓)	6	4(+)	4(+)	4(+)	3(+)	3(+)
2. Physical feelings of anxiety, tight chest and panic	>3.25	1.67 (↓)	5	5(=)	5(=)	4	3(+)	3(+)
3. Lack of control over thoughts and feelings	>3.25	1.67 (↓)	6	5(=)	4(+)	5	4(+)	4(+)

Note. S is an abbreviation of session; Likert scale range 1-7; higher score indicating a greater problem; Values in bold fall within clinical range; (+) = reliable positive change in relation to first available score; (=) = no change in relation to first available score; (-) = reliable negative change in relation to first available score.

Abridged affirmative and sceptic briefs

The affirmative brief emphasised significant and reliable improvements in Tim's problems, psychological flexibility and distress- demonstrated by quantitative data which were corroborated by the CI. Tim described being able to 'carry on' (rather than being overwhelmed), improved coping with difficult thoughts and sleeping better; he also spoke about his experience in terms of 'mental recovery'. Tim attributed positive changes to the therapy process; for example he said, '*certainly I'm pinning a lot of my mental recovery on the work I've done with Nicole*'. Throughout the CI, Tim made references to the positive impact of ACT-specific events in therapy, such as the 'passengers on a bus' metaphor²² and thought defusion exercises. Tim maintained positive changes (at follow-up), despite significant stressors at work and within his family.

The sceptic case drew upon inconsistencies between the reliable reductions in quantitative measures of distress and Tim's views; it highlighted that Tim described being more able to '*deal with*' distress and therefore '*carry on a bit better*'. Tim described how the therapy was not aiming to make him '*feel better, but equipping you to better deal with your feelings*'. Although congruent with the

²² This functioned as an overarching metaphor of identifying cognitive fusion as an obstacle for valued living

ACT model – which aims to ‘grow the person’ (improve coping resources) rather than ‘shrink the problem’ (reduce symptoms) – this is evidence that the therapy did not lead to changes in the problems that Tim initially sought help for: anxiety and depression. Scores from the SRS and quotes from the CI provide evidence that positive changes were due to extra-therapeutic factors such as the therapeutic relationship and Tim’s high level of motivation coming into therapy. A convincing quote for the role of the therapeutic relationship is; *‘the therapy has been great but the actual engagement of feeling somebody understands you, and that trust that you build up, and so I was sharing all sorts of things’*.

Adjudication

Table 5. *Judicial results for Tim*

	Judge A	Judge B	Judge C
Client change			
Categorisation of outcome (certainty of decision)	Recovered (80%)	Recovered (80%)	Improved (80%)
Extent of client change (certainty of decision)	Substantially (80%)	Substantially (80%)	Considerably (80%)
Attribution			
Due to therapy (certainty of decision)	Substantially (100%)	Substantially (100%)	Considerably (80%)
Mediating Factors	-Therapeutic relationship -Identification of values -Acting on values -Acceptance related	-ACT provided new framework for insight and reframing of experiences -Person-centred approach	-Acceptance -Mindfulness -Defusion

	to struggles at work	-New learning about ways to express himself and adapt to work despite ongoing illness side effects	
Moderating Factors	<ul style="list-style-type: none"> -Realistic therapy expectations -Effort to promote recovery -High motivation 	<ul style="list-style-type: none"> -Little shame -High emotional and cognitive intelligence and reflective capacity -High cultural capital -Ability to draw strength from others and build strong relationships 	<ul style="list-style-type: none"> -High intellectual capacity -Previous therapy experience
Certainty that ACT processes contributed to change	80%	100%	80%
ACT-specific processes that contributed to therapy-related change	<ul style="list-style-type: none"> -Acceptance of and cognitive defusion from anxiety-provoking thoughts, feelings and physical sensations -Values identification 	<ul style="list-style-type: none"> -Cognitive defusion -Present moment awareness -Values 	<ul style="list-style-type: none"> -Acceptance -Cognitive defusion -Self as context -Metaphor use -Mindfulness
Generic therapy processes that contributed to therapy-related change	<ul style="list-style-type: none"> -Therapeutic Alliance -Tim liked the therapist 	<ul style="list-style-type: none"> -Strong therapeutic alliance -Focus on goals -Therapist attributes of warmth, competence -Cognitive and 	<ul style="list-style-type: none"> -Therapeutic alliance

behavioural
reframing
-Insight into
problematic patterns
of thoughts and
actions
-Well managed
ending

**Overall attribution
of therapy-related
change**

ACT: Other Factors 60:40 56:44 80:20

Note. Categorisation of outcome was rated on a 4-point scale: deteriorated, unchanged, improved, recovered; Extent of change was rated on a 6-point scale: no change, slightly, moderately, considerably, substantially, completely; Attribution due to therapy was rated on a 6-point scale: not at all, slightly, moderately, considerably, substantially, completely.

Two judges concluded with confidence that Tim had made a substantial recovery; one judge viewed the change as a considerable improvement. All judges (separately) identified the therapeutic alliance/relationship as a generic factor contributing to change; two of whom identified it as a mediating factor. All judges were confident that ACT-specific processes were responsible for more than half of the therapy-related change; and cognitive defusion as a key mediating process of change. Two judges determined that values, acceptance and present moment awareness significantly contributed to positive change. The evidence that mattered most to the judges as they drew their conclusions about Tim were:

- Tim's account (language used, references to specific techniques, attribution, and connection with therapy approach)
- Reliable and significant change in outcome measures (and whether these were maintained over time)
- Consistency between the CI and quantitative measures
- Markers of substantial and potentially lasting change
- Examination of extra-therapeutic effects

Abridged Results for Paul

Context and Focal Problems

Paul was a 61-year-old man at the post-treatment stage of laryngeal cancer; treatment involved radical radiotherapy. Side effects included: pain, loss of taste, dry mouth, fatigue, difficulties speaking, and teeth removal. Paul did not have pre-existing mental health diagnoses. Prior to cancer, Paul had several physical health problems involving surgery. He lived locally with his partner who was a survivor of thyroid cancer. Paul had adult children and grandchildren from a previous marriage; he had become disconnected from them since his cancer diagnosis. At referral, Paul had stopped participating in a psychosocial group for cancer patients; he was unemployed and could not return to his long career in construction due to his health. Paul was trying to “get rid” of the anxiety and intense sadness he was experiencing; he was unable to leave his house most days. Paul felt like his world was ‘caving in’ and ‘cancer was everywhere’; he feared cancer re-occurrence.

Major Adaptations of ACT Protocol

Key areas in Paul’s formulation were experiential avoidance of sadness and guilt, and fusion with thoughts about cancer re-occurrence, self-blame, and narratives about the person that he “should be”; such avoidance was driving much of his behaviour. While Paul identified his family as important, he had lost touch with other values. Integral areas of focus during therapy were exploring acceptance- versus control-based coping, practicing present-moment awareness, and clarifying values. There was a focus upon exploring barriers valued action, particularly in terms of fusion with fears about doing things differently post-cancer.

Quantitative Results

Table 6. *Paul's psychological distress and flexibility ratings*

Outcome measures	Cut off	RC min	Baseline	Pre	Post	1-month	3-month
PHQ-9	>9	6 (↓)	22	22	13 (+)	-	-
GAD-7	>7	4 (↓)	20	18	13 (+)	-	-
AAQ-II	>26	10.62(↓)	-	47	26 (+)	-	-

Note. RC; reliable change (i.e., minimum change-score required to demonstrate statistically reliable change [at 95% confidence]); Cut off; caseness threshold for determining clinically significant symptoms; PHQ-9; patient health questionnaire; GAD-7; generalised anxiety disorder questionnaire; AAQ-II; acceptance and action questionnaire; Values in bold fall within the clinical range; Arrows (↑/↓) indicate direction of improvement desired change (improvement) for each measure; (+) denotes *reliable improvement* in relation to first available score; (=) denotes *no change* in relation to first available score; (-) denotes *reliable deterioration* in relation to first available score; Paul did not return follow-up data.

Table 7. *Paul's process ratings*

Process measures	S1	S2	S3	S4	S5	S6
AAQ-II	47	46	46	25	26	26
SRS	40	40	40	40	40	40

Note. S; session; AAQ-II: acceptance and action questionnaire; scores range from 7 to 49, with higher scores indicating greater psychological inflexibility; SRS: session rating scale; maximum possible score of 40; score less than 36 indicates potential concern in the therapeutic relationship.

Table 8. *Paul's problem ratings*

Problem Questionnaire	Cut off	RC min	S1	S2	S3	S4	S5	S6
1. Disconnected from children and grandchildren	>3.25	1.67 (↓)	6	6	1(+)	1(+)	1(+)	1(+)
2. Unable to cope with feelings and emotions	>3.25	1.67 (↓)	7	7	5(+)	5(+)	4(+)	5(+)
3. Struggling to get out of the house	>3.25	1.67 (↓)	7	7	5(+)	4(+)	4(+)	3(+)
4. Not working	>3.25	1.67 (↓)	7	7	5(+)	4(+)	3(+)	3(+)

Note. S is an abbreviation of session; Likert scale range 1-7; higher score indicating a greater problem; Values in bold fall within clinical range; (+) = reliable positive change in relation to first available score; (=) = no change in relation to first available score; (-) = reliable negative change in relation to first available score.

Abridged Affirmative and Sceptic Briefs

The affirmative brief outlined evidence of statistically reliable reductions in stable anxiety and depression; which represent clinically meaningful shifts across clinical gradations. Paul did not experience any noteworthy positive events in his life that could account for such improvements; rather, he faced several life stressors and personal losses during therapy (such as family death and financial difficulties). In addition, Paul experienced statistically reliable reductions in the problems generated at the start of therapy. This case drew on several sources of evidence from case notes to corroborate reduced PQ scores; for example, Paul re-established his relationship with his son and began to engage in recreational activities. Paul gained insight into the unrealistic expectation of achieving control over his internal experiences and responded positively to thought-control metaphors; as evidenced in the CI. A statistically reliable reduction in psychological inflexibility was a key source of evidence. Paul's held a positive view of therapy and attributed getting "better" to therapy.

The sceptic argument claimed that apparent changes were minor and were not evidenced to have been maintained post-therapy. Small changes that did occur were the result of relational artefacts; namely the therapeutic relationship and Paul's desire to please the therapist. Paul gave consistently positive descriptions of the therapist in the CI and on SRS and shared only positive views of other health professionals. Paul attributed positive changes to non-specific therapeutic processes such as offloading and being listened to in a non-judgemental way. Although Paul acknowledged benefits of some metaphors, he did not mention any ACT-processes. Furthermore, the accuracy of Paul's ratings on quantitative measures was brought into question given some difficulties in reflective capacity and understanding the phrasing of questions (as evidenced in case notes).

Adjudication

Table 9. *Paul's judicial results*

	Judge A	Judge B	Judge C
Client change			
Categorisation of outcome (certainty of decision)	Improved (80%)	Improved (100%)	Improved (60%)
Extent of client change (certainty of decision)	Considerably (80%)	Moderately (80%)	Considerably (60%)
Attribution			
Due to therapy (certainty of decision)	Substantially (80%)	Substantially (100%)	Considerably (80%)
Mediating Factors	-Therapeutic relationship -Therapist skills	-Exposure to previously avoided emotion in a supportive context -Breathing exercises	-Therapeutic relationship -Metaphors relating to acceptance versus control in

		-Strong therapeutic alliance	relation to emotions -Values clarification and action
Moderating Factors	-Paul's willingness to open up -Paul's ability to express previously avoided emotions	-Motivated to make best use of therapy -Able to accept support from others -Extraverted character (open to socialising) -Generally optimistic attitude	-Open to intervention -Broad trust in health professionals
Certainty that ACT processes contributed to change	60%	60%	20%
ACT-specific processes that contributed to therapy-related change	-Acceptance of painful thoughts -Committed action in relation to problem 1	-Acceptance and present moment awareness (overcoming experiential avoidance) -values and committed action (to a lesser extent) -Regulation of anxiety	-Valued action
Generic therapy processes that contributed to therapy-related change	-Therapeutic Alliance -Therapist empathy increased Paul's confidence	-Therapeutic environment (positive regard, empathy, genuineness) -Exposure to affect -New learning-capacity to express	-Therapeutic relationship -Therapeutic space provided impetus for change

feelings adaptively

**Overall attribution
of therapy-related
change**

ACT: Other Factors	50:50	32:68	20:80
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Note. Categorisation of outcome was rated on a 4-point scale: deteriorated, unchanged, improved, recovered; Extent of change was rated on a 6-point scale: no change, slightly, moderately, considerably, substantially, completely; Attribution due to therapy was rated on a 6-point scale: not at all, slightly, moderately, considerably, substantially, completely.

Judges unanimously concluded that Paul improved during therapy (from a moderate to considerable extent) of which the therapeutic relationship was a key mediating factor, over and above ACT-specific processes. Paul's motivation to utilise therapy was identified as partially moderating his improvement. The judges' confidence in the assertion that ACT specific processes contributed to change was mixed (from 20%-60%). Exposure to previously avoided emotions was identified by two judges as integral to promoting positive change. All judges attributed at least half of the therapy-related change to non-ACT specific processes. The evidence that mattered most to the judges were:

- Paul's verbal reports of change (appearing to be a social pleaser, emphasis on therapeutic relationship acting as a vehicle for behavioural change, description of therapy as the cause of his improvement, inability to identify specific ACT processes)
- Stable pre-therapy baseline for depression and anxiety
- Reliable change in outcome measures
- Clinical symptoms of anxiety and depression at the end of therapy, combined with minimal change on 'problem 2' of PQ
- Lack of evidence of increased insight into idiosyncratic character and unhelpful habitual ways of being

Abridged Results for Joe

Context and Focal Problems

Joe was a 49-year old man at the post-treatment stage of tongue cancer. His treatment involved radiotherapy and surgery; his side effects included: pain,

complete loss of taste, fatigue, difficulties eating, and weight loss. Prior to cancer, Joe had no significant health problems or mental health difficulties. Joe lived with his wife and three young children and owned and managed a recreation business; however his absence during cancer treatment meant that it had become a financial risk. During radiotherapy, Joe experienced overwhelming panic and derealisation. He since struggled with intense anxiety attacks at home and at work which had triggered other distressing memories. Joe had received counselling support at his treatment hospital during treatment. At referral, Joe was overwhelmed and perplexed by his internal experiences (racing thoughts and physiological symptoms of anxiety). He had high levels of irritability and sadness and described being unable to cope with small tasks.

Major Adaptations to ACT Protocol

The formulation of Joe's presenting struggles centred on his unwillingness to experience anxiety and racing thoughts (experiential avoidance); this linked to over-identification with himself as someone who has never had mental health problems. Joe was fused with self-evaluative thoughts (self-blame) and fear of inner experiences served as a barrier to important value-driven decision making and committed action. Key areas of focus within therapy were metaphors and exercises related to cognitive defusion and acceptance. Identification of attentional failures and practising present-moment awareness was also considered crucial to increase psychological flexibility so that he could engage in value-driven behaviour.

Quantitative Results

Table 10. *Joe's psychological distress and flexibility ratings*

Outcome measures	Cut off	RC min	Baseline	Pre	Post	1-month	3-month
PHQ-9	>9	6 (↓)	18	17	7(+)	-	9(+)
GAD-7	>7	4 (↓)	21	20	7(+)	-	7(+)
AAQ-II	>26	10.62(↓)	-	19	14 (+)	-	12(+)

Note. RC; reliable change (i.e., minimum change-score required to demonstrate statistically reliable change [at 95% confidence]); Cut off; caseness threshold for determining clinically significant symptoms; PHQ-9; patient health questionnaire; GAD-7; generalised anxiety disorder questionnaire; AAQ-II; acceptance and action questionnaire; Values in bold fall within the clinical range; Arrows (↑/↓) indicate direction of improvement desired change (improvement) for each measure; (+) denotes *reliable improvement* in relation to first available score; (=) denotes *no change* in relation to first available score; (-) denotes *reliable deterioration* in relation to first available score.

Table 11. *Joe's process ratings*

Process measures	S1	S2	S3	S4	S5	S6
AAQ-II	19	19	19	13	14	14
SRS	33	38	35	38	38	40

Note. S; session; AAQ-II: acceptance and action questionnaire; scores range from 7 to 49, with higher scores indicating greater psychological inflexibility; SRS: session rating scale; maximum possible score of 40; score less than 36 indicates potential concern in the therapeutic relationship.

Table 12. *Joe's problem ratings*

Problem Questionnaire	Cut off	RC min	S1	S2	S3	S4	S5	S6
1. Unable to cope with challenges	>3.25	1.67 (↓)	6	5(↓)	4(+)	5(↓)	2(+)	2(+)
2. Irritability towards family	>3.25	1.67 (↓)	6	5(↓)	4(+)	3(+)	3(+)	2(+)
3. Overwhelmed by racing thoughts and anxiety	>3.25	1.67 (↓)	6	4(+)	4(+)	5(↓)	3(+)	5(↓)

Note. S is an abbreviation of session; Likert scale range 1-7; higher score indicating a greater problem; Values in bold fall within clinical range; (+) = reliable positive change in relation to first available score; (=) = no change in relation to first available score; (-) = reliable negative change in relation to first available score.

Abridged Affirmative and Sceptic Briefs

The affirmative case highlighted that the quantitative measures demonstrated statistically reliable and clinically significant improvements in anxiety and depression. Extracts from the CI were used to corroborate changes, outlining Joe's ability to articulate ways in which the therapy had enabled him to better understand and cope with anxiety, rather than fight it and becoming overwhelmed. The case outlined examples of shifts in processes of psychological flexibility- for example, increased awareness of the present moment within latter sessions (compared to high distractibility in the first two sessions). Joe said that the therapy "*definitely accelerated*" his mental recovery and he did not mention any events or experiences outside of therapy (that were not linked to therapy in some way) that were significant or helpful to him. Weekly process data was used to link in-therapy processes and week-to-week shifts in client problems (process-outcome links). For example, between sessions four and five the reliable reduction in ratings of problem one and three can be mapped onto significant shifts in Joe's understanding of his values (as indicated by therapist notes).

The sceptic case argued that Joe's problems were improving before the therapy, and thus changes cannot be attributed to therapy. Extracts from the CI supported this, where Joe made a reference to improving slowly on his own. This brief argued that changes were inflated by quantitative measures as the dramatic shifts in symptoms were not corroborated by Joe's descriptions of change (i.e. Joe made no reference to improvements in the anxiety or low mood); Joe's PQ ratings of problem three were used as further evidence of unreliable improvement. In the CI, Joe made generic statements about the therapy such as, "*it really helped me*", but when prompted to provide specifics he had limited examples. Joe's AAQ-II ratings were brought into question as his scores were not in the clinical range at the beginning of therapy which was not consistent with flexibility shifts described in the rich case record. This case casts doubt on the extent of Joe's changes and helpful role of therapy.

Adjudication

Table 13. Joe's judicial results

	Judge A	Judge B	Judge C
Client change			
Categorisation of outcome (certainty of decision)	Recovered (80%)	Improved (100%)	Improved (80%)
Extent of client change (certainty of decision)	Considerably (80%)	Considerably (80%)	Substantially (80%)
Attribution			
Due to therapy (certainty of decision)	Considerably (80%)	Substantially (100%)	Substantially (100%)
Mediating Factors	-Alliance -Therapist warmth, empathy -Therapist competence	-Insight into his current situation and unworkability of current ways of coping (e.g. fighting internal experiences) - Good therapeutic alliance; seemed to trust her competence -Insight into values led to shifts in perception and behaviour	-Values clarification -Cognitive defusion
Moderating Factors	-High commitment and motivation	-Decent level of motivation to do something different -Cared about goals	- Psychologically receptive -Familial support -Previous experience

		he was working towards -Family context gave him a drive to succeed	of overcoming adversity
Certainty that ACT processes contributed to change	40%	80%	60%
ACT-specific processes that contributed to therapy-related change	-Committed action (commitment to valued action, drifting and returning was an important process) -Present moment awareness	-Thought defusion -Reframing relationship with anxiety and thoughts -Loosening his sense that he needs to be in control -Values work highlighting imbalances	-Values clarification -Defusion
Generic therapy processes that contributed to therapy-related change	-Improvement in therapeutic alliance over time	-Strong therapeutic alliance -Focus on specific goals -Therapist attributes (warmth, genuineness and non-judgemental) -Exposure to previously avoided affect	-Containment and support from therapist -Discussions about relational issues
Overall attribution of therapy-related change			
ACT: Other Factors	40:60	50:50	60:40

Note. Categorisation of outcome was rated on a 4-point scale: deteriorated, unchanged, improved, recovered; Extent of change was rated on a 6-point scale: no change, slightly, moderately, considerably, substantially, completely; Attribution due to therapy was rated on a 6-point scale: not at all, slightly, moderately, considerably, substantially, completely.

Judges agreed that Joe improved, with one judge believing this resulted in recovery²³. Judges were confident that observed change was considerably due to the therapy. There were mixed opinions as to whether ACT-specific processes or generic therapy processes were more influential. Although the judges did not agree on the extent to which specific events or processes were helpful, they did that the strong therapeutic alliance and Joe's motivation to overcome his struggles were integral moderators of change. Judges' certainty that ACT-specific processes led to change varied from 40-80%. Two judges stated that defusion and values clarification were important, and the remaining judge highlighting value-driven action as contributing to improvements.

Cross-Case Synthesis

Taking the three cases together, there were a number of patterns identified:

- Judges agreed that these cases showed good outcomes (rated as 'improvement' or 'recovery'); specifically, clients progressed towards therapy goals, experienced reliable reductions in anxiety and depression and provided positive narratives about the therapy.
- Increased psychological flexibility (as measured by AAQ-II) was mirrored by improvements in psychological distress for client 1 and 2; however client 3 did not show reliable or significant changes in flexibility. All clients behaviourally demonstrated improvements in flexibility through increased valued-action.
- Judges were confident that client's positive outcomes were attributable to their experience of therapy, over and above non-therapy factors.
- ACT processes that were considered to have at least partially mediated outcomes were: increased insight into unworkable coping strategies (and the use of metaphors to support this), exposure to and acceptance of previously avoided emotions, defusion from anxious thoughts, present moment awareness and values clarification and action.

²³ 'Recovered/ recovery' refers to a clear improvement and functional recovery in key problem areas.

- The presence of a strong therapeutic alliance was considered to at least partially mediate change for all clients. Helpful therapist characteristics were: competence, likeability, relational warmth, genuineness and empathy.
- Moderating processes included: client motivation, effort and openness to therapy; cognitive intelligence and reflective capacity, and ability to build a trusting relationship and to draw strength from others (i.e. family and friends).
- The ingredients that facilitated client change were deemed to be ACT-specific and therapeutic alliance factors; the extent of the overall attribution of change varied between clients. ACT-specific processes were deemed to outweigh generic processes for client 1, equally influential for client 3 and less active than generic factors for client 2.
- One judge highlighted the problematic nature of endorsing questions about 'ACT-specific processes', asserting that some of the processes specified in ACT are also specified in other therapeutic approaches but talked about in different words and frameworks.
- All clients were understood to have high levels of motivation and openness to therapy, Tim was viewed to be advantaged by his reflective and intellectual capacity (demonstrated through articulation in change interview and demographic factors); he showed a connection with the ACT model, integrating it with his own philosophical mind-set. Client 2 and 3 referenced helpful ACT techniques/ metaphors; however they did not demonstrate such integration.
- Patterns within the quantitative data suggest that sessions focussed on values and committed action contributed to behavioural shifts as evidenced in subsequent movements towards relevant goals.
- All clients said that they would have benefited from receiving the intervention earlier and expressed a desire for more therapy sessions to maintain changes or to further improve. Two clients went on to receive psycho-social support from their treatment hospital following therapy (i.e. client 1 attended a mindfulness group and client 2 received counselling support).

Discussion

This study reports on the first evaluation of the effectiveness of ACT for individuals with HNC. The results add to previous ACT-cancer literature, evidencing that it can be an effective intervention for facilitating reliable and significant improvements in psychological distress and value-driven behaviour for people with HNC. The clients shared experiences of traumatic cancer treatment and the possibility of death; which required engaging in an 'auto-pilot' state in order to get through. As a consequence they all experienced problems in personal relationships and occupational roles. The therapy supported clients to think about unworkable (control-based) coping strategies and provided a framework for relating to their inner experiences differently (acceptance) to promote valued-action.

The judicial outcomes (based upon the matrix of quantitative and qualitative clinical evidence presented in the rich case records) suggest that ACT-specific processes and generic therapy factors (specifically the therapeutic relationship) combined to facilitate change for all clients²⁴. A possible explanation for the variability in the relative contribution of 'active ingredients' may be that individual differences in each clients' ability or willingness to adopt an ACT-consistent understanding of their internal world and worldview. Judges were confident that Tim showed dramatic changes in the problems for which he sought therapy as he 'blended' the therapeutic model with his own life-model. ACT challenges many commonly held assumptions about emotions, thoughts and behaviour; requiring one to be open to a different (often counterintuitive) way of viewing one's inner world. The validity of the study findings is strengthened by the fact that the study was naturalistic – that is, inclusion criteria were broad and consistent with those of the recruited services, no eligible clients were excluded, and the therapy was delivered flexibly.

Clinical and Theoretical Implications²⁵

The HSCED enabled a dismantling of therapy components to understand change processes for people with HNC. Therapist characteristics of warmth,

²⁴ See extended section 4.1 for a discussion of relationship between study findings and current research.

²⁵ See extended section 4.2.1 – 4.2.3 for detailed discussion of clinical, theoretical and research implications

empathy and likeability appeared to facilitate the development of a strong therapeutic bond and alliance. This, in combination with client characteristics of motivation to do something differently and appropriate expectations appeared to provide a context in which ACT was an effective intervention. The results suggest that common factors alone did not account for the full extent of therapy-related change, with ACT-specific processes playing a (varying) role for each client. This brings question to the common factors theory which claims that it is the common social and relational processes within and surrounding any therapy that are responsible for eliciting change, rather than “objective” factors or model-specific techniques (Wampold, 2015). Assessing the active role of model-specific versus generic/common processes is complex as there is a degree of interdependence (Laska & Wampold, 2014). Furthermore, the therapeutic relationship may not be dissociable from the ACT model, given that it is claimed to be a component of ACT. Perhaps it is more a question of whether the ACT therapeutic approach (e.g. embodiment of psychological flexibility, remaining present-moment focussed and avoiding an expert stance) is practiced in a deliberate and purposeful manner. In the CIs, clients spoke of the beneficial effects of generic therapist qualities, such as warmth and empathy. Discriminating between ACT versus non-ACT processes is partially artificial, given that we cannot remove the specific content of the enterprise as the therapeutic relationship must have a therapeutic rationale and focus.

Clients demonstrated value-driven behaviour change over the course of therapy, irrespective of continuing unpleasant (‘negative’) thoughts, feelings and bodily sensations, and ongoing life stressors. Such behavioural changes are indicators of increased psychological flexibility, congruent with aims of ACT to teach psychological skills to handle painful experiences in a way that their function is changed and value-driven behaviour can occur; thus moving closer to a meaningful and fulfilling life.

Clients experienced reliable reductions in psychological distress that were maintained at 3-month follow-up; this is an outcome theorised to be secondary to changes in psychological flexibility (Hayes et al., 2006). Distress reduction (and movement towards behavioural goals) occurred for these clients without therapeutic aims to change or alter their distressing thoughts. For example, Paul continued to have thoughts that the cancer would re-occur, Tim continued

to have thoughts relating to 'not coping' and Joe continued to have negative thoughts about his abilities as a father; yet clients experienced psychological and behavioural improvements. It is notable that cognitive defusion (Hayes, Strosahl, & Wilson, 1999) may be viewed as a form of secondary thought re-appraisal, where the function is re-appraised rather than the content. This approach that recognises (rather than minimises or alters) the distress of cancer (and relating worries and fears) may authentically validate these individuals, many of whom live with a realistic possibility of illness reoccurrence and early mortality. This was evident for the three clients in this study who faced these possibilities for themselves and others (family and friends who had cancer).

The replication of positive changes between clients demonstrates case-to-case transferability of the intervention model (Schwandt, 1997). Whilst sharing some common characteristics (e.g. age, gender) clients had some notable heterogeneity (e.g. level of education, socio-economic status, employment status and site of HNC). This indicates that effects are not circumscribed to a particular case or homogenous case-mix. Findings are consistent with preliminary studies showing positive outcomes of ACT with other cancer samples at different stages of treatment (Arch & Mitchell, 2015; Feros, Lane, Ciarrochi, & Blackledge, 2013; Rost, Wilson, Buchman, Hildenbrandt, & Mutch, 2012).

In conclusion, this study contributes to the limited evidence base for psychotherapy for individuals with HNC; demonstrating that ACT can be a feasible and effective model of therapy. Future research would benefit from assessing longer-term ACT interventions to allow investigation of a dose-response relationship. In addition, more research is needed to understand how individuals at the pre- or mid-treatment stage of cancer could benefit from ACT; particular given all client's desire for therapy pre-treatment.

Limitations

A key limitation of this study is the potential impact of the lead researcher who was simultaneously the therapist. This bias was reduced using transparent method, the use of an analysis team to cross-examine the rich case records and the use of independent judges. A balancing strength of this dual role is that it generates knowledge in context, capturing complexity and subtly in the

therapy process (McLeod, 2010). Despite theoretical differences, the author/therapist, analysis team and judges are likely to share beliefs in the general effectiveness of psychotherapy. Study findings may have been strengthened with 6-month follow-up data, particularly as ACT literature claims long-term effectiveness. An unavoidable limitation was that all clients were male and in a post-treatment stage of HNC. Finally, while the AAQ-II is the most widely used and validated measure of psychological flexibility, it was not easily understood by all clients and its validity has been questioned (Schmalz & Murrell, 2010; Wolgast, 2014). The study may have benefited from measures of each process of the flexibility model; or the use of a recently developed alternative measure- CompACT (Francis, Dawson, & Moghaddam, 2016).

Word Count²⁶= 6073

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Extended Paper

1.0 Extended Introduction

1.1 Chapter Introduction

The extended introduction sets the study context, providing information in relation to head and neck cancer (HNC) and its treatment, psychological distress and evidence-based therapies, with a specific focus acceptance and commitment therapy (ACT).

1.2 Head and Neck Cancer

Head and neck cancer (HNC) is a broad term encompassing malignancies that arise in the paranasal sinuses, nasal cavity, oral cavity, pharynx and larynx (Figure 1). Most HNC's are squamous cell carcinomas. Oesophageal (gullet) cancer, thyroid cancer, brain tumours and eye cancer are not classified as a HNC. Aetiology, histology, diagnostic and treatment approaches vary according to the specific cancer site (National Cancer Institute[NCI], 2017).

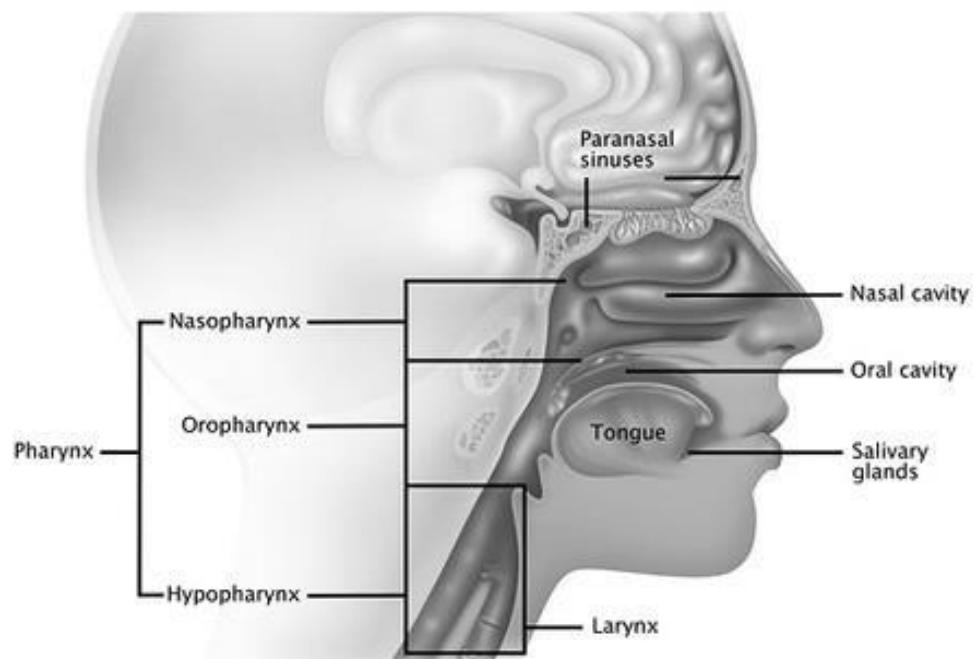


Illustration by Terese Winslow: Medical and Scientific Illustration, LLC, U.S.

Figure 1. Anatomical sites of head and neck cancer.

1.2.1 HNC Epidemiology

Agreement on worldwide incidence is difficult to ascertain due to varying categorisation of HNC sub-types; although recent data suggests it is the seventh most common cancer type at present (Global Burden of Disease Cancer Collaboration Fitzmaurice & Allen, 2017). HNC is the eighth most common cancer in the UK; approximately 12000 new cases were diagnosed in 2015 causing 3800 deaths (Macmillan, 2017b). Incidence of HNC increases with age, over 50% being in people aged over 65 years old. Men have a four times higher risk of HNC compared to women (Bogetti et al., 2013); although incidence is increasing more rapidly in females than males (Macmillan, 2017b). Mouth cancer is the most common sub-type of HNC which can affect a number of areas including: lips, tongue, inside of the cheeks, floor or roof of the mouth and gums (National Health Service [NHS], 2015). On average, there is a net 5-year survival rate of 55% across some HNC subtypes based on a 2009-2013 UK population (Muller, Belot, Morris, & Rachet, 2016).

Screening for HNC involves a physical examination by a head and neck surgeon and radiological assessment using CT, MRI, or both (Argiris, Raben, & Ferris, 2008). Diagnosis of HNC relies upon accurate staging methods using the Tumour Node Metastases (TNM) classification system. The stage of the HNC refers to the size of the tumour, whether it has spread to lymph nodes and whether it has spread beyond its original site. The latter is referred to secondary or metastatic cancer. Stage one refers to relatively small and contained tumour. Stage two refers to a cancer is larger than stage one and may have spread to lymph nodes close to the tumour. Stage three refers to a large tumour which may have started to spread to surrounding tissues and lymph nodes. Finally, stage four refers to advanced tumour that has spread to another body organ (Cancer Research UK, 2014).

1.2.2 HNC Risk Factors

The exact causes of HNC are not fully understood, although several risk factors have been identified. The primary risk factors associated with head and neck cancer include tobacco use, alcohol consumption, human papillomavirus (HPV)

infection (for oropharyngeal cancer- tonsils and base of tongue), and Epstein-Barr virus (EBV) infection (for nasopharyngeal cancer) (Macmillan, 2015) and human papillomavirus (HPV; National Cancer Institute, 2017).

Other risk factors include:

- Paan betel quid (Ho, Ko, Yang, Shieh, & Tsai, 2002)
- Consumption of certain preserved or salted foods (Yu & Yuan, 2006)
- Poor oral hygiene and missing teeth (Macmillan, 2017b)
- Exposure to radiation (Mayne, Morse, & Winn, 2006)

1.3 HNC Treatment

Treatment of HNC typically involves surgery, radiotherapy, chemotherapy or any combination thereof.

1.3.1 Surgery

Surgery is a common form of treatment for HNC (Macmillan, 2017b). Small cancers can be treated with a surgical operation that does not require overnight hospital admission. Larger cancers often involve a hospital stay and an operation under general anaesthetic. The operation may involve more than one part of the head and neck, and may cause scarring. Plastic or reconstructive surgery to the face is sometimes required following surgery (Macmillan, 2017a).

1.3.2 Radiotherapy

Radiotherapy is an intensive procedure that uses high-energy rays to kill cancer cells, while leaving the healthy cells to recover. It is often used postoperatively for head and neck cancer. Possible side effects include: problems with mouth (e.g. ulceration, loss of taste, pain, dryness, infection) and teeth (e.g. decay), weight loss linked to difficulty swallowing and poor appetite, changes to voice, and hair loss (Cancer Research UK, 2016).

1.3.3 Chemotherapy

Chemotherapy is the use of anti-cancer (cytotoxic) drugs to destroy or damage cancer cells; usually given in combination with radiotherapy. The drugs are typically given intravenously, but some are given as tablets. Intravenous chemotherapy can be given continuously over a few days through a small, portable pump (Macmillan, 2017). Chemotherapy increases the risk of aversive radiation-related effects such as painful inflammation and ulceration of the mucous membranes (mucositis), difficulty swallowing (dysphagia) and eczema (dermatitis). Treatment-related toxicities include dysphagia, speech dysfunction, gastric tube dependence, tracheostomy dependence and physical disfigurement, nerve damage and pain (Pignon, Maître, Maillard, & Bourhis, 2009).

1.4 Psychological Impact of HNC

It is acknowledged that HNC patients are vulnerable to experiencing clinical levels of anxiety and depression - largely understood to be the result of functional difficulties, image concerns (Söllner et al., 2001), threats to life, social functioning and reduced quality of life (Hammerlid & Taft, 2001; Rogers et al., 2007). Anxiety problems are prevalent in this population, specifically social anxiety, panic, and fear of cancer re-occurrence and choking (Frampton, 2001; Hulbert-Williams, Storey, & Wilson, 2015; Lang, France, Williams, Humphris, & Wells, 2013). The prevalence of depression in HNC patients is reported to be higher (22-57%) than in those with cancers in other sites (0-38%; Massie, 2004) and suicide rates were found to be four times higher than in the general population and other cancer populations (Zeller, 2006). Patients who undergo treatment are at risk of experiencing perceptions of limited attractiveness, low self-esteem, diminished feelings of sexuality, and isolation (Curtis & Zlotolow, 1980; Frampton, 2001b); depression has been found to increase significantly over the course of radiotherapy (Neilson et al., 2013).

The profound physical, psychological and social effects of HNC and its treatment put patients at risk of serious deterioration in psychosocial and physical domains of quality of life (QOL) postoperatively (Terro & Crean, 2017). Qualitative research indicates that expressed trauma and terror as a result of

HNC diagnosis and treatment coupled with stigma influence distress levels in HNC patients (Threader & McCormack, 2016).

1.5 Psychological Distress

Psychological distress is an extensively used indicator of mental health. It is generally defined as a state of emotional suffering characterised by clinical features of anxiety and depression (Drapeau et al., 2012; Mirowsky & Ross, 2002) that impact on daily functioning (Wheaton, 2007). While psychological distress can be part of diagnostic criteria for some psychiatric disorders, the term as used in this research refers only to the combined presentation of anxiety and depression.

1.5.1 Anxiety

Anxiety is an emotion accompanied by physiological, cognitive and behavioural components. When adaptive, anxiety serves to prepare an individual to cope with danger. When a person experiences fear, the body's 'alarm system' is triggered. This begins with the activation of the brain's amygdala which sends a distress signal to the hypothalamus, in turn triggering the sympathetic nervous system. These glands respond by pumping the hormone epinephrine (also known as adrenaline) into the bloodstream (Perkins & Corr, 2014). As epinephrine circulates through the body, it brings on a number of physiological changes, listed below;

- Increased heart rate, pushing blood to the muscles, heart, and other vital organs
- Increased pulse rate and blood pressure
- Breathing becomes faster and shallower
- Sight, hearing, and other senses become sharper.
- Dry mouth
- Excessive perspiration
- Nausea
- Muscle tension

(Cannon, 1929)

The freeze response was added to this model to account for physiological responses such as vigilant immobility. Anxiety exists along a continuum from a

protective, adaptive emotion to an unpleasant state in which irrational fears drive a pervasive anxiety response in situations that do not pose a threat to the individual. Anxiety may be considered as clinical or problematic when it encompasses pervasive worry, maladaptive behavioural patterns such as avoidance (Klein & Pine, 2001) and when it prevents or limits daily functioning (Carr, 2001). Severe forms of this anxiety can be categorised into psychiatric diagnostic groups, if relevant criterion is met. Psychiatric manuals include the Diagnostic and Statistical Manual of Mental Disorders (DSM-V) and International Classification of Diseases (ICD-10). These tools consist of numerous forms of anxiety 'disorders' based on the developmental timing of their emergence, the types of stimuli that trigger the anxiety and the pervasiveness and topography of the anxiety response.

The application of medically-orientated diagnostic labels to individuals experiencing psychological distress is contentious, namely because of poor reliability and validity of the diagnostic categories and its implicit (un-validated) assumption of biological causality (Bentall, 2003; Boyle, 2002).

The prevalence of problematic levels of anxiety is difficult to establish given the differences in diagnostic criteria, assessment tools and methodological differences in epidemiological studies. It is estimated that there is a 25-30% lifetime prevalence²⁷ for at least one anxiety disorder (Clarke & Beck, 2010) and despite widespread opinion in the media that each year more people are suffering from anxiety, there is no reliable evidence in the data that there has been a relative increase in anxiety disorders over the past century (Bandelow & Michaelis, 2015)

1.5.2 Depression

The emotion of sadness is adaptive, often following a loss of valued objects, events, personal characteristics, skills or relationships (Carr, 2001). Extreme states of mood such as depression are different from sadness as they are less adaptive. Depression is characterised by persistent low mood, selective attention to negative features of the environment, pessimistic outlook on life, self-defeating behaviour patterns and physiological changes (NHS, 2016). It is often classified by its severity; mild, moderate and severe, with a threshold

²⁷ The proportion of individuals who have suffered from a certain disorder once in their life.

representing a clinical cut-off. Clinical depression is also referred to as major depression in diagnostic manuals. Features of clinical/major depression are outlined in Table 14.

Table 14. Features of Clinical Depression

Perception	Bias towards negative events
	Mood-congruent hallucinations
Cognition	Negative view of self, world and future
	Excessive guilt
	Suicidal ideation
	Cognitive distortions
	Inability to concentrate
Affect	Depressed mood
	Inability to experience pleasure
	Irritable mood
	Anxiety and apprehension
Behaviour	Psychomotor agitation
	Depressive Limpness
Somatic state	Fatigue
	Sleep disturbance
	Aches and pains
	Appetite problems
	Change in weight
	Loss of interest in sex
Interpersonal adjustment	Deterioration in family relationships
	Withdrawal from peer relationships
	Poor school or work performance

Note: Features are based on ICD-10 and DSM-V classifications

There is wide variability in depression prevalence estimates; likely to be due to a combination of measurement, diagnostic and study design factors. The world health organization (WHO) prevalence estimates ranged from 2.2% (Japan) to 10.4% (Brazil) (Kessler et al., 2010). Clinical depression is associated with a wide variety of physical health problems such as chronic physical disorders, including: arthritis, diabetes, cancer, cardiovascular disease and chronic pain (Anderson, Freedland, Clouse, & Lustman, 2001; Chapman, Perry, & Strine, 2005; Massie, 2004). Clinical depression is associated with significantly elevated risk of early death (Cuijpers et al., 2014).

1.5.3 Psychological Measures

Mental health services commonly use symptom thresholds on validated measures (self-report questionnaires) of psychological problems as criteria for access to the service or therapy-type. Standardised measures are also routinely used to monitor patients' response to psychological treatment, which is linked to improving patient outcomes (Gondek, Edbrooke-Childs, Fink, Deighton, & Wolpert, 2016).

An NHS initiative called Improving Access to Psychological Therapies (IAPT) is a programme established in 2008 for adults experiencing mental health problems, particularly anxiety and depression. This programme uses two standardised screening measures to assess severity of anxiety and depression. These are- generalised anxiety disorder questionnaire (GAD-7) and patient health questionnaire (PHQ-9; IAPT, 2014).

1.5.4 Comorbidity

The diagnostic process suggests that depression and anxiety are two distinct 'disorders'; however there is no evidence to support this assumption, instead much evidence demonstrates that the two experiences are interrelated and thus there is a high diagnostic comorbidity (Coplan, 2015). Most people who suffer from severe levels of these forms of distress are likely to experience clinically significant features of the other. It is thus widely recognised that anxiety and depression often coexist.

1.5.5 Models of anxiety and depression

A range of theoretical models have been used to explain the development and maintenance of anxiety and depression; with each model promoting a theoretically-congruent treatment approach.

There are several widely recognised models of anxiety: (i) The avoidance model (Borkovec, Alcaine, & Behar, 2004) postulates that worry functions as a cognitive avoidance response to perceived future threats. It describes worry as an attempt to create ways to prevent bad events from occurring and/or to prepare oneself. It also states that the engaging of worry just prior to a fear-inducing image reduces anxious arousal, thus worry is partially maintained through negative reinforcement. (ii) The intolerance of uncertainty (IU) model (Dugas, Gagnon, Ladouceur, & Freeston, 1998) is a cognitive model that

suggests excessive worry is maintained in individuals who have a dispositional characteristic of IU- stemming from a set of negative beliefs about uncertainty. (iii) The metacognitive model (Wells, 1999) proposes that individuals develop a pattern of responding (cognitive attentional syndrome: CAS) which consists of worry, rumination, fixed attention and unhelpful self-regulatory behaviours. Wells argued that positive metacognitive beliefs (e.g. usefulness of worry, rumination or monitoring) and negative metacognitive beliefs (e.g. thoughts are uncontrollable) maintain the CAS. Finally, (v) The acceptance-based model (Roemer & Orsillo, 2002) emphasises the tendency for an individual to narrow their focus toward threatening information and to respond negatively (e.g. attempts to avoid internal experiences such as unpleasant emotions). This is hypothesised to lead to reduced engagement in important areas of life- thus the core problem is viewed to be the individuals relationship with internal experiences, characterised by distress, fusion and reactivity which intensifies emotional responding.

A major theory of depression is (Beck's (1979) cognitive model. It describes the influential role of negative thoughts about oneself, the world and the future (i.e. cognitive triad) and negative biases and distortions in belief systems. Beck further emphasises the primacy of cognition: suggesting that one's feelings and actions are largely determined by belief-based appraisals of events.

Behavioural models of depression (Ferster, 1973; Jacobson, Martell, & Dimidjian, 2006; Lewinsohn P.M., 1974) emphasise the role of reductions in positive reinforcement in one's environment (e.g. relationships and roles) and growth in negative reinforcement (i.e. heightened avoidance or escaping behaviours associated with aversive responses).

1.6 Evidence-based therapies for adults with anxiety and depression

1.6.1 Cognitive Behavioural Therapy

The National Institute for Health and Care Excellence (NICE) is a governing body for British healthcare. It produces treatment/therapy guidelines supported by research evidence. NICE advocate a stepped care approach; from low-intensity self-help to high-intensity cognitive behavioural therapy (CBT) for anxiety and depression in adults. CBT is rooted in cognitive and behavioural theories and primarily focuses on the assessment and treatment of 'here and

now' problems. CBT states that emotional and behavioural difficulties are underpinned by cognitive processes (maladaptive appraisals, thoughts and beliefs) and behaviour influences these cognitions (Beck, 1979). CBT is the most widely studied therapy and has thus had a large evidence-base for its effectiveness for treating anxiety and depression in adults (Cuijpers, Van Straten, Anderson, & Van Open, 2008; Deacon & Abramowitz, 2004). However, the increasing diversity in applied CBT over time has posed challenges to evaluation (Hayes, Vilatte, Levin, & Hildenbrandt, 2011). Once a single, structured approach, CBT is now a family of approaches of diverse protocols and methods of application. A commonality across the variability is the assumption that maladaptive thoughts are causally linked to emotional distress. Therefore, aims to modify cognitions and emotional distress are hypothesised to lead to positive behavioural change. Beck's (1979) content-specificity hypothesis states that different mental health conditions can be characterised by the content of the maladaptive thoughts specific to that condition. Thus, modifying such thoughts is principal for achieving reduced distress. At present, despite the large evidence base for CBT effectiveness, there is limited evidence to suggest that such findings are accounted for by mechanisms of change suggested by the model (Burns & Spangler, 2001). A review of studies identified a lack of empirical support for cognitive primacy and cognitive changes do not account for therapeutic effects over and above behavioural components of CBT (Longmore & Worrell, 2007).

Generally, empirical studies of CBT exclude individuals with co-morbid illnesses such as cancer. Given that CBT focuses on influencing maladaptive or biased cognitions, it does not adequately address cognitive components of anxiety or depression for people with cancer who are distressed by rationale thoughts, fears and memories. For example concerns about pain, death, disability and management of multiple stressors are often entirely realistic given the context. A systematic review of therapeutic interventions did not find consistent evidence for the efficacy of CBT for individuals with anxiety and cancer (Newell, Sanson-fisher, & Savolainen, 2002)

A recent systematic review of psychological interventions for individuals with HNC found insufficient evidence for the effectiveness of CBT in improving quality of life (Calver et al., 2017). However; only six studies met inclusion

criteria for this review, there was only one study investigating an alternative approach to CBT, and there was heterogeneity of intervention and methodology between assessed studies. The outcomes of this review are consistent with earlier findings from Semple and colleagues (2013) who reviewed CBT-informed interventions (using varied formats) for HNC. They measured outcomes of anxiety and depression as well as quality of life. Again, only a small number of studies were included (n=7 trials) and there was high variability in study quality. The meta-analyses found no significant change in anxiety, depression or quality of life post-intervention. Both reviews highlight the small number of intervention studies for this population.

1.6.2 ACT

In recent years 'third-wave' behavioural approaches have appeared more frequently in the literature and have been applied in clinical practice. These approaches represent a shift towards a more contextual approach than traditional CBT. Third wave therapies include: acceptance and commitment therapy (ACT), dialectical behaviour therapy (DBT), mindfulness-based cognitive therapy (MBCT), and metacognitive therapy (MCT). However, there has been some debate whether DBT and MCT can be considered part of the third-wave movement given their closeness to the traditional CBT approach. Mindfulness based treatments focus on achieving present moment, non-judgemental awareness (Kabat-Zinn, 2003). Much of the current research has focused on mindfulness interventions for stress reduction in physical health conditions. Empirical evidence suggests that mindfulness-based interventions are not sufficient clinical interventions for clinical levels of anxiety and depression (Baer, 2003; Toneatto & Nguyen, 2007).

ACT is a trans-diagnostic approach of psychological wellbeing (Hayes, Strosahl, & Wilson, 1999; 2011). It uses acceptance, commitment and mindfulness strategies to maximise the potential for people to live a more rich and meaningful life. ACT has been influenced by Radical Behaviourism, and Relational Frame Theory (see sections 1.7.1- 1.7.3). ACT was formalised as a therapy in the 1990s and has undergone rapid development over the last decade. It purports that human suffering is a result of unhelpful relationships with cognitive, emotional and behavioural processes (Hayes et al., 2011). It aims to improve an individuals' 'psychological flexibility' - the ability to connect

with the present moment and to pursue or change behaviour in the service of living a valued life (Harris, 2006; 2009).

A growing number of studies have accumulated evidencing the efficacy of ACT for anxiety and depression (Arch et al, 2016; Ost, 2014; Ruiz, 2010) and initial studies have demonstrated positive effects for individuals with cancer experiencing psychological distress (Hulbert-Williams et al., 2015). Evidence within the cancer literature supports the assertion that individuals who attempt to avoid or suppress cancer-related thoughts and behaviours experiencing greater distress (Abramowitz, Tolin, & Street, 2001; Angiola & Bowen, 2013).

Single-case designs for individuals with cancer have demonstrated significant improvements in anxiety, obsessive thoughts and living a more value-led life which were maintained at three and six month follow ups (Karekla & Consantinou, 2010; Montesinos, Hernandez., & Luciano, 2001). Further publications have used experimental designs, comparing an ACT based intervention with standard treatment and found significantly reduced fear of cancer re-occurrence, emotional distress, anxiety, depression and improved quality of life in individuals who had the ACT intervention (Montesinos & Luciano, 2005). A similar study compared an ACT intervention with cognitive therapy and concluded that ACT led to significantly better outcomes, with effects lasting up to 12 months (Páez, Luciano, & Gutierrez, 2008). Limitations of these studies include the sole use of breast cancer samples and lack of power (Hulbert-Williams et al., 2015). In 2012, a large RCT comparing ACT with CBT in a sample of ovarian cancer patients found that ACT resulted in significantly greater improvements over the 12 weeks, although mood and quality of life improvements were observed in both groups (Rost et al., 2012). Similarly, an experimental study of 45 cancer patients found significant improvements in distress, mood and quality of life with effect sizes comparable to those of CBT (Feros et al., 2013). It is important to recognise that this study did not have a control arm and used a non-specific cancer sample.

In addition to the intervention research, there are an emerging number of studies that have used ACT-related constructs as correlates of adjustment. For example, Ciarrochi, Fisher and Lane (2011) report a significant positive correlation between self-reported success at living according to one's values

and improved well-being and distress-related outcomes in a large sample of mixed cancer patients. Similarly, when compared with other cancer-based intervention approaches, ACT is less problem-focused (Hayes et al, 2011) and may better represent the individualistic and dynamic nature of cancer adjustment.

Confidence in the efficacy of ACT for cancer-related psychological distress can be drawn from the outcomes of three recently published ACT intervention studies (Arch & Mitchell, 2015; Feros et al., 2013; Rost et al., 2012). Arch and Mitchell (2015) assessed the effectiveness and feasibility of a 7-week group ACT intervention (in a community care setting) for individuals with ovarian cancer who had moderate-severe anxiety (with or without depressive symptoms). Significant reductions in anxiety and depression were found post-intervention, with stable baselines. Additionally, fear of cancer reoccurrence, pain and trauma symptoms related to cancer diminished significantly post-intervention. Furthermore, vitality (life meaning, comprehension and manageability) increased significantly post- intervention which was partially mediated by changes in psychological flexibility. It must be acknowledged that his study reported the significance of outcomes over a 1-month baseline period.

Feros and colleagues (2013) investigated the effectiveness of ACT for 45 people with different varying types and stages of cancer; however only 28 participants engaged in all 9 therapy sessions. Psychological distress, mood, and quality of life significantly improved from pre- to post-intervention and from pre-intervention to 3-month follow-up. Process analysis showed that the hypothesised change process in ACT (psychological flexibility) did not predict changes in distress, mood or quality of life, although it did predict these outcomes at follow-up. The effect sizes of the positive changes in distress and mood were large (.87- 1.12); this compares favourably to effect sizes reported in studies of CBT interventions for cancer patients (Osborn, Demoncada, & Feuerstein, 2006). It is worth noting that this trial did not have a control arm and did not use any behavioural measures to assess changes in valued action; a key outcome in ACT.

Rost and colleagues (2012) assessed the effectiveness of a 12-session ACT for women with late stage ovarian cancer. Several constructs were measured including: distress, quality of life, anxiety, acceptance, depression, thought-suppression and mental disengagement. This trial had two arms, the ACT intervention and treatment as usual (TAU) which consisted of cognitive-behavioural techniques. Results showed that both conditions showed improvements from pre- to post-intervention in distress, anxiety and depression; however the ACT intervention showed significantly greater rates of improvement in both. These changes occurred in the face of deteriorating health conditions. Authors hypothesised that such changes were due to increased acceptance of their situation, enabling participants to engage in valued-living. It is of note that psychological distress often varies in intensity over the course of the cancer process. A further limitation acknowledged by this study was the use of one therapist who delivered both TAU and ACT.

A recently published systematic review examined the effectiveness of ACT for individuals with long-term health conditions, including cancer (Graham, Gouick, Krahé, & Gillanders, 2016). The review included eight RCTs, four pre-post designs and six case studies. Of the six studies that measured psychological distress, all but one demonstrated significant improvement with large effect following the ACT intervention. Despite these promising findings, it was found that the quality of reviewed studies was generally low. The highest quality study compared a telephone-delivered ACT intervention for people with colorectal cancer to treatment-as-usual. Here, no significant difference was observed in the ACT group compared to TAU at post-intervention; however participants were not selected on the basis of clinical levels of distress at the beginning of therapy, thus making change more difficult to detect. Authors concluded that the effectiveness of ACT is not yet well-established and requires further investigation.

A further systematic review that specifically examined the effectiveness of ACT for cancer patients found evidence that ACT led to significant improvements in anxiety, depression and emotional distress post-intervention (González-Fernández & Fernández-Rodríguez, 2018). In addition, increased psychological flexibility was found in twelve of the nineteen included studies. The quality of

reviewed studies was assessed and identified as a key limitation, compromising the validity of conclusions drawn. The authors found that only a few studies compared the ACT results over a period of time or to other psychological or placebo interventions. There is a clear need for methodologically sound examination of ACT for this population.

The literature demonstrates that ACT is a promising psychological intervention for cancer populations. NICE guidelines regarding psychological support for people with cancer are non-specific and out-dated (NICE, 2009). The guidelines are developed for a broad group of adults with chronic physical health conditions and advocate 'specialist interventions' of which CBT is namechecked. This highlights a need to develop and test interventions for adults with cancer to provide evidence for updated guidance for clinicians working therapeutically with this population.

1.7 Acceptance and Commitment Therapy (ACT): Theoretical and Philosophical Basis

1.7.1 Functional Contextualism

Developed from radical behaviourism, functional contextualism rests on two key principles: 1.) behaviour must be understood in relation to the context in which it emerges, 2.) the function of behaviour must be identified in order to understand or influence it (Gifford & Hayes 1999). Contextualism takes the view that no psychological events (i.e. thoughts, recollections, internal bodily sensations, emotions) are inherently dysfunctional or problematic, rather it depends on the historical and situationally defined context in which it occurs. In this way, thoughts and feelings do not cause actions, except as structured by context (Biglan & Hayes, 1996). According to this viewpoint, mental and sensory processes (also termed 'private experiences'; Skinner, 1957, 1975) need not be changed, rather it is the context that causally links these psychological states (Hayes, Luoma, Bond, Masuda, & Lillis, 2006). This position opposes mechanistic philosophies, whereby internal experiences can be viewed as 'pathological' and therefore advocate techniques that alter their content or replace their form. A direct application of functional contextualism in ACT is the goal to increase a person's insight into their behaviour, noticing how it functions in the context of their life. For example, a person who has made a decision to

avoid romantic relationships because they have been hurt by past partners may be asked to consider whether this behaviour serves to improve their quality of life, or lower it. The same overt behaviour can have multiple functions and likewise many different forms of behaviour may serve the same purpose. In ACT, this idea is referred to as 'workability', that is, the function of the behaviour and the context in which it occurred are central.

1.7.2. Relational Frame Theory

ACT is considered to be theoretically embedded in Relational Frame Theory (RFT) (Roche, Barnes-Holmes, Stewart, & O'Hora, 2002). RFT is a pragmatic theory of language and cognition. Relational framing includes: a) deriving relations between events, b) joining them into vast relational networks, and c) transferring functions between related events (Hayes, et al., 2001). RFT asserts that derived relations can change the functions of events. Derived stimulus relations are relations between two or more stimuli that are not directly trained or taught and are not based solely on the physical properties (e.g. appearance, sound, taste) of the stimuli, but by specific contextual cues (Garcia & Benjumea, 2001). Thus, relating is contextually controlled and established through language in the early years of life. RFT views derived relational activity as a form of generalised operant behaviour. The ability to derive bidirectional stimulus relations means that people can readily relate neutral events to more important psychological events, even when the former consistently follow the latter (Leader, Barnes, & Smeets, 1996).

It is proposed that generalised relational responding emerges in children once a child has been exposed to enough relational training. For example, a child is explicitly taught object-word, word-object relations. If a child who has experienced much of this naming activity is then taught 'this is your toy' (in the context of the social interaction and the verbal cue), they consequently may now identify the object when asked "where is your toy?" in the absence of prior differential reinforcement for doing so. This demonstrates a type of generalised operant behaviour. Given that language is a social activity, RFT comments on the relation between language and social behaviour. While Skinner's (1975) account of verbal behaviour forms part of the basis for RFT's assumptions; RFT refutes Skinner's radical behaviourist assumptions that all learning takes place

through direct experience (see section 1.7.3).

RFT, specifically the bi-directionality of stimulus relations is applied to understand the occurrence of psychological problems. For example, it explains why an individual experiencing psychological distress often avoids talking about the psychologically painful event. Because language is a bi-directional process, the aversive experience can be 'felt' in the context of talking about it, without being in the situation itself. In this way, the report of the aversive event acquires many of the aversive and painful functions of the event itself (Gifford & Hayes, 1999).

A further defining feature of RFT is the transformation of function. This concept is the process whereby the functions of one stimulus alter or transform the functions of another stimulus in accordance with the derived relation between the two, without additional training (Dymond & Barnes, 1995). When applied to psychological distress, it explains how words can have aversive functions, even if the event has never been experienced. For example, if a child is told that he is going to the "doctor", and is then exposed to an uncomfortable medical examination, it is likely that the word "doctor" will be classically conditioned with an aversive experience. If the child is then told that "dentists are like doctors who look after your teeth", a relation of coordination or equivalence is established between "doctor" and "dentist". Thus, when subsequently required to go to the dentist, the child will likely show signs of anxiety even though he has never actually had an aversive experience at the dentist. In this case, the aversive functions of doctor have transferred to dentist via the relations of coordination (Barnes-Holmes, Barnes-Holmes, Mchugh, & Hayes, 2004)

Relational framing is applied within clinical settings when understanding how 'private events' may lead to psychological distress (Hayes et al., 2011). The aim of ACT is therefore to help distance the self from such painful private events. This is typically achieved by changing the context in which they occur and reducing the function of these events without changing its content (Harris, 2009).

1.7.3. Applied behaviour analysis

Applied Behaviour Analysis (ABA) is a set of principles and procedures based

upon learning theory and behaviourism that can be applied to a clinical setting. The major learning theories are Skinner (operant conditioning), Pavlov (1927; conditioned reflexes and classical conditioning), Thorndike (1931; trial and error learning and connectionism) and Watson (1919; radical objective observation of behaviour). Methods found within ABA enable a person to predict and influence behaviour. Radical behaviourism states that behaviour is (i) functional, (ii) elicited through the interaction of biology, learning history and current context and, (iii) defined and maintained by the contextual consequences of the behaviour. From this perspective, behaviour refers to anything a person does, both the overt observable and the private unobservable behaviours (such as thinking and feeling). A key element of ABA is functional behavioural analysis. This involves detailed analysis of the function (or purpose) of a particular behaviour. A formula that can be used to structure this analysis and often incorporated into ACT is the Antecedent-Behaviour-Consequence framework.

1.8 Rationale for using ACT

ACT is a third-wave behavioural approach that shares some techniques with CBT; particularly those relating to behavioural interventions (Hofmann & Asmundson, 2008). While some methods appear similar (e.g. exposure) they differ in focus and fundamentally pursue a different goal. For example, in CBT the aim of exposure is to increase habituation to the feared situation and thus reduce anxiety for the individual. By contrast, exposure in ACT has the aim of bringing a person into contact with inner experiences (i.e. anxiety) that they have been avoiding in order to facilitate a new relationship with anxiety. While both models aim to facilitate a pursuit of important life goals, the method through which this is achieved is fundamentally different. CBT encompasses a problem-solving process in which irrational thoughts and global beliefs are identified and challenged or confronted through various techniques. By contrast, ACT treats cognitions as behaviours (or private events); asserting that they (along with emotions, memories and bodily sensations) achieve their power not by their form or frequency, but by the context in which they occur. Therefore, ACT aims to foster acceptance and separation from distress, reducing experiential avoidance (the resistance of experiencing negatively evaluated thoughts, feelings, sensations or memories).

ACT as an approach does not focus on symptom reduction (i.e. depression,

anxiety). Effectiveness is measured by how much an individual re-engages with a life that they value. This model of healthy adaptation to life circumstances and health prognosis may be a validating and suitable approach for individuals with cancer, who face many psycho-social stressors and uncertainty relating to the cancer and many of whom live with the realistic possibility of cancer-reoccurrence and early mortality (Parker et al., 2014). To date, there are no studies that have investigated the effectiveness of ACT specifically using HNC populations. Furthermore, no HNC studies have used a case series approach to explicitly examine change processes which is integral for understanding and refining interventions.

1.9 ACT Processes

ACT proposes that when a person is unwilling to stay in contact with private experiences (such as emotions, thoughts or bodily sensations), or takes steps to alter their form or frequency, it results in distress for the individual (Hayes et al., 2006) and prevents them from living a full and meaningful life. This is known as psychological inflexibility. In this way, the primary source of psychopathology is the interaction between language and cognition with direct eventualities to produce an inability to persist or change in order to live in a way that is personally meaningful and valued. Efforts to control private experiences are conceptualised within ACT as 'experiential avoidance' and may be particularly important for individuals with cancer who often struggle with distressing thoughts and beliefs about themselves and their future. The primary aim of ACT is to increase psychological flexibility by enabling a person to change their relationship with distressing cognitions and emotions (acceptance) and behaving in a way that is personally meaningful (commitment). The goal of which is to create a rich and meaningful life. Distress reduction is not an aim of ACT, but said to be a secondary outcome of increased psychological flexibility (Hayes et al., 2006). Psychological flexibility is formulated within the 'hexaflex', comprising of six interrelated core processes (figure 2). The theoretical model provides conceptual scaffolding for testing individual components and processes of the therapy. For example, experimental evidence has demonstrated that acceptance and values interventions can increase persistence in a distressing task without reducing distress (Hayes et al., 1999; McMullen et al., 2008).

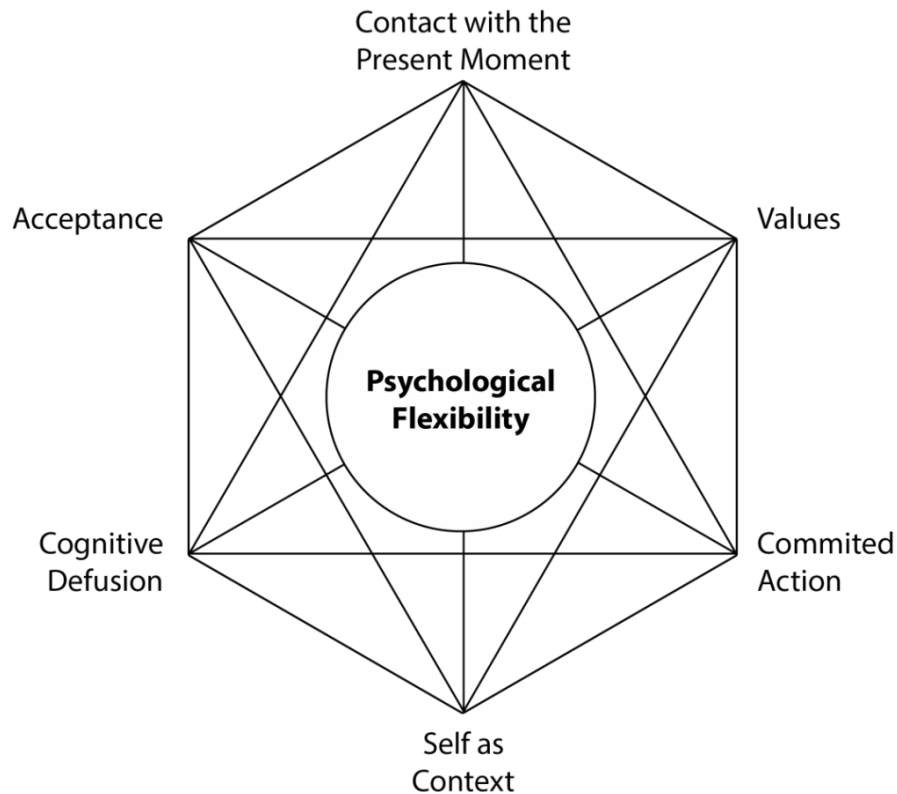


Figure 2. ACT Hexaflex (Hayes et al., 1999)

I. Present moment awareness

This involves connecting with private experiences and external senses, whilst bringing non-judgemental awareness to the present moment, rather than operating on 'auto-pilot' (Harris, 2006; 2009). Mindfulness exercises are used to promote this ability, supporting a person to experience the world more directly so that their behaviour is more flexible and their actions more consistent with the values that they hold. Evidence suggests that mindfulness exercises can increase attentional flexibility (Langer & Moldoveanu, 2000) and lead to improved emotional well-being for people with varied physical health conditions (Carlson, 2012; Piet et al., 2012).

II. Cognitive Defusion

Cognitive defusion (or separation) techniques aim to create distance from the content of undesirable thoughts, images or memories. Defusion encourages individuals to interpret such private events in a different context rather than attempting to alter their content or frequency. Thus, ACT aims to help a person to interact differently with their thoughts, learning to step back or detach from

them rather than getting caught up and 'pushed around' by them. Defusion exercises aim to enable a person to notice their thoughts and reduce their literal quality, thus weakening the power of the content of the thought. Defusion is not an end in itself rather it is a means of increasing value-driven action. Evidence supporting this process can be found in experimental studies where word repetition reduces both believability and subjective distress experienced from negative self-relevant phrases (Masuda, Hayes, Sackett, & Twohig, 2004) and thoughts related to body-image (Mandavia et al., 2015).

III. Acceptance

Acceptance can be described as a willingness to make room for painful feelings, sensations and urges instead of trying to resist, control or eliminate them (Harris, 2006). It involves learning that an unwillingness to have internal experiences (i.e., a natural level of emotional and physical discomfort; Harris, 2006) is unsuccessful and has the unintended consequence of narrowing one's life. Acceptance involves an actively embracing (not wanting) private events induced by one's own history or body. Acceptance is not an end in itself; rather it is a means of increasing value-driven action.

Research has shown that acceptance interventions can increase persistence and willingness to engage in distressing tasks (Levitt, Brown, Orsillo, & Barlow, 2004; McMullen et al., 2008).

IV. Self-as-context (pure awareness)

Self-as-context is a perspective that is fostered through mindfulness, metaphors and experiential exercises. This aims to help clients to see their inner experiences as distinct from consciousness and therefore not necessarily a threat. It is a viewpoint from which one can be aware of one's flow of experiences without attachment to them or an investment in them. This process seeks to undermine an attachment to a conceptualised self (i.e. a person's fused, evaluative stories about who they are) and undermines excessive rule control. It encourages an observer stance, distinguishing between the part of them which is always thinking and changing and that which observes these processes (the aspect of a person which is aware of thoughts, beliefs, and memories). The central idea is that the observing part of the self never changes; it is the same 'you' that has been there your whole life. It is typically referred to

in therapy as the 'observing self'. This process encourages individuals to develop pure awareness where they learn to see themselves within context, not defined by their private experiences, but at a distance from any conceptualised versions of the self that they may hold (e.g., "I am worthless"). Taking this 'third person' approach is said to lead to a more de-centred self where they are less consumed with unhelpful thoughts, ruminations about the past or worries about the future. A self-as-context exercise might involve asking clients to imagine that they are older and to write a letter of back to the person struggling now.

Research has shown that an ACT-intervention containing all six processes led to significantly greater reductions in PTSD symptoms than an ACT intervention that did not contain self-as-context components (Williams, 2006).

V. Values

Values are a person's desired qualities of behaviour and chosen life directions. Values (unlike goals) can never be obtained but can be lived-out moment by moment. In this regard, values describe how a person wants to behave on an ongoing basis. ACT aims to enable a person to clarify their values, while undermining verbal processes that might lead to choices based on social compliance (domination of rules followed to avoid social criticism or achieve social approval), avoidance (domination of rules followed to avoid or escape difficult feelings such as shame or guilt) or cognitive fusion ('I should value X' or 'a good person would value Y'). Such choices are hypothesised to be behaviourally unhelpful because they do not lead to the flexibility characteristic of choices linked to positive consequences (Sheldon & Elliot, 1999).

Studies have demonstrated that values interventions combined with other ACT components increases task persistence through reducing pain perceptions (Gutierrez, Luciano, Rodriguez, & Fink, 2004).

VI. Committed Action

ACT encourages the development of larger and larger patterns of action, guided by identified values, rather than guided by experiential avoidance. Behaviourally coherent behaviour change methods are typically incorporated into this process within ACT; for example, exposure, skills acquisition and concrete goals (Hayes

et al., 2006; K. G. Wilson & DuFrene, 2008). Concrete goals that are values consistent can be set and achieved. Harris (2009) described steps to committed action: (i) choose a life domain that is a high priority for change, (ii) choose what values you wish to pursue in this domain, (iii) develop goals that are guided by those values, (iv) take action mindfully. Goals must be specific, meaningful, adaptive, realistic and time-framed. Such goals may be set as homework between sessions, or may be medium- or long-term. Within therapy, barriers to action (fusion, excessive goals, avoidance of discomfort, remoteness of values) are frequently addressed. It is recognised that everyone breaks commitments at times, and often the role of the therapist is to address potential fusion that may come with this (e.g. client fuses with thought 'I am a failure').

The literature on the effectiveness of behaviour change upon psychological variables is vast. This process is rooted in behaviour therapies that have extensive evidence-base.

2.0 Extended Methods

2.1 Systematic Case Study Rationale

The need to establish evidence-based practice continues to drive psychotherapy²⁸ research. There is increased recognition that therapy is efficacious, and a viable alternative to psychiatric medication (APA, 2006; 2012). Randomised controlled trials (RCTs) are considered the 'gold standard' for establishing the efficacy of psychotherapy, demonstrating high levels in internal validity. RCTs have an essential position in clinical research and when conducted to a high quality, they provide valuable information regarding therapy outcomes (Carey & Stiles, 2016). It is important to acknowledge that RCTs have several shortcomings, most notably in relation to their compromised external validity (e.g. resemblance to clinical practice) and use of crude statistics. As a consequence of these factors, valuable information (such as that relating to outliers or qualitative information) can be easily missed and findings cannot be applied to the individual (Elliott, 2002; McLeod, 2010a; Westen, Novotny, & Thompson-Brenner, 2004). RCTs are most problematic when stretched beyond their capability, that is, when applied to situations where linear causality does not apply (Carey & Stiles, 2016). In this way, a RCT is an inappropriate method for investigating and understanding the complex processes within psychological therapy (Donaldson, Christie, & Mark, 2008).

Good practice involves the testing of therapies using a method that is appropriately suited to the research question (Benelli, De Carlo, Biffi, & McLeod, 2015). The successful construction of clinical guidelines concerning psychological therapies for specific problems relies on the availability of adequate scientific and clinical evidence to which clinical observation and case study methods have majorly contributed (Benelli et al., 2015). Detailed case study methods generate practice-based evidence and remain important for assessing client outcomes which are heavily influenced by a complex multitude of factors (such as, extra-therapeutic events and the quality of therapeutic relationship) over and above a particular diagnosis or treatment model (Beutler,

²⁸ Terms 'psychotherapy' and 'therapy' are used interchangeably; they refer to talking therapies based on psychological models.

2009; Wampold, 2001). In order to fully understand 'how' and 'why' a particularly therapy works, methods that are equipped to critically explore complexities should be employed. Case studies tell a story which is memorable and offers knowledge that is readily integrated into the pre-existing 'action schemas' that guide practice with clients (McLeod, 2010a). Supplementing RCTs with pragmatic and naturalistic case study approaches has been encouraged (Bohart, Tallman, Byock, & Mackrill, 2011; Elliott, 2002; Fishman, 1999; Miller, 2004).

The quality of published case studies is highly variable. Systematic approaches ensure quality and replicability in investigation of the role of specific processes that impact therapy outcomes for individual cases. The evidence produced by systematic outcome-orientated case studies may be more credible than that produced by RCTs because they draw on many different sources of information, providing complex data and detail, thus reflecting an accurate appraisal of the degree to which a client has been helped by therapy (McLeod, 2010a). The value of the systematic case study is gaining recognition; for example, the APA's Presidential Task Force on Evidence-Based Practice (2005) endorsed the systematic case study as "scientifically sound and instructive" (Borckardt et al., 2008, p. 78). The use of case series approaches (i.e. more than one client per investigation) may provide more information and increase the implications of results. For example, a systematic case series provides rich data of a case study while enabling an investigation of repeatability of effects. This method offers more scope for theoretical generalisation and can answer questions about effectiveness of specific interventions for specific client groups (Iwakabe & Gazzola, 2009).

2.2 HSCED Development

Elliott (2002) drew on several sources to develop the hermeneutic single-case efficacy design (HSCED). It is a pragmatic approach that aims to critically examine evidence for the effectiveness of a therapy within specific cases. The HSCED is based on a systematic analysis of a comprehensive pool of data regarding the following: qualitative outcome assessment, qualitative change process data about significant events, quantitative outcome measure(s), a

weekly outcome measure, and direct information about therapy process (Elliott, 2009).

Unlike experimental case study designs which are limited to a time series analysis of a single outcome variable, the HSCED is sensitive to any type of client change. The development of this approach was first informed by Kazins (1981) single-participant experimental design guidelines; where it was stipulated that in order to increase the legitimacy of inferences about causality, case studies must;

- 1.) Gather objective data
- 2.) Repeatedly assess client functioning (i.e. take baseline and weekly measures)
- 3.) Repeat this methodology across a number of similar cases

Elliot further adopted procedures from Cook and Campbell's (1979) account of internal validity from quasi-experimental designs. This included incorporating the process of systematically considering of a set of competing explanations for client change.

A further source of the HSCED was Bohart and Boyd's (1997) description of an interpretive approach to analysing client's accounts of change. They stipulated that a convincing case that therapy led to reported change would be if a.) there was other evidence that the change occurred and, b.) other alternative possibilities were plausibly ruled out.

Elliot (2004) affirmed the need for an adjudication stage, informed by the work of Miller (2004) and Bohart et al (2011). The addition of this component was based on the notion that adjudication plays a key role in the scientific process. For example, journal peer-review demonstrates how different reviewers often have different opinions as to the reliability, validity and quality of evidence. In the HSCED, expert psychotherapy judges are recruited to address the complexities, contradictions and obscurities of client change data, thus producing judgements that are highly relevant to practising therapists.

The HSCED incorporates a set of 'practical methods that are transparent, systematic, and self-reflective enough to provide an adequate basis for making

inferences about therapy efficacy in single cases' (Elliott, Slatick, & Urman, 2001, p.166). The central aim of the HSCED is to answer two key research questions, (i) is there evidence of substantial change after the introduction of therapy? (ii) if so, are the changes attributable to therapy processes, common factors or other non-therapeutic explanations?

The HSCED should be used as an element within an overall programme of research into the effectiveness of a particular type of therapy, particularly models or client-groups that are under-researched. The HSCED was enhanced to accommodate three clients within one investigation (Elliot, 2015), to increase contextual sensitivity and enable cross-case comparisons.

2.2.1 Philosophical underpinnings of the HSCED

The HSCED is underpinned by pragmatism. It is interpretive rather than experimental, emphasising thick descriptions in the form of rich pools of information (qualitative and quantitative data) rather than abstract design features. Further to this, it develops probabilistic rather than absolute knowledge claims (Elliott, 2015). Weight is given to networks of information and interpretive procedures to develop probalistic explanations of change. This method is neither experimental in status nor does it aim to generate claims of 'absolute' truth.

2.2.2 HSCED procedures

Rich Case Record (extracted from Elliot's [2002] guidance)

- I. Obtainment of contextual facts about the client and therapist. These include: demographic information, presenting problem(s) and therapeutic approach.
- II. Quantitative measures are used to assess client-change during and after therapy. Measures relating to the client problem and model-specific processes are used as well as extra-therapeutic processes such as client expectation and therapeutic relationship. Change measures allow detection of significant events in therapy (model specific and extra-therapeutic) and ascertain connections between these events and the outcomes reached by the client. At a minimum measures should be given at the beginning and end of therapy. Elliott (2002) advises giving them periodically throughout therapy if possible. A weekly outcome

measure is a key element of the HSCED. This should measure the client's therapy-related problems or goals. Elliott and colleagues (1999) used the Simplified Problem Questionnaire (PQ), an individualised target-complaint measure.

- III. A qualitative semi-structured interview (the Change Interview; Elliott et al., 2001) directly follows the therapeutic intervention. This offers an opportunity to understand the client's experience of helpful and hindering aspects of the therapy and their attributions of any change that occurred over the course of therapy. The interviewer also makes attempts to identify any external factors (e.g. life events) that may have impacted on outcomes (Carvalho, Faustino, Nascimento, & Sales, 2008). The change interview takes between 30 to 45 minutes and can be performed by a third party to reduce bias.
- IV. The helpful aspects of therapy (HAT) form (Llewellyn, 1988) is often used in HSCED to measure client perceptions, pinpointing specific therapeutic processes that may be associated with change on the weekly outcome measure. This can be given or used to structure conversation.
- V. Records of therapy sessions such as therapist processes notes or recordings of therapy sessions are used to pinpoint, corroborate and classify issues or contradictions elsewhere in the rich case record. For example, to make sense of shifts in quantitative measures.

Analysis

The analysis stage requires the research team to develop affirmative and sceptic arguments regarding client(s) change; based upon evidence from the rich case records. The purpose of the affirmative case is to provide a persuasive argument that the client changed over the course of therapy and the change was largely attributable to the therapy itself. The affirmative case should draw upon a combination of the following types of evidence: (i) retrospective attribution, (ii) process-outcome mapping, (iii) within therapy process-outcome correlation, (iv) early change in stable problems, and (v) event-shift sequences. The sceptic case aims to systematically identify alternative interpretations of the rich case record and the affirmative case. This includes the exploration of eight explanations outlined in table 15.

Table 15. Alternative explanations of change (Elliott, 2002)

Change	Description
Non-improvements	This is where apparent changes are attributed to be trivial or negative. Reliability and clinical significance of outcome measure and the change interview help to assess this explanation.
Statistical artefacts	This may include measurement error, regression to mean or experimentwise error. Reliable change index calculations, assessment of the stability of client problems and replication of change across multiple measures can be used to assess this.
Relational artefacts	This may include superficial attempts to please the therapist or effects of rapport/therapeutic relationship. Ways of assessing this include measures of client relationship and assessment of client tendency to answer in a socially desirable manner.
Client expectations	This can be evaluated during the change interview by asking the client whether changes were expected or surprising. Measures of therapy expectations can also be used.
Self-correction	Changes reflect self-help and self-limiting easing of temporary problems. An assessment of duration/stability of client problems helps to ascertain this.
Extra therapy life-events	This involves attempts to understand the potential influence of life-events outside of therapy. A consideration of the mutual influence of therapy and life-events must be given.
Psycho-	Information on medication and physical health problems must

biological factors be assessed in relation to apparent change.

Reactive effects Research enhanced the therapy outcome. The change interview can be used to assess this by asking directly about the effects of the research.

Adjudication

Three independent psychotherapy practitioner-researchers (known as 'judges') are employed to critically examine rich case records and arguments. Elliott (2009) advises that they should be selected to ensure representation of divergent theoretical orientations. In this research project, the judges were electronically sent the rich case records, affirmative and sceptic cases and a transcription of the change interviews. Each judge was invited to read the case records in a unique order to reduce order effects. Judges were sent an electronic link to their own Qualtrics online survey (one for each client) which had been created by the first and second authors. The survey encompassed a series of semi-structured adjudication questions; summarised in table 16. A three week time period to complete adjudication was given.

Table 16. Adjudication Questions

Client change	Options
How would you categorise this client's outcome?	Deteriorated Unchanged Improved Recovered (client demonstrated clear improvement and functional recovery in key problem areas)
How certain are you?	Percentage (0-100%)
What evidence presented in the rich case record mattered most to you in reaching this conclusion; and how did you make use of this evidence?	
To what extent did the client change during therapy? (certainty of decision)	No Change (0%) Slightly (20%) Moderately (40%) Considerably (60%) Substantially (80%) Completely (100%)
How certain are you?	Percentage (0-100%)
What evidence presented in the rich case record mattered most to you in reaching this conclusion; and how did you make use of this evidence?	
In your view, why did the client remain unchanged (or deteriorate) over the course of therapy? (answer if applicable)	
To what extent do you believe that the client's change is due to the therapy?	Not at all (0%) Slightly (20%) Moderately (40%) Considerably (60%)

Substantially (80%)
Completely (100%)

How certain are you?

Percentage (0-100%)

What evidence presented in the rich case record mattered most to you in reaching this conclusion; and how did you make use of this evidence?

Which therapy processes (mediator factors) do you feel were helpful to the client?

Which characteristics and/or personal resources of the client (moderator factors) do you feel enabled the client to make best use of therapy?

How strong is your belief that ACT-specific processes contributed to therapy-related change for this client?

Percentage (0-100%)

Which ACT-specific processes and techniques, if any, do you feel facilitated client-change?

How strong is your belief that other (generic) therapy processes facilitated therapy-related change for this client?

Which generic therapy processes, if any, do you feel facilitated therapy-related change for this client?

Overall what proportion of therapy-related change was due to:
ACT-specific processes
Other therapy processes?

Percentages

2.3 ACT Intervention

The lead researcher became a member of an ACT online community- the Association for Contextual and Behavioral Science (ACBS). This provided access to clinical and theoretical resources, training and published research. The Better Living with Illness Protocol (Brassington et al, 2016) was obtained from the ACBS; while it was not necessary to obtain permission to use this protocol, co-author D.Gillanders was made aware and acknowledged its use for this research. The Better living with Illness protocol was published for use as a group ACT intervention for individuals with chronic physical health conditions. It is to be run over 6 weeks with sessions lasting up to 2.5 hours with a break. The manual was used flexibly (in line with author guidance) to allow the therapist to apply the contents to an individual mode of delivery and to take an active and responsive role in targeting inflexible processes in flight by which this therapy is theorised to have its effect (Hayes et al., 1999). At the time of the study design, this protocol was deemed to be the most suitable published ACT manual for individuals with HNC.

Each session of the intervention included metaphors and at least one experiential exercise. Initial sessions focused upon the client's experiences of cancer and establishing creative hopelessness (realisation that control-based coping is problematic). Values work came early within the intervention to instil motivation and direction; every session also encouraged committed action. Middle sessions focussed specifically upon thought defusion and acceptance. Self-as-context and mindfulness exercises were interwoven into sessions. The final two sessions were focussed upon valued action and preparing for setbacks. Table 17 outlines the protocol session objectives.

Table 17. Protocol Structure

Session	Session objectives
1	<ul style="list-style-type: none"> • Exploring the client's experiences of cancer and coping strategies (distinguishing between control and non-control strategies) • Distinguishing between primary and secondary suffering
2	<ul style="list-style-type: none"> • Learning about thoughts, emotions, behaviour and physiology • Understanding how strategies like suppression can be unhelpful • Introducing concept of values • Learning about mindfulness as an awareness technique
3	<ul style="list-style-type: none"> • Understanding what values are and begin to identify them • Practising mindful awareness
4	<ul style="list-style-type: none"> • Learning about and practise defusion from thoughts • Practise mindful awareness and introduce self-as-context perspective
5	<ul style="list-style-type: none"> • Discussing valued action and set goals • Reviewing and consolidate previous sessions
6	<ul style="list-style-type: none"> • Learning about pacing • Preparing for setbacks

2.4 Additional Therapist Details

The therapist was a 27-year old female trainee clinical psychologist, employed by Nottinghamshire Healthcare NHS Foundation Trust. At the time of delivering the intervention, the therapist was in her second of a three-year clinical psychology doctorate, having completed adult mental health and older adult placements. There is no ACT certification process; however in line with ACBS recommendations, the therapist undertook advanced ACT skills building training to develop skills, knowledge and techniques. This was delivered by Dr S.C Hayes (co-founder of ACT) and took place over two days. In addition, the

therapist received teaching on ACT via DClinPsy training and accessed ACT literature and manuals to ensure a sufficient level of knowledge about this model. The therapist received weekly telephone supervision from a clinical psychologist (second author) who has expertise in ACT. These sessions typically lasted 1 hour and involved formulation, reflection and planning. Details of the ACT fidelity check can be found in the journal paper.

2.5 Rationale for Measures

The Acceptance and Action Questionnaire (AAQ-II: Bond et al., 2011) is the most common tool for the assessment of experiential avoidance and psychological inflexibility. The self-report measure consists of seven questions, each rated on a 4-point Likert scale (see appendix C). The AAQ-II has adequate structure, reliability and validity (F. W. Bond et al., 2011). There is some research to suggest that the validity (face, construct and content) of the AAQ-II is questionable (Wolgast, 2014), however it remains the most widely used general ACT process measure which will enable contextualisation of study results with other ACT research. This measure was used weekly to allow correlation analysis of model processes with psychological outcomes.

The Personal Questionnaire (PQ: Appendix D) developed by Elliot, Mack and Shapiro (1999) is a client generated measure designed to measure changes in specific problems unique to the client. A simplified version of the PQ was used in this study which consists of up to ten problem statements which the client will rate on a 7-point Likert scale at the beginning of each session. This measure has been shown to have good internal consistency and strong correlations with standardised outcome measures (Elliott et al., 2012).

The Generalised Anxiety Disorder (GAD-7) questionnaire (Appendix F) is a brief clinical measure for assessing anxiety. It is typically used as a screening tool and for assessing anxiety severity in clinical practice. This measure is known to have good construct validity (Spitzer, Kroenke & Williams, 2001). A score of 15 or above indicates 'severe' level of anxiety- this study used a 'caseness' score (8 or above) as a threshold for appropriateness of treatment (Kroenke et al., 2001); in line with clinical practice. This allows for identification of statistically reliable change, without limiting the sample.

The Patient Health Questionnaire (PHQ-9: Appendix G) is a brief measure for screening, monitoring or diagnosing depression. The internal and test-retest reliability is suggested to be excellent and good validity for the severe threshold (Kroenke et al., 2001). A score of 20 indicates a 'severe' level of depression-again, this study used a 'caseness' score (10 or above) as a threshold for appropriateness of treatment (Spitzer et al., 2006).

The Session Rating Scales (SRS: Appendix H) is a measure for tracking components of the therapeutic alliance. The scale was developed in a clinical setting and does not require the clinician to adhere to a particular model or approach (Miller, 2012). It has been shown to have good test-retest reliability, internal consistency and validity (Duncan et al., 2003). This measure was used weekly by the therapist tracking throughout the intervention.

A Change Interview (CI) was used in line with HSCED guidance to gain qualitative information about the therapy and client. An interview schedule was developed by the research team, based on The Helpful Aspects of Therapy framework (Llewelyn, 1988; appendix E) a simple, short framework of open questions and rating scales to assist a client in reflecting on what they found helpful and unhelpful in therapy.

The CI encompassed the following questions:

- I. What was your experience of the therapy?
- II.
 - A. Of the events which occurred in the therapy, which one do you feel was the most helpful or important for you personally? (*By "event" I mean something that happened in the session. It might be something you said or did, or something your therapist said or did.*)
 - B. Can you describe what made this event helpful/important and what you got out of it.
- III. Did anything else particularly helpful or important happen in the therapy?
- IV. Is there anything that would have improved the therapy?
- V. Did anything happen during the therapy which may have been unhelpful?

VI. Over the course of therapy, did you experience any significant life events or changes that may have impacted the therapy, and if so what were they?

2.6 Epistemological Position

Alignment between a researcher's philosophical worldview and research design is integral in creating research coherence. The epistemological position of this research is pragmatic constructivism. Pragmatism developed in resistance to the extreme positions of positivism and constructivism and considers the research question to be more important than the method used. This pragmatic standpoint rejects the forced choice between incompatible methodologies and asserts that both qualitative and quantitative methods can be used together (Tashakkori & Teddie, 1998). Brewer and Hunter (1989) proposed that this approach allows researchers to 'attack a problem with methods that have non-overlapping weaknesses and complimentary strengths'. In terms of establishing causality, a pragmatic position would state that causal relationships may exist, but interpretation will be inherently intertwined with their identification. This viewpoint is consistent with the interpretive and pragmatic approach of the HSCED.

Constructivism is a viewpoint whereby knowledge is constructed by the knower. Kuhn (1970) and Rorty (1991) are frequently cited for their argument that knowledge is a construction by individuals and is relative to the current context, rather than representing some correspondence to external reality. Therefore, rather than seeking "truth", we seek explanations that are viable in the world as we understand it.

Case study research is typically apprehensive of words like *explanation* and *cause*, which suggest a mechanical, reductionist and dehumanizing method of understanding complex processes. However, thinking causally and searching for explanations is a natural human process (Cook & Campbell, 1979) and when therapy is described as responsible for, bringing about, facilitating, or influencing change on the part of clients, this is explicitly causal. Narrative causality employs a range of modes of explanation including who did something (agentic explanation); what the person's purpose was in acting (intentional explanation); what plan, role, or schema the person was enacting

(formal explanation); and what situation allowed the action (opportunity explanation) (Elliott, 1992).

2.7 Ethical considerations and procedures

The following ethical issues were considered prior to obtaining ethical approval for the study. Ethical approval was granted from the Health Research Authority-East Midlands (appendix A). The study was conducted in accordance with the ethical principles stipulated by the BPS (2006).

2.8 Informed consent

Following screening for eligibility by a clinician within the client's treatment hospital, an information sheet (appendix B) was given to potential participants. They were given up to 24 hours to consider study participation. Once verbal consent was given to a clinician, the lead researcher was contacted and made telephone contact with the potential participant. Additional questions were answered and they were invited to meet with the lead researcher. During this first meeting, written consent was obtained (appendix C). At this stage the researcher reiterated that participation was voluntary and they were free to withdraw at any time.

2.9 Methods of reducing burden and risk

No intervention or procedure which would normally be considered a part of routine care was withheld because of research participation.

The process and outcome questionnaire measures given throughout the study intervention had the potential to cause client burden; however this was minimised by ensuring that potential participants were fully aware of the tasks (clearly stated on the Participant Information Sheet) and aware of their right to withdraw at any point. The two psychological distress measures used for the study were part of usual care.

It was made clear to potential participants that if they exercise their right to withdraw at any point, there would be no penalty and their treatment and care would not be affected by their decision. If a client discontinued or opted for further support post study intervention, they were referred back to their referring clinician to receive 'usual care'. No participants withdrew consent.

As with any psychological therapy, there was the potential risk that talking about distressing experiences could have led to an increase in frequency or intensity of a psychological distress. The lead researcher/therapist was aware of safeguarding procedures within the participant's treatment hospital and planned to follow these if necessary. This was not necessary during the study period.

Continued provision was ensured for all participants at the end of the research. Participants were given the choice to return to treatment as usual following the research intervention; treatment as usual varied depending on the recruiting service. Following the completion of the intervention; one participant opted to continue with counselling support from a clinician at his treatment team; one participant opted to take part in a therapeutic mindfulness group post-intervention; one participant did not desire further psychological support.

2.10 Confidentiality and Data Protection

Storage of personal data, including audio recordings from therapeutic sessions and the CI was treated as confidential documents and held securely in accordance with regulations. Person identifiable data was restricted to those personnel approved by the Chief or local Principal Investigator and recorded on the 'Trial Delegation Log.'

All study researchers endeavoured to protect the rights of the participants to privacy, and adhered to the Data Protection Act, 1998. Only the minimum required information for the purposes of the study were collected. All data to be used for analysis was anonymised before being stored on a Trust computer.

Access was be restricted by user identifiers and passwords (encrypted using a one way encryption method).

3.0 Extended Results

3.1 Rich Case Records

The journal paper includes components from the rich case records including: information about the therapist, contextual information on the clients and the therapy process and quantitative process and outcome data. This extended section provides additional data and information from each of the rich case records, specifically: (A) Summary of key descriptions in the change interviews, (B) evidence for and against shifts in client's goals, (C) Evidence for and against shifts in ACT processes, and (D) Complete affirmative and sceptic briefs.

3.2.1 Addition components of Tim's Rich Case Record

A. Summary of key descriptions in change interview

Tables 18A-F summarise key descriptions offered by the client during the change interview. A reference to its place in the transcript is given at the end of each quote and a therapist-suggested attribution.

Table 18A. Helpful Change Processes	Attribution ²⁹
'it just really has helped me stop trying to ignore things, but actually when they come, recognise them, name them' (68-70)	Generic: therapy
'...when it [thought] pops up for no reason, I just visualise it as this thing and go 'okay I've seen you before, we're okay, let's get on', it's been great to do that' (lines 86-88)	Therapy technique (cognitive defusion)
'we've gone through to do some sort of meditation, and Nicolle has calmly recorded me one of the scenarios...so it's given me that inner, I use the word spiritual, but that inner, my energy, my glow, whatever it is, isn't my thoughts because I can't control those, and the same	Therapy technique (present moment

with emotions, you can't, so it's just given me a real way of dealing with things' (lines 96-102). awareness)

'we did a couple of visualisation type things, and a little bit about letting things pass by as well, so it's like sitting in your living room, you've seen this thought before, you know that it's probably going to come again, but let it pass by, don't stop it and go...and so I'm just hooked into a few things we've talked about, just every now and again I just think 'I've just been thinking about this for the last half an hour, nothing's changed, let it go' (lines 231-236) Therapy technique (cognitive defusion)

'...but if you're tired you kind of sit there and everything aches of it, and all of a sudden you're thinking...'oh god what am I going to do about that?', and you think 'Jesus yeah it's important but I can do that tomorrow', so that's improved my sleeping as well,,,,,you're waking up an thinking 'what have I woken up for?', obviously subconsciously things are happening still, but consciously when it happens I think it's helped to be able to use the techniques and now I'm sleeping better, but certainly I'm pinning a lot of my mental recovery on the work I've done with Nicolle' (lines 237-244) Therapy techniques

'welcome on board the bus' kind of thing, and gone 'okay, I know who you are, you're horrible and you're ugly but actually I know who you are so you can't grab my attention anymore, just sit down' or even 'you're not getting on the bus, I'm not going to let you get on', and it's just...it's very strange but it works, it's worked for me' (lines 251-254) Therapy technique (metaphor, cognitive defusion)

'if somebody else had been there I would still be feeling, going through the techniques I'm sure, I'm absolutely sure that that would have been the right type of intervention for me because of the way that it's opened my eyes to not doing certain things, or stop doing certain things to give me separation, to be able to deal with and view things differently' (lines 627-632) Therapy technique (cognitive defusion)

'actually it has helped just kind of give perspective, and when all of a sudden this comes on again, I think 'I've been great for...why's that?', 'stop asking why's that, what if I do this?', and within a few moments Therapy technique (self-as-

<p>it goes, I don't even think about it to be honest, I don't try and consciously get it to go away, I just think 'right okay, let's go and do that', and then all of a sudden ... you realise it's gone...which is brilliant, and I'm not trying to use it as a technique, I'm just trying to use it as a way of dealing with it better, and by just keeping going' (760-767)</p>	context)
<p>'what I've been able to do is carry on a bit better, rather than just 'oh my god this is too much, I need to get out of here', and I think that's what happened last year post my cancer when I went back to work, I just found it all just too difficult, and my instant response was 'I just can't do this' (lines 78-82)</p>	Generic: therapy
<p>'I've remained at work which is a huge driver here, or at least to keep working, albeit on a reduced workload or reduced pace of workload at least' (line 84)</p>	Therapy technique (values)
<p>'...quite often you go 'I can't do it, it's too difficult, I'll put it to one side', but now I'm like 'no, I've had all these thoughts before, it's not too difficult, I'll just make a start and carry on', and that's been a real help with work especially.' (lines 126-128)</p>	Generic: therapy
<p>'... a key one as well as the beginning, was 'what is it that I'm looking for?', I mean my driver really has been to retire, and I'm in my 50s now but when you have a health care you think "right okay, what's more important?", and it things like make sure I get the mortgage paid, make sure the family is secure, make sure there's nothing that if I go, I'm leaving behind that's going to cause any discomfort, but actually if I don't, nothing does happen; I'm in remission, then what's so important about being able to retire, and it's that freedom of financial ability to help and support, and we just unpacked objectives against my values' (lines 109-116).</p> <p>'we knew some of the things are difficult and you have got conflicting values sometimes, that that might give you fitness health wise, so that's one of my drivers, but actually 'am I going to have a drink on a Saturday night?' kind of thing; you know it's no good for you because it's not healthy, but actually I really fancy a drink because it helps me feel more social, it makes me feel more...so you've got conflicting, but actually that's that balance, and that's a lot of decisions we</p>	Therapy technique (values)

always make in life isn't it' (lines 447-453)

'it just helps me in those sorts of situations just to step back and go am I doing this because it's easy, or am I doing this and compromising my values' (lines 118-119)

Therapy
technique
(values and
action)

'it's been really just a bit cathartic to get that degree of separation where you can just stand back and go "yeah it's okay, let's do that"; not always, obviously, I don't expect it to be my divisor or knowing where to go all the time, but actually it just gives you that degree of...all these thoughts are all popping in my head, all the different things about whether I should or shouldn't, but actually no, go away, let's move in that direction' (lines 120-125)

Therapy
technique
(defusion,
values and
action)

'working with Nicolle has really just helped me go stop trying problem solving, stop trying to work it out, don't buy into all these thoughts', because they're not doing me any favours' (lines 229-231)

Therapy
technique
(creative
hopelessness)

'...maybe the last session more so when we started to talk about that and actually then to see [fatigue] as well as a separate thing, because actually you know when you're tired and you get fuzzy headed and that, a full day of focusing....so one of the key things is that I get very spaced out after a few hours and feeling shattered, and that's not good for anyone, but actually now I'm doing a bit of physical exercise as well which helps with that fatigue, but also then being able to go 'just pen down'... take a breather.. I'm hoping to put myself in a quiet environment, just take some time, re-energise, recharge, and come back rather than just trying to plough through and make poor decisions, or not really do a good job, so I'm not there yet, I don't expect to be, but it's on an upwards trajectory kind of thing...I'm speaking to my employers about (fatigue) now, just in terms of recognising what we can do as a reasonable adjustment (lines 131-148)

Therapy
techniques
(separation,
pacing)

'...leaning towards going 'right look after me now', I don't owe (work) anything, but then that comes with another value, crikey that's going to be difficult because there would need to be training, relearning,

Unclear

building new relationships; I've done it a few times in my career but it's kind of like I need to go down that route now really, and I'll be having the conversation later today actually, so hopefully that's the route I think...because naturally I want to say 'no I can do this, I want to stick it out and prove to you I can do this', but it's not doing my health any favours' (lines 182-189)

'...in one of the scripts I think that we were doing an exercise on, and it was very much more about not making you feel better, but equipping you to better deal with your feelings, and it kind of just, I know it's a word play thing, but actually that's exactly it, actually it's not about feeling better from it, because I've got to accept these things are happening in my life, I can't not, but commit to saying 'I can carry on', so it's just kind of flipped the whole thing about, from intellectual problem solve to 'don't solve it, let it happen', so again, early stages still with this, but actually that sort of mantra if you like has just helped me get by' (lines 266-273)

Therapy technique (acceptance)

'...you can't control emotions, but some of the things I do now experience, I now, certainly the sadness ones, to go 'well I've been here before, I don't need to be emotional about it all', whereas previously when something happens, you don't know what it is, frightening and you end up crying or getting sad or getting low on yourself, I think I've kind of...not blocked those feelings out, but in terms of the therapy we kind of just understood that they're natural... it was very much more about this acceptance thing (lines 275-282)

Therapy techniques (acceptance, normalisation)

'...when I'm speaking she gave me time to speak, listened, reflected, so showed me that she was listening, that kind of reflection was very engaging, very professional, and I find that respectful, just in the way I work, but then on a personal sort of thing, where we would have a bit of a laugh about something, so it was that whole spectrum of not too serious and clinical against not too 'I'm just here to see you for an hour and a half', it was perfect' (lines (302-307)

Therapeutic relationship

'it's quite difficult to articulate really in terms of how important knowing that you're being listened to is, regardless of the subject matter, regardless of what the conversation is about, and it's like...like we're talking now; your body language and everything is

Therapist factors

telling me you're listening and you're reflecting back to me, and that is great (lines 653-657)

'there are other factors that maybe are on the periphery but they haven't really helped me, it just seems to be this that's helped...and her as an individual, the therapy has been great but the actual engagement of feeling somebody understands you, and that trust that you build up, and so I was sharing all sorts of things, not just the cancer journey but we also picked some of the stuff from my childhood and marital stuff that's come up, and it's only by doing that I've lifted the lids off it' (lines 245-251)

Therapy and
therapist
factors

'if I had had a different therapist doing the intervention I might have felt differently, but possibly, possibly not, I can't obviously give that call, all I can give an assessment of is yeah this has helped me, both in terms of the length of the six weeks, different things, the structure of ACT, the way we were able to impact some of that to help me with certain techniques, but also the integrity and professionalism of the therapist has been a huge part to me, and trust' (lines 597-602)

Therapy
techniques and
therapist
factors

'I felt completely that Nicolle understood me, not just what I'd gone through but like... kind of work out who I was and the way I deal with things, and was perhaps able to adjust the way she related to me accordingly; I don't know because I can't speak for Nicolle, but I certainly felt that it was tailored and targeted in the structure of the hour and a half's, and when we ran over sometimes there was none of this 'right that's it, time's up, out you go', do you know what I mean 'I'm seeing somebody else now, sorry', she just let it run' (606-613)

Therapy and
therapeutic
relationship

'(the therapy) wouldn't have been so valuable to me if somebody had been... too clinical... I was buying into the methodology because I was buying into the person, so I think it was complementary. I feel that if we had tried a different technique, then I would probably have still had the good feeling relationship around trying a different thing, so I can't separate it out ...If I was to rank and score them if you like in terms of that, they would be reasonably equal in terms of importance to me, but I suppose having...probably maybe three or four, where I'd kind of got a good understanding and only then just

Therapeutic
relationship

looking at what was there and trying to make sure we got everything before we closed, I had bought into Nicolle, so that was more important to me in the last two really, because like anything else you build the trust don't you, and then 'we don't need to do that now, we know where we're at', so I could then...so yeah, both important' (lines 627-649).

'it's helping me be able to have that conversation in a better way than I had done previously, where I'm saying 'I don't know', so that's given me the tools' (lines 413-415)

Therapy
techniques

'I've got better understanding, but also I then need to share that understanding with family, my partner and children who worry about you and how you're getting on, so you feel like you're doing a bit of feedback there, and it's important because they dealt with me being ill for such a long time, and can see when I'm tired and have been very supportive, but if they can understand it as well it's better, and it's key to this, I have to update work, and they say 'are you better now? Are you alright now?', and you do your back to work interviews and they're trying to make adjustments, but if I can't...all I was able to say was 'I'm having these anxiety attacks, I don't know what's causing them', it's not helpful, so as soon as I was able to understand it better then I was able to actually manage their expectations on stuff' (lines 388-398)

Generic:
therapy

Table 18B. Helpful factors in the clients life situation

'I'm speaking to my employers about now, just in terms of recognising what we can do as a reasonable adjustment....without going to part-time or downgrading or anything like that, we've just got to look at what's the best thing to do and for how long, so I'm getting all that kind of help. (lines 147-153)

'...maybe the other thing is the wellbeing events that I've been coming to here, which is the first time I've been in a group of cancer patients where we were all in different parts of our journey, but collectively try and understand a bit more and do some exercise, so I think I have benefited from just getting that endorphin release mainly, of doing some physical work' (lines 211-215)

'I've had sessions with a lymphoedema nurse following the surgery, and physio with (name) generally about the care that's ongoing, so those things were important in terms of my physical recovery, which then as you feel better you feel emotionally better, but it was this remaining not being able...sort of waking up every morning or driving to work and feeling really anxious' (lines 220-224)

'one of the things I'm conscious of from the fatigue session we had (at the well-being group), it's what I call boom and bust; you feel great so you do loads, and then you crash a bit, so it's that boom and bust, rather than I think they call it phasing; just do enough and then do a bit more, rather than trying to go because you feel good (748-752)

'...it's certainly better than CBT, as I say...maybe that was the therapist again because that was somebody private and I didn't know them that well, it was at their home in their spare room sort of thing, and it was like...it was okay, but I think at the time I didn't come away feeling like 'that's me done' after the six weeks, I didn't get anything like I'm getting now, and that might be a reflection on that I hadn't gone through cancer then, that was for something else, so it perhaps didn't have the relevance, but right now this is exactly what I needed, and hopefully touch wood I'll be here to reap the benefits for a long time' (lines 831-843)

Table 18C. Client's personal attributes/ resources that may have helped him use therapy

'in the first few weeks in terms of the questionnaires we were completing throughout the sessions, I didn't feel there would be a clear answer, or 'oh great now I've got this, I feel better' because I don't and I think that would be wrong to think that' (lines 76-78)

'...I consider myself as being reasonably intelligent, and so when you can't analytically or logically process something you've kind of just got to look for something that helps you deal with it' (lines 262-264)

'I went in there knowing that it wasn't a magic wand, so it got me to where I wanted to be' (lines 545-546)

'it's about getting the most out of it, being able to buy into...that's the wrong word, but being able to go 'okay it's going to work better if I understand it', so I came to this and as I say, wow, it was a bit of an epiphany really' (lines 442-446)

'I had previous referrals through the NHS so I knew it was finite (number of sessions), because it is, so I went in with eyes wide open really to this is going to be a number (lines 289-290)

' I read online that ACT particularly wanted to see if this was a way of helping people with head and neck cancers' (lines 579-581)

'I could use the words 'buy into it', but it resonated with me, actually 'yeah okay, I can accept this is going to help', otherwise if it had been someone telling me I need to eat ten jelly beans a day and stand on my head for four hours, I'd be going 'well I'll try it but...' I wouldn't have bought into it, or if somebody said to me 'you need to cross your legs and mantra' and all this kind of stuff, again I would have been open to try anything' (lines 589-594)

Table 18D. Hindering factors in the client's life situation

'I think that's what happened last year post my cancer when I went back to work, I just found it all just too difficult, and my instant response was 'I just can't do this', and actually because I was trying to solve it and trying to end it, so I've remained at work which is a huge driver here, or at least to keep working, albeit on a reduced workload or reduced pace of workload at least, and I've had referrals to my occupational health therapist as well, we're trying to work out what's the best thing to do with work' (lines 80-86)

'it's very much about pace and demand and workload against being able to concentrate or function for lengths of time, without going to part-time or downgrading or anything like that, we've just got to look at what's the best thing to do and for how long' (lines 149-152)

'I understand that it's a business, it's got to run, so if that work is being covered by others then that's not exactly fair either on them, you know, short-term it works, but we're looking at options now, and I'm in that decision thing of saying well do I try and plough through and give them a commitment within X timeframe I'll be able to be back to what I should be, if you like, or do I allow that position to be given to someone who can do it and I move into something else, with the badge... I don't owe them anything, but then that comes with another value, crikey that's going to be difficult because there would need to be training, relearning, building new relationships; I've done it a few times in my career but it's kind of like I need to go down that route now really?' (lines 174-186)

'I think on the work front there was a difficult conversation with my boss and his boss around what's the likely adjustment needed for me, as I mentioned, and I already had an occupational health referral ... who typically said that somebody with my cancer journey could be up to two years recovering, and obviously alarm bells were ringing 'oh my god, are we able to just manage this?', and then the conversation was 'do we go back to occupational health to get a follow up assessment having had some help, or do I just move job?', this kind of stuff' (lines 701-708)

'...and then you go to the GP and they just go 'stress'; it wasn't stress, yes it was anxiety but it wasn't work related stress, it was very much fatigue from what I had gone through, plus not being able to accept everything that was happening to me, my body

changing and my body trying to do everything' (lines 373-381)

'My auntie passed away unfortunately, very suddenly in the middle of the night, she was just found on the floor in the bathroom sort of thing, so we weren't particularly close in later years but in my younger years the family was closer and stuff, so there were fond memories and things, and I obviously went to the funeral during the sessions, and we obviously talked about it as well' (lines 675-680)

'...unfortunately my wife has had an operation recently, she dislocated her shoulder last year so she's in a sling for a couple of months, so I'm doing all of the domestic...not that I wouldn't have done previously, but a lot more if you like' (lines 754-756)

'I didn't know how powerful (the therapy) was going to be, because I think the work I had done previously on mindfulness and a bit of CBT wasn't great to be honest, it wasn't a great experience, it was very much, the visualisation worked but I couldn't buy into it really to get the full value' (lines 296-299)

Table 18E. Client's personal attributes/resources that may have hindered him in therapy

'...when it pops up for no reason, I just visualise it as this thing and go 'okay I've seen you before, we're okay, let's get on', it's been great to do that in general, but as we started to discuss towards the end of the sessions, it's more difficult when I'm tired, and I've come to realise that fatigue is something that's cancer related' (lines 86-90)

'it was very much fatigue from what I had gone through' (lines 378-379)

'I'm just trying to use it as a way of dealing with it better, and by just keeping going, but whatever that is, shopping or whatever I'm doing in the moment really, it goes; the only time I think is when I'm really tired or in a lot of pain, or I wasn't feeling well and I'm in bed feeling a bit rubbish' (766-770)

Table 18F. Hindering aspects of the therapy

'whilst the room was fine it was quite a large room we were using, and some of the exercises...I didn't allow it to affect me but there was some background noise, with trolleys up and down the corridor; if money and resources is available to do this with people, you'd almost want your own suites would you, which is sound proof perhaps, like here, one of these rooms here is where we have the spiritual music when doing reflexology, you can't hear a thing; the blinds are down and...I suppose it's ambience isn't it as well; I didn't feel it at all deflated or reduced what I got out of the session (463-470)

'In terms of would could have perhaps been an improvement was, and this is a procedural thing really, is that we were in clinic 9, so when I turned up in the morning for the session the receptionist didn't have me on a list, because we were just going into a room there, she didn't know Nicolle so when she rang through to the psychology team, 'oh she's one of the trainees', I don't think Nicolle is based here, so procedurally I suppose...and it wasn't a problem at all, and it got quite comical, I'd just say 'I'm not on the list and you don't know Nicolle, but I know to sit round on them chairs', and this is perhaps just a lesson learnt for the way that it's structured (lines 455-463)

Table 18G. Missing aspects of therapy

'if I had got to see her earlier, do you know what I mean? In terms of I finished my, I got my all clear probably 9 months ago now, and I know there's a waiting list and stuff but it was only through... starting to talk to my physio about it, 'well actually this doesn't work', she goes 'I think it would really help with a referral to therapy', and my physio referred me' (lines ...that perhaps would have helped me last year when I went off sick again because I couldn't cope with work, I found it all too overwhelming' (lines 358-373)

' I think an earlier intervention would have been an 'even better if' (lines 381)

'it's helping me be able to have that conversation in a better way than I had done previously, where I'm saying 'I don't know', so that's given me the tools, so that earlier intervention would have helped me have those conversations earlier, and possibly prevented me going off sick again; it was only for a couple of weeks but even so, when you're on half pay it's no fun (lines 413-418)

“even better if’s” are constrained by costs, availability, resource, all that kind of stuff, but perhaps, and I didn’t expect it really, if I hadn’t got to the position I was at I might be going ‘Jesus can we have some more please?’, but actually what I’ve got out of it has been brilliant, therefore yeah I kind of let go of it, but yeah I suppose if there was somewhere, but the thing is I wouldn’t want to be able to dial into a service, like you might dial it and go ‘previously I spoke to your colleague but can I talk to you now?’ would have been no good to me, because I haven’t got those first steps and built up that picture, but I can’t also expect to be able to ring up Nicolle in the middle of the night, of course not, so is it an ‘even better if’?, not in my eyes it probably isn’t, I just think in terms of it being a luxury to be able to do that, and I don’t expect it’ (346-357)

‘...but you build up a relationship and you build the trust as I say, and actually it’s not, you kind of think it would be lovely to have somebody on the end of the phone or something, outside of this, to go ‘do you know what, I think I might be slipping a bit, can we just have a chat....but....I know what it costs to run government bodies like the NHS, and it’s got to be shared around’ (lines 292-295)

‘Tuesday or Wednesday I’m feeling a bit achy or tired, so that was when I was struggling to perhaps use some of the techniques, and I mentioned that on the Friday, so I kind of looked forward to a Friday, of giving me that sort of boost again if you like, of ‘right okay...’, and so the weekends were great’ (lines 745-748)

B. Client Goals

Tim generated 3 problem statements which were used to create therapy goals:

- 1.) Inability to focus for any length of time and frequently losing concentration
Goal: To be able to function and contribute at work again.
- 2.) Physical feelings of anxiety, tight chest, and panic
Goal: To cope with my anxiety better.
- 3.) Feeling like I have no control over my thoughts and emotions
Goal: To be in control over my thoughts and feelings again and feel happier about life and my future.

Data from the change interview, questionnaires and the therapists' process notes will be drawn upon to provide evidence for and against movement towards client goals; as shown in Tables 19a and 19b.

Table 19a. Evidence of movement towards goals

Goals	Evidence	Source
(1)To improve focus and concentration and function better at work	'...because actually you know when you're tired and you get fuzzy headed and that, a full day of focusing, and my length of focus has increased...'	Change Interview lines 135-137
	Reduction in PQ ratings of this stable problem session 1: score of 6 session 2: score of 4 session 3: score of 4 session 4: score of 4 session 5: score of 3	Simplified PQ-weekly measure
	Reduction in ratings of item 7 in PHQ-9 <i>'Trouble concentrating on things'</i> Baseline: score of 2 session 1: score of 2 session 6: score of 1 1-month follow up: score of 0 3-month follow up: score of 0	PHQ-9 measure
	Session 4. Tim described a shift in this problem, where he had noticed that he was beginning to work more effectively. He also said that he was more able to make decisions at home and at work.	Therapist process notes
(2)To cope better with anxiety	'...my thoughts, because I can't control those, and the same with emotions, you can't, so it's just given me a real way of dealing with things' (lines 96-102).	Change interview extracts
	'actually it has helped just kind of give perspective, and when all of a sudden this comes on again, I think 'I've	

been great for...why's that?', 'stop asking why's that, what if I do this?', and within a few moments it goes, I don't even think about it to be honest, I don't try and consciously get it to go away, I just think 'right okay, let's go and do that', and then all of a sudden ... you realise it's gone...which is brilliant, and I'm not trying to use it as a technique, I'm just trying to use it as a way of dealing with it better, and by just keeping going' (760-767)

'...when it pops up for no reason, I just visualise it as this thing and go 'okay I've seen you before, we're okay, let's get on', it's been great to do that in general' (lines 86-88)

Simplified PQ
weekly measure

Reduction in PQ Likert rating of how much this anxiety has affected him over the past week:

session 1: score of 5

session 2: score of 5

session 3: score of 5

session 4: score of 4

session 5: score of 3

session 6: score of 3

GAD-7
questionnaire
measure

Significant reduction in GAD-7 scores:

Baseline: score of 18

Session 1: score of 17

Session 6: score of 9

1-month follow-up: score of 6

3-month follow-up: score of 3

Therapist process
notes

Session 5: Tim engaged in experiential exercise where he opened-up to the sensation of anxiety and took a curious, observing position. He reflected on being able to 'look at it' rather than 'be it' and externalised the sensation as a walnut inside his chest. He verbally indicated an increasing acceptance of this emotion.

(3)To have more control over thoughts and emotions and therefore feel happier	<p>Gradual reduction in rating of item 7 in AAQ-II '<i>I worry about not being in control of my worries and feelings</i>'</p> <p>Session 1: score of 6</p> <p>Session 2: score of 6</p> <p>Session 3: score of 5</p> <p>Session 4: score of 4</p> <p>Session 5: score of 4</p> <p>Session 6: score of 4</p> <p>1-month follow-up: score of 3</p> <p>3-month follow-up: score of 2</p>	<p>AAQ-II questionnaire measure</p> <p>Therapist process notes</p>
	<p>Session 2: disclosed previous experience of 'losing control' of anger which led to act of physical aggression. New understanding of his resistance to having strong emotions.</p>	
	<p>Session 3- disclosed previous experience of uncontrollable crying. Made the link between this and resistance to feeling emotions. Realisation that emotions are not 'bad'. Experiential exercise led to the recognition that he is separate from his thoughts and feelings; therefore he can take a position of observing. Client also recognised that pursuing values is more obtainable and meaningful than perusing a feeling of happiness. Tim altered this goal to '<i>I want to be able to cope better with my feelings and thoughts</i>'.</p>	
	<p>Session 4: Tim had a realisation that control is an illusion and comes at a cost. He used thought-distancing techniques during the week and found that he was able to let go of thoughts that he had previously fought with.</p>	
	<p>Session 5- Tim recognises that nobody is able to 'control' their feelings and thoughts in the way that he</p>	

had previously believed. No longer viewed this as a realistic goal.

Notes. PQ scoring involves rating how much the problem has affected the person over the past week: 1 = Not at all bothered, 2 = Very little, 3 = Little, 4 = Moderately bothered, 5 = Considerably, 6 = Very considerably, 7 = Maximum possible. PHQ-9 item scoring involves rating frequency of problem on a 4-point Likert scale: 0=not at all, 1 = several days, 2 = more than half days, 3 = nearly every day. Total scores indicate severity of depression: 0-4 = no symptoms, 5-9 = mild, 10-14= moderate depression, 15-19 =moderately severe, 20-27 = severe. GAD-7 total scores indicate severity of anxiety: 0-5 = mild, 6-10 = moderate, 11-15 = moderately severe, 15-2 = severe.

Goals	Evidence	Source
(1)To improve focus and concentration and function better at work	<p>'I'm speaking to my employers about now, just in terms of recognising what we can do as a reasonable adjustment, because it's not the ability to function in terms of complexity, it's very much about pace and demand and workload against being able to concentrate or function for lengths of time, without going to part-time or downgrading or anything like that, we've just got to look at what's the best thing to do and for how long, so I'm getting all that kind of help.'</p> <p>Increased PQ rating at session 6; session 1: score of 6 session 2: score of 4 session 3: score of 4 session 4: score of 4 session 5: score of 3 session 6: score of 4</p> <p>Session 4- Tim explains how his fatigue reduces his ability to focus, despite improvements.</p>	<p>Change interview lines 147-153</p> <p>Simplified PQ- weekly measure</p> <p>Therapists' process notes</p>
(2) To cope better with anxiety	At session 6 and 1-month follow-up, the client's scores indicate that he is still affected by anxiety several days/week (score of 1 for 6 items)	GAD-7 questionnaire measure

Session 1: Tim feeling overpowered by physiological aspects of anxiety: fright, panic, racing heart, sweating, and pressure on chest. Scared to increase workload because it may worsen the anxiety.	Therapists' process notes
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Session 2- Anger towards himself for not being able to 'solve' the anxiety. Fear of being hurt in marriage.

Session 5- Tim shared how he finds it hard to accept and open-up to anxiety when it does not make contextual sense or when he is fatigued.

(3)To have more control over thoughts and emotions and therefore feel happier	Tim initially wanted to be able to control his emotions and thoughts. The intervention did not support him in this pursuit, instead worked to create insight into the unworkability of this goal. Therefore he did not reach this goal, instead reworded it to 'distress caused by thoughts and emotions'.	Therapist' process notes
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Note. PQ scoring involves rating how much the problem has affected the person over the past week: 1= Not at all bothered, 2= Very little, 3= Little, 4= Moderately bothered, 5= Considerably, 6= Very considerably, 7= Maximum possible.

Note: PHQ-9 item scoring involves rating frequency of problem on a 4-point Likert scale: 0=not at all, 1=several days, 2=more than half days, 3= nearly everyday

C. Evidence for and against psychological flexibility process shifts

Tables 20A-F tables outline evidence for and against change in the six core psychological processes of ACT, based upon therapist process notes and session recordings.

Table 20A. Evidence of change in the process of Acceptance

Session	Example of acceptance	Refutation
1*		<p>Tim's desire to get have pleasant feelings: <i>'I really want to get back to feeling good'</i></p> <p>Avoidance of the experience of anxiety by keeping his workload low.</p> <p>Use of many emotional control strategies (e.g. tries to think positively, does not allow himself to think about death, distracting against emotion of fear).</p>
2*	<p>Following beach ball metaphor, Tim says that he is more curious about inner experiences.</p> <p>Tim gained insight into ineffectiveness of avoiding feelings: <i>'I've tried the putting the sadness away in a box, it doesn't work'</i></p> <p>Willing to sit with sadness in experiential exercise.</p>	<p>Therapist question <i>'how willing are you to feel sadness?'</i> Tim's response <i>'not very is my honest answer'</i>.</p> <p>Continued desire to change emotions: <i>'I don't want to be crying, I don't want to feel low'</i></p>
3**	<p>Tim gains insight into emotions attached to memories that are driving his current experiential avoidance of anxiety and sadness. Tim describes this as a <i>'lightbulb moment'</i>.</p>	

Engaged in mindfulness exercise where he observed the changeability of his emotions.

- 4 Tim more willing to have his past, letting go of attempts to get rid of memories. *'I'm not ashamed of crying, but I don't want to feel out of control'*

'I can see that you can't unpick or control emotions like I have been doing- it's like an epiphany'

Shift: 'I want to get better at feeling, rather than aim to feel better'

- 5*** Tim engaged in experiential exercise where he opened-up to the sensation of anxiety and took a curious, observing position. He reflected on being able to look at it rather than *'be it'* and externalised the sensation as a walnut inside his chest. He verbally indicated an increasing acceptance of this emotion. Tim describes his ongoing difficulty opening up to undesirable emotions when they do not fit with the context/situation
- Continues to want the physical sensations of anxiety (i.e. heavy chest, tightness) to reduce in intensity.

- 6* Open discussion about experience of fatigue. Sometimes ignores the cancer-related fatigue, trying to plough on or battle with it.
- Adopted a willing posture towards familiar experience of anxiety *'I am living with these things and that's ok'* Struggles to tolerate feeling of guilt in present.
- Continues to try to correct past experiences of failure to avoid unpleasant feelings.
- When anxiety becomes overwhelming, increasingly.

*Session included *minor* work in this process

Session included *substantial* work on this process* Work on this *process* was primary to the session

Table 20B. Evidence of change in the process of Present Moment Awareness

Session	Example of present moment awareness	Refutation
1*	<p>Able to identify that he currently feels guilt, worry and sadness.</p> <p>Tim recalled noticing physiological experiences of intense panic at work.</p>	<p>Therapist asked '<i>what are you feeling right now?</i>' client responded by describing his current situation- difficulty focusing on present moment bodily experience.</p> <p>Described living on auto-pilot throughout cancer experience and this being a natural state for him.</p> <p>Dominance of future worries in the conversation; particularly finances, relationships, work and health.</p> <p>Dominance of traumatic past experiences; particularly marriage infidelity and cancer experience.</p> <p>High levels of organising, problem-solving and planning.</p>
2**	<p>Tim engaged in mindfulness exercise and allowed anger to come up.</p> <p>More able to identify thoughts as they come up, for example '<i>I'm letting people down</i>' '<i>what if this doesn't go away?</i>'</p>	<p>Tim engaged in rumination about his mind and body e.g. '<i>why am I thinking this?</i>'</p> <p>Fear that allowing anger will result in aggressive behaviour, as it has in the past.</p>
3**	<p>Tim becomes more aware of thoughts as they come up</p> <p>Tim engaged in an experiential</p>	<p>Tim maintains fast pace of conversation, finds it difficult to slow down and notice the current moment.</p>

	mindfulness exercise. Afterwards, noticeable reduction in pressured speech and an increased awareness of what was happening inside his body.	Intense cancer treatment memories dominating his thinking.
4*	Started implementing mindfulness into his working day; taking 5-minutes alone to focus on the present, notice his thoughts and feelings.	Feeling very fatigued during the week, making it more difficult to notice what is going on around him.
5**	Engaged in mindfulness awareness exercise- noticed and allowed the emotion of anxiety – 10 minute exercise, noticed thoughts wandering but reported being able to bring them back to the exercise.	
	Tim asked therapist to record mindfulness scripts for him to use at home.	
6*	Implemented ' <i>quiet time</i> ' into his daily routine to practise present moment awareness- sees this as ' <i>vital</i> ' to his recovery.	Continues to get caught up in worries about future financial position.
	Reduced dominance of memories within conversation.	Possibility that the client was using mindful exercises as a form of relaxation.
	Engaged in mindfulness exercise.	

*Session included *minor* work in this process **Session included *substantial* work on this process *** Work on this *process* was primary to the session

Table 20C. Evidence of change in the process of Cognitive Defusion

Session	Example of defusion	Refutation
1**	Passengers on a bus metaphor- caused client to rethink the effectiveness of current thought-control attempts. Found that it echoed his experience of having constant negative thoughts about the future and his health. Recognises that he does not want them.	<p>Fused thoughts: <i>'what if I can't...'</i> <i>'what if I get hurt again?'</i> <i>'what if I never cope with work again?'</i> <i>'what if the cancer comes back?'</i></p> <p>Fused evaluations <i>'I can't cope , but I should be able to', 'I can't do this'</i></p> <p>Sometimes unable to describe thoughts as there are <i>'too many'</i></p> <p>Tendency to apply problem-solving strategies to unpleasant thoughts in order to control/get rid of them.</p> <p><i>'I don't allow myself to think morbidly'</i></p>
2*	Increasing recognition of thinking as an ongoing process. Desire to distinguish between helpful and unhelpful thoughts, and determination not to get hooked by unhelpful thoughts.	Misuse of passengers on a bus metaphor; described how he notices unhelpful thoughts more, and <i>'chuck them off my bus'</i> . Desire to gain control over life, views control over thoughts as part of this goal.
3**	Thought separation metaphor 'thoughts as passing cars'- engaged in an exercise of watching thoughts. Client was able to notice his evaluations of the thoughts	<p>Fusion with the thought <i>'I haven't dealt with past experiences'</i> is a barrier to moving forward.</p> <p>Still hooked by 'what if' thoughts. Tends to analyse and problem-solve the thoughts, even if there are many of them.</p>

- 4*** Reported noticing strong thoughts during the week and used the passing cars exercise. *'Normally I'd say Oh Shit and hook in, but I didn't that time'*. Continues to ignore some thoughts or 'not let myself think about it'
- Engaged in task of writing down his *'big ugly thoughts'*, labelling them (i.e. evaluations, descriptions)
- Engaged in further thought-distancing techniques such as word repetition. Tim grasped the purpose of this, recognising
- 5* Increased use of 'my mind' rather than 'I' when describing thoughts and memories.
- During mindfulness exercise, client noticed that his mind judged the emotion and consequently he visualised a judge's wig- further separation.
- Increased understanding of ineffectiveness of trying to control thoughts and the time and effort it takes away from doing other things.
- 6* Able to notice unhelpful thoughts about fatigue, *'why am I so tired, what does this mean?'* and health *'shit, what happens if I fail?'* When feeling fatigued, gets pulled into ruminating about work.
- Increasing acceptance that his mind will produce thoughts 'like a radio' predicting bad things about his future
- Increased insight into the thoughts that are most likely to hook his attention;

those relating to failing and being unloved.

*Session included *minor* work in this process

**Session included *substantial* work on this process

*** Work on this *process* was primary to the session

Table 20D. Evidence of change in the process of Self-As-Context

Session	Example of self-as-context	Refutation
1*		<p>Client troubled by many questions about his current self- <i>'I don't why I can't cope' 'what's happened to me?'</i> because of the cancer experiences and perceived inability to manage emotions</p> <p>Experiences himself as his roles; father, husband, work role, cancer patient.</p> <p>Distressed by thoughts and feelings as he views them as 'him'</p>
2*	Able to observe his thinking and notice and label thoughts.	Experiences high levels of fear and panic about loss of job role. <i>'I beat myself up when I can't do it'</i>
3***	Engaged in self-as-context experiential exercise 'continuous you'. Found the experience 'powerful', he appeared to gain insight that there is part of him that always observes. He called this part 'the self-being, the constant, my soul'	
4*	Use of emotion externalising language 'the feeling' rather than 'I am anxious'	

5*

6** Asked to repeat the self-as-context exercise to gain separation from roles, emotions and memories. Appeared increasingly willing to have these experiences, now that he felt separate from them.

Increasingly able to think about changing his work role.

*Session included *minor* work in this process

**Session included *substantial* work on this process

*** Work on this *process* was primary to the session

Table 20E. Evidence of change in the process of Values.

Session	Example of clarity of value clarification	Refutation
1**	Identified that work and relationship with his wife and children are very important. Finds joy in making others happy and providing for those he cares about. Reflection on cancer experience has taught him that <i>'life is about experiences and togetherness, not belongings'</i> .	Current internal experiences limiting his thinking of what is important to him- focus on changing inner experiences first. Unclear what values are driving his determination to maintain work role. Tim described having to choose between stability and love in the past, unsure what guided the decision and whether he made the 'right' one.

		Very goal-focussed (e.g. retirement, paying off mortgage) which leaves him feeling dissatisfied with life at present.
2**	Gets pleasure from helping and teaching others, particularly his children and work colleagues.	
	Gained insight that his goal of financial security has become rigid and limiting upon other important areas of life.	
	Engaged in values discussion and reflection. Understood that values have an ongoing quality.	He described how 'commitment' 'honesty' and 'love' used to be important but he now has placed limits on these due to experiences of being hurt.
3**	Further discussion of values led client to elicit values key in different domains of his life, which he had previously not thought of in this way: <i>Family</i> : Provide wisdom, respect, supportive and caring <i>Intimate relationships</i> : connection, physical intimacy, commitment <i>Work</i> : leading others, freedom, providing wisdom and direction to colleagues <i>Self-care</i> : achievement, perseverance, physical fitness <i>Community</i> : Kindness	Desire to be a ' <i>good dad</i> ' – evaluation not a value. Self-care and intimate relationships were areas of high importance, but low valuing due to fusion with past experiences, anger and fear: ' <i>I can't move past this</i> '
	Tim recognised that pursuing values is more obtainable and meaningful than perusing a feeling of happiness.	

4***	<p>Increasing recognition that he can control decisions and chose to live according to values, regardless of current feelings or thoughts.</p> <p>Tim described the choice-point diagram as 'a helpful guiding tool' that 'makes me think'.</p>	<p>Busyness of life sometimes gets in the way of connecting with values</p>
5*	<p>Describes thinking more about values, rather than being goal-focussed. Sees this as 'freeing' and 'exciting'</p>	<p>Tendency to 'over-think' values in an analytical way</p>
6**	<p>Tim has implemented 'quite time' into his daily routine to practise present moment awareness- sees this as 'vital' to his recovery.</p> <p>Engaged in open discussion about barriers to connecting with values – identified: fatigue, physical health problems, relationship difficulties, financial worries.</p> <p>Shift - more able to think about him and what he wants from life, rather than always seeking to keep others happy.</p> <p>Motivated to keep living according to values, particularly maintaining relationships with his children, being there for them and supporting them and contributing to the work environment.</p>	

*Session included *minor* work on this process

**Session included *substantial* work on this process

*** Work on this *process* was primary to the session

Table 7F. Evidence of change in the process of Committed Action

Session	Example of committed action	Refutation
1*		<p>Does not find the same satisfaction and excitement from things he used to enjoy, so he does them less often (e.g. attending events, going for meals with children)</p> <p>Much of behaviour is focussed around trying to get back to previous working role and capacity- leaving less energy and time for other action.</p>
2*	Would like to start playing sport again. Started attending a weekly well-being group where he is more focussed on building his strength and fitness and increasing his weight.	
3*	Made commitment to spend more 1:1 time with wife, despite thoughts about risk of getting hurt and fluctuating motivation.	
4**	Remaining at work, despite anxiety still being present- open to discussion and goal-setting around pacing at work.	Reduces workload when anxiety increases in intensity.
5**	Open discussions with management about future work commitments, mental health and reasonable adjustment.	Financial constraints limiting ability to think about other possibilities.

6*** Tim has implemented 'quiet time' into his daily routine to practise present moment awareness- sees this as 'vital' to his recovery.

Made decision to change work role
Decision driven by desire to gain a better work-life balance and to take care of his physical well-being. He found this decision '*hard but freeing*'.

*Session included *minor* work in this process

**Session included *substantial* work on this process

*** Work on this *process* was primary to the session

D. Arguments for Tim's case

Affirmative Case

There has been a substantial change in Tim's problems.

Baseline and session 1 GAD-7 and PHQ-9 scores show that Tim's psychological distress was stable prior to therapy (figures 1 and 2). A reduction of 1-point on the GAD-7 during this period enables us to predict that without intervention, his anxiety would not have naturally reduced to sub-clinical levels over time. This is supported by Tim's references to time off work due to panic and anxiety over the previous months. Tim experienced significant positive changes in anxiety during therapy; with a reduction from severe (17) to mild anxiety (9). This exceeds the criterion for a statistically reliable change (4 or more points). Moreover, changes continued after therapy: with anxiety reducing to the mild range (3) at follow-up, representing a clinically significant improvement. Although Tim's depression score reduced by 4 points between baseline and the start of therapy (3-week period), this is not a reliable change according to established norms (NHS England, 2014) and could be the product of measurement error or other effects. During the 6-weeks of therapy, Tim's depression score reduced reliably, demonstrating a clinically significant improvement.

Improvements in psychological distress demonstrated by quantitative data are corroborated by the client's views. In the change interview he described being able to 'carry on a bit better' rather than becoming overwhelmed (lines 78-79), improved coping with difficult thoughts and sleeping better (lines 237-244). He also made reference to his 'mental recovery' during therapy (line 244). The significant reduction in psychological distress was maintained and further improved at 1- and 3-month follow-up.

Tim experienced reliable changes in the 3 problems that he generated at the start of therapy, exemplified by reductions in PQ scores. Arguably, problem 1 (i.e. inability to focus for any length of time and frequently losing concentration) may be the most important problem to Tim, given that it was the first problem described. At session 1, it bothered him 'very considerably' and by the end of the therapy, it bothered him only 'moderately'. This reduction is a reliable and clinically significant improvement. This is supported by qualitative data where he described that his '*length of focus has increased*' (line 137). Problem 2 ('physical feelings of anxiety, tight chest and panic') bothered the client 'considerably' at the start of therapy and only 'moderately' by the end of therapy, demonstrating a reliable and clinically significant improvement. Problem 3 ('feeling like I have no control over thoughts and emotions') reduced by 2-point during therapy, however the lack of clinical significance of this shift may be the result of Tim's increased understanding of thoughts and emotions. Tim re-worded this problem as 'distress caused by unpleasant thoughts and feelings' in session 5 which is likely to have invalidated measuring the trajectory of problem 3. Ratings of question 7 on the AAQ-II, 'I worry about not being able to control my thoughts and feelings' shows a significant reduction from '6' (almost always true) to 2 (very seldom true) at follow-up which may be a more reliable measure of problem 3. Qualitative data supports a change in problem 3, whereby the client describes many ways that he is coping better with difficult thoughts and feelings. While some degree of distress is caused by the thoughts and feelings, the client describes a new insight into the normality of having unpleasant or unhelpful thoughts and feelings (lines 280 and 802).

Further convincing evidence of change is the reliable and clinically significant reduction in psychological inflexibility from pre- to post-therapy. This is the central aim of ACT, over and above reducing psychological distress. The

quantitative change data is supportive by numerous quotes from the change interview where the client describes engaging in the core ACT processes and the positive benefit of them. For example, he describes using thought-separation techniques at home and at work to enable him to carry on, despite having unpleasant thoughts (lines 78-82, 126-128). Tim also highlights how he has let go of unhelpful coping strategies. Tim's increased skill in using these processes provides an explanation of the maintained improvements at follow-up.

Tim attributed these changes to the therapy (retrospective attribution)

An important element of the affirmative case is that the client attributed changes to the therapy process. A convincing example of this is his statement in the change interview, '*certainly I'm pinning a lot of my mental recovery on the work I've done with (therapist name)*' (line 244). Throughout the interview Tim makes references to model-specific techniques learned in therapy and implemented in his life. The positive impact of using thought separation strategies (cognitive defusion process) and the powerfulness of gaining a new perspective of the transcendence of the self (self-as-context process) are described at length in section 2A. Tim linked positive changes such as coping better and moving forward to specific therapy events; for example he describes the use of visualisation techniques enabling him to '*let things pass*' rather than getting consumed by unpleasant thoughts. Such visualisation techniques encompass both present moment awareness and cognitive defusion processes. Tim also makes reference to a guiding metaphor that was introduced in session 1 and discussed throughout other sessions, 'passengers on a bus' (appendix G). Tim describes how being able to 'welcome' thoughts onto the bus has '*really worked*' for him. This metaphor taps into processes of acceptance and cognitive defusion. Tim also attributes being able to make better decisions to discussions within therapy about his values. He asks himself questions like '*what's my driver?*' recognising the importance of conscious values-driven action. The positive impact of these processes are mirrored by quantitative improvements in psychological flexibility, where a strong continuous reduction takes place between session 1 and 5 (figure 3). During these sessions, the content was heavily focussed on establishing creative hopelessness and introducing the 6

core processes of ACT. Session 6 was mainly focussed on maintaining gains and looking to the future.

Improvements were maintained despite life stressors

Tim faced several challenges in his life, some of which he mentioned in the change interview. During the therapy process, his wife had an operation which meant that his responsibilities at home increased. Tim was close with his mother who he emotionally supported because she suffered with depression. In addition, Tim's aunt died during the course of therapy, which involved attending the funeral between session 4 and 5. Despite these additional stressors, Tim's improvements in psychological distress and psychological flexibility were stable and sustained at 3-month follow-up.

Conclusion

In this brief, you have been presented with multiple lines of evidence that:

- Tim demonstrated substantial change in his problems
- Tim attributed these changes to therapy
- Improvements were made in spite of life challenges

This evidence provides a basis for you to:

- (a) Support the case that Tim changed substantially during the period of therapy; and
- (b) Draw the inference that this change was caused by Tim's participation in ACT.

Sceptic Case

This sceptic brief is an attempt, made in good faith, to counter the desire to believe that Tim changed substantially during therapy and that this change was as a result of ACT. To do this, the sceptic case will systematically examine the client's case record for evidence of alternative explanations.

Tim's problems were not stable

Tim's baseline PHQ-9 and GAD-7 scores are not sufficient to establish whether the anxiety and depression he experienced post-cancer would have remained stable at 'severe' levels over time. The lack of direct evidence of this brings

question to the affirmative argument that the intervention led to reductions in distress; it is plausible that Tim would have adjusted to life after cancer over time.

Tim's apparent changes were minor

While the affirmative case has argued that Tim changed substantially during therapy, the evidence on which this argument is based has been selectively drawn from the case record. There are inconsistencies between the reliable reductions in quantitative measures of anxiety and depression and Tim's views of change in anxiety and depression. Tim described being more able to '*deal with*' and '*cope with*' distress and therefore '*carry on a bit better*'. Tim described how the therapy was not aiming to make him '*feel better, but equipping you to better deal with your feelings*'. Although congruent with the ACT model – which aims to 'grow the person' (improve coping resources) rather than 'shrink the problem' (reduce symptoms) – this is evidence that the therapy did not lead to changes in the problems that Tim initially sought help for: anxiety and depression. The PQ scores support the assertion that changes in Tim's problems were minor, given that problem 3 did not show a clinically significant change, still bothering him 'moderately' at the end of therapy. Further to this, Tim did not make any specific connections between the reduction in these problems and specific therapy events.

Tim just learned a new language for his problems

ACT enabled Tim to construct a new narrative of his psychological experiences. The therapy provided him with a way of perceiving his problems differently, through the transmission of language. This is not evidence of psychological change, rather an example of how Tim became socialised to the ACT model.

Relational artefacts

The evidence presented in the case record may have been influenced by relational factors, such as acquiescence. Therapy process notes detail that Tim has a strong desire to help and please others, and it is argued that this will have extended to the therapist. Tim describes the therapist in a positive light, clearly valuing the relationship. He was aware that the goal of therapy was to see positive changes; therefore reductions in scores and positive descriptions of the therapy were driven by his desire to please the therapist.

It is highly likely that possible therapy gains were influenced by the therapeutic relationship, a factor common across all types of therapy. Key evidence for this claim lies in the consistently high scores on the SRS (see figure 6) and Tim's views in the change interview. Tim makes several references to the importance of the relationship. A particularly convincing quote for this assertion is; *'it just seems to be this that's helped...and her as an individual, the therapy has been great but the actual engagement of feeling somebody understands you, and that trust that you build up, and so I was sharing all sorts of things'* (lines 246-249). This is direct evidence that the therapeutic relationship was the most important factor leading to any experience of therapy as 'helpful', not the therapy itself.

The minor changes were heavily influenced by Tim's level of motivation

Prior to therapy, he had accessed a well-being group at the hospital; he had carried out personal internet research into psychological therapies and was proactively seeking support from occupational health at work. He had also made decisions about improving his physical health, for example planning to exercise more. It is therefore entirely plausible that that a key factor that brought about changes that did occur in Tim's life during the period of therapy was his pre-existing high level of determination to help himself.

Support from other sources provides a credible explanation of the apparent changes

In addition to the therapy, Tim has accessed several sources of support which are likely to have led to the apparent improvements. Prior to the cancer, Tim had engaged in several sessions of cognitive behavioural therapy (CBT) due to stress at work. Given the overlapping characteristics of CBT and ACT, it is highly reasonable to assume that some aspects of the CBT contributed to Tim's ability to understand and engage in therapy, and cope with his distress. Tim was going to a weekly well-being group at the hospital during the course of the therapy intervention. As well as physical well-being, this group focussed on mental well-being, where advice from nurses was given and there were opportunities to share experiences and off-load. The emotional benefits of this group are likely to have been a significant factor in Tim's mental recovery. Further to this, Tim was referred onto a mindfulness course post-therapy, which

accounts for continued improvements in anxiety, depression and psychological flexibility scores at follow-up.

Statistical errors cannot be ruled out

It is possible that measurement issues inflated apparent change. There are many factors that may have exceeded Tim's ability to accurately characterise his experience on quantitative questionnaires. Ambiguous wording of items, unusual phrasing of questions or misunderstanding of the meaning of items may all have played a part in inflating Tim's scores. Reductions in all three items on the PQ from session 1 to 2 are particularly questionable given that session 1 focussed on exploring the clients' experience of cancer and introducing the ACT model.

Conclusion

This sceptic brief has identified robust and persuasive evidence that alternative explanations exist to counter the affirmative case's assertions. This evidence provides a basis for you to reject the argument that Tim changed substantially during the period of therapy and to conclude that any minor changes that may have taken place were most likely caused by other factors and not by his participation in therapy.

3.2.2 Additional Components of Paul's Rich Case Record

A. Summary of key descriptions in change interview

Tables 21A-F summarise key descriptions offered by the client during the change interview. A reference to its place in the transcript is given at the end of each quote, alongside a therapist-suggested attribution³⁰.

³⁰ For some quotes, a suggested attribution is provided (second column) based on the therapist's interpretation of the quote (and discussions within the broader analytic team). You may interpret these quotes in different ways, and we would encourage you to subject them to an independent and critical reading, in the context of the broader interview transcript (Appendix G).

Table 21A. Helpful Change Processes

Attribution

'...then I went to, started meeting Nicolle, that was brilliant, it's like every time I come out from seeing her I'm bouncing you know? (lines 45-46)

'then I can come in and talk to Nicolle you know, offload kind of thing so yeah it was great' (lines 59-60)

'(partner) says to me, she says 'I can always tell when you've been to see Nicolle', she said 'not picking fault or anything, but you're buzzing, there's no snapping', I said 'so I'm too snappy?' and she said 'no but you are better when you've been and spoken to Nicolle' (lines 414-417)

'you're more open talking to somebody like that as a friend or so like you or Nicolle you know, yeah, it's more of an open thing' (lines 78-79)

'I don't think I worry now as much as I used to before I started treatment with Nicolle, yeah it's a lot better, yeah. It's like do you know...I feel better talking to someone' (lines 245-248)

Generic:
therapy

'you will need somebody out there like Nicolle to talk to, it does help, it helps a lot' (lines 327-328)

Therapist
factors

'because when I used to go and see the doctor or anything I used to hold things back, so that didn't help you know, but no not this time, because I realised then holding things back that's not really helping, so no I've just been as honest as I can be this time and yeah, that's probably why it's working better for me' (lines 490-494)

Paul's ability to
be honest

'And I think you've got that thing where you don't talk to people about your you know, the confidence and things like that, but yeah I think talking to a stranger helps, yeah I find it a lot more easier' (lines 91-93)

Therapist
factors

'I get too wound up, which don't happen very often now, but I'll just sit there and you know, like go in a daydream or whatever you know, and you know, do the breathing thing Nicolle told me to do, and then I'm alright, fine' (lines 231-233)

Therapy
technique

'I'm a softie you know, but yeah Nicolle has helped me put that into like a perspective really you know, [unclear: 00:30:14], emotions are trying to come up...and like a beach ball you're trying to push them down, sometimes you can't stop it and that's when you start blubbering or whatever' (lines 389-393)

Therapy
technique

'That kind of stayed with me, I was learning how to deal wit emotions you know, like Nicolle said sometimes you do have to explode, it may come out you know, yeah and after that it was fine' (lines 480-482)

Therapy
technique

'Nicolle said emotions are, imagine a beach ball Paul in the water, and you're trying to push it down you know and you can't, you just can't do it, it keeps coming to the top, and I thought yeah that's exactly it, yeah, I'm trying to push it all down and it's coming up, coming up' and I said yeah, that was like spot on that... That's a good way to you know, explain things, ye really helpful (lines 403-410)

Therapy
technique

She said to sit up straight and concentrate on something while she read this passage out, and it just so happens there was a picture in the room of the beach and the sunset, and I could relate to that because [unclear: 00:40:20] I go and see my sister, I'm happy there you know what I mean, so yeah you know, yeah that really helped as well' (lines 545-549)

Therapy
technique

'Yeah it was nice, we were laughing and joking and that, I think that helps as well you know, having a laugh and joke because you tend to I don't know, forget yourself and open up more if you know what I mean, yeah, no it's been brilliant' (lines 466-468)

Therapeutic
relationship

'She just made me feel at ease and at home, just naturally just talk about anything' (lines 498-499)

Therapeutic
relationship

'she doesn't judge you, she sits and listens to all your chat you come out with' (lines 914-915)

'every session just made it better and better and better. I don't think Nicolle could have done anything better, it was just...it was spot on from day one I think' (lines 522-523)

Generic:
therapy

'but it is life changing, therapy, definitely life changing you know, and greater than meetings or treatment, it just shows you there's no age limit, there's no discrimination at all, male, female, you know, yeah. See, not crying, but I would have been you know what I mean? [Unclear: 00:45:26], I think it made me a stronger person than what I was' (lines 593-597)

'Nicolle said 'you're strong enough emotionally' I said 'no it's something I've got to do', that would top it all you know...I'm going to do it' 'how did it go?' 'yeah, I had a bit where I went a bit you know, and I shook myself and said 'no come on', you've just got to be confident, you've done the hardest thing you could ever do', and that was Nicolle, I could hear Nicolle in my head 'you can get through it', yeah I think she's helped more than what she knows really' (lines 604-612)

'If it all gets too hard now I just think of Nicolle, you know what would she tell you to do, and I'm thinking breathing exercises or just get up, take the dog for a walk' (618-620)

Therapy
technique

'...but now I've started going out on it now, so that's alright, exercising more, I used to just sit and watch tele all day and not do nothing, feeling sorry for myself [unclear: 00:53:25] get the old me back, even though I can't go into work you know, it's no excuse for sitting down and hiding on the [unclear: 00:53:36] so yeah, Nicolle got me to get more exercise, get out' (lines 686-691)

Generic:
Therapy

'Yeah, I set some little goals and then I up and up and up, she said 'that's a big step getting on a mountain bike, are you sure?' 'Yeah I'm gonna do it', [unclear: 00:54:07], and since the kids have been on

holiday you know bring out the mountain bikes now' (696-698)

'get out there and advertise to people...because yeah, honestly it's really, really worked, if you had seen me when I first started it, it was like 'I can't be arsed to move'...simply washing, having a shower or whatever in the morning...too much to have a shave you know... give me that push, and it worked, I had a shave, that was better' (lines 924-946)

Generic:
therapy

'I think she gave me the confidence to get up off my backside and do something, not against anybody that's had cancer or, they're going to need it at one stage, a kick up the backside' (lines 723-725)

Therapy and
therapist
factors

Table 21B. Helpful factors in the clients life situation

'just what I told my missus, I got to know her, well when I was going to cancer treatment so yeah, it's a bit...because she's been through it herself, she had thyroid cancer, so she kind of knows what to expect, the mood, it's like now she says 'you know where you're putting your coat on?' I said 'yes', she said 'I suggest you build me a room where I can shove ya, like a calming room because you get very snappy' (186-191)

'right from the day I got cancer right up until the end of my treatment, I couldn't fault anyone, not even from the porter right up to the top row, it was brilliant you know, you hear about things you know, like things not going right, ye things aren't brilliant anywhere you go, you go you know what I mean, and I always turn round and nah King's Mill, they were there for me [three times I've been there and they've been there for me. I can't fault them' (lines 337-342)

Table 21C. Client attributes/ resources that may have helped him use therapy

'because when I used to go and see the doctor or anything I used to hold things back, so that didn't help you know, but no not this time, because I realised then holding things back that's not really helping, so no I've just been as honest as I can be this time and yeah, that's probably why it's working better for me' (lines 490-494)

'I've been given another chance if you like and I'm not going to waste it' (lines 861-862)

Table 21D. Hindering factors in the client's life situation

'Yeah, one of my mates, I was telling...she got cancer and she's only early 50s, she's been told she's got months to live, and she went on Facebook keeping all updated...it's like mad' (lines 171-174)

'Even with one of the porters at the treatment centre, we got talking and I'd go in and he would say 'are you alright Paul?' 'yeah, I'm alright, I'll be alright' and he said 'you'll be alright, I know you will' he said 'because I've been through it', so yeah same thing, he had

throat cancer....bloody hell' (lines 357-354)

'and just what I told my missus...because she's been through it herself, she had thyroid cancer' (lines 185-186)

'I lost my mother in law a month back to cancer, if that wasn't bad enough we were there when she took her last breath you know what I mean, the last time I saw that was my sister, I watched her take her last breath and it wasn't nice, and if that weren't enough I had to go and carry the coffin'

'I had to go and carry the coffin....it's something I've got to do, that would top it all you know, I mean I still [unclear: 00:46:20] with my mother in law, still went up and had coffee with her and things like that you know' (lines 604-607)

'but my friend she's been given 6 to 9 months and she's coping really...I don't know, it's just unbelievable.....she says 'right I'm having a party next Saturday' I'm thinking 'you've got cancer' so I said 'why is it your birthday?' she said 'no, what I'm thinking of is when people die what do we do, we have a wake, no I'm going to...I want you to come Saturday and everybody else on Facebook, whoever wants to come' not like a party, a get together you know, like farewell thing like' (761-771)

'My biggest thing was when I got cancer, apart from the doc saying 'you've got cancer', day one treatment you were like 'money', because you know, your health's more important obviously, but I think my biggest worry after that is money, because I was working you see, I've worked all my life, and wham you can't work anymore 'I can't pay my bills' you know' (lines 146-150)

'Because if you're worried about money how are you going to get better you know, you just bring more stress on yourself' (lines 159-160)

'I had worked nearly 40 years, guess what, you can't go to work anymore now, it's like I don't know, [unclear: 00:11:32], you don't realise how much it affects you' (lines 166 167)

'you've got (partners name) as well, no disrespect to (partners name) but you know, you're supporting her, she's coming home and she's telling you what's been happening at the hospital, her family don't get on and you know, so there's conflict' (lines 196-199)

'I think going back to the cancer...so I've got an itch you know, and my partner said

‘well I got that when I finished my treatment’, and the nurse said...you know the stuff they put on your body, it’s like that, so yeah so, that’s got me a bit on edge so I have to go back to the doctors and find out’ (lines 217-221)

‘yeah it helped, but they had a lady there by herself and because she had nobody at home she started talking to me, we didn’t mind because we realised then that she was on her own, but then it was like well you’re taking time up’ (lines 310-313) (Quote referring to psychosocial group)

‘but when I was at this group meeting it was like...I don’t want people knowing about that’ (lines 500-501) (Quote referring to psychosocial group)

Table 21E. Client attributes/resources that may have hindered him in therapy

‘I can get over this now... it’s Nicole’s doing, she’s really made me more get up and go’ (lines 733-734)

(INT: Were you surprised, the changes you’ve just described, were you surprised that they happened to you or did you kind of expect that from your sessions with Nicole?) ‘No I think I was surprised actually I used to sit there and start blubbering whenever you know what I mean, but I used to, that’s what I used to do you know’ (lines 250-255)

‘I’d just been to see the consultant ‘yeah your throat’s alright’ you know, [unclear: 00:20:45] and you sit there joking but then you go away, I wanted to get out, not because it was boring or anything, I used to say to her ‘right come on, time for appointment’ and she said ‘why?’ [Unclear: 00:21:09] there’s loads of people out there; supposed I’m taking other people’s time up’ (INT: So you felt guilty?) ‘ Yeah and she was saying ‘no you don’t do that’ she said ‘I’m here with you’ and I said ‘yeah but...’ and someone who was here for the first time since finding out, and I know what it feels like you know, they want somebody to talk to, ‘m taking the time up’ (lines 273-284)

Table 21F. Hindering aspects of the therapy

Paul did not describe any hindering aspects of the therapy; however, he did mention a missing aspect of therapy:

'I think it would have been helpful, well for me if we had these, like during the treatment, because when you're having the treatment I think you need someone to talk to them, and it's alright telling your family and things like that but just things like, you might get embarrassed about asking about you know, to your family' (lines 72-76)

B. Client Goals

Paul generated 3 problem statements which were used to create therapy goals:

1.) Disconnected from children

Goal: To get closer with my children and grandchildren

2.) Unable to control emotions and feelings

Goal: To be less emotionally fragile and sad all of the time

3.) Not getting out of the house or working

Goal: To be able to get out of the house more and get earning again

Tables 22A-B. Note- goal 3 was separated into two specific goals for clarity.

Table 22A. Evidence of movement towards goals

Goals	Evidence	Source
(1) To get closer with my children and grandchildren	<p>Significant reduction in PQ scores for problem 'Disconnected with my children'</p> <p>Session 1- score of 6</p> <p>Session 2- score of 6</p> <p>Session 3- score of 1</p> <p>Session 4- score of 1</p> <p>Session 5- score of 1</p> <p>Session 6- Paul said this goal had been achieved so didn't require scoring anymore</p>	PQ scores
	<p>Session 1- Paul described how family is most important to him, but his relationship had become almost non-existent since the cancer. Paul avoided family following cancer diagnosis because scared that he would have to say goodbye. Last saw him a year ago. Fears contacting him in case son reject him. Daughter works a lot, little contact. Feels excluded from children since divorce. Set goal: To text his son</p> <p>Session 2- Learning from experience of his own father what type of father he wants to be.</p> <p>Session 3- Met up with son between sessions, feels 'more positive' about the relationship. Been spending time with partner's grandchildren. Regular texting with son. Discussed relationship with daughter and his desire to support her through having grandchildren to stay.</p> <p>Session 4- took his grandchildren to the park between sessions, enjoyed their company. Had partner's grandchildren to sleep over. Had positive telephone call with son, talking about the future.</p> <p>Session 5- grandchildren have become a 'big motivator' to getting up in the morning. Paul described getting sense of accomplishment through teaching them.</p> <p>Session 6- opened up to feeling of guilt for not being present when his children were young.</p>	Therapist process notes

(2) To be less emotionally fragile and sad all of the time

Significant reduction in PQ scores for problem 'I can't control my feelings and emotions'

PQ scores

Session 1- score of 7

Session 2- score of 7

Session 3- score of 5

Session 4- score of 4

Session 5- score of 5

Session 6 –score of 5

Note. Paul reworded this goal at session 5 to 'to cope better with emotions'

Coping better with emotions:

Change Interview

'another thing now you see, you get emotional and you're taught like how to handle it and things like that, I don't cry so much now' (lines 179-181)

An acceptance of emotions:

'I get very emotional, I'm a softie you know, but yeah Nicolle has helped me put that into like a perspective really you know, [unclear: 00:30:14], emotions are trying to come up...and like a beach ball you're trying to push them down, sometimes you can't stop it' (lines 391-394)

'I was learning how to deal with emotions you know, like Nicolle said sometimes you do have to explode, it may come out you know, yeah and after that it was fine' (lines 481-483)

Session 1- strong adherence coping by blocking out emotion *'plough on, don't get emotional, don't cry'*
Feeling like something is wrong with him because emotion *'overflows'*. Lots of unanswered questions i.e. *'why am I feeling like this?'*

Therapist process notes

Session 2- shift: begins to recognise the ineffectiveness of trying to control emotions. Recognises his

judgements on showing emotion and historical origins of this tendency.

Session 4- begins to recognise sadness is '*normal*' in given his experiences. Reports '*not wanting to cry as much now*' and '*I'm not so fragile now, but still get upset when bad things happen*'. Engaged in mindfulness exercise where he allowed himself to feel guilt and sadness.

Session 5 – reports '*crying less*'. Discussion about goal and re-wording it to '*I want to cope better with my feelings*'.

Session 6- insight that emotions are not always logical and recognition that '*if I keep blocking it out it will get worse in my head*'. Reports to be '*managing my emotions better now than 6 weeks ago*'

(3)To be able to get out of the house more

Significant reduction in PQ scores for problem 'Not getting out of the house'
Session 1- score of 7
Session 2- score of 7
Session 3- score of 5
Session 4- score of 4
Session 5- score of 4
Session 6- score of 3

PQ scores

'now I've started going out on it now, so that's alright, exercising more, I used to just sit and watch tele all day and not do nothing, feeling sorry for myself [unclear: 00:53:25] get the old me back, even though I can't go into work you know, it's no excuse for sitting down and hiding on the [unclear: 00:53:36] so yeah, Nicolle got me to get more exercise, get out' (lines 686-691)

Change Interview

'but I got over that (cancer) and I'm thinking I can get over this now, [unclear: 00:57:08] yeah so [unclear: 00:57:14], Nicolle's doing, she's really made me more get up and Go' (lines 733-735)

		Therapist Process Notes
	<p>Session 1- Paul struggling to wash and get dressed unless he had an appointment. Most of day spent watching television. <i>'I'm sat around doing nothing 24/7'</i>.</p> <p>Session 3- Met up with son during week</p> <p>Session 4- Spending time with grandchildren and partner's grandchildren. Doing</p> <p>Session 5- Going for walks, started going out on his bike again. Went on cycling trip with partner. Described having thoughts of not wanting to get out of bed about 4 days/week but motivating himself to get dressed regardless.</p> <p>Session 6- made a friend in the community, surprised at how good he felt afterwards.</p>	
To start earning and working again	<p>Significant reduction in PQ ratings of how much problem 'not working' bothers Paul:</p> <p>Session 1- score of 7</p> <p>Session 2- score of 7</p> <p>Session 3- score of 5</p> <p>Session 4- score of 4</p> <p>Session 5- score of 3</p> <p>Session 6- score of 3</p>	PQ scores
	<p>Session 1 – guilt at not working, feeling like he is 'taking and not giving back'. Feeling very stressed about finances. Fused with negative judgements about himself for receiving benefits.</p> <p>Session 3 – Discussions of values underneath work role, jobs he could do outside of construction and barriers to moving towards them. Decided he wants to contribute to local area and <i>'make a difference'</i>.</p> <p>Session 4- spoke to a friend about a volunteer role.</p> <p>Session 5- Shift: recognition that family are more important than work and being off work does not mean that he is a failure.</p> <p>Session 6- Discussion about expecting anxiety when he starts any new job. <i>'I'm not going to let anxiety stop me</i></p>	Therapist Process Notes

from getting back into work'. Asked if he could text therapist to in future to tell me he was back in work.

Notes. PQ scoring involves rating how much the problem has affected the person over the past week: 1= Not at all bothered, 2= Very little, 3= Little, 4= Moderately bothered, 5= Considerably, 6= Very considerably, 7= Maximum possible. PHQ-9
item scoring involves rating frequency of problem on a 4-point Likert scale: 0=not at all, 1=several days, 2=more than half days, 3= nearly every day GAD-7 total scores
indicate severity of anxiety: 0-5= mild, 6-10=moderate, 11-15=moderately severe, 15-2= severe.

Table 22B. Evidence against movement towards goals

Goals	Evidence	Source
(1)To get closer with children /grandchildren		
(2)To be less emotionally fragile and sad all of the time	Session 5- Paul recognised that he can't control emotions and they can be illogical and intense. Wishes emotions could be controlled, still desires to cry less. Questionnaire item 2 'Feeling down, depressed or hopeless'. From pre- to post-therapy, only a reduction of 1 point. Session 6, scored '2; more than half days'	Therapist Process Notes PHQ-9
(3)To be able to get out of the house more	No change in scores of item on PHQ-9, 'Little interest or pleasure in doing things' from pre- to post-therapy. Score stable remained at '2: More than Half Days' Session 5- Paul described having thoughts of not wanting to get out of bed approx. 4 days/week. Session 6- Paul still wants to be doing more out of the house.	PHQ-9
To get earning and working again	Session 5- Made decision to focus upon his health and getting out more, before looking for a job- hypothesis: avoidance of anxiety, <i>'I think I'll just put it on the back burner and think about it again in September'</i> . Session 6- Paul did not have a time frame or specific strategy for how he would find a new job.	Therapist process notes

Note. PQ scoring involves rating how much the problem has affected the person over the past week: 1= Not at all bothered, 2= Very little, 3= Little, 4= Moderately bothered, 5= Considerably, 6= Very

considerably, 7= Maximum possible.

Note:

PHQ-9 item scoring involves rating frequency of problem on a 4-point Likert scale: 0=not at all, 1=several days, 2=more than half days, 3= nearly everyday

C. Evidence for and against psychological flexibility process shifts

Tables 23A-F outline evidence for and against change in the six psychological processes, based upon therapist process notes and session recordings.

Table 23A. Evidence of change in the process of Acceptance

Session	Example of acceptance	Refutation
1*		Strong desire to get rid of sadness and reduce crying; trying to live up to family rule, <i>'men don't cry'</i> Experiential avoidance: 1. much time spent watching TV to block out feelings 2. Avoiding contact with son Hopes therapy will remove anxiety and low mood.
2*	Paul recognised that his body wants to feel but his mind does not. Open discussion about drivers of experiential avoidance. Agrees to try being more open to emotion in therapy room Engaged in discussion following passengers on a bus metaphor, considering the cost of pushing away inner experiences.	Continued attempts to control crying at expense of doing things. Does not want to be vulnerable to feeling strong emotions at home <i>'I need to bury these things before I can move on'</i>
3*	Cried in session while talking about near-death experience and past losses. Recognises that his emotions are not abnormal.	Continues to want sadness and anxiety to reduce.
4***	Went for a walk by himself following funeral and opened-up to the sadness.	

	Beach ball metaphor ³¹ led to a shift in recognition of unworkability of control. Insight into personal costs of avoiding unpleasant feelings (anxiety and sadness)	Fear of experiencing anxiety prevents action related to work/volunteering opportunities.
	Engaged in mindful awareness exercise- opened up to sadness and guilt.	Used awareness exercise as a form of relaxation and said he 'felt better' afterwards.
5*	Discussion about inevitability of anxiety when he starts works again- some degree of openness towards this.	Experiential avoidance: reluctant to commit to action related to work/volunteering despite strong desire. Crying less- views this as a positive outcome of therapy.
6**	Engaged in discussion about 'ups and downs of life' and tendency to push down feelings. Paul initiated discussion about beach ball metaphor. <i>'Sometimes I allow the feeling, if I keep blocking it I know it will get worse in my head'</i>	Described experience during the week when he felt sad, told himself <i>'I'm not going to let this happen'</i> .

*Session included *minor* work on this process

**Session included *substantial* work on this process

*** Work on this process was *primary* to the session

³¹ The beach ball metaphor makes a link between the struggle of trying to control/push away unpleasant inner experiences (e.g. sadness) to that of trying to constantly hold an enormous inflatable beach ball under the water, but it keeps popping up in front of our faces. The alternative is to allow the ball (i.e. the experience) to float around the person, to be there, thus freeing up energy and time to focus on what is really important.

Table 23B. Evidence of change in the process of Present Moment Awareness

Session	Example of being present	Refutation
1**	<p>When directed, Paul could identify current sensations and experiences, 'butterflies' 'wanting to cry', 'pain', 'worry about lumps'.</p> <p>Recalled thoughts directly prior to appointment <i>'I think I'll cancel, my life is too much of a mess'</i></p>	<p>Strong judgements about sensations and experiences.</p> <p>Most of content about past experiences and future fears</p> <p>Recognition that cancer experience and physical health problems not experienced directly, but on auto-pilot mode; difficulty moving away from this approach.</p>
2**	<p>Cried in session- Therapist <i>'What is going on for you right now?'</i> Paul replied <i>'tightness in chest'</i></p> <p>Identified that he felt tired and lethargic in session.</p> <p>Engaged in discussion about making conscious decisions, which requires awareness of moment.</p> <p>At end of session, said he felt <i>'a bit lighter'</i></p>	<p>Continues to buy into evaluations of present moment experiences</p> <p><i>'crying like an idiot'</i></p>
3*		
4**	<p>During week, took time to himself focusing on the present (directing attention to inner experiences and environment).</p> <p>In session, engaged in mindful awareness exercise- noticed he got distracted.</p>	<p>Appeared to use awareness exercise as relaxation.</p>
5*	<p>Recalled physical sensations of anxiety when doing new things, starting jobs in past.</p> <p>Engaged in experiential exercise- noticing breathing, sensations and thoughts. Could notice thoughts</p>	<p>Unclear whether he understood exercise as he could not reflect on it afterwards.</p>

wandering.

- 6* Recognition that he felt sad that he would not be seeing the therapist again.
Reduced dominance of past experiences within session.

*Session included *minor* work on this process

**Session included *substantial* work on this process

*** Work on this process was *primary* to the session

Table 23C. Evidence of change in the process of Cognitive Defusion

Session	Example of defusion	Refutation
1*		Fused with evaluations about his life <i>'my world is caving in' 'there's something wrong, I never used to be this emotional'</i> rules <i>'men don't cry'</i> worries about his health <i>'the cancer is going to come back'</i> . Unable to identify thoughts when asked, but clearly fused by them in conversation
2***	Thought control experiential exercises- Paul had the realisation that he cannot alter the content of thoughts.	Still struggled to identify label current thoughts.
3*	Mind as a 'doom and gloom' radio metaphor- shift where Paul could recognise that when tried, he has the thought <i>'I can't be bothered, there's no point'</i> . Engaged in a discussion about separating from the thought versus buying into it.	Unclear whether Paul fully understood concept of separating from thoughts.
4*	Shift: Insight into choice to listen to his mind or to do what is important using 'here and now' examples; e.g. of visiting partner's father who has dementia, thinking that he wanted to cancel first session, but choosing to	

come anyway.

5*	Engaged in experiential exercise of noticing how thoughts change.	Unclear whether Paul sees separation as a conscious choice
6**	More discussion of 'thoughts' as oppose to just stating content. Able to identify thoughts that will come when he begins process of going back to work.	Still fused with evaluations of emotions and feelings. Unclear whether Paul sees thinking as an ongoing process.

*Session included *minor* work on this process

**Session included *substantial* work on this process

*** Work on this process was *primary* to the session

Table 23D. Evidence of change in the process of Self-As-Context

Session	Example of self-as-context	Refutation
1*		Desire to get rid of inner pain, sadness, anxiety. Desire to 'deal with' and 'bury issues' so that he can move forward
2*		Fear of being harmed by own inner experiences (e.g. crying)
3*		
4*		
5***	Engaged in self-as-context experiential exercise 'the continuous you'. Reflected on role and bodily changes throughout life, but grasped the idea that there is a part of him that remains the same.	Unclear of the impact of this exercise, other than at a basic level of noticing changes versus other things that have stayed the same. Paul did not seem to understand it as a perspective.
6*	Increasing recognition that Paul is more than his feelings and roles (particularly work role). He said this helped him feel less concerned about not being in work at present.	

*Session included *minor* work on this process

**Session included *substantial* work on this process

*** Work on this process was *primary* to the session

Table 23E. Evidence of change in the process of values

Session	Example of values clarification	Refutation
1**	<p>Identified relationship with partner as important and '<i>keeping (him) going</i>'</p> <p>Paul described wanting to help others who are struggling.</p> <p>Sad about loss of relationship with son and feeling excluded from children and grandchildren's lives-; Paul recognised this sadness meant that these relationships are valuable to him.</p>	<p>Described lack of motivation to get up in morning</p> <p>Inability to work in construction again caused Paul distress</p> <p>Sees his life as out of his control because of numerous tragedies; '<i>What's the point in doing something if the cancer is going to come back?</i>'</p> <p>At present, Paul is not making conscious choices about life direction, just '<i>going with it</i>'.</p>
2**	<p>Further discussion about broken relationship with son since cancer and ways of building it back up again.</p> <p>Engaged with 'Passengers on a Bus' exercise- giving serious thought to life direction. Identified family closeness as very important, and getting back to work as very important.</p>	<p>Unclear of potential values underlying desire to get back to work; possibility that it is driven by avoidance of guilt for receiving benefits. '<i>I'm losing my self-respect by taking but not giving</i>'</p>
3***	<p>Structured task and values metaphor: Paul learned that his tendency to judge others who don't work is rooted in a value of 'contributing'. Discussed values underlying desire to work; Paul identified, 'being useful', 'contributing to local area' and</p>	<p>Despite discussion of occupational values, Paul remained fixed on desire to go back into construction, conflicting with his claim that his health is important to him.</p>

‘achieving’.

In the domain of family, Paul identified values of ‘guiding’ and ‘supporting’ children and grandchildren.

In domain of intimate relationships, Paul recognised that it is important for him to listen to his partner and be honest; learnt from previous mistakes in relationships.

4** Identified that enjoyment from leisure and recreation used to be central, but since cancer he has neglected it; specifically bike riding. Discussion of volunteer opportunity that would fit values. Desire to do something local.

5** Increasing contact with family values; spending more time with grandchildren. Reflecting on challenges and benefits of being a grandparent. Paul described how his grandchildren are a ‘*big motivator now*’. Discussion of difficulties supporting partner when she talks about her family conflict.

6**	Paul set himself value-based goals for the future. Improving health, remaining close with grandchildren, seeing more of his son and continuing to go out on his bike. Paul described feeling more positive about life, despite the ups and downs; he related this to knowing what is important to him.	Some remaining lack of clarity around work role and type of job he would find meaningful.
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*Session included *minor* work on this process

**Session included *substantial* work on this process

*** Work on this process was *primary* to the session

Table 23F. Evidence of change in the process of committed action

Session	Example of committed action	Refutation
1*	Attending first session of therapy, despite apprehension.	Attending therapy possibly driven by desire to get rid of unpleasant feelings.
2**	During week, Paul attended a funeral and carried the coffin, despite fears that he would cry in front of others. Goal- to text son /make contact Booked dentist appointment to get a new set of teeth.	Paul believed he needs to be 'more confident' before he can start being 'sociable again'.
3**	Went for a walk during week; enjoyment from nature. Sent text to son during the week which led to a telephone conversation where they arranged to meet up.	Some days staying in bed and watching a lot of TV, despite wishing he could 'do more'. Battling with idea that he needs to 'feel better' before doing more.

Goal -to get back on bike and to ride with partner as a way of spending time together.

Increased contact with daughter, partner arranged to have grandchildren sleep over.

4** Continuing to spend time weekly with grandchildren and partner's grandchildren.

Met up with son.

Made decision to support partner during a visit once/week to see her father, despite unpleasantness of the experience.

Arguments with partner because he finds it difficult to hear her talking about her family conflicts.

Goal- to go on a 'date night' with partner.

5** Went out on bike with grandchildren.

Avoidance of committing to action related to work/volunteering. Possibly driven by avoidance of anxiety and uncertainty.

Did not do 'date night; with partner, *'things came up'*.

6** Continued contact with son; Paul said sorry for previous mistakes. This was 'hard' for him, but important for their relationship.

Decision to put work on 'back burner'. Described how thinking about work makes his mood 'worse'

*Session included *minor* work on this process

**Session included *substantial* work on this process

*** Work on this process was *primary* to the session

D. Arguments

Affirmative Case

There has been a substantial change in Paul's problems

Baseline and session 1 PHQ-9 scores show that Paul's depression was stable prior to therapy (figure 1) and, following the introduction of the therapy, declined from severe (22) to moderate (13): representing a statistically reliable improvement. Similarly, baseline GAD-7 scores indicate that Paul's anxiety was stable (Figure 2); following the introduction of therapy, Paul's anxiety reduced from a severe (18) to moderate (13) level, representing a statistically reliable improvement. Although changes in depression and anxiety symptoms did not move Paul below the caseness thresholds, it nonetheless represents clinically meaningful shifts across clinical gradations (statistically robust reduction in level of clinical severity). It is highly likely that such changes in psychological distress were due to therapy, given that Paul did not experience any noteworthy positive changes or events in his life over the 6-week intervention that could account for such improvements. In fact, Paul faced several life stressors and personal losses (such as family death, ill-health of friends and financial stressors) over the 6-week period.

Over the course of therapy, Paul saw a substantial reduction in the problems he came with. PQ scores and therapy process notes demonstrate that he became more connected with his family – particularly his son, which was of high importance to him. At the start of therapy he described being 'excluded' from his children since the divorce with his wife, and becoming completely 'disconnected' from his son since the cancer. This was a longstanding problem that had caused Paul notable distress. Over the course of therapy, this problem reduced substantially from a score of '7' (considerable) to '1' (not bothered); and at session 5, Paul said that it was no longer a problem that needed to be rated. Similarly, Paul's problem of not getting out of his house much reduced reliably and to a clinically significant degree. This is corroborated by his change interview where he describes going out on bike rides, walks and spending time with his grandchildren. Although Paul did not commit to taking action towards going back to work, his views and distress related to not working changed significantly from a score of 7 ('maximum possible') to 3 ('bothered a little'). Finally, Paul described the problem of being 'unable to control emotions and

feelings' which bothered him to the maximum possible degree (score of 7). Through the course of therapy, Paul gained insight into the unrealistic expectation of achieving control over his internal experiences, recognising that nobody can control their emotions and his sadness was completely understandable in the context of his life. This led Paul to re-phrase the problem to 'not coping with emotions and feelings'; which, at the end of therapy, he rated as a considerable problem (score of 5). This demonstrates that the therapy enabled Paul to engage in a process of understanding this problem further and gain insight into the underlying issue.

Further convincing evidence of change is the reliable and clinically significant reduction in psychological inflexibility. This is the central aim of ACT, over and above influencing psychological distress. Paul's inflexibility at session 1 was near the maximum possible score (47/50) and reduced to 26 at session 6, representing a statistically reliable change on the cusp of the clinical threshold. This demonstrates a dramatic and noteworthy improvement over a 6-week period of therapy.

The changes outlined were not due to psychobiological factors as Paul was not taking any psychiatric medication before, during, or after therapy. In fact, Paul experienced ongoing negative physical health side-effects throughout the therapy.

Paul attributed these changes to the therapy (retrospective attribution)

During the change interview, Paul made many attributions of 'getting better' to therapy. Convincing quotes include: 'every time I came out from seeing her, I'm bouncing you know?' (lines 45-46) 'I don't worry as much as I did before' (line 245), 'every session just made it better and better' (line 522) and 'It's life changing, therapy, greater than any meeting or treatment' (line 593). These examples are evidence that Paul was convinced that positive changes were due to his experience of therapy. He also commented that his partner also made this link between being in therapy and noticing positive changes in Paul's emotional state (lines 414-417). Paul made reference to specific therapy events that he found helpful, including breathing exercises, learning about his emotions, the 'beach ball metaphor' enabling him to allow emotions to come up, and being encouraged by the therapist to 'do more' in line with his values.

Connection between processes and outcomes

It is possible to map some of Paul's outcomes to specific shifts in processes. A convincing example of this is the notable reduction in PQ scores for problems; 'disconnection with children' and 'not getting out much' from sessions 2 to 3. Within these sessions there were shifts in processes of values and committed action (as shown in tables 5E and 5F). These sessions included discussions, structured tasks, metaphors and experiential exercises related to Paul's life direction, values and goals. In the change interview, Paul makes connections between positive changes and specific therapy processes. He described finding it helpful to understand his unhelpful control-based coping strategies through the beach ball metaphor. According to therapist process notes, this discussion centred on willingness to experience emotion and occurred in session 4. This process shift is supported by a shift in psychological flexibility scores from in session 4 (figure 3).

Conclusion

In this brief, you have been presented with multiple lines of evidence that:

- Paul demonstrated that substantial change occurred in his problems
- Paul attributed these changes to therapy
- There is an evident connection between therapy events, process shifts and outcomes.

Sceptic Case

Paul's problems were not stable

The possibility that Paul's psychological distress would have reduced naturally over time cannot be ruled out. One baseline measurement prior to therapy is not evidence of problem stability. Paul did not have any psychiatric diagnoses and thus it is entirely plausible that he would have adjusted to life after cancer and made improvements in problematic areas without therapy. Furthermore, the problems Paul generated using the PQ emerged following his experience of cancer (e.g. disconnection from son, inability to work) and thus cannot be said to be 'longstanding'.

Paul's apparent changes were minor

While the affirmative case has argued that Paul changed substantially during therapy, the evidence on which this argument is based has been selectively drawn from the case record. Both PHQ-9 and GAD-7 scores at the end of therapy remain above the threshold for caseness, thus providing evidence that reductions were not clinically significant (i.e., they did not move Paul below caseness threshold). This is corroborated by the absence of evidence in the change interview; Paul makes no reference to substantial improvements in anxiety or depression. Furthermore, Paul's positive comments about his psychological health were vague and centred on describing how 'helpful' therapy was, rather than any tangible improvements in his psychological state. Within the change interview, Paul comments on how he did not expect to get anything from the therapy (lines 255-258), therefore it is plausible that minor improvements were viewed in a disproportionately positive light. While Paul's AAQ-II scores reduced from pre- to post-therapy, Paul does not make any reference to specific ACT processes that enabled him to become more psychologically flexible (i.e. thought separation/defusion, present moment awareness etc). It is entirely plausible that he did not have insight into this process or did not view such changes as significant.

Relational artefacts

The evidence presented in the case record may have been influenced by relational factors, such as acquiescence. Minor inconsistencies within the data Paul's evidence demonstrate that his reports were influenced by a desire to show positive effects of the therapy. For example, Paul described the therapy as 'really helpful' many times within the change interview, however scores on the PHQ-9 and GAD-7 demonstrate that he remained above the clinical threshold at the end of therapy. Paul clearly valued the relationship with the therapist as shown by high ratings on the SRS (figure 6) throughout therapy. He was aware that the goal of therapy was to see positive changes; therefore reductions in scores and positive descriptions of the therapy were driven by his desire to please the therapist.

There is a surplus of evidence within the change interview and the SRS that Paul attributed positive changes to the therapeutic relationship. Paul makes several references to the benefits of offloading, being listened to and not being judged. When asked directly by the interviewer why he felt better after sessions,

he attributed this to talking about his experiences and 'getting stuff off (his) chest'. This is evidence that it was not ACT that led to minor changes, but the therapeutic relationship.

Statistical errors cannot be ruled out

It is possible that measurement issues inflated apparent change. There are many factors that may have exceeded Paul's ability to accurately characterise his experience on quantitative questionnaires. Misunderstanding of the meaning of items is highly likely to have been possible for Paul, given his lack of formal education. Therapist' process notes highlight a discussion that took place in session 2, where the therapist checked Paul's understanding of Likert scales as he appeared to get the numbers confused. From session 2, the therapist supported Paul completing the questionnaires to overcome this potential issue; however this in itself brings into question his ability to be honest and confidence to say if he was confused. These issues are likely to have influenced the accuracy of Paul's ratings.

Conclusion

This sceptic brief has identified robust and persuasive evidence that alternative explanations exist to counter the affirmative case's assertions. This evidence provides a basis for you to reject the argument that Paul changed substantially during the period of therapy and to conclude that any minor changes that may have taken place were most likely caused by other factors and not by the therapeutic model.

3.2.3 Additional components of Joe's Rich Case Record

A. Summary of key descriptions in change interview

Tables 24A-F summarise key descriptions offered by the client during the change interview. A reference to its place in the transcript is given at the end of each quote, alongside a therapist-suggested attribution³².

Table 24A. Helpful Change Processes

Helpful change process	Attribution
'Well one it kind of helped to share things anyway' (line 35)	Generic: therapy
'knowing it's normal to have these kind of things' (line 36)	Generic: Therapy
'perhaps being able to just...it's hard to explain really, but umm, when it comes on I suppose I'm not so flustered by it, I can probably try and relax a bit more, I just try not to let it affect me and take over, whereas before when it's a really unknown you don't know how to cope with you know' (lines 37-40)	Therapy technique
'Well just kind of understanding things a little bit more I think really, and umm knowing that...I'm the kind of person that I'm kind of an unlikely person, or I thought I was an unlikely person to get this anxiety, and umm, and I was kind of battling with it and fighting with it when I probably should have left it, just let it be there but try not to let it affect me, and I think that's what Nicolle was trying to kind of teach me really'(lines 50-55)	Generic: therapy
Yeah it was being able to talk to Nicolle and understand, try and understand the problem really (lines 62-63)	
'I think I'm improving slowly on my own anyway, but definitely Nicolle	

³² For some quotes, a suggested attribution is provided (second column) based on the therapist's interpretation of the quote (and discussions within the broader analytic team). You may interpret these quotes in different ways, and we would encourage you to subject them to an independent and critical reading, in the context of the broader interview transcript

helped me to overcome that, and it just, it definitely accelerated it and perhaps helped improve it for the better, umm in the future really' (lines 68-70)

'when I first contacted her I wasn't on the right track at all, I was really finding it difficult and really battling with it and not understanding it, and then Nicolle helped me to do that really' (lines 75-77)

'I was trying to push it completely out of my mind when really I was probably better just let it be there but not let it take control really, that was probably one of the main things' (lines 84-86)

Therapy techniques

'the other thing where she spoke about a gentleman that when he had it, 'hello old friend you're back again' and that...when that came I kind of used that to try and control it really and understand it and still carry on. Sometimes I could carry on and sometimes I couldn't' (lines 87-89)

Therapy technique (thought separation)

She gave me good advice really, umm and yeah she gave me good advice in a lot of ways, and just did my best to try and take time out for myself and things like that and my family, and the important things in life and live for today I suppose and not always aiming for the goal in the future' (lines 115-118)

Therapy techniques (values)

I am probably pushing harder and getting people to try and cover for me, even when I probably wouldn't have done before, I'm trying to trust people a bit more (lines 127-129)

Therapy technique (values)

I like Nicolle, she was good, and she was...on the same, yeah she understood me really and that was good....she was easy to talk to, we talked about many different subjects and how my life's changed and how things have changed me I think, yeah, I went through a lot of things, and a lot of the time you know, it's just to be able to talk to somebody and not hold back really was good... I did feel like I could tell her anything, but a family member you would try and not say things because you feel as though it would upset them' (lines 193-203)

Relationship factors

'I just had to go and lie down and just close my eyes and try and
yeah, just let it go really, but even then it was perhaps helping
because I was trying not to stress and worry over it, just kind of let it
happen' (lines 216-218). Joe

'I felt she understood me and she was understanding, it was good, I
would think anybody going through what I've gone through it's got to
be a help because I really didn't think I was the person that would be
affected by things like this (lines 321-324) Generic:
therapy

Table 24B. Helpful factors in the clients life situation

Joe did not describe any helpful influences outside of therapy.

Table 24C. Client attributes/ resources that may have helped him use therapy

'I would like to have something else to try if I went on struggling' (lines 224-225)

'I appreciate the time and effort that went into it, it was great' (line 333)

Table 24D. Hindering factors in the client's life situation

'it's very difficult because I've got my own business and it's very demanding, and I've got, it's kind of seven days a week and it's really awkward and while I came off staff had left, things have changed, things have got very difficult, the business is losing money so I've had no other choice other than kind of get straight back in and doing way too much really' (lines 123-127)

'when I wasn't there it was losing a lot of money, and it was all going a bit...horribly wrong really, and...then gives you more worry, more stress, more anxiety' (lines 136-138)

'My wife is getting frustrated going...couldn't understand why I couldn't control it (lines 175-176)

Table 24E. Client attributes/resources that may have hindered him in therapy

'But yeah, I don't think there is an answer' (line 180)

'you asked me a question but I can't remember exactly what the question was now, what was it? (lines 55-56)

'Umm what do you mean, what caused that or what...?' (line 257)

(INT: you described earlier about not feeling as flustered and being able to use the techniques and things that Nicolle taught you, do you think there was anything that went on outside of your sessions that kind of encouraged you to do that, or made it harder for you to do that?) 'Umm yeah both really, sometimes out of the sessions I could use it and sometimes I couldn't, it was sometimes...yeah, sometimes you could be in control but when I was on holiday it got that bad that I couldn't do any of it (209-216)

'I really didn't think I was the person that would be affected by things like this, I thought I was a strong-minded person' (lines 232-324)

Table 24F. Hindering aspects of the therapy

Joe did not identify any unhelpful aspects of the therapy; however he described some missing aspects of the therapy:

'umm I would have liked to have had more, kind of more tools to be able to use to fight it, but perhaps there aren't any you know' (lines 163-165)

'I went on holiday and I had quite...afterwards in between seeing Nicolle and this conversation now, and I had quite a few bad days, quite bad, and yeah I kind of used what she said but I felt like I wanted something else to use, but I don't know if that's even possible (lines 172-175)

'I would like to have something else to try if I went on struggling, but as I say I don't know if there is anything out there that I can try, anything different' (lines 224-226)

(INT: Yeah, so it's helped to a certain point but actually you feel that maybe if there were kind of more sessions that would, you feel that would continue to help you potentially?) 'Yeah I think it would... I think it probably wasn't quite enough' (lines 228-299)

'Yeah maybe have them (sessions) you know, extended so as it gets later down the line kind of two weeks between meetings or something like that, maybe that might be answer you know' (lines 309-311)

B. Client Goals

Joe generated 3 problem statements which were used to create therapy goals:

- 1.) Unable to cope with challenges; can only cope with small tasks one at a time: *Goal- to cope better with work challenges (such as: amount of phone calls, unexpected problems, managing staff and workload, making decisions about the business)*
- 2.) Irritability and lack of quality time with family:
Goal- to spend quality time with wife and children
- 3.) Overwhelmed by racing thoughts, shakiness and agitation:
Goal- to not get overwhelmed and completely panicked by racing thoughts and bodily agitation

Data from the change interview, questionnaires and the therapists' process notes will be drawn upon to provide evidence for and against movement towards client goals; as shown in Tables 25A-B.

Table 25A. Evidence of movement towards goals

Session	Evidence	Source
(1)To cope better with work challenges (e.g. <i>amount of phone calls, unexpected problems, managing staff and workload, making decisions about the business</i>)	<p>Reliable and clinically significant decline in problem severity from pre- to post-therapy. Session 1; score of 6 ('very considerable') to session 6; score of 2 ('very little').</p> <p>'I am probably pushing harder and getting people to try and cover for me, even when I probably wouldn't have done before, I'm trying to trust people a bit more (lines 127-129)</p> <p>Session 3- Joe identified values underlying work role and reflected on the personal costs of it continuing as it is.</p> <p>Session 4- Joe realises much of his stress is 'normal' given his unique work situation and his difficulty concentrating is linked to lack of sleep and over-working. Joe engages in values discussion, recognising changing priorities as he ages and post-cancer experience. Joe commits to altering his working hours from 7am-10pm to 7am -6pm with a day a week covered by staff member.</p> <p>Session 5- Joe continues to manage phone calls and unexpected problems at work. Received positive feedback from clients during week. Joe makes decision regarding staff management. Joe consolidates decision to sell the business. Joe is able to switch off his work phone during session. Joe made important decision not to cancel upcoming family holiday and arranged work cover.</p> <p>Session 6- Joe felt positive about work sale decision and has been in contact with estate agents. Joe identified aspects of work that he wants to gain from another role and aspects of work that are unhelpful to him and family. Joe has started using lists and talking to his wife more about</p>	<p>PQ</p> <p>Change Interview</p> <p>Therapist' process notes</p>

	workload. Reduced work hours in short-term.	
(2)To spend quality time with wife and children	<p>Reliable and clinically significant decline in problem severity from pre- to post-therapy. Session 1; score of 6 ('very considerable') to session 6; score of 2 ('very little').</p> <p>'...just did my best to try and take time out for myself and things like that and my family, and the important things in life' (line 117)</p> <p>Session 3- reflected on irritability towards daughter and made goal to use strategies to help him stay engaged with her. Joe recognised impact of the business upon wife and children and their time together. Had not shouted at children this week.</p> <p>Session 4- following previous week's goal- Joe finished work one day during week and prioritised dinner with family. He stayed at the meal despite experience of anxiety and racing thoughts. Continues to spend time playing with young daughter, despite 'feeling irritable'. Joe recognised that internal experience does not dictate behaviour.</p> <p>Session 5- made decision not to cancel upcoming family holiday. Decision to sell business in order to move closer to be involved in children's lives and become closer to wife again. (went on family holiday between session 5 and 6)</p> <p>Session 6 – Joe started to talk to his wife more about the workload and mental health experiences. Joe planned fishing trip with daughters.</p>	<p>PQ</p> <p>Change Interview</p> <p>Therapist' process notes</p>
(3)To not be overwhelmed and panicked by racing thoughts and bodily experiences	<p>Reduction in problem severity over the 6-weeks of therapy from '6'- very considerably' to '5' considerably.</p> <p>'knowing it's normal to have these kind of things' (line 36)</p>	<p>PQ</p> <p>Change Interview</p>

‘perhaps being able to just...it’s hard to explain really, but umm, when it comes on I suppose I’m not so flustered by it, I can probably try and relax a bit more, I just try not to let it affect me and take over, whereas before when it’s a really unknown you don’t know how to cope with you know’ (lines 37-40)

‘when I first contacted her I wasn’t on the right track at all, I was really finding it difficult and really battling with it and not understanding it, and then Nicolle helped me to do that really’ (lines 75-77)

‘I just had to go and lie down and just close my eyes and try and yeah, just let it go really, but even then it was perhaps helping because I was trying not to stress and worry over it, just kind of let it happen’ (lines 216-218)

Session 3 -Engaged in mindfulness exercise where he identified unpleasant thoughts and watched them float by on a stream. Joe said he used this technique during the week despite finding it difficult.

Therapist’
process notes

Session 4- Joe gained insight into the role of evaluating thoughts upon internal experience- he linked ‘positive’ adrenaline experience of riding motorbike to the current ‘negatively judged’ anxiety experiences. Joe said that he better understood his bodily reactions and was less fearful of them.

Session 5- Joe makes link between fighting internal experiences or trying to problem-solve them away and their amplification. Joe made decision to try ‘allowing’ it when it shows up. Joe used distancing techniques such as ‘hello my old friend’ which he found helpful during the week.

Session 6- Joe reflected on racing thoughts/agitation during family holiday. Despite a couple of ‘episodes’ he used some strategies and took ‘time out’ which enabled him to stay on

the holiday. Joe recognised that this experience is no longer stopping him from doing important things- he just would like it to '*disappear in an ideal world*'. Joe described a 'lightbulb moment' during the week where he was sitting in a garden swing and noticed internal sensations like anxiety.

Notes. PQ scoring involves rating how much the problem has affected the person over the past week: 1= Not at all bothered, 2= Very little, 3= Little, 4= Moderately bothered, 5= Considerably, 6= Very considerably, 7= Maximum possible. PHQ-9
item scoring involves rating frequency of problem on a 4-point Likert scale: 0=not at all, 1=several days, 2=more than half days, 3= nearly every day GAD-7 total scores
indicate severity of anxiety: 0-5= mild, 6-10=moderate, 11-15=moderately severe, 15-2= severe.

Table 25B. Evidence of movement away from goals

Session	Evidence	Source
(1)To cope better with work challenges (e.g. <i>amount of phone calls, unexpected problems, managing staff and workload, making decisions about the business</i>)	<p>Sessions 1-4 Joe unable to switch work phone off during sessions. Sessions 2 and 3 Joe takes telephone calls and it noticeably stressed by them and confused about presenting challenge.</p> <p>Session 2 – Joe feeling frustrated and overwhelmed by work situation- business losing money and requiring all of his time and energy. Joe feels 'less competent than I ever have'. Joe said he cannot cope with staff who need 'hand holding' which leads to frustration.</p> <p>Session 3- Joe reflected on work incident during the week where he inappropriately shouted at an employee.</p>	Therapist process notes
(2)To spend quality time with wife and children	<p>Following session 4- Joe missed his daughter's school play as he got caught up at work. Takes work telephone calls from when he wakes to when he sleeps, regardless of whether he is doing something with family. Thinking of cancelling family holiday.</p> <p>Session 5- would like to take daughters out on boat trip, but fears he will have overwhelming anxiety experience.</p> <p>Daughter and wife had noticed Joe's irritability towards his daughter during the week; Joe felt guilty about this.</p>	Therapist process notes
(3)To not be overwhelmed and	No reliable or clinically significant change in this problem, according to self-report.	PQ

panicked by racing thoughts and bodily experiences	<p>Session 2- Joe described feeling trapped by this experience. Very distracted during session due to racing thoughts. Woken up at night by worries- difficulty sleeping. 'my old self could cope with anything'.</p>	Therapist process notes
	<p>Session 3- Joe said that he found it difficult to separate fighting the experience to 'letting it be there'. Night times are difficult, Joe continued to wake up worrying which impacts his productivity the next day. Recalled an anxiety episode in the week where he said aloud 'leave me, I can't cope with this'.</p>	
	<p>Session 5- Joe describes finding it too difficult to use coping strategies when thoughts are racing too much; happened approx. once/week. Joe continues to try to logically problem-solve the experience when it emerges.</p>	
	<p>Session 6- 'episode' during meal with his family including: heart racing, racing thoughts, nausea. Joe viewed this as a 'set back' in his recovery.</p>	Change Interview
	<p><i>(INT: you described earlier about not feeling as flustered and being able to use the techniques and things that Nicolle taught you, do you think there was anything that went on outside of your sessions that kind of encouraged you to do that, or made it harder for you to do that?)</i> 'Umm yeah both really, sometimes out of the sessions I could use it and sometimes I couldn't, it was sometimes...yeah, sometimes you could be in control but when I was on holiday it got that bad that I couldn't do any of it (209-216)</p>	
	<p>'I really didn't think I was the person that would be affected by things like this, I thought I was a strong-minded person' (lines 232-324)</p>	
	<p>'I went on holiday...afterwards in between seeing Nicolle</p>	

and this conversation now, and I had quite a few bad days,
quite bad, and yeah I kind of used what she said but I felt
like I wanted something else to use' (lines 172 175)

Note. PQ scoring involves rating how much the problem has affected the person over the past week: 1=

Not at all bothered, 2= Very little, 3= Little, 4= Moderately bothered, 5= Considerably, 6= Very
considerably, 7= Maximum possible.

Note:

PHQ-9 item scoring involves rating frequency of problem on a 4-point Likert scale: 0=not at all, 1=several
days, 2=more than half days, 3= nearly everyday

C. Evidence for and against shifts in ACT processes

Tables 26A-F outline evidence for and against change in the six psychological processes, based upon therapist process notes and session recordings.

Table 26A. Evidence of change in the process of Acceptance

Session	Example of acceptance	Refutation
1*	Joe recognised that feeling sad was normal in his situation- he expected this to some degree.	<i>'I know what I'm feeling is wrong'</i> In session- alternated between describing level of distress and attempting to put 'positive spin' on current situation <i>'but I'm sure I'll be fine, I need to give it time maybe'</i> Joe had tried different strategies to try to get rid of inner experiences.
2**	Shift- some degree of creative hopelessness- Joe could reflect on workability of attempts to 'feel better' and inability of anyone to control feelings. Anxiety struggle switch metaphor- Joe said he 'completely identified with that'.	
3**	Leaves on stream mindfulness exercise; noticed thoughts, saw them come and go	Still determined to 'get better', meaning reduce anxiety and low mood symptoms.
4*		
5*	Intense anxiety experience during week- initially fought with it shouting 'leave me alone', but recognised this amplified it. Then 'gave up the fight' and accepted it was there for those moments. Joe actually paid attention to it, noticing what it really felt like.	
6*	Joe reflected on racing thoughts/agitation during family holiday. Despite a couple of 'episodes' he used some strategies and took 'time out' which enabled him to stay on the holiday. Joe described a 'lightbulb moment' during the week where he was	Joe is not completely convinced of the willingness/acceptance stance to anxiety experience. Does not believe that he is always able to do this.

sitting in a garden swing and noticed internal sensations like anxiety
Discussion about co-existing with physical sensations of anxiety. Joe made decision to take a position of willingness.

*Session included *minor* work on this process

**Session included *substantial* work on this process

*** Work on this process was *primary* to the session

Table 26B. Evidence of change in the process of Present Moment Awareness

Session	Example of being present	Refutation
1**		<p>Cancer treatment experienced on 'auto-pilot' and seeing 'images of dead corpses' still unable to concentrate on here and now, constant focus on what he has to do next.</p> <p>Watched television, but would miss chunks of storyline.</p> <p>Constantly got 'lost in my thoughts'.</p> <p>In session- very distractible, pressured speech and unable to follow simple conversation. Visibly plagued by future worries.</p> <p>Unable to focus on body when asked question about current state.</p>
2*	Recognition/insight that he tries to convince himself that he is 'ok' and the cost of doing this.	Very distracted during session- took work calls and asked me to repeat questions.
3**	<p>Engaged in leaves on stream mindfulness task- Joe recognised his level of distraction, but was able to bring awareness back to exercise.</p> <p>Joe gained insight that the physical experience of panic/anxiety is the same as adrenaline he gets when rides on</p>	

	motorcycle- lightbulb moment.	
4*	End of session- Joe reflected on level of distraction during session. He noticed his thoughts wander.	
5*		
6*	Joe much more able to notice feelings and thoughts as they appear. Takes time out of his day to notice surroundings and bodily experiences.	Continued to find it hard to implement structured time in day to practice mindfulness.

*Session included *minor* work on this process

**Session included *substantial* work on this process

*** Work on this process was *primary* to the session

Table 26C. Evidence of change in the process of Cognitive Defusion

Session	Example of defusion	Refutation
1*		Fusion with thoughts: 'I'm not as I should be' ' <i>I need something to get rid of this</i> ' ' <i>I should be able to cope with this, I've been through worse</i> ' Joe did not see thinking as ongoing process.
2***	Shift- Joe seemed to grasp 'mind as a problem-solving machine' and 'doom and gloom radio' metaphors. Would write down his thoughts during the week as a coping strategy- indicating some degree of separation. Joe said he found the 'hands as thoughts' metaphor ' <i>powerful</i> ' and recognised for the first time how he becomes completely consumed by worries/thoughts. Shift- Joe could identify several thoughts in session- e.g. 'I'm letting my family down' and 'I don't have enough	Language exercise – to see how mind responds to statements. Joe was unable to recognise his response as thoughts- indicating fusion with mind. Judges himself when he is irritable with daughters. Goal of writing down his thoughts was to try and get them out of his head. Mindfulness task in session- Joe said his thoughts were 'whizzing so fast' that he could not identify all of them.

	staff and can't cope'	
3**	<p>Separation: Joe used 'hello my old friend' distancing technique when he noticed intense health-related worries emerge during car journey. Joe said the thoughts 'surprised him'.</p> <p>Leaves on stream mindfulness exercise- noticed thoughts, saw them come and go. Joe decided he would use this technique at night.</p> <p>Joe noticed that his mind makes him feel bad for having certain thoughts.</p>	<p>Joe described finding it difficult to understand which thoughts to 'let go of' and which ones to listen to.</p> <p>Leaves on stream mindfulness exercise- Joe automatically evaluated the thoughts that he noticed</p>
4**	Consolidation of how to use separation strategies.	Fused with thought ' <i>I don't know what will happen if I sell the business</i> '
5**		During week, Joe noticed racing thoughts and tried the leaves on a stream exercise to reduce them.
6*	Intense panic experience while out for family meal- stayed despite thoughts of wanting to leave.	Continued challenge recognising thoughts that are helpful/workable and those to separate from

*Session included *minor* work on this process

**Session included *substantial* work on this process

*** Work on this process was *primary* to the session

Table 26D. Evidence of change in the process of Self-As-Context

Session	Example of self-as-context	Refutation
1*		
2	Able to reflect on tragic life events and the continuity of carrying on.	Joe judged himself as 'different' to his 'old self' and feared that he would not be the man he used to be (i.e. functioning, coping, happy)
3*		Fear of losing role as a 'business owner'
4*	Recognition that he has been through many challenging experiences and coped to different degrees, but he hasn't changed inside.	<i>'I've always been a positive person'</i>
5*		
6***	Engaged in self-as-context experiential exercise. Joe said it was 'powerful', as he had not recognised this continuous part of himself. Joe said it enabled him to think differently about 'losing my work role'. Joe generated some unhelpful self-descriptions he has previously held onto e.g. 'I am a strong person', 'I am the financial provider'	

*Session included *minor* work on this process

**Session included *substantial* work on this process

*** Work on this process was *primary* to the session

Table 12E. Evidence of increased clarity of values

Session	Example of clarity of values	Refutation
1*	Identified that his wife and children are 'the most important' thing to him. Said this aloud (for first time) and realisation of his current neglect of them-emotional experience.	Constant working, driven by fear of stopping. Gained no satisfaction, enjoyment from work. Focus on trying to escape from inner experience rather things that are important to him in life.

- 2* Increased recognition of importance of physical health- friend who shared cancer journey has rapidly deteriorated – this enabled him to reflect on values.
- 'I just want a mundane 9-5pm office job' – desire driven by frustration and the need for time at home.
- 3* Increased clarity of importance of relationship with wife and previous neglect of it.
- Engaged in discussion about the prospects of business and his motivations/desires/values. Identified aspects of the job that are important and those that are compromising other aspects of his life.
- 4*** Occupational values: organising, creativity, success (in terms of customer experience)
- Shift in viewpoint- does not want mundane job- needs work to be creative and interesting. Recognised that previous thought was driven by avoidance.
- Battling with fear of 'letting customers down' and desire to spend time with family- compromising on family at present.
- Recognition that the business is unsustainable, and if nothing changes he may lose his family and compromise physical recovery.
- Reflected on visit to see friend who is dying- led him to think more about the future.
- Recognition that his values are not in line with actions in relation to work-life balance.
- 5** Engaged in 80th birthday values experiential exercise- found it 'emotional but eye-opening'. Joe said he was determined not to waste the

years he has. Shift in perspective when he realised his employees and customers were not at the party, but his wife, children and grandchildren.

- 6** Increasingly determined to build closer relationship with wife and daughters.
Joe described importance of his health and steps he is taking to improve it.

*Session included *minor* work on this process

**Session included *substantial* work on this process

*** Work on this process was *primary* to the session

Table 26F. Evidence of committed action

Session	Example of committed action	Refutation
1*	Joe went to work every day, generally stayed there even if he became overwhelmed. Joe had sought out therapy. .	Unable to make decisions regarding work, constantly put important things off - ' <i>I haven't got the head at the moment to sort this out</i> ' (re: his business) Joe claimed his family were very important, but dedicated no time with them. Current actions driven by avoiding anxiety Unable to commit to next session time, said that he could 'only deal with few days at a time.
2*		Refused some aspects of work because of fear they might ' <i>tip (him) over the edge</i> '. Unable to contemplate hiring another person because of fears they might not be good enough. Joe said he used to spend time with wife going out for meals, but since he has lost his taste he ' <i>can't be</i>

bothered, it's just disgusting'.

Unable to commit to next session time.

3*	<p>Experienced intense worries during car journey to work, but he did not allow thoughts to stop him.</p> <p>Joe able to do more tasks at work and considered hiring new employee.</p> <p>Doing more exercise, building strength up. Drinking high calorie drinks to increase weight.</p> <p>Practical discussion about managing irritability when spending time with daughter. Previously Joe had left room or avoided time together, but wanted this to be different.</p> <p>Agreed to have a meal with his wife, despite the unpleasant taste of food.</p>	<p>Continued to struggle to achieve time with family. Feared that setting goals would be 'too much to handle'.</p> <p>Joe agreed time of next session and engaged in discussion about family holiday.</p>
4**	<p>Goal- to have a meal with wife, talked about his current struggles openly.</p>	<p>Joe described feeling like he had 'no choice' regarding work situation as employees continued to let him down. Hesitance committing to decision regarding work, despite deliberating over it for 2 months.</p>
5***	<p>Joe began using strategies to help memory for important things- e.g. writing lists, telling wife, setting reminders.</p>	<p>Joe said that he would like to take daughters out on boat trip, but fears he will have an anxiety attack.</p>

Joe consolidated decision to sell the business. In process of recruiting a temporary manager to 'hold' the business while Joe organised its sale.

Goal- to have mid-week lunch with his wife (first time in several years without the children) organised employee to cover work phones.

- 6*** Went on family holiday- despite fears of anxiety and workload increasing while away. Reflected in ability to do what matters, despite unpleasant feelings and nagging thoughts '*it will all go wrong while I'm away*'.
Continued to exercise twice/week.
Spent an afternoon with his daughter- found meaning and enjoyment from the experience, noticing qualities of her he had previously not been aware of.
Reduced his work hours.
Intense panic experience while out for family meal- stayed despite thoughts of wanting to leave.
Joe recognised that the panic/anxiety experience is no longer stopping him from doing important things- he just would like it to '*disappear in an ideal world*'.
Set short-term goals- 'to see the business sold', 'continue prioritising family', 'continue to build bodily strength and increase weight'.

*Session included *minor* work on this process

Session included *substantial* work on this process* Work on this process was *primary* to the session

D. Arguments

Affirmative Case

There has been a substantial change in Joe's problems

Joe said that he had been struggling with intense panic and depression since the cancer treatment, 4-months prior to therapy. Baseline GAD-7 and PHQ-9 scores were collected 2-weeks prior to the therapy, further supporting the assertion that his distress was stable. Comparatively, following the introduction of therapy, distress as measures by the GAD-7 and PHQ-9 showed reliable and clinically significant improvements, according to established norms (IAPT, 2011; NHS England, 2014). Over the 6-weeks of therapy Joe's anxiety shifted from the 'severe' category (score 20) to 'mild' (score of 7) and remained at that level at 3-months follow-up. Similarly, Joe's depressed symptoms shifted from the 'moderately severe' category (score of 17) to 'mild' (score of 7) (see figures 1 and 2).

Joe generated 3 specific problems that he wanted help with at the start of therapy: 1.) inability to cope with challenges; only able to cope with small tasks one at a time, 2.) irritability/lack of quality time with family, 3.) overwhelmed by racing thoughts, shakiness and agitation. The extent to which these 'bothered' him was tracked each week using the PQ. Table 25A shows reduced in severity from pre- to post-therapy in all 3 problems. Joe's inability to cope with small challenges and irritability towards his family showed reliable and clinically significant improvements according to established norms ($RCI = 1.67$) (Elliott et al, 2016). The extent of problem 3 (overwhelmed by racing thoughts, shakiness and agitation) varied considerably over the course of therapy. The change in this problem dipped below the caseness threshold at session 5, however rose slightly at session 6 indicating a reduction from pre to post-therapy of 1-point. Therapist' process notes indicate that Joe took time to 'let go' of his desire to control and 'get rid' of this anxiety experience. While he indicated understanding how to cope with it better, he still found it challenging to tolerate it:

'perhaps being able to just...it's hard to explain really, but umm, when it comes on I suppose I'm not so flustered by it, I can probably try and relax a bit more, I just try not

to let it affect me and take over, whereas before when it's a really unknown you don't know how to cope with you know' (lines 37-40)

'I was kind of battling with it and fighting with it when I probably should have left it, just let it be there but try not to let it affect me' (line 54)

Extracts from Change Interview (see Table 1)

In addition to positive changes in psychological distress and client-generated problems, the AAQ-II process measure indicated a reduction in psychological inflexibility from pre- to post-therapy. This is the central aim of ACT, over and above influencing psychological distress. Joe's inflexibility at session 1 was 19 and at session 6 it was 14. While this does not represent a significant shift, therapist process notes clearly corroborate shifts in the sub-processes of psychological flexibility. Some of the most convincing evidence is the shift in Joe's ability to be aware of the present moment within latter session compared to earlier sessions where he was highly distractible, only able to focus on future experiences and had highly pressured speech. Further to this, shifts in value-driven action are convincing evidence of increased flexibility; whereby Joe reassessed his life direction and made life-changing decisions about his family and business. According to the ACT model, such significant changes would only be possible with increased psychological flexibility, bringing question to the sensitivity of the AAQ-II to pick up on week-to-week shifts in specific processes. In session 6, the therapist addressed Joe's understanding of the questions in the AAQ-II and it emerged that he did not like some of the phrasing which is likely to account for non-clinical pre-therapy score.

Joe attributed these changes to the therapy (retrospective attribution)

An important element of the affirmative case is that the client attributed changes at to the therapy process. There are several quotes from the change interview where Joe describes how the therapy enabled him to better understand his experiences and develop different ways of coping with them;

'Well just kind of understanding things a little bit more I think really, and umm knowing that...I'm the kind of person that I'm kind of an unlikely person, or I thought I was an unlikely person to get this anxiety, and umm, and I was kind of battling with it and fighting with it when I probably should have left it, just let it be there but try not to let it

affect me, and I think that's what Nicolle was trying to kind of teach me really'(lines 50-55)

'I was trying to push it completely out of my mind when really I was probably better just let it be there but not let it take control really, that was probably one of the main things' (lines 84-86)

Furthermore, Joe said that the therapy '*definitely accelerated*' his mental recovery and he found the process of being able to talk openly to a therapist helpful.

Extra-therapy events are insufficient to account for change

There are no plausible or obvious non-therapy explanations of the pre- to post-therapy changes for this case. Joe did not describe any events or experiences outside of therapy (that were not linked to therapy in some way) that were significant or helpful to him over the 6-week period. Joe did not have high expectations of therapy, as indicated in therapist' process notes where he said that he was '*not that hopeful, but willing to try anything*'. Notes also indicate that although Joe wanted help for his distress, he found it difficult to commit to sessions and goals, particularly at the beginning of sessions – ruling out the hypothesis that personal qualities (such as determination) led to the observed changes. Over the course of therapy, Joe faced daily challenges, including his wife's frustration that he was struggling to cope, raising three daughters who each have their own needs, the death of a close friend, work- related challenges (such as unreliable staff) and significant financial challenges.

Joe describes *helpful aspects* of therapy that are clearly linked to shifts in his problems.

Links between Joe's descriptions of helpful aspects of therapy and positive change (as seen in therapist process notes and quantitative outcome measures) is evidence of therapy-driven change. A convincing example is Joe's report of the usefulness of learning and understanding his inner experiences and the unworkability of fighting with anxiety (see table 1). According to therapist process notes, sessions 1-2 focussed on creative hopelessness (i.e. recognising the reality that trying to control feelings and inner experiences gets in the way of living a meaningful, rich life). This correlates with a reliable reduction in PQ ratings for the problem '*overwhelmed by panic, racing thoughts*

and agitation' between sessions 1-2. Further to this, session 3 included work around thought defusion strategies and willingness, although this was followed by a small rise in PQ scores, the therapist' process notes indicate that Joe had a couple of intense experiences that week and was using the techniques to 'get rid' of the experience; however session 4 involved a review of strategies and their purpose; which was followed by another reliable reduction in PQ scores the next session.

Weekly process data reveals covariation between in-therapy processes and week-to-week shifts in client problems (process-outcome links)

Convincing evidence for the assertion that the therapy itself significantly contributed to positive change are process-outcome links. There are several instances where significant therapy events (as shown in tables) are followed by positive shifts in quantitative measures. For example, between session 4-5 there is a reliable reduction in ratings of problem 1 (inability to cope with work challenges) and 3 (irritability and lack of quality time with family). During session 4, therapist process notes indicate that there was a shift for Joe: towards increased recognition of the importance of his family over and above work commitments and success. Joe was faced with the realisation that he may lose his family because of his work situation, and he responsively set goals to re-align his actions with his values (i.e. prioritise time with his wife and children). Joe also committed to the significant value-driven decision to sell his business. These significant therapy events correlate with subsequent reductions in PQ scores for both problems.

Conclusion

In this brief, you have been presented with multiple lines of evidence that:

- There has been substantial change in Joe's problems
- Joe attributed changes to therapy
- Extra-therapy events are insufficient to account for change
- Shifts in problems are clearly linked to therapy events

Sceptic Case

Joe's problems were not stable

Baseline questionnaire data is not sufficient to claim that Joe's problems were stable. The GAD-7 and PHQ-9 are only brief measures of psychological distress and were administered only 2-weeks prior to the start of therapy. Furthermore, in the change interview, Joe described how he was '*improving slowly on (his) own anyway*'. This makes it entirely plausible that Joe's distress would change naturally over time.

Joe's apparent changes were minor

The affirmative case has given a disproportionate amount of weight to quantitative data when assessing evidence of significant change in Joe's distress. It is clear from the change interview that Joe's descriptions do not corroborate such dramatic shifts in anxiety and depression. Joe describes how the therapy has enabled him to understand himself and his experiences better and make use of some coping strategies; however, Joe makes no reference to actual improvements in the anxiety or low mood. In fact, Joe appears to predict that he will continue struggling, evidenced by the statement, '*I would like to have something else to try if I went on struggling, but as I say I don't know if there is anything out there that I can try, anything different*' (lines 224-226). In addition to qualitative data, Joe's PQ ratings of problem 3 (i.e. overwhelmed by racing thoughts, shakiness and agitation) did not reliably or significantly improve over the course of therapy.

Relational artefacts

Therapist process notes describe how Joe was grateful to receive therapy, which is particularly noteworthy because his treatment hospital did not have psychology provision. This, combined with rising scores on the SRS, makes it reasonable to assert that Joe's outcome ratings were influenced by a desire to be worthy of his therapist's effort. In the change interview, when asked global questions about the usefulness of therapy, he makes generic statements such as '*it really helped me*', but when prompted to provide more specific answers, only had limited examples – which he often repeated in different ways. For example;

'Well one it kind of helped to share things anyway, umm the changes...I'm just trying to think...knowing it's normal to have these kind of things...' (lines 35-36)

‘when I first contacted her, I wasn’t on the right track at all, I was really finding it difficult and really battling with it and not understanding it, and then Nicolle helped me to do that really’ (lines 75-77)

Furthermore, apparent changes outlined in the affirmative case (e.g., on outcome measures) occurred in spite of a lack of change on the ACT-specific process measure (AAQ-II): The lack of change on the ACT-specific process measure suggests that any outcome changes were likely due to other therapy (e.g., relational) or non-therapy factors.

Statistical errors cannot be ruled out

There are some inconsistencies within quantitative measures, bringing question to the validity of the outcomes concluded by the affirmative case. The GAD-7 measures anxiety symptoms and showed a decline from ‘severe’ to ‘mild’ over the course of therapy. However, this is not supported by PQ ratings for problem 3; ‘overwhelmed by racing thoughts, shakiness and agitation’ which varied over the course of therapy, and at post-therapy remained above the clinical threshold. It is therefore possible that measurement issues inflated the change described by the affirmative case. Joe’s ratings of the AAQ-II suggest that his psychological flexibility did not reliably improve, and was not even in the clinical range at the beginning of therapy. These results are inconsistent with described shifts in psychological processes, bringing into question Joe’s ability to accurately represent his experience on the AAQ. This is corroborated by therapist process notes which describe how, in session 6, the therapist addressed Joe’s understanding of the questions in the AAQ-II and it emerged that he did not ‘like’ some of the phrasing, which is highly likely to have influenced the validity of his ratings.

Conclusion

This sceptic brief has identified robust and persuasive evidence that alternative explanations exist to counter the affirmative case’s assertions. This evidence provides a basis for you to reject the argument that Joe changed substantially during the period of therapy and to conclude that any minor changes that may have taken place were most likely caused by other factors and not by the therapeutic model.

3.3 Adjudication Results

Tables 26A-C outline the raw data obtained from each judge during the adjudication stage.

Table 26A. Judges' responses for client 1 'Tim'

	Judge 1	Judge 2	Judge 3
How would you categorise the outcome for this client?	Recovered	Recovered	Improved
Deteriorated (clear deterioration)			
Unchanged (no clear changes)			
Improved (clear improvement)			
Recovered (clear improvement and functional recovery in key problem areas)			
How certain are you? (%)	80%	80%	80%
What evidence presented in the rich case record mattered most to you in reaching this conclusion? How did you make use of this evidence?	Corroboration of standardised assessments of anxiety and depression with PQ improvement and self-reported improvement Little deviations	Consistency of indications across different types of evidence: quantitative (standardised measures and personal goals), and the full interview transcript	Clear articulation from the client; language use; outcome measures (in general).

	from a narrative of improvement was very convincing evidence.	This evidence showed quite remarkable improvement, with a combination of factors indicating this is recovery, potentially long-lasting and maintainable in the context of further difficult life events. Quantitative measures suggested that Tim is now below clinical cut-off. This was consistent with interview, which demonstrated clear, specific insight into why this occurred		
To what extent did the client change over the course of therapy?	Substantially	Substantially	Considerably	
No change (0%)				
Slightly (20%)				
Moderately (40%)				
Considerably (60%)				
Substantially (80%)				
Completely (100%)				
How certain are you? (%)	80%	100%	80%	
What evidence	-Strongest case was personal	Linking together quantitative measures	The client states that ACT was an	

presented in the rich case record mattered most to you in reaching this conclusion? How did you make use of this evidence?	account given in the change interview, which expressed far reaching changes in a number of areas.	and full transcript of his interview. I was looking for markers of substantial, potentially lasting, intrapsychic change that would lead to not only symptom reduction, but the potential for personal growth and maintainable, long lasting recovery. From matching this evidence to ATOS criteria it was clear that a remarkable and multi-faceted change process had occurred. Tim shows change occurring in each of the seven of the therapeutic objectives specified by the ATOS, and could talk about them clearly and highly specifically, using the concepts and language of ACT, and in an intelligent and reflective way, making these ideas his own, and relating them to his own life. Tim changed, or evolved, personally, in terms of his outlook on	epiphany, better than previous therapy, he could highlight techniques and methods learned.
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		life, his inner world, his external world, and how he navigates forward healthily in these contexts.	
In your view, why did the client remain unchanged over the course of therapy?			
To what extent is the client's change due to his experience of therapy? (see previous scale)	Substantially	Substantially	Considerably
How certain are you? (%)	100%	100%	80%
What evidence presented in the rich case record mattered most to you in reaching this conclusion? How did you make use of this evidence?	Although the baseline did not appear wholly stable, the background to the case suggested comparatively longstanding problems with a dose-response effect on all measures. Tim's specific identification of ACT-process related changes is convincing	Evidence from the full interview transcript mattered most - a) the way he spoke about the changes involved an interweaving of ideas, metaphors and reflections that were consistent with the therapy approach, and evidenced that he had connected with this approach, taken the ideas on, and blended with his own philosophy/mindset/'life model' b) clear from the	Client language/report. Changes in outcome measures.

	<p>corroborating evidence therapy caused the change, coupled with process and outcome data.</p>	<p>transcript he made a particularly strong bond with Nicolle, full of a sense of being understood, connected with on his level, cared for, his problems thought about in fruitful ways, and warmth. The strong therapeutic alliance was more evidence that therapy was responsible for change</p> <p>c) no evidence that extra-therapeutic factors played a major part, although it is worth noting that Tim is having ongoing help (e.g. mindfulness course)</p>	
<p>What, if any therapy processes (mediator factors) do you feel were helpful to the client?</p>	<p>Therapeutic relationship as central to their experience also clearly specific ideas and techniques that helped the client from his reports at the change interview. In particular: identification of his values and</p>	<p>-New form of insight into his experiences, re-framing in a more helpful way</p> <p>- Motivation to try a different way of being, if presented in a person-centred way, and a framework that he resonated with</p> <p>- New learning in the sense of express himself openly with therapist and adapting to work in a way that</p>	<p>Acceptance, mindfulness, defusion</p>

	<p>living them out seemed important to him, letting go of the struggle with his striving at work in particular seemed an important and insight (acceptance or defusion)</p>	<p>suits the ongoing consequences of his illness (e.g. fatigue)</p>	
<p>Which characteristics or personal resources (moderator factors) do you feel enabled the client to make the best use of therapy?</p>	<p>Tim had realistic expectations of therapy, in that he was not expecting a "miracle cure" and by implication was more willing to put effort in to promote his own recovery. He also stated that he wanted to "make the most" of the opportunity, which suggests a higher degree of motivation.</p>	<ul style="list-style-type: none"> - Little Shame - High level of emotional and cognitive intelligence, - Education background, enables strong ability to a) articulate internal world and b) reflect on internal world. - Relatedly, high 'cultural capital' enabling a positive and valuing experience of services - Ability to form strong relationships and deal with minor setbacks positively, without ruminating Able to in draw help from others and system around him 	<p>Previous therapy experience; intellectual capacity.</p>
<p>How strong is your belief that ACT-specific processes contributed</p>	<p>80%</p>	<p>100%</p>	<p>80%</p>

to therapy-related change for the client?			
Which ACT-specific processes and techniques, if any, do you feel were helpful to the client?	Acceptance, valued and cognitive defusion seemed prominent. Defusion from and acceptance of anxiety provoking thoughts, feelings and physical sensations seemed key to the changes he experienced. Then work on values seemed to help him get back on track.	Disclaimer: It's slightly problematic answering this question as some of the processes specified in ACT are also specified in other approaches but talked about in different words. For instance, present moment awareness translates to moment-to-moment psychodiagnosis in ISTDP, Cognitive Defusion translates as rendering Defences ego-dystonic Cognitive defusion (in particular the bus metaphor) - Present moment awareness -Values Evidence in part D-matching session recordings to ACT processes was strong, especially in context of interview transcript.	Acceptance; defusion; self as context; metaphor use; mindfulness.
How strong is your belief that other (generic) therapy processes contributed	80%	100%	40%

to therapy-related change for the client?			
Which generic therapy processes, if any, do you feel were helpful to the client?	-therapeutic alliance. Tim really seemed to like Nicole.	-strong therapeutic alliance - focus on goals and specified difficulties - therapist attributes of warmth, competence - Cognitive and behavioural reframing: -Insight into problematic defensive/avoidant patterns of thoughts & actions - Well managed ending: linking and coordinating with other sources of care	-therapeutic alliance
Overall, what proportion of the client's therapy- related change was due to ACT and generic processes?	60% ACT 40% Generic	56% ACT 44% Generic	80% ACT 20% Generic

Table 26B. Judicial responses for client 2 'Paul'

	Judge 1	Judge 2	Judge 3
How would you categorise the outcome for this client?	Improved	Improved	Improved
Deteriorated (clear deterioration)			
Unchanged (no clear changes)			
Improved (clear improvement)			
Recovered (clear improvement and functional recovery in key problem areas)			
How certain are you? (%)	100%	80%	60%
What evidence presented in the rich case record mattered most to you in reaching this conclusion? How did you make use of this evidence?	-Triangulation of standardised quantitative measures, Paul's Likert scale scores for his personal goals, and full interview transcript (seeing his quotes in the context of the whole conversation). -Most persuasive evidence was the consistency across these sources.	-Reliable (but not clinical) change observed on the PHQ-9 and GAD-7, coupled with the minimal change on problem 2 suggest improvement but not recovery. -His reports also seem a little less emphatic compared to Tim	-It appears from some of the outcome measures and the client's self-report that important changes have taken place. What is less clear in this case, however, is the degree of socially desirable responding; the client has not said anything detrimental about anyone in his

			medical /therapeutic journey, or his broader network. His phrasing often seems to indicate a social pleaser (not bad in itself) but perhaps may mean the self-report aspects here need to be considered within that context.
To what extent did the client change over the course of therapy?	Moderately	Considerably	Considerably
No change (0%)			
Slightly (20%)			
Moderately (40%)			
Considerably (60%)			
Substantially (80%)			
Completely (100%)			
How certain are you? (%)	80%	80%	60%
What evidence presented in the rich case record mattered most to you in reaching this conclusion? How did you make use of this evidence?	Consistency over types of data was important, perhaps more was the sense of Paul's change himself through the interview transcript. - Made use of this evidence by evaluating it against	-All bar one of the problems he identified at the beginning of therapy were causing minimal difficulty by the end of therapy. However, an important problem remained	-There appears to be more values-based action, and some evidence that particular metaphors had impact. However, broader outcome measures are not as convincing, and the

<p>McCullough's (2008) Achievement of Therapeutic Objectives Scale (ATOS). I have scored this question differently from the previous one because it seems really that Paul's symptoms have changed primarily, rather than Paul as a person ('character change' in ISTDP). It seemed there was a great deal of Exposure (to affect), that was facilitated by a New Learning experience with Nicolle, where Paul felt freer and more able to express himself and his feelings more openly, facilitated by ACT techniques. I have rated this score lower than the previous question because I don't see so much evidence of Paul having Insight into his idiosyncratic</p>	<p>an issue and clinical symptoms of anxiety and depression remained a problem. To me this suggested that there had been an improvement (as supported by his own reports) which is of clinical importance, but significant problems remain.</p>	<p>verbal report may be over-emphasising the changes that have taken place.</p>
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character defences,
i.e. seeing how his
habitual ways of
being have helped
caused problems,
and then moving on
to a different sense
of Self and pattern of
Relating to Others. I
made use of the
evidence from the
interview transcript
by looking for
indications that he
believes himself to
have changed as a
person - in
character, outlook,
behaviour with other
people, and so on.
There are some
suggestions of
reduced snappiness,
but this seems
through the relief of
talking to Nicolle
rather than a change
on level of
personality. It
looked like the
emphasis was on
Exposure (to affect)
and New Learning
(expressing affect
within the
therapeutic
relationship).

In your view, why did the client remain unchanged over the course of therapy?

To what extent is the client's change due to his experience of therapy?
(see previous scale)

Substantially

Substantially

Considerably

How certain are you? (%)

100%

80%

80%

What evidence presented in the rich case record mattered most to you in reaching this conclusion? How did you make use of this evidence?

-Affirmative argument was far more convincing than the sceptic argument - the latter did not seem well supported by evidence, whereas the former seemed to 'fit' the data better

-Stable pre-therapy baseline on standardised measures was important evidence.
-Client's identification of therapy as the cause of his improvement, coupled with reports that others (his partner) noticed the changes he was experiencing by attending sessions seems to indicate that it was at least a substantial contributor to the improvement.
-Furthermore, spontaneous improvement of

-here is a great deal of focus from the verbal report that and SRS that the relationship was important to this client. This seems to have acted as a vehicle for some behavioural changes, though the strength of these changes is less clear.

		<p>anxiety and depressive symptoms of the severity he was experiencing and over several months would be less likely to have caused the change than therapeutic input. That said, he is unable to identify many specific therapeutic processes to which he can attribute the changes he experienced.</p>	
What, if any therapy processes (mediator factors) do you feel were helpful to the client?	<p>-Experiencing of emotion within a safe and containing, supportive therapeutic context</p> <p>- Being able to calm himself and regulate his anxiety (e.g. breathing exercise)</p> <p>-Forming a strong therapeutic alliance</p>	<p>-Therapeutic relationship with Nicolle and general therapist skills are identified as important at the change interview. This doesn't mean that specific techniques weren't important but the evidence for the role of these factors is less convincing</p>	<p>-Aspects related to metaphor (in this case acceptance vs. control in relation to emotions) and Values clarification/action.</p> <p>-The therapeutic relationship, however, appears to account for a lot of the changes here (at least in terms of SRS and verbal report) rather than specific aspects of the therapy.</p>
Which characteristics or	<p>- Seemed fairly extroverted: able to</p>	<p>-His willingness to open up and</p>	<p>-Open to intervention</p>

personal resources (moderator factors) do you feel enabled the client to make the best use of therapy?	talk to others, open to socialising - Motivated and wanting to make the best use of the therapeutic space after previous attempts have been less effective ('I've been given another chance') -Generally seems of a quite positive, optimistic attitude, able to take in support from others when offered	express avoided emotions, despite feeling uncomfortable with this at first seemed helpful for therapy.	- Broad trust in health professionals (given positive previous experiences), wife had similar lived experience.
How strong is your belief that ACT-specific processes contributed to therapy-related change for the client?	60%	60%	20%
Which ACT-specific processes and techniques, if any, do you feel were helpful to the client?	-It is slightly problematic answering this question as some of the processes specified in ACT are also specified in other approaches but talked about in different words. (e.g. present moment awareness, values, committed action) . For instance,	-Acceptance and committed action. Accepting rather than avoiding or struggling against painful thoughts was identified as important by Paul. Also, taking action on improving his relationship with his children seemed important committed action.	-From evidence presented the client has not gripped on to some of the key elements associated with ACT, and instead has used (and understood) the aspects that are more concrete and more traditional CBT-like. The exception here is probably valued

present moment
awareness
translates to
moment-to-moment
psychodiagnosis
in ISTDP, Cognitive
Defusion translates
as rendering
Defences ego-
dystonic, and
acceptance as an
alternative to
experiential
avoidance is
translated as a
breakthrough of
Feeling/Impulse
(See Malan's
Triangle of Conflict).
Therefore although
these processes are
specified in ACT,
they are also
specified in different
models too, albeit in
different language.
- Acceptance and
Present Moment
Awareness:
overcoming
experiential
avoidance was I
think crucial to Paul.
This was enabled
through the
relationship with
Nicolle, and

action, and some
aspects of
acceptance vs.
control.

	<p>augmented through good use of technique (e.g. beach ball metaphor, which was returned to multiple times). Awareness of physical sensations with emotions perhaps deepened the process.</p> <p>- Some evidence of values and action with contact with his son, but less</p> <p>- Regulation of anxiety (e.g. breathing exercise)</p>		
How strong is your belief that other (generic) therapy processes contributed to therapy-related change for the client?	100%	60%	80%
Which generic therapy processes, if any, do you feel were helpful to the client?	<p>-Clear focus on goals and specific difficulties</p> <p>- Therapeutic environment with Roger's Triad (positive regard, empathy, congruence), with therapist competence in model</p>	<p>-Alliance and the empathy Paul felt seemed to give him confidence in himself as much as the ACT specific processes did.</p>	<p>-The non-ACT factors seem strong in this case - most of verbal report relates to therapeutic relationship. Where the TA has provided an impetus for change - this seems to have been in more of the traditional CBT</p>

	- Exposure to affect		sense, rather than a
	-New Learning :		deep understanding
	emotionally		on the part of the
	expression		client about thought-
	relationship with		action fusion etc.
	therapist		
Overall, what	ACT: 32%	ACT: 50%	ACT: 20%
proportion of the	Generic: 68%	Generic: 50%	Generic: 80%
client's therapy-			
related change was			
due to ACT and			
generic processes?			

Table 26C. Judicial responses for client 3 'Joe'

	Judge 1	Judge 2	Judge 3
How would you	Improved	Improved	Improved
categorise the			
outcome for this			
client?			
Deteriorated			
(clear			
deterioration)			
Unchanged (no			
clear changes)			
Improved (clear			
improvement)			
Recovered			
(clear			
improvement			
and functional			
recovery in key			
problem areas)			
How certain are	100%	80%	80%

you? (%)

<p>What evidence presented in the rich case record mattered most to you in reaching this conclusion?</p> <p>How did you make use of this evidence?</p>	<p>Consistency of indications across different types of evidence: quantitative (standardised measures and personal goals), and the full interview transcript.</p> <p>I used the filtered information in the tables less.</p> <p>I was interested in the arguments for and against to rule in/out major factors that would help account for the primary data above that was not obvious elsewhere.</p>	<p>Spontaneous recovery from such severe anxiety symptoms would be unlikely as would recovery from depressive symptoms. This is the main evidence of improvement however, one of the problems identified remained unresolved and the hindering aspects of therapy suggested some unresolved problems still remained.</p>	<p>The change scores appear reliable and significant.</p> <p>The qualitative data indicates that change was due to the intervention and not outside factors. There are still some residual issues, but clear evidence of behaviour change in the direction of valued behaviour - I imagine these changes will have significant impact going forward.</p>
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To what extent did the client change over the course of therapy?

Considerably

Substantially

Substantially

No change (0%)

Slightly (20%)

Moderately (40%)

Considerably

(60%)

Substantially

(80%)

Completely

(100%)

How certain are
you? (%)

80%

80%

80%

What evidence
presented in the
rich case record
mattered most
to you in
reaching this
conclusion?

How did you
make use of this
evidence?

Tables of process shifts used in combination with full interview transcript and quantitative measures- thinking about it in broader context of the ATOS's indications of therapeutic change (McCollough, 2008)
Joe has a level of insight and changing some of his ways of relating to his anxiety and internal world, and acting in line with values. However, there is still some conflict around how to relate to his inner world (to control or accept), some anxieties about what help is available afterwards (suggesting not all is resolved), the sense of wanting 'something more' (tools, ways of coping, number of sessions). My impression would be that gains may fall back a little.

Changes on standardised assessments combined with client reports of improvement. Standardised assessment would suggest a very large change over the course of therapy; however, the change interview comments are more measured and do not give full confidence that complete change has occurred hence selecting substantial rather than complete change.

Behavioural indicators - doing despite anxiety; valued behaviour (turning phone off, selling business, dinner with wife, etc.).

In your view,
why did the
client remain
unchanged over
the course of
therapy?

To what extent
is the client's
change due to
his experience
of therapy?

(see previous
scale)

How certain are
you? (%)

What evidence
presented in the
rich case record
mattered most
to you in
reaching this
conclusion?

How did you
make use of this
evidence?

Substantially

100%

Correlation and consistency
between changes in
quantitative scores with the
timing of therapy.
Overall consistency
over the PHQ, GAD, AAQ-II,
and his Problems 1-3.

Then checked that nothing
in the qualitative data
contradicted this view,
which it did not.

Considerably

80%

Timing and
extent of the
change shown
from process and
outcome
measure all
indicate a
therapy related
Change;
however, Joe's
comment that he
was already
making similar
changes but
therapy
accelerated
things suggests
that similar
changes may
have been

Substantially

100%

Client appears
overwhelmed in
initial sessions, to
the extent that he
can't focus on the
session. Clear
recall of
techniques and
discussions in
Joe's account.

		achieved but to a lesser extent.	
What, if any therapy processes (mediator factors) do you feel were helpful to the client?	<ul style="list-style-type: none"> - Insight, or recognition of how his usual ways of coping are actually making his difficulties worse (e.g. 'trying to fight it'), although there is evidence some of this usual way of coping remains - decent motivation to do something different - some change in perception/relationship to Self and to Others in terms of recognising the importance of his family versus the time he spends working: re-calibrating this relationship - good therapeutic alliance with Nicolle, trusted her, able to open up, seemed to trust her competence too. 	General therapeutic factors seem more important to the changes Joe experienced than ACT related factors due to the reports that he was still refuting an ACT-type stance towards anxiety even at his last session.	Values clarification Defusion
Which characteristics or personal resources (moderator factors) do you feel enabled the client to make the best use of therapy?	<ul style="list-style-type: none"> - moderate insightfulness: able to recognise unhelpful ways of being with his anxiety and emotions and challenge this : also able to retain information and attempt techniques outside of appointments. - caring about the goals he is motivated to work towards: seeing family as the most important thing. -Motivated to improve. Seeking help, looking to make the most out of what he is given 	Joe's commitment to keep trying to manage problems with work even though they weren't easily resolved and at times got worse appeared a key factor in his improvement.	Familial support; psychologically receptive; previous experience of over-coming adversity.

	<p>- living in the context of wife, three children and having a business: sense of care and support, and drive to succeed.</p>		
How strong is your belief that ACT-specific processes contributed to therapy-related change for the client?	80%	40%	60%
Which ACT-specific processes and techniques, if any, do you feel were helpful to the client?	<p>It's slightly problematic answering this question as some of the processes specified in ACT are also specified in other approaches but talked about in different words. Therefore although these processes are specified in ACT, they are also specified in different models too, albeit in different language, and there could be some debate about broader philosophical/metapsychology differences too.</p> <p>- Thought defusion seemed important for Joe : reframing his relationship with anxiety, thoughts and emotions, loosening (though not eliminating) his sense that he needs to 'control' or 'fight' them.</p> <p>- Values work also seemed important : highlighting the imbalance between work,</p>	<p>Committed action and present moment awareness. The apparent committing, drifting from commitment and returning was an important theme of therapy from the process notes.</p>	<p>Values Defusion</p>

responsibility and family in his life, encouraging him to address this. The emotion he felt when he said 'family are the most important thing' for the first time emphasises this importance.

How strong is your belief that other (generic) therapy processes contributed to therapy-related change for the client?	100%	80%	60%
Which generic therapy processes, if any, do you feel were helpful to the client?	<ul style="list-style-type: none"> -strong therapeutic alliance - focus on goals and specified difficulties - therapist attributes of warmth, competence, Roger's triad - Exposure to previously avoided affect (e.g. emotions about family) - Insight into problematic defensive/avoidant patterns of thoughts & actions - Some shift in relationship with others outside therapy room (trying to trust others more) 	<p>When scores on the SRS improve over therapy (as they did with Joe) it is typically indicative of an episode of therapy where the alliance has played more of a role in the outcome than if it remains stable, so this seems significant with Joe. Particularly as his engagement seemed to waver at times when he took phone calls during sessions.</p>	<p>Clear containment and support from therapist; client discusses relational issues.</p>

Overall, what
proportion of the
client's therapy-
related change
was due to...

ACT : Generic
therapy
processes

ACT: 50%

Generic: 50%

ACT: 40%

Generic: 60%

ACT: 60%

Generic: 40%

4.0 Extended Discussion

4.1 Relationship Between Study Findings and Current Research

It is important to consider the study findings regarding the effectiveness of ACT in the context of the current ACT research base, particularly that relating to cancer populations. Furthermore, study findings relating to 'active' therapy ingredients (model-specific versus common factors) will also be considered in relation to psychotherapy process theory and research.

The efficacy of ACT for anxiety and depression is supported by meta-analytic reviews that demonstrate moderate to large effect sizes post-intervention and at follow-up (A-Tjack et al., 2015; Hacker, Stone, & Macbeth, 2016; Powers, Vording, & Emmelkamp, 2009; Ruiz, 2010). However, it must be noted that studies included in these reviews vary in terms of primary and secondary outcome variables. Furthermore, the methodological rigour of ACT trials has been criticised for use of treatment-as-usual rather than control comparison groups (Öst, 2008). While the reviews demonstrated that ACT was effective, there remains minimal evidence that ACT is superior to established psychological treatments (e.g. CBT) for anxiety and depression alone (such as CBT). Research testing the efficacy of ACT in treating psychological problems comorbid with physical health problems is positive; and suggests that ACT is superior to other psychotherapies (J. Arch et al., 2012; Gaudiano, 2011; Hann & McCreacken, 2014). Specifically, there is promising pilot data for people with varying types of cancer for outcomes such as: distress, anxiety, well-being and adjustment (Arch & Mitchell, 2015; Ciarrochi et al., 2011; Feros et al., 2013). The current study findings are comparable to those of Feros and colleagues (2013) who concluded that ACT led to significant improvements in distress, mood and quality of life; which were maintained at 3-month follow-up. Their experimental method involved nine individual sessions of ACT for 45 cancer patients (with varying cancer types).

The current results not only add to the evidence base for ACT for people with cancer, but the examination of ideographic level change provides useful data for understanding active processes in psychotherapy. Only two single-case designs have been employed to assess the efficacy of ACT for individuals with cancer;

both of which have significant methodological limitations. The first of these found that a twenty-week ACT intervention led to significant reductions in anxiety and obsessive thoughts for a male who had breast cancer (Montesinos, Hernandez., & Luciano, 2001); however this study lacks generalisability due to the rare diagnosis of breast cancer in males and the two therapists' who delivered the intervention had limited experience of ACT. The second was a case report of a female with breast cancer who engaged in eight sessions of ACT; it concluded that the intervention was helpful; however this was solely based upon anecdotal reports from the client (Karekla & Consantinou, 2010). This study lacked systematic and replicable procedures and did not collect process or outcome data to support its conclusions. The current study is therefore a necessary addition to the single-case evidence-base, echoing their positive results for HNC patients through the use of a stronger, methodologically rigorous case series approach. Evidence of case-to-case transferability of positive effects of ACT was found, as there was notable client heterogeneity (e.g. level of education, socio-economic status, employment status and site of HNC). This indicates that effects are not circumscribed to a particular case or homogenous case-mix; which fits with current research for the effectiveness of ACT for cancer patients.

The mediating role of acceptance found in the current study (albeit to different degrees between clients) is supported by findings from previous research. Early studies show significant associations between acceptance and both adaptation to cancer diagnosis and improved psycho-social outcomes (C. S Carver et al., 1993; Stanton et al., 2002). Unhelpful effects of suppression of emotional responses and positive effects of acceptance was demonstrated by a sample of adults with mood and anxiety disorders (Campbell-Sills, Barlow, Brown, & Hofmann, 2006). The moderating role of acceptance in therapy outcomes has been demonstrated for chronic physical conditions (Åkerblom, Perrin, Fischer, & McCracken, 2015; Johnston, Foster, Shennan, Starkey, & Johnson, 2010) and cancer (Feros et al., 2013; Montesinos & Luciano, 2016). These findings are consistent with broader correlational evidence that avoidance-based coping strategies are strongly associated with increased psychological distress among HNC patients (Morris et al., 2017).

The question of whether some psychotherapies are 'superior' to others has been debated over the past half a century. It has led researchers to attempt to tease out 'active ingredients' of therapy- the processes that directly influence client change. Factors that are not specific to any given model are often terms 'common' or 'general' factors. The current study found that a strong therapeutic relationship was a strong mediating factor for all three clients. Specifically: alliance, therapist competence, likeability, relational warmth, genuineness and empathy. Although there are varying definitions of 'alliance' and 'relationship' in research, there is agreement that factors associated with these constructs are integral to therapeutic outcomes regardless of therapeutic model or treatment problem (Horvath & Symonds, 1991; Orlinsky, Ronnestad, & Willutzki, 2003; Wampold, 2001). The current study found that while the relationship was important across cases, the expert judges believed that its influence varied between clients. There was also slight variation between judges' ratings for each client. This highlights the complexity and perhaps artificiality of teasing apart these processes; we cannot remove the specific content of the enterprise as the therapeutic relationship must have a therapeutic rationale and focus (i.e. therapy techniques and model). Previous studies have attempted to quantify the contribution of therapeutic relationship factors, with estimations ranging from 30% to 85% (Hubble, Duncan, & Miller, 1999; Lambert, 1992; Sprenkle & Blow, 2004; B. Wampold, 2001). Lambert (1992) further quantified that 15% of therapy outcomes are due to placebo effects (e.g. expectations), 40% due to extra-therapeutic effects (e.g. life events) and only 15% due to specific therapy techniques. Such valuations could be criticised for being outdated and lacking in empirical basis.

To understand the current evidence relating to common factors, Wampold (2015) proposed a 'Contextual Model'. This framework consists of three pathways within which common and specific factors are embedded: 'The real relationship', 'Expectations' and 'Specific Ingredients'. Wampold drew on the evidence of different possible ways in which these processes may 'work' and highlighted the relationship between such pathways. For example, the model suggests that specific ingredients not only create expectations (pathway 2), but universally produce some health-promoting actions. That is, thinking about the world in less maladaptive ways (CBT) or improving interpersonal relationships (

dynamic therapies). Furthermore, a strong alliance is deemed necessary for the third pathway as well as the second, as without agreement about the tasks of therapy, the client will be less likely to engage in healthy actions discussed. The model draws attention to the complexity of identifying active change ingredients within therapy trials due to the multiple ways in which they can lead to outcomes. For example, some clients may come to therapy well prepared to form a strong alliance and it is these clients who also have a better prognosis, so the alliance-outcome association is due to the characteristics of the patients rather than to something that therapists provide. In essence, the contextual model states that if the treatment elicits healthy client actions, it will be effective; whereas advocates of specific ingredients as remedial for psychological problems predict that some therapies– those with the most powerful specific ingredients – will be more effective than others. Wampold concluded that if not discounted, then the common factors are thought of as necessary, but clearly not sufficient.

A more recently published narrative review discusses the current state of the evidence relating to the ‘common versus specific factors debate’ in psychotherapy (Mulder, Murray & Rucklidge, 2017). The authors claim that the search to answer this question has led to two broad groupings of psychotherapy theorists: those emphasising relationship, patient expectancy, and process (common factors), and those emphasising procedural techniques (specific factors). The review states that trials of direct treatment comparisons have found at best only small differential effects (Barth et al, 2013). Furthermore, there are many limitations of such evidence, for example the dominance of CBT as one of the treatment groups, thus limiting an understanding of specific strengths of other approaches. The review highlights that the common factor and specific factor positions may be less divergent than they at first appear within the literature. There is an apparent agreement that elements from treatment models grounded in evidence (such as credible psychological principles) could contribute to the effectiveness of psychotherapy for specific problems. An example of this would be exposure-based procedures for some types of anxiety disorders (Hoffman & Barlow, 2014). Furthermore, there is also general agreement that common factors, such as engagement, optimism, and explicit collaboration, improve outcome. There might be small but clinically relevant differences in aspects of specific factors, but these differences are

difficult to detect due to poorly designed, underpowered trials (Mulder, Murray & Rucklidge, 2017).

The findings of this study appear to support the 'moderate' common factors position, described by Sprenkle and Blow (2004) who, based on their findings proposed that the contribution of common therapy processes and model-specific techniques is not a rigid either/or; rather, there are types of problems, clients and circumstances for which a particular model is well-suited. This proposes that while the therapeutic relationship is highly significant, it is not both necessary and sufficient for therapeutic change. In line with this, the current study found that additional client-factors at least partially mediated therapeutic outcomes. These were: motivation, effort and openness to therapy; cognitive and reflective capacity, and drawing strength from others (social support). Although rarely a focus of clinical trials, Gilts and colleagues (2013) investigated psychosocial factors that mediated the participant's response to a brief stress-management and supportive attention interventions prior to undergoing cancer treatment. Contrastingly to the current study, they found that individuals with lower perceived support benefited most from a structured psychosocial intervention. It is important to note that the study did not measure client characteristics and participants included in the study did not all have clinical levels of psychological distress. The moderating influence of client motivation and openness to therapy are supported by broader literature that acknowledges that motivation, both as a client-independent variable and a dependent variable (goal of treatment) is an influential factor upon therapy outcomes (Grencavage & Norcross, 1990; Sprenkle & Blow, 2004).

A recent study assessed client and therapist views of the influence of hope and expectancy upon therapy outcome- it concluded that it was perceived as accounting for approximately 27-30% of the therapy-related change (Goldman, 2015). Furthermore, Dew and Bickman (2005) found that client expectancies prior to therapy were positively related to both therapeutic alliance and client outcomes. While the present study found that client's expectations and effort did contribute to therapy-related change; therapist and relationship factors were believed to hold greater extra-therapeutic influence.

A further mediating factor identified in the current study was 'exposure to previously avoided emotions'. While this forms part of a specific processes within ACT (acceptance and present moment awareness), it has been considered to be a common therapy factor as it often features in various types of psychotherapies, albeit using different terminology (Weinberger & Rasco, 2007). This is consistent with conclusions from one of the expert judges, who cautioned against rigidly separating 'ACT-specific' and 'general' therapy factors. Similarly, the mediating factor 'valued-action' could be considered to be part of the non-specific common therapy factor of 'behavioural modification' (Sprenkle & Blow, 2004). For example, developing new skills and identifying unhelpful behavioural patterns is part of committed action within ACT and a behavioural component of various psychotherapies. Regardless of whether these processes are considered to be specific or general, the study results and previous research demonstrate the importance of both processes in facilitating client change.

Client intelligence and reflective capacity was not explicitly measured in the current study; however it was noted by the expert judges to have positively impacted upon client one's ability to engage in, and highly benefit from ACT. This echoes previous studies that have assessed the role of cognitive processes (such as sustaining attention, remembering, and processing the information) in therapy outcomes (Green, Kern, & Heaton, 2004). The judges in the current study also concluded that client one demonstrated remarkable changes during therapy as he was able to integrate the model into his worldview and mind-set. This process is supported by previous research that found an interaction between client-type and intervention (Beutler, Blatt, Alimohamed, Levy, & Angtuaco, 2006). They proposed that clients who are more self-reflective and introspective are more likely to benefit from insight-based approaches.

The influential role of extra-therapeutic factors such as family support is supported by early empirical research on therapy change processes (Hubble et al., 1999); although this is not specific to any therapy-type.

4.2 Extended Implications

4.2.1 Clinical Implications

It is reported that there is insufficient evidence to refute or support the effectiveness of psychosocial interventions for people with HNC (Semple et al., 2013). The findings from this study evidence ACT as a feasible intervention for reducing clinical levels of distress in individuals with HNC. This study has implications for practice, as it highlights specific components within therapy which may be particularly important to include when refining and delivering ACT interventions to individuals with HNC, and more broadly cancer. These include: establishing a strong therapeutic alliance, addressing client insight into unworkable coping strategies (and the use of metaphors to support this), facilitating exposure to and acceptance of avoided or suppressed emotions, and fostering motivation through values clarification and action. Based on the current finding that all clients expressed a desire for earlier therapy and more sessions, it is suggested that 6-sessions at the post-treatment stage of cancer may be untimely and insufficient, despite positive reliable shifts in psychological domains. The findings also highlight the importance of considering client-factors at the beginning of psychotherapy, for example client motivation, expectations and openness to therapy.

Single-case designs are important for monitoring and understanding change. Considering the drive to evidence outcomes, and the increased focus on the mechanisms and processes of change, clinicians delivering ACT could benefit from incorporating research methods into their practice. For example, it may be relatively simple to employ weekly process measures and facilitate a post-therapy change-interview. Based on the study findings, it may be important to critically consider measures of psychological flexibility in practice, given that clients experienced difficulties using the AAQ-II.

4.2.2 Theoretical Implications

This study found that a 6-week ACT intervention was effective for the three adult clients with HNC; specifically, clients progressed towards therapy goals, experienced reliable reductions in anxiety and depression and provided positive narratives about the therapy. Clients also engaged in more effective behaviour, albeit in unique ways relevant to their contexts. The study concluded that the outcomes achieved by clients were due to their experience of therapy.

ACT makes specific predictions about active change processes; thus this study examined process-outcome links and found that while the relative influence of ACT processes varied between clients, ACT processes (as per hexaflex model) had a partial mediating role for all clients. Process analysis (evidenced in rich case records) provided evidence both for and against shifts in each of the six processes hypothesised to be core to ACT: acceptance, present moment awareness, cognitive defusion, self-as-context, values and committed action. Based on the evidence provided, Judges respectively identified each process as helpful for facilitating change, albeit to different degrees between clients. In ACT, the broad concept of psychological flexibility is theorised to be the product of these six processes. It defined as “the ability to fully contact the present moment and the thoughts and feelings it contains without needless defence, and, depending on what the situation affords, persisting in or changing behaviour in the pursuit of goals and values” (Hayes et al., 2006, p 678). While it is acknowledges that the six psychological processes forming this construct are interrelated; the model has received critique for the similarity between definitions of ‘acceptance’ and ‘psychological flexibility’ (Wolgast, 2014).

Over the course of the intervention, this study found reliable and clinical significant improvements in the ACT process measure (AAQ-II) for two of the three clients. These results are consistent with the ACT model hypotheses (Hayes, 2004; Harris, 2006). Client three; however did not score above the ‘caseness’ threshold for psychological inflexibility at the beginning of therapy, despite clinical levels of psychological distress and observable signs of psychological inflexibility (as noted in rich case record). While his inflexibility scores reduced over the course of the intervention it was neither reliable nor clinically significant. Possible explanations for this outcome are: firstly, perhaps the AAQ-II was not valid measure psychological flexibility for this client; secondly, perhaps this demonstrates a theoretical issue with ACT in that psychological inflexibility does not always correlate with psychological distress; contrary to published literature that claims a strong relationship between the two constructs (Chawla & Ostafin, 2007).

Consistent with the theoretical underpinnings of ACT, clients demonstrated increased value-driven behaviour over the course of therapy, irrespective of

continuing unpleasant ('negative') thoughts, feelings and bodily sensations. This is congruent the definition of psychological flexibility; that is, to better handle painful inner experiences in a way that value-driven behaviour can occur.

However, judges noted that at the end of therapy two clients appeared to hold a desire for some of their unpleasant feelings/emotions to change (evidenced in change interviews). This raises question about the necessity and feasibility of achieving a state of 'acceptance' and active embracing of internal states, without attempts to change them. Acceptance is theorised to foster value-driven action; however the findings from this study suggest that effective behaviour change can occur while an individual remains avoidant of some inner experiences. This is arguably accounted for by the concept of 'workability' within ACT- a behaviour or process is only addressed if its function is no longer helpful to an individual.

Although symptom reduction is not a prerequisite of ACT, it is hypothesised to be a secondary outcome of increased psychological flexibility (Harris, 2009). The study found that all clients experienced reliable reductions in psychological distress; for two clients these were clinically significant (i.e. fell below the threshold for clinical caseness). This study was unable to draw conclusions regarding the sequence of these changes, given that distress was not measured concurrently with psychological flexibility. However; client problems that were behavioural in nature improved alongside improvements in distress; suggesting a relationship between valued-action and reduced distress.

4.2.3 Research Implications

This study has promising findings for the clinical use of ACT with individuals with HNC experiencing distress; promoting acceptance of the distress associated with cancer whilst simultaneously supporting individuals to engage in a meaningful and valued life. The findings build on previous preliminary trials of ACT for mixed cancer samples (Arch et al., 2012; Feros et al., 2013; Hulbert-Williams, Storey, & Wilson, 2015). The current study has contributed to the evidence-base by examining ideographic level changes through the use of a multiple case series approach; providing findings that are highly relevant to clinical practice. In order to build an evidence-base necessary to understand the effectiveness of ACT for individuals with cancer more broadly, further research would benefit from using randomised controlled investigation to assess multiple

relevant outcomes (those relating to distress, psychological flexibility, life-meaningfulness/satisfaction and behavioural change).

Questions regarding the optimum length of ACT for individuals with cancer remain unanswered by this study. This is an important area that future research may benefit from addressing. The current study provided mixed findings whereby clients viewed 6-sessions as insufficient, despite significant improvements in distress and client-generated problems. Examining dose-response relationship and long-term follow up may provide important implications for the maintenance or respective relapse of improvements and thus re-entry to psychology services. Furthermore, all clients expressed a wish for the opportunity for psychological therapy earlier in their treatment; research addressing ACT given at different treatment stages could be vital for preventative psychotherapy.

The difficulties with the use of the AAQ-II outlined in this study suggest that further testing of measures of psychological flexibility is a useful research avenue. A promising measure, the CompACT has recently been developed and may offer a valid measurement of the complex construct.

Finally, this study went beyond examining the specific processes within the ACT model; investigating also the influence of common-therapy and non-therapy processes upon client-change. It provides evidence of the effectiveness of psychotherapy more broadly, specifically the role of the therapist factors in facilitating change. Often, experimental trials attempt to control therapist factors in order to assess specific model effectiveness; however it appears essential that we begin to view therapist effects as sources of variance, not error. Intervention research may benefit from additional measures of therapist factors to further develop understanding around active-therapeutic ingredients.

4.3 Extended Critique

Building on the critique outlined in the journal paper, this section considers a more detailed appraisal of strengths and weaknesses of the study.

4.3.1 Design

This study drew on multiple types and sources of data and analysis to investigate change for three adult clients with HNC. Furthermore, the role of examining plausible rival explanations has been recognised as an important element of evaluative research (e.g. Maxwell, 2004; Yin, 2000). This method provided a rich insight into the therapy, clients and process of change; making a viable link between research and practice. Nevertheless, the HSCED remains an uncommon case study method, perhaps due to its complexity and high resource demand (e.g. analysis team, expert judges). While Elliott (2002, 2009) sets out guidance on conducting a HSCED, there remains much to be decided by the researcher with regards to additional components and processes (e.g. more recent addition of adjudication stage). A key limitation of this design is the high reliance on the views of three expert judges. While the judges who took part in this study declared varied theoretical orientations and have prominence in psychotherapy research, their conclusions will be influenced by their previous experiences and preconceptions of different therapies and what client change looks like. Given that not all of the data in the case records was subject to established analysis methods (e.g. change interviews were not qualitatively analysed), this aspect of the study could be criticised as unscientific.

4.3.2 Measurement

The GAD-7 and PHQ-9 may be critiqued on the basis that they are brief measures of anxiety and depression; thus, they do not provide a detailed quantitative understanding of sub-types or characteristics of these experiences. For example, it is well documented that social anxiety is a particular difficulty for patients with HNC; however this could not be measured on the GAD-7. Although the study did not aim to use these measures diagnostically, their brevity may reduce their sensitivity to subtle changes. Despite these limitations, the measures offer benefits such as low client burden, robust psychometric properties and their wide use will enable contextualisation of study results with other research.

Perhaps the most notable measurement limitation of this study lies in the use of the AAQ-II to measure psychological inflexibility. Although a revised version of an older 16-item version which was identified as focusing on avoidance of emotions (Tull, Gratz, Salters, & Roemer, 2004); the AAQ-II does not address avoidance of physical sensations, for example those associated with anxiety

and panic (Schmalz & Murrell, 2010). Items of the AAQ-II have been found to relate more strongly to those designed to measure general distress than items designed to measure acceptance/non-acceptance, and it does not contain items that measure valued action (Wolgast, 2014). In part, this problem may be a natural consequence of the explicitly functional framework in which the ACT model is situated. In ACT the focus is shifted from emotion regulation toward effective (valued) living (Blackledge, J & Hayes, 2001). In retrospect, this study may have benefited from the use of a newly published measure –CompACT; which was designed to address the previous difficulties operationalising psychological inflexibility (Francis et al., 2016). This measure was not used as it was not published during the design stage of this research. The limitations brought about by the use of the AAQ-II were mitigated by the studies use of additional processes for tracking changes in client's psychological flexibility. Furthermore, given that the central aim of ACT is to increase value-driven action as a method of increasing the meaningfulness and vitality of life; a measure of life satisfaction or meaning would have greatly benefited the study quality.

The session rating scale (SRS) was employed as a process measure of aspects of the therapeutic alliance. Consistently high scores in this measure across clients were found. This may have been the result of social desirability responding; however triangulation of SRS scores with change interview data and therapist process notes enabled this possibility to be explored by the judges.

It is well documented that some people rate outcome measures knowing that it will affect whether they will continue therapy, or receive additional access to services. This is an inherent bias within psychometric assessment which was reflected upon by the therapist throughout the intervention delivery. Again, the judges were able to assess consistency between quantitative and qualitative data presented in the rich case records and clients were made aware at the beginning of the study that they would have the opportunity to return to usual care following the ACT intervention.

4.3.3 Sample Characteristics

The clients who took part in this study were all male, between the ages of 45-65 in the post-treatment stage of HNC. This was a natural consequence of the study method which aimed to recruit clients as they presented to the waiting list. These demographics are consistent with those of the HCN population more generally (Bosetti et al., 2013). Furthermore, there was heterogeneity between the clients (i.e. level of education, socio-economic status, and site of HNC) and the study findings are largely consistent with current research on ACT and cancer; which suggests that the processes are unlikely to differ if the study was to be repeated with a female. This is consistent with the trans-diagnostic nature of ACT.

4.3.4 Potential sources of bias

At the level of recruitment, participants were recruited from the top of the waiting list at recruiting services and assessed with inclusion criteria. This is transparent and replicable; however it resulted in the selection of three adult males who were all in the post treatment stage of HNC. In line with the HSCED guidance, this method of data collection aimed to get as close to 'real-life' care as possible, increasing ecological validity of the study.

At the level of data collection, participants received the ACT intervention from the same therapist, who also fulfilled the role of lead researcher. This could be seen as a potential source of bias as client-change could potentially have been the result of individual-therapist effects. Furthermore, given that the therapist had a degree of investment in the study continuation; it could be argued that additional effort may have gone into helping the clients through therapy. It must be acknowledged however, that the therapist/lead researcher had no affiliation to ACT as a model and did not have an investment in a particular outcome. A further potential source of bias is that of obtaining self-report questionnaire data. The therapist gave questionnaires at the beginning and end of sessions. Self-report questionnaires rely on the honesty of participants and administering them with the therapist/researcher present, may have increased the chances of acquiescence; particularly with the session rating scale. This decision was made on a practical basis to minimise the chance of missing data.

At the level of data analysis the use of expert judges may be viewed as a potential source of bias. Judges will inevitably bring their own experiences,

knowledge, interests and assumptions when viewing, critiquing and providing judgements on client-data. Furthermore, judges were not completely 'independent' in the sense that they worked within Nottinghamshire and had varying levels of professional links to the recruiting sites or doctoral programme. The judges were given brief instructions to familiarise themselves to the data and answer the adjudication questions, but their method of personal analysis and critique was not controlled. From a positivist perspective, the use of judges in this way may be viewed as a source of bias to the validity of conclusions.

Within the HSCED, the aim is not to exert high levels of control and reduce all bias. In fact, the underlying pragmatic constructivist position would challenge the idea of ever establishing unbiased research. This position states that reality is a product of the human mind and therefore is inherently subjective. The HSCED relies on a pragmatic, practical reasoning-system to draw probabilistic explanations of change. Thus, it does not follow a positivist experimental process of tightly controlling variables to reduce bias in order to generate claims of 'absolute truth'. The challenge, then, is to make the practical reasoning system transparent, systematic, and self-reflective.

5.0 Critical Reflective Section

5.1 Dual role of therapist and researcher

Traditionally, scientific research into psychotherapy effectiveness aims to assert high levels of control over study variables to reduce bias and strengthen causal conclusions. While the HSCED is equally systematic and rigorous, it aims to investigate causal links in a naturalistic context, recognising that high levels of control bear little resemblance to clinical practice. Consequently, there is less focus upon controlling potential bias, instead simply recognising and considering the influence of such contextual effects. During initial planning of this research, my expectation was that a clinician in one of the recruiting hospitals would deliver the ACT intervention; enabling me to focus solely on the research aspect of the project. Due to practical issues this was not feasible and I was encouraged by my supervisors to consider Elliott's (2002) rationale for undertaking the role of therapist and researcher. Initially, I was hesitant about this and felt anxious about managing the pressure of delivering a research intervention, particularly because it was highly important that it was a single-model therapy. Much of my previous clinical experience was delivering therapy in an integrative multi-model approach. I considered Elliott's rationale and had discussions with the research team. I agreed to take on the dual-role and we made plans to maximise my competence in delivering the ACT intervention (i.e. formal training, supervision, reading).

During the intervention phase, the dual role brought several challenges. In order to fulfil both roles adequately, I mentally separated them during different time points. For example, within the therapy sessions I viewed myself as a therapist (as if I were part of my clinical placement), making decisions based on my clinical judgements in the best interests of clients, guided by the theoretical and psychological components of the ACT intervention. This was congruent with my research protocol and ethical guidance from the research ethics committee (REC). This intellectual separation was easier than I had anticipated. I was able to draw on my existing therapeutic skills and the knowledge I had acquired during ACT training to engage and support each client to develop a new understanding of their inner worlds and current situation. On the few occasions

where a session was re-arranged by the client, I did have thoughts about what this might mean for my research timescale; however I was able to utilise the ACT model myself - practising mindful awareness and defusion from unhelpful thoughts. This enabled me to notice my own thoughts about potential challenges.

Strengths of undertaking dual role became most obvious to me at the beginning of the analysis stage when I began to collate the rich case records. I adopted a critical-reflective stance drawing on knowledge from both positions. My understanding of the data was greatly enriched because of my role as therapist – I was able to pull out its meaning more readily and understand the context and process of changes. It was at this time that I reflected on my decision to take on the therapist role and believed it to be a helpful one. I also appreciated having been on advanced ACT training as this supported me to understand and tease apart the data, particularly while identifying evidence for and against shifts in ACT processes. Because I had written the process notes I could place them in the context of the client whom I had built a relationship with and their situation. I believe that my dual role added to the contextual richness, quality and validity of the data collated to form the rich case records.

Prior to collating the rich case records, I had wondered about how difficult it might be to identify and write about evidence against client change, or potentially hindering aspects of the therapy for clients. I thought that it may be personally challenging to expose myself to such a critical analysis of my therapeutic skills and abilities. Interestingly, it was not as challenging as I had predicted and again I was able to notice and defuse from my worries and negative thoughts relating to my skills. Further to this, I am not personally or professionally invested in finding a positive outcome for ACT; rather I was concerned about identifying if and how it could be effective. It was also an opportunity to learn more about my therapeutic skills and gain detailed feedback relating to processes such as the therapeutic relationship. Active reflection, particularly during clinical supervision helped with these potential challenges. I kept a reflective diary and aimed to fulfil a professional and critical-researcher position throughout. This helped me to minimise the influence of my personal feelings and vulnerabilities; particularly upon the research analysis stage. Further to this, a meeting with the analysis team where we discussed the raw

data and collated the rich case records was essential for minimising a singular perspective of the data.

(Gabriel, 2005) stated that a dual-role creates conflict between the goals and focus of therapy, and that of the research. While I did experience this conflict at the times described above, it was effectively managed through the use of sufficient reflection and transparency. Such difficulties were further overcome by having a clear definition of each role and making the decision to only analyse the data once all therapy sessions were complete for all clients. Bond (2000) argues that practising a state of 'ethical mindfulness' can aid this dual role; I adopted this throughout the research, which was especially evident in discussions during clinical supervision.

5.2 One therapist for all clients

A potential downside of this study design is that the therapist was common factor across the cases. To some degree, this may restrict the application of the finding that the therapeutic relationship was a mediating factor. From a critical perspective, there may have been something unique about my approach or personality that suited the clients. Alternatively, having one therapist for all clients offered consistency across the cases and the judges identified components that led to a strong therapeutic alliance that are established in the literature- such as empathy, listening and warmth.

5.3 Non-ACT consistent goals

The personal questionnaire (PQ) was used to develop client-generated goals at the start of therapy. This enabled a focus on aspects of the client's lives that were viewed as problematic and in need of change. A challenge faced during this process was when clients generated goals that were theoretically inconsistent with the philosophy and aims of ACT; for example, control-based goals (e.g. to feel better). When this occurred in session one, I made a clinical judgement not to challenge the client or request that they changed their goal. This decision was made based on my view that it was important to meet the client where they were at; recognising that it could feel very invalidating for them and rupture the therapeutic relationship early on if I were to challenge this. Further to this, I knew that throughout the session (and subsequent sessions) we would explicitly address the unworkability of control-based coping strategies (creative hopelessness) and this would potentially support the client to

experientially understand that internal experiences (thoughts, emotions, memories) cannot be changed. On reflection, I feel that this was the right decision at the time as I built strong therapeutic relationships with all clients and at their pace, they recognised and adapted their goals in a naturalistic and ideographic way. The ACT model described that it is a natural desire to want to 'feel better' and change inner experiences and therapists should avoid attempts to verbally persuade clients to 'think differently' about this. I recognise that a criticism of this decision would be that I was setting the client up to fail or deceiving them; however my clinical rationale for allowing these goals to remain during initial phase of therapy was strong and made in the best interest of the clients.

5.4 Challenges during the development of rich case records

Developing the rich case records was a lengthy procedure that required in depth identification of processes, following Elliott's (2002) guidance. Several difficulties arose during this stage of the research. Categorising the qualitative change-interview data into Elliott's categories at times felt restrictive, and I initially created additional sub-headings adding a layer of interpretation of the quotes. Previous HSCED's have done this (McLeod, 2010). During a research team meeting the decision was made to remove the additional sub-heading to keep the data in its raw form (albeit categorised) for the judges to add their interpretation.

During this process I found myself wondering about additional factors and information that I knew about the clients and their lives that were not mentioned in the change interview; and therefore could not be included in the rich case records. I wondered about why clients chose not to mention certain things. Upon reflection, this could be a drawback of all qualitative interview-based research; it highlights the importance of following the research method rigorously to ensure that only that which is freely offered by participants is included in the rich case records.

When I listened back to the change interviews I was curious about each client's opinions about the therapy process. I felt a degree of apprehension (experiencing thoughts like 'what have they said about me?'). Generally it was an interesting process that enabled me to see that, generally, my ideas about what aspects were helpful (based on feedback within therapy) were generally

consistent with their interviews. It was somewhat challenging to hear clients say that there were missing aspects of the therapy, particularly when client 3 said that there were additional things he would have wanted and wanted more help. This evoked feelings of sadness and caused me to question whether I could have done more as a therapist. Some aspects of the change interviews surprised me, for example when client three mentioned that he is better 'controlling the anxiety'. We had spent a lot of time talking about the ineffectiveness of controlling emotions in therapy and my opinion was that he had grasped this. It led me to wonder whether I had misunderstood him during therapy or perhaps his language was misleading during the change interview. The word 'control' can have different meanings for different people; it is likely that to him he meant managing/ getting anxiety under control in the sense that it was no longer controlling him; rather than the definition of control used within ACT which is trying to alter or change something internal before acting in line with values. Difficulties interpreting data is a downside of both qualitative and quantitative research as words and phrases can have different meanings for different people. The use of multiple expert judges to analyse the data may have reduced this potential issue.

5.5 Ethical issues and decision-making

Making a decision about the quantity of questionnaire measures to use to track change in various areas was complex. I had to take account of mandatory service questionnaires, client burden and the time points at which essential domains needed to be measured to answer the research question. This balance was considered carefully during discussions with my primary research supervisor. We were able to reduce client burden by using anxiety and depression questionnaires that were part of treatment-as-usual (therefore had to be administered) at one of the recruiting services (from which two participants were recruited). A downside of this decision was that the measures were brief and not specific to health-related psychological distress. In order to gain 'enough' meaningful data, we needed to measure psychological flexibility and common therapeutic factors. In an ideal world, we would have measured the processes of psychological flexibility independently and we would have operationalised and measured therapeutic expectation, motivation and specific components of the therapeutic relationship (i.e. empathy). A pragmatic decision was made to use a simple, short measure of therapeutic relationship and

alliance (SRS) and one measure of psychological flexibility (AAQ-II). While this may have limited the depth of the quantitative dataset, we gained much information about these factors through other types of data; specifically the change interview and therapist process notes.

A further ethical issue was encountered when making decisions relating to the use of a manualised ACT intervention. Manualised psychotherapy interventions are used within efficacy trials as a method of ensuring that each participant is receiving the same intervention and thus specific techniques can be measured, improving therapist accountability and increasing the generalisability of findings. The assumption that findings of such trials are relevant to clinical practice has been criticised (Wilson, 2012). While low intensity therapeutic services are required to adhere to standardised therapy manuals, clinical psychologists and psychotherapists are not bound by the same restrictions. Furthermore, manualised therapies have been criticised as restricting clinical judgement and hindering theoretical innovation. It poses ethical questions, for example what to do if a client is not able to keep up with the pace of the manualised protocol? Following a detailed discussion about these factors with the research team, we agreed that a protocol was necessary in order to increase the consistency of the therapy received by each client; however we also decided that it would be used flexibly. By this, I mean that clinical judgement would surpass the protocol and processes of psychological inflexibility identified by within my therapist role would be targeted in the moment. It was decided that transparency of the intervention and any adaptations was crucial to make cross-comparisons and draw accurate conclusions. Details of the intervention and any adaptations were explicitly outlined in the rich case records, journal and extended paper. Furthermore, ACT fidelity was formally assessed by the second author using recordings of sessions. The aim was to ensure that each client received ACT that fitted them, not necessarily identical metaphors or exercises in an identical order.

5.6 Reflections during therapy

Sections 5.6.1 to 5.6.3 summarise adapted material from my reflexive diary that was used to aid development throughout the intervention phase of the study.

asked if he could hug me to say goodbye and I agreed to this. This seemed an important process to end the therapeutic relationship that we had built.

5.7 Personal Learning Points

5.7.1 Research preconceptions

Prior to beginning the research project, I held assumptions about the broad effectiveness of psychotherapy and positive experiences of delivering ACT in clinical practice. I also had preconceptions about people with cancer and assumed that due to the traumatic experiences and distress, clients would present as chaotic and overtly distressed. Some of these beliefs were strengthened during the research (i.e. overall conclusion that the therapy led to positive changes); however my ideas about people with cancer were challenged. Each of the clients presented differently and had different levels of focus, overt distress and unresolved trauma experiences. I also had anxiety about being a young therapist; worrying that the clients might think I was too young or too far from their experience to be of any help. This assumption was greatly challenged during the research journey, especially given that one of the judges noted that the clients' high beliefs in my competence and client's experience of feeling understood by me partly mediated their outcomes. I have learned the importance of reflecting on personal assumptions and question how they might narrow my openness to new information and ideas.

5.7.2 Development of Research and Clinical Skills

Prior to joining the clinical doctorate, I had relatively little experience of academic research. This meant that at each stage of the process, I was confronted with tasks and challenges that were new to me. I had to find a balance between seeking support and guidance from my supervisors and finding solutions independently. The IRAS form was particularly complex and challenging, as was attending the REC committee. I had to learn about processes of conducting research on NHS premises and all of the practical demands and regulations that come with that. One of the learning points that came from one of the CI's was in relation to the practicalities of seeing clients at their treatment hospital; whereby receptionist did not know who I was because I was not a permanent team member. In future research, I will endeavour to be more organised and communicate better with staff at recruitment sites. I was

constantly referring to my protocol for guidance through different stages. Managing my time between this research and my clinical and academic work was a challenge that was overcome by taking a methodical approach. This was particularly essential when faced with an extensive amount of data and a design that I have not heard of prior to my role as a trainee psychologist. I spent time reading about and talking through the HSCED with my primary supervisor; however it was through doing it that I began to learn and understand the intricacies and complexities of the design. This research project has been a steep learning curve that has provided me with invaluable knowledge and experience of conducting intervention research in naturalistic settings. I believe that my research capacity has greatly improved and I feel confident to be part of research in practice when I qualify.

My clinical skills have benefited from this research, specifically relating to understanding and delivering ACT and adhering to a unimodal therapy. My clinical skills such as formulation, reflection and engaging clients in therapy were drawn upon and enhanced during this experience. Clinical supervision was a vital part of this learning experience where I was challenged to think critically about the client's presentation and problems and holding a dual role of therapist and researcher.

This research has equipped me with increased knowledge of ACT, the therapy process more broadly and research design and implementation. It has increased my confidence conducting research and my critical thinking skills have grown. Such transferable skills will be important as I continue through my career and qualify as a clinical psychologist.

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³³ Number excludes tables, figures, references and appendices

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Appendices

Appendix A: Ethical Approval



Health Research Authority

East Midlands - Nottingham 1 Research Ethics Committee

The Old Chapel
Royal Standard Place
Nottingham
NG1 6FS

Please note: This is the favourable opinion of the REC only and does not allow you to start your study at NHS sites in England until you receive HRA Approval

15 November 2016

Professor Thomas Schröder,
Associate Professor in Clinical Psychology; Co-Director (Academic & Research), Trent
DClinPsy Programme, Division of Psychiatry and Applied Psychology, School of Medicine,
University of Nottingham;
University of Nottingham
B12 YANG Fujia Building,
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NG8 1BB

Dear Professor Schröder,

Study title:	Acceptance and Commitment Therapy for Individuals with Head and Neck Cancer Experiencing Psychological Distress: A Hermeneutic Single-Case Efficacy Design
REC reference:	16/EM/0429
Protocol number:	16067
IRAS project ID:	210537

Thank you for your letter of 11th November 2016, responding to the Committee's request for further information on the above research and submitting revised documentation.

The further information has been considered on behalf of the Committee by the Chair.

We plan to publish your research summary wording for the above study on the HRA website, together with your contact details. Publication will be no earlier than three months from the date of this opinion letter. Should you wish to provide a substitute contact point, require further information, or wish to make a request to postpone publication, please contact the REC Manager, Ms Rachel Nelson, NRESCcommittee.EastMidlands-Nottingham1@nhs.net.

Appendix B: Information Sheet

Participant Information Sheet

(Final version 1.0: Date 16.07.16)

IRAS project ID: 210537

Title of Study: Acceptance and Commitment Therapy for Individuals with Head and Neck Cancer Experiencing Psychological Distress

Name of Researcher(s): Nicolle Morris, Nima Moghaddam, Anna Tickle, Sanchia Biswas & Thomas Schroder

We would like to invite you to take part in our research study. Before you decide we would like you to understand why the research is being done and what it would involve for you. One of our team will go through the information sheet with you and answer any questions you have. Talk to others about the study if you wish. Ask us if there is anything that is not clear.

What is the purpose of the study?

To increase understanding of how Acceptance and Commitment Therapy (ACT) can reduce distress (such as anxiety and depression) by increasing psychological flexibility in individuals with cancer of the head or neck. Although there is research showing that this therapy is effective for reducing anxiety and depression (Ost, 2014; Ruiz, 2010) there is still a lot to learn about exactly how it works for individuals with cancer of the head and neck, due to the unique difficulties brought about by this diagnosis and treatment.

Why have I been invited?

You are being invited to take part because you have a diagnosis of cancer of the head or neck and have expressed a desire for psychological therapy. We are inviting three participants like you to take part.

Do I have to take part?

It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be contacted by Nicolle Morris (researcher) and asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason. This would not affect your legal rights.

What will happen to me if I take part?

Once you have given consent to take part, you will be contacted by the lead researcher and Trainee Clinical Psychologist Nicolle Morris who will arrange to see you at King's Mill Hospital for six individual sessions of Acceptance and Commitment Therapy. Each therapy session will be individually tailored to your goals and needs and will last approximately 1.5 hours, although this is flexible to your needs.

During sessions, you will be asked to complete up to four short questionnaires; these aim to measure your view of your distress (e.g. anxiety, depression) therapy goals, psychological flexibility and your relationship with the therapist.

Approximately 1 week after the final therapy session, an independent researcher will meet with you at a time that suits you to discuss your opinion of the therapy and any changes to your distress levels. This discussion will be audio recorded and kept **strictly confidential** by a principle investigator at the University of Nottingham.

Finally, two short questionnaires will be posted to you (at 1 and 3 months after the therapy) with a stamped addressed envelope for you to return them to the study team; These aim to measure your view of your current levels of distress (e.g. anxiety, depression).

Expenses and payments

You will not be paid to participate in the study.

What are the possible risks of taking part?

There are no likely risks of taking part in this study.

What are the possible benefits of taking part?

Acceptance and Commitment Therapy is an evidence-based therapy for reducing anxiety and depression, however we cannot guarantee this outcome. If, after the intervention you still require psychological input, you can opt for 'usual care' at your treatment hospital; this might be further psychological therapy.

What if there is a problem?

If you have a concern about any aspect of this study, you should ask to speak to the researchers who will do their best to answer your questions. The researchers contact details are given at the end of this information sheet. If you remain unhappy and wish to complain formally, you can do this by contacting Patient Advice and Liaison Service: 0800 092 0301

Will my taking part in the study be kept confidential?

We will follow ethical and legal practice and all information about you will be handled in confidence.

If you join the study, some parts of your medical records and the data collected for the study will be looked at by authorised persons from the University of Nottingham who are organising the research. They may also be looked at by authorised people to check that the study is being carried out correctly. All will have a duty of confidentiality to you as a research participant and we will do our best to meet this duty.

All information which is collected about you during the course of the research will be kept **strictly confidential**, stored in a secure and locked office, and on a password-protected database. Any information about you which leaves the hospital will have your name and address removed (anonymised) and a unique code will be used so that you cannot be recognised from it.

Your personal data (address, telephone number) will be kept for 6-7 months after the end of the study. All other data (research data) will be kept securely for 7 years. After this time your data will be disposed of securely. During this time all precautions will be taken by all those involved to maintain your confidentiality, only members of the research team will have access to your personal data.

Although what you say during the therapy and later discussion is confidential, should you disclose anything to us which we feel puts you or anyone else at significant risk, we may feel it necessary to report this to the appropriate persons.

What will happen if I don't want to carry on with the study?

Your participation is voluntary and you are free to withdraw at any time, without giving any reason, and without your legal rights being affected. If you withdraw then the information collected up to that point cannot be erased and this information may still be used in the project analysis. If you wish, you will return to the service waiting list at the point you were taken from.

What will happen to the results of the research study?

You will be non-identifiable from study results. This study will form a Doctoral Thesis at the University of Nottingham, School of Medicine. It will therefore be available to read by undergraduate and postgraduate students registered at this institution. The intention is to submit this study to the Journal of Psycho-Oncology, an international academic Journal with an. Key results will also be disseminated at the psychology service at King's Mill Hospital and made available to participants and posted to them on request.

Who is organising and funding the research?

This research is being organised by the University of Nottingham and is being funded by the National Health Service (NHS).

Who has reviewed the study?

All research in the NHS is looked at by independent group of people, called a Research Ethics Committee, to protect your interests. This study has been reviewed and given favourable opinion by East Midlands - Nottingham 1 Research Ethics Committee on 15th November 2016.

Further information and contact details

Nicolle Morris (Trainee Clinical Psychologist)

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Prof Thomas Schroder (Associate Professor in Clinical Psychology; Co-Director of Trent
DClinPsy Programme)

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Appendix C: Consent Form

CONSENT FORM

(Final version 1.0: 16.7.16)

Title of Study: Acceptance and Commitment Therapy for Individuals with Head and Neck Cancer Experiencing Psychological Distress

REC ref: *(to be added after approval given)*

IRAS project ID: 210537

Name of Researcher: Nicolle Morris

Name of Participant:

Please initial box

1. I confirm that I have read and understand the information sheet final version 1.0 dated 16.07.16 for the above study and have had the opportunity to ask questions. ☐
2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, and without my medical care or legal rights being affected. I understand that should I withdraw then the information collected so far cannot be erased and that this information may still be used in the project analysis. ☐
3. I understand that data collected in the study may be looked at by authorised individuals from the University of Nottingham, the research group and regulatory authorities where it is relevant to my taking part in this study. I give permission for these individuals to have access to these records and to collect, store, analyse and publish information obtained from my participation in this study. I understand that my personal details will be kept confidential. ☐
5. I agree to take part in the above study.

Name of Participant

Date

Signature

Appendix C: Acceptance & Action Questionnaire

AAQ-II

Below you will find a list of statements. Please rate how true each statement is for you by circling a number next to it. Use the scale below to make your choice.

1	2	3	4	5	6	7
never true	very seldom true	seldom true	sometimes true	frequently true	almost always true	always true

1. My painful experiences and memories make it difficult for me to live a life that I would value.	1	2	3	4	5	6	7
2. I'm afraid of my feelings.	1	2	3	4	5	6	7
3. I worry about not being able to control my worries and feelings.	1	2	3	4	5	6	7
4. My painful memories prevent me from having a fulfilling life.	1	2	3	4	5	6	7
5. Emotions cause problems in my life.	1	2	3	4	5	6	7
6. It seems like most people are handling their lives better than I am.	1	2	3	4	5	6	7
7. Worries get in the way of my success.	1	2	3	4	5	6	7

This is a one-factor measure of psychological inflexibility, or experiential avoidance. Score the scale by summing the seven items. Higher scores equal greater levels of psychological inflexibility.

Appendix D: Questionnaire of Client Problems

Simplified Personal Questionnaire Procedure

(Robert Elliott, Carol Mack & David A. Shapiro, 2015)

Problem Description Form:

1. Please describe the main problems you are having right now that led you to seek treatment.
2. If you are seeking psychotherapy, please list the specific problems or difficulties that would like assistance with. Please feel free to add to your list as you fill out other forms.

Instructions: Please rate each of the following problems according to how much it has bothered you during the **past seven days, including today.**

<u>Problem</u>	Not at all	Very Little	Little	Modera tely	Conside rably	Very conside rably	Maximu m possible
	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
	1	2	3	4	5	6	7

Appendix E: Helpful Aspects of Therapy Framework

HELPFUL ASPECTS OF THERAPY FORM (H.A.T.) (10/93)

1. Of the events which occurred in this session, which one do you feel was the most **helpful** or **important** for you personally? (By "event" we mean something that happened in the session. It might be something you said or did, or something your therapist said or did.)

2. Please describe what made this event helpful/important and what you got out of it.

3. How helpful was this particular event? Rate it on the following scale. (Put an "X" at the appropriate point; half-point ratings are OK; e.g., 7.5.)

HINDERING <-----				Neutral	-----> HELPFUL			
1	2	3	4	5	6	7	8	9
-----	-----	-----	-----	-----	-----	-----	-----	
E	G	M	S		S	M	G	E
X	R	O	L		L	O	R	X
T	E	D	I		I	D	E	T
R	A	E	G		G	E	A	R
E	T	R	H		H	R	T	E
M	L	A	T		T	A	L	M
E	Y	T	L		L	T	Y	E
L		E	Y		Y	E		L
Y		L				L		Y
		Y				Y		

4. About where in the session did this event occur?

5. About how long did the event last?

6. Did anything else particularly helpful happen during this session?

Please describe it briefly

7. Did anything happen during the session that was hindering?

Please describe it briefly

Appendix F: Anxiety Questionnaire

GAD-7 Anxiety

Over the <u>last 2 weeks</u> , how often have you been bothered by the following problems? (Use “✓” to indicate your answer”	Not at all	Several days	More than half the days	Nearly every day
1. Feeling nervous, anxious or on edge	0	1	2	3
2. Not being able to stop or control worrying	0	1	2	3
3. Worrying too much about different things	0	1	2	3
4. Trouble relaxing	0	1	2	3
5. Being so restless that it is hard to sit still	0	1	2	3
6. Becoming easily annoyed or irritable	0	1	2	3
7. Feeling afraid as if something awful might happen	0	1	2	3

Column totals:

___ + ___ + ___ +

= **Total Score** _____

If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

Not difficult
at all
☐

Somewhat
difficult
☐

Very
difficult
☐

Extremely
difficult
☐

From the Primary Care Evaluation of Mental Disorders Patient Health Questionnaire (PRIME-MD PHQ). The PHQ was developed by Drs. Robert L. Spitzer, Janet B.W. Williams, Kurt Kroenke and colleagues. For research information, contact Dr. Spitzer at rls8@columbia.edu. PRIME-MD® is a trademark of Pfizer Inc. Copyright© 1999 Pfizer Inc. All rights reserved. Reproduced with permission

Appendix G: Depression Questionnaire

PHQ-9 Depression

Over the last 2 weeks, how often have you
been bothered by any of the following problems?

(Use “✓” to indicate your answer”

	Not all the time	at Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things.....	0	1	2	3
2. Feeling down, depressed, or hopeless.....	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much.....	0	1	2	3
4. Feeling tired or having little energy.....	0	1	2	3
5. Poor appetite or overeating.....	0	1	2	3
6. Feeling bad about yourself — or that you are a failure or have let yourself or your family down.....	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television.....	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed? Or the opposite — being so fidgety or restless that you have been moving .around a lot more than usual.....	0	1	2	3
9. Thoughts that you would be better off dead or of hurting yourself in some way.....	0	1	2	3

Column totals ____ + ____ + ____ + ____

= **Total Score** ____

Appendix H: Measure of Therapeutic Alliance and Relationship

Session Rating Scale

(Johnson, Miller, & Duncan 2000)

Please rate today’s session by placing a hash mark on the line nearest to the description that best fits your experience

Relationship

I did not feel heard, understood, and respected.

|-----|

I felt heard, understood, and respected.

Goals and Topics

We did not work on or talk about what I wanted to work on and talk about.

|-----|

We worked on and talked about what I wanted to work on and talk about.

Approach or Method

The therapist’s approach is not a good fit for me.

|-----|

The therapist’s approach is a good fit for me.

Overall

There was something missing in the session today.

|-----|

Overall, today’s session was right for me.

Appendix I: ACT Adherence Rating Scale

ACT & FAP Items	Notes:	Rating
1) Deliteralization/Defusion <ul style="list-style-type: none"> - Deliteralization/ Defusion - Feelings/Thoughts <u>DO NOT</u> lead to actions - Self as context/mindfulness of self as separate from language 		1 2 3 4 5
2) Willingness/Acceptance <ul style="list-style-type: none"> - Experiential Acceptance - Exploration of feelings/sensations - Mindfulness of current experiences - Out of session acceptance skills practice 		1 2 3 4 5
3) Creative hopelessness/Workability/Control is Problem <ul style="list-style-type: none"> - Effects to control thoughts and feelings - Explore the impact of previous efforts to control or avoid 		1 2 3 4 5
4) Values & Goals <ul style="list-style-type: none"> - Values and Goals 		1 2 3 4 5
5) Committed Action <ul style="list-style-type: none"> - Making and keeping Commitments 		1 2 3 4 5
Other Items		
9) General Assessment <ul style="list-style-type: none"> - Client's goals for treatment - Psychopathology - Assessment of general functioning 		1 2 3 4 5
Anti-ACT Items		
10) Challenging Cognitions (Only rate if it is "think this instead")		1 2 3 4 5
11) Experiential Avoidant Change Strategies <ul style="list-style-type: none"> - Avoid or control - Substituting positive thoughts - Reassurance in order to reduce experience 		1 2 3 4 5
12) Cognitive Therapy Rational		1 2 3 4 5
13) Thoughts and Feelings Cause Action <ul style="list-style-type: none"> - Feelings/Thoughts leads to action - Relate improvement to cognitive change 		1 2 3 4 5
14) In session exposure <ul style="list-style-type: none"> -deliberately exposing the person to feared stimuli and preventing the compulsion so that anxiety directly decreases 		1 2 3 4 5

Global Rating of Adherence					
15) Overall Adherence to Project Manual	1	2	3	4	5
16) Overall Competence of Therapist	1	2	3	4	5

Appendix J: Elliot's (2002) Guidance

A practical reasoning strategy

In our society, various types of experts must rely on practical reasoning systems in complex circumstances marked by multiple possible causal factors and contradictory evidence. Such circumstances preclude certainty or even near certainty (i.e., $p < .05$) and often require that decisions be made on the basis of “probable cause” or “the weight of the evidence” (i.e., $p < .20$).

The challenge, then, is to make this practical reasoning system transparent, systematic, and self-reflective enough to convince ourselves and others. This requires three things: (a) a rich case record consisting of multiple data sources, both qualitative and quantitative; (b) two or more positive indicators of direct connection between therapy process and outcome; and (c) a systematic assessment of factors that could account for apparent client change. This reasoning process is not mechanical and is more like detective work in which available evidence is weighed carefully and contradictory evidence is sought for possible alternative explanations.

Clear Links between therapy process and outcome

Making causal inferences about the relationship between therapy and client change requires using the available evidence to assemble both affirmative and sceptic positions. The *affirmative case* consists of positive evidence connecting therapy process to client outcomes and requires two or more of the following:

During the course of therapy, client experiences changes in long-standing problems.

Client explicitly *attributes* post-therapy change to therapy.

Client describes *helpful aspects* in therapy clearly linked to post-therapy changes.

Examination of weekly data reveals covariation between in-therapy processes (e.g., significant therapy events) and week-to-week shifts in client problems (e.g., helpful therapeutic exploration of a difficulty followed by change in that difficulty the following week).

Competing explanations of apparent change

Non-therapy Processes That May Account for Observed Client Change and Methods for Evaluating Them

<i>Nontherapy Process</i>	<i>Examples</i>	<i>Methods for Assessing</i>
1. Nonimprovement	<ul style="list-style-type: none"> • Negative: deterioration • Irrelevant: unimportant, trivial 	<ul style="list-style-type: none"> • Analyze for deterioration as well as improvement • Ask about negative changes • Analyze clinical significance of change (Jacobson & Truax, 1991) • Ask client to evaluate importance/significance of changes (Kazdin, 1999)
2. Statistical artifact (random error)	<ul style="list-style-type: none"> • Measurement error • Regression to the mean • Experiment-wise error 	<ul style="list-style-type: none"> • Calculate Reliable Change Index (Jacobson & Truax, 1991) • Use multiple pretests (rapid drop vs. stable or worse) • Assess duration of problem (short vs. long) • Assess consistency across multiple measures • Calculate global reliable change (e.g., require reliable change on two out of three measures)
3. Relational artifact (interpersonal dynamics between client	<ul style="list-style-type: none"> • “Hello-goodbye” effect: emphasize distress at beginning, positive functioning at end 	<ul style="list-style-type: none"> • Measure social desirability • Researcher, not therapist, interviews client • Encourage negative comments

and therapist)		<ul style="list-style-type: none"> • Listen for spontaneous remarks expressing desire to please or evaluation apprehension • Global or vague positive descriptions versus supporting or convincing detail • Presence of both positive and negative descriptions
4. Expectancy artifacts (cultural or personal “scripts”)	<ul style="list-style-type: none"> • Client tries to convince self and others that change has occurred when it has not 	<ul style="list-style-type: none"> • Ask client to evaluate changes as expected versus surprising • Examine client descriptions for consistency with cultural stereotypes versus plausible detail • Look for spontaneous client attempts to convince self and therapist that change has occurred
5. Self-generated return to baseline	<ul style="list-style-type: none"> • Temporary initial state of distress or dysfunction • Reverts to normal baseline through client’s own natural corrective or self-help processes • Not caused by therapy; would have happened anyway 	<ul style="list-style-type: none"> • Evaluate duration of problems (interview or ratings) • Ask client to evaluate likelihood that change might have occurred without therapy • Use multiple pretests; look for change before therapy starts • Look for client narratives of self-help efforts begun before therapy
6. Extra-therapy events (positive life events)	<ul style="list-style-type: none"> • Improvements in relationships or work • Changes in health status unrelated to therapy 	<ul style="list-style-type: none"> • Ask client: qualitative interview • Look for in-session narratives about positive extra-therapy events or changes

	(e.g., successful surgery, negative biopsy)	<ul style="list-style-type: none"> • Look for extra-therapy events associated with weekly change
7. Unidirectional psychobiological causes	<ul style="list-style-type: none"> • Psychopharmacological medications/herbal remedies • Hormonal stabilization in recovery from stroke or childbirth 	<ul style="list-style-type: none"> • Keep track of medications and herbal remedies including changes and dose adjustments • Look for in-session narratives about medical intervention
8. Reactive effects of research	<ul style="list-style-type: none"> • Effects of research activities (e.g., posttraumatic stress disorder assessment) • Relation with research staff (e.g., better than with therapist) • Sense of altruism (e.g., derives meaning from helping others) 	<ul style="list-style-type: none"> • Ask client about effects of research (qualitative interview) • Use less obtrusive data collection • Use naturalistic clients rather than recruited ones

Appendix K: JCBS author guidance

JCBS guide for authors exceeds 4 pages- see link for details

<https://www.elsevier.com/journals/journal-of-contextual-behavioral-science/2212-1447/guide-for-authors>

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