

**An exploration of Cognitive Behavioural Therapists' personal
and professional development**

A thesis submitted to Cardiff University for part fulfilment for the degree of
Doctorate in Clinical Psychology

2018

Kathryn Rayson

School of Psychology

Cardiff University

List of Contents

List of tables	3
List of figures	4
List of appendices	4
Declaration	5
Thesis abstract	6
Acknowledgements	7
Paper 1: The quality of research exploring in-session measures of CBT competence: a systematic review	
Abstract	9
Introduction	10
Method	14
Results	18
Discussion	30
References	36
Paper 2: Exploration of Postgraduate Certificate Cognitive Behavioural Therapy Students' Personal and Professional Development using Repertory Grids	
Abstract	46
Introduction	47
Method	54
Results	59
Discussion	64
References	78

Paper 3: Critical Review and Reflection on this Research

Paper 1: The systematic review	87
Paper 2: The empirical study	99
Dissemination	110
Personal reflection on the overall research process	111
References	113

List of Tables

Paper 1: The systematic review

Table 1. Definitions of measurement properties adapted from CONsensus-based Standards for the selection of Health Measurement INSTRUMENTS	19
Table 2. Overview of studies included in the review	21
Table 3. Critical appraisal results for interpretability using the Checklist for the Appraisal of Therapeutic Competence Scale Studies	22
Table 4. Reliability and validity methodology ratings using the Checklist for the Appraisal of Therapeutic Competence Scale Studies	23

Paper 2: The empirical study

Table 1. Selection of elements and explanation of amendments from Jenkins (2017)	56
Table 2. Principle Component Analysis	59
Table 3. Descriptive statistics for all element pairs' Euclidean Distances	60
Table 4. Comparison of elements over the training journey	62
Table 5. Categorisation of constructs using the Classification System for Personal Constructs (Feixas., Geldschläger and Neimeyer, 2002)	63

List of Figures

Paper 1: The systematic review

Figure 1. A framework for CBT therapist competence measures (Muse & McManus, 2013), 11
based on Miller's (1990) clinical skills hierarchy

Figure 2. Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA: 20
Moher et al., 2009) study flow diagram.

Paper 2: The empirical paper

Figure 1. 'Influences on Self-Perception of Competence' (Bennett-Levy & Beedie, 2007). 50

Figure 2. The DPR model highlighting the role of reflection and interpersonal skills in 51
therapist skill development (Bennett-Levy, Thwaites, Chaddock & Davis, 2009).

List of Appendices

Appendix A: Guidelines for the submission for publication to the *Behavioural and* 121
Cognitive Psychotherapy journal

Appendix B: Systematic review final search strategy 129

Appendix C: Checklist for the Appraisal of Therapeutic Competence Scale Studies 132

Appendix D: Guidelines for the submission for publication to the *Cognitive Behavioural* 137
Therapist journal

Appendix E: Participant information sheet 147

Appendix F: Consent form 151

Appendix G: Demographics questionnaire 153

Appendix H: Participant debrief sheet 155

Appendix I: Classification System for Personal Constructs (Feixas, Geldschläger & 157
Neimeyer, 2002)

Appendix J: Ethical approval 159

DECLARATION

This work has not been submitted in substance for any other degree or award at this or any other university or place of learning, nor is being submitted concurrently in candidature for any degree or other award.

Signed (candidate) Date

STATEMENT 1

This thesis is being submitted in partial fulfillment of the requirements for the degree of DClInPsy

Signed (candidate) Date

STATEMENT 2

This thesis is the result of my own independent work/investigation, except where otherwise stated. Other sources are acknowledged by explicit references. The views expressed are my own.

Signed (candidate) Date

STATEMENT 3

I hereby give consent for my thesis, if accepted, to be available for photocopying and for inter-library loan, and for the title and summary to be made available to outside organisations.

Signed (candidate) Date

An exploration of Cognitive Behavioural Therapists' personal and professional development

Kathryn Rayson

Doctorate of Clinical Psychology, Cardiff University, 2018

Thesis Abstract

This thesis explores Cognitive Behavioural Therapists' personal and professional development. Paper one consists of a systematic review of the quality of ten studies examining the measurement properties of CBT Competence Scales (CCSs). Overall the quality of the studies varied, but most were rated as 'fair' due to small sample sizes. The review also found inconsistency in the way some measurement properties were defined. The review concluded that more research into the measurement properties of CCSs is needed and that consensus is required to determine appropriate sample sizes and measurement property definitions. Paper 2 explored the personal and professional development of eight students over the course of a postgraduate certificate in Cognitive Behavioural Therapy (CBT), within Personal Construct Theory, using the repertory grid technique. The study found that certificate students perceived an increase in CBT competence but at the expense of interpersonal effectiveness. The study found difference in the personal and professional development of certificate CBT students, compared to previous findings with diploma students. Implications for students, trainers and commissioners are discussed, with suggestions on ways to increase certificate students' reflection. Paper three presents a critical review of the research process, including both the systematic review and empirical paper. The strengths and limitations will be discussed, as well as the authors personal development as a scientist practitioner as a result of conducting the research.

Acknowledgements

Firstly, I would like to express my gratitude to the CBT certificate students who took part in the empirical study. NHS staff time is under so much pressure and these participants not only made time to take part in the interviews, but did so with enthusiasm and honesty.

Secondly, I would like to thank my research supervisors Dr Louise Waddington and Dr Dougal Hare. You were always available to offer advice and encouragement, and I am grateful of the time you made to offer feedback on drafts of my work. I am also grateful to Hannah Jenkins who offered me a great deal of advice. In addition, thanks to Matthew Yates for being my independent assessor for the systematic review.

Thirdly, I would like to thank my parents for always ensuring my education was a priority and for my sister who always shows unconditional belief in my ability (even when it's not founded). I would also like to thank my wonderful cohort. I have learnt so much from all of you and I will always be grateful for the support I received from you all at different times.

Most importantly I must thank my boyfriend John, for too many reasons to mention. Most importantly for the emotional and practical support given that allowed me to focus on my work. Without him my training would have been so much harder and I am so grateful for his continual love and support.

Paper 1: The Systematic Review

The quality of research exploring in-session measures of CBT competence: a systematic review

Manuscript prepared in accordance with the guidance for the

Behavioural and Cognitive Psychotherapy Journal (see Appendix A)

Word count (excluding Table, Figures, References and Appendices†): 5685

†References to Appendices will be removed before submission for publication

Abstract

Background: Cognitive Behavioural Therapy (CBT) is in high demand due to its strong evidence base and cost effectiveness. To ensure CBT is delivered as intended, fidelity assessment is needed in research, training and practice. Fidelity is commonly measured by rating treatment sessions using CBT Competence Scales (CCSs).

Aims: The current review assessed the quality of the literature examining the measurement properties of CCSs and makes recommendations for future research.

Method: Medline, PsychINFO, Scopus and Web of Science databases were systematically searched to identify relevant peer-reviewed, English language studies from 1980 onwards. Relevant studies were those that were primarily examining the measurement properties of CCSs used to assess adult 1:1 CBT treatment sessions. The quality of studies was assessed using a novel tool created for this study, following which a narrative synthesis was presented.

Results: Ten studies met inclusion criteria, most of which were assessed as being 'fair' methodological quality; primarily due to small sample sizes. Construct validity and responsiveness definitions were applied inconsistently in the studies, leading to confusion over what was being measured.

Conclusions: Although CBT Competence Scales are widely used, future research exploring their measurement properties would benefit from attention to methodology and reporting of individual properties. Consistent definitions of measurement properties and a consensus about adequate sample sizes are required to ensure the quality of future research.

Keywords: Cognitive Behavioural Therapy; CBT; Training; Competence; Clinical skill.

Introduction

Treatment fidelity or integrity is used to refer to the extent a psychological treatment is implemented as intended (Fairburn & Cooper, 2011) and comprises of adherence and competence. Adherence refers to the extent to which a therapist delivers a therapy in accordance with the therapy model or manual. Competence refers to the skill with which a therapist delivers the therapy. Adherence and competence have been shown to be highly correlated (Barber, Liese & Abrams, 2003), with a complex hierarchical relationship. Adherence is necessary but not sufficient for therapist competence and competence is not sufficient without adherence (Waltz et al., 1993). Competence in therapy may then consist of adherence to the therapy, ability to engage a client, skilful use of treatment change strategies; as well as knowledge of when and when not to apply these strategies (Yeaton & Sechrest, 1981).

The core competences needed to deliver effective Cognitive Behavioural Therapy (CBT) have been incorporated into a broad framework consisting of five domains: 1) Generic Therapeutic Competences; 2) Basic CBT Competences; 3) Specific Behavioural and Cognitive Therapy Competences; 4) Problem Specific Competences; and 5) Meta-competences (Roth & Pilling, 2007). This framework gives a comprehensive definition of CBT competence but the authors acknowledge that it is not a measure of competence and advocate the use of competence measures that assess a subset of core competencies (Roth & Pilling, 2008).

A previous systematic review (Muse & McManus, 2013) presented a helpful framework by which different levels of CBT competence can be demonstrated and assessed (See Figure 1.) The framework is based on Miller's (1990) proposal that there are four levels of assessment of competence: a) the clinician *knows* or has the *knowledge*; b) the clinician *knows how* to use this knowledge; c) the clinician *can show how* to do a skill; and d) the

clinician displays this skill in practice. Thus, in this hierarchical framework the highest level of competence is if the therapist can use a skill in practice, which can be assessed by rating treatment sessions (assessor or self), supervisory assessments and patient surveys.

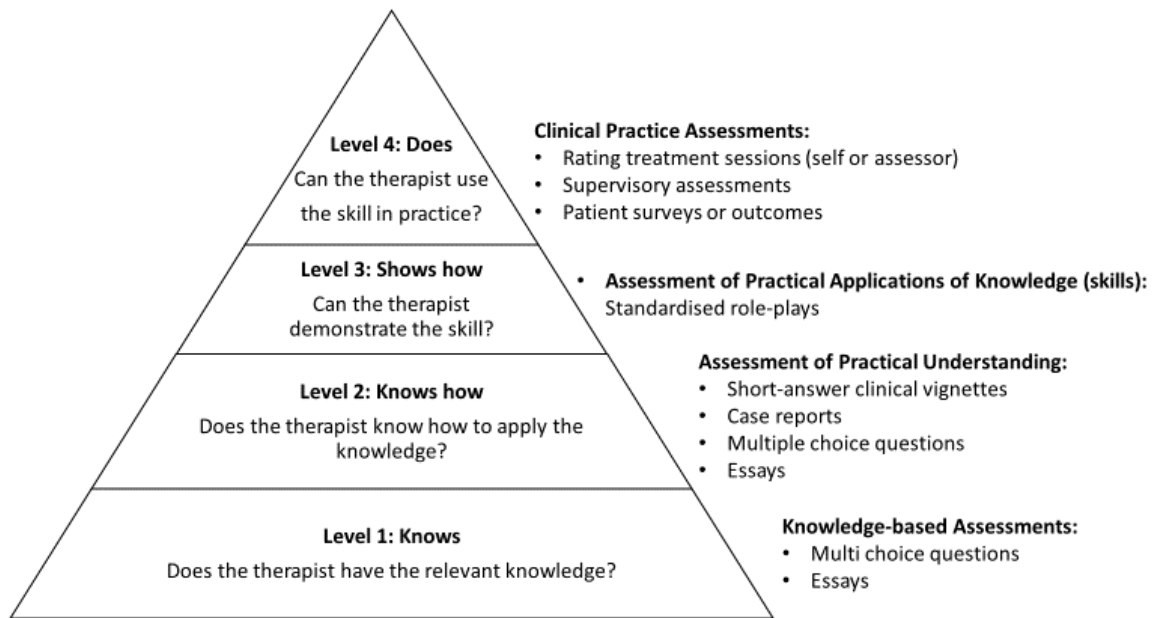


Figure 1. A framework for CBT therapist competence measures, based on Miller's (1990) clinical skills hierarchy (Muse & McManus, 2013).

The framework suggests that assessor ratings of therapist in-session performance are considered the ‘gold standard’ in assessing competency (Muse & McManus, 2016). Treatment sessions can be rated with CBT Competence Scales (CCSs) either live in session or more typically by rating an audio or video recording. These scales usually consist of a list of domains in which an observer rates the level of competence observed on an analogue scale. Totals from each domain can be combined to create an overall competence score with an agreed cut off, which if met suggests a therapist has met a satisfactory level of competence. Crucially CCSs can be used by independent assessors, as well as the therapist and supervisor. This is

important since independent assessors tend to be more modest in their scoring compared to patients, therapists or supervisors (Rozek et al., 2018) and can therefore arguably be described as more objective.

One of the first CCSs developed was the Cognitive Therapy for Depression Checklist (CCCT: Beck, Rush, Shaw & Emery, 1979); later developed into the Cognitive Therapy Scale (CTS: Dobson, Shaw & Vallis, 1985; Vallis, Shaw & Dobson, 1986). The CTS has been further revised (CTS-R: Blackburn et al., 2001) and disorder specific versions developed around the CTS/CTS-R framework (e.g. Competence Rating Scale for PTSD: Dittman et al., 2017; CTS for Psychosis: Haddock et al., 2001; Cognitive Therapy Competence Scale for Social Phobia: von Consbruch, Clark & Stangier, 2012). While other global CCSs are being developed (e.g. Assessment of Core CBT Skills: Muse, McManus, Rakovshik & Thwaites, 2017), the CTS/R remain the primary tools used by CBT training programmes to measure competence (Liness, Lea, Nestler, Parker & Clark, 2017; Muse & McManus, 2016).

CBT has become one of the most prominent psychological therapies worldwide, due to increasing evidence of its efficacy (Hofmann et al., 2012). In the UK, the National Institute for Health and Clinical Excellence (NICE) recommends CBT for the treatment of a variety of psychological difficulties in adults (NICE, 2004, 2007, 2011, 2014a, 2014b). In England there has been a firm commitment for services to deliver CBT through the roll out of the Improving Access to Psychological Therapies (IAPT) initiative (Clark, 2011). In Scotland and Wales, national psychological therapy provision guidelines, such as the *Scottish Psychological Therapy Matrix* (NHS Education for Scotland, 2015) and *Matrics Cymru: Delivering Evidence-Based Psychological Therapy in Wales* (National Psychological Therapies Management Committee, 2017), promote the widespread use of CBT. As the demand for CBT

increases, commissioners, services, trainers and researchers all need effective methods to ensure CBT is delivered with fidelity to the evidence base.

Measuring competence in CBT is essential to ensure the quality of CBT treatment being delivered and to improve treatment in everyday practice (Kazantzis, 2003). CBT competence may account for some variance in patient outcomes (Jacobson & Gortner, 2000), but results are variable in studies (Branson, Shafran & Myles, 2015; Dobson & Kazantzis, 2003). One explanation for this variance could be the poor reliability of tools used to assess competence (Crits-Christoph et al., 1991), but there are many other variables that can effect outcomes e.g. the characteristics of the patients (Fairburn & Cooper, 2011). Assessing competence is also important in empirical trials of CBT to assess fidelity, but reliable and valid measures of competence are needed to do this effectively (Shafran et al., 2009). There are often barriers to implementing treatment integrity procedures in outcomes research (Perepletchikova, Hilt, Chereji & Kazdin, 2009). For example, a systematic review found inter-rater reliability of the CTS or CTS-R is not often reported and when it is the results are variable (Loades & Armstrong, 2016).

Due to the widespread use of CCSs in training, development and research, and the consensus that they are the ‘gold standard’ of competency assessment (Muse & McManus, 2013, 2016), it is essential that the measurement properties of these tools are assessed. A previous review of CBT competence found the reliability and validity of existing CCSs to be mixed (Kazantzis, 2003). A further systematic review examining the assessment of CBT competence found there was still a lack of empirically evaluated CCSs with adequate reliability and validity (Muse & McManus, 2013). Further research is needed to either refine existing measures or develop new scales (Muse & McManus, 2016), but to do so there must be a better understanding of the problems within the existing research.

In the field of psychometric research, it is important to distinguish between the outcomes (of analysis of measurement properties in this case) and study design. It can be said that the results of a study can be trusted if the methodology is of good quality (Terwee et al., 2012). To the best of the authors' knowledge, there are no published reviews which have assessed the quality of research examining the measurement properties of CCSs. Thus, this present review will seek to add to the literature by reviewing the quality of literature examining CCSs and make recommendations on how to improve the quality of future research. Due to the complex relationship between adherence and competence the present review will consider measures that assess a combination of adherence and competence. The specific research questions addressed within the review are:

- 1) What is the quality of the research examining CCSs?
- 2) How can research into the measurement properties of CCSs be improved?

Method

Search strategy

Studies were identified through an electronic search of relevant databases: Medline, PsychINFO, Scopus and Web of Science, on 12th February 2018.

The following general search strategy was used (see Appendix B for individual database search strategies):

1. (“therap* competen*” OR “clinical competen*” OR “therap* skill” OR “assess* competen*” OR “competen* assess*” OR “therap* quality” OR “intervention competen*” OR “intervention quality” OR “clinical expertise”) AND (“cognitive therapy” OR “behav* therapy” OR “cognitive-behavior*” OR “cognitive behavior*” OR “CBT”)

OR

2. (“cognitive therapy scale” OR “revised cognitive therapy scale” OR “CTS-R”).

A further 10 studies were identified through snowballing methods by cross checking reference lists, key author searches and consultation with a CBT expert.

Inclusion/exclusion criteria

The following inclusion criteria was used to assess eligibility:

1. Studies published in English from 1980 to present day.
2. Studies where the primary aim is the investigation of a CCS based on adult, individual, face to face CBT.
3. Studies published in peer reviewed journals.
4. Studies that included mixed adherence and competence scales.

Randomised control trials (RCTs) that use a CCS to assess treatment fidelity were excluded, because their primary focus is not investigating the validity, reliability or responsiveness of a CCS (Terwee, de Vet, Prinsen & Mokkink, 2011).

Quality assessment

A thorough literature search was conducted to identify a suitable tool to appraise the quality of the selected papers. Although many tools exist for assessing the quality of quantitative and qualitative studies, there are few that are suitable for assessing the methodological quality of studies on measurement properties. To bridge this gap, an international Delphi study developed the CONsensus-based Standards for the selection of health Measurement INSTRUMENTS checklist (COSMIN) for assessing the methodological quality of studies on measurement properties (Mokkink et al., 2010a; 2010b). The COSMIN checklist was developed initially to be used with health status measurement instruments (HSMIs). Although there is much overlap between the measurement properties of HSMIs and CCSs, there are some distinct differences. The COSMIN checklist was considered for use within the present review, but the tool was too broad in scope generally and lacked specificity in relation to studies reporting the measurement properties of CCSs. A new tool was developed for this purpose, based on the criteria in COMSIN, its accompanying definitions of measurement properties and information from a precursor to COSMIN proposing quality criteria (Terwee et al., 2007): the Checklist for the Appraisal of Therapy Competence Scale Studies (CATCS: Appendix C).

The CATCS checklist consists of 17 items relating to: a) generalisability; b) reliability: inter-rater reliability, test-retest reliability, measurement error, internal consistency; c) validity: structural validity, hypothesis testing, criterion validity, content validity; and d) responsiveness. Each item is rated on a scale from 0-2 (0=poor, 1=fair and 2=excellent) based on either the design and/or reporting. There is no assumption that these three areas are equally weighted and therefore total scores for each paper are not calculated. Definitions of the measurement properties included can be found in Table 1.

Existing critical appraisal tools recognise the importance of generalisability but are unable to capture features that are important for CCSs. Generalisability is one of the most important domains, since poor reporting in this area undermines the reporting of other properties (Terwee et al., 2007). For example, a study might report excellent inter-rater reliability but if the study does not provide adequate information about the patient population, therapists and raters then this information cannot be meaningfully generalised to other populations. Thus, a total score for generalisability is reported with ≥ 10 deemed to be acceptable. In one of the earlier drafts of the CATCS the number of recordings used was included in the ‘generalisability’ section and not included on each area of ‘reliability’, ‘validity’ or ‘responsiveness’. When the lead author [KR] trialled the use of an early draft of the CATCS it was difficult to identify one value for the number of recordings used overall, as this often varied between assessments of measurement properties. Instead, the number of recordings used was included as a methodological factor for each measurement property (apart from ‘content validity’, as it is not dependant on sample size). Acceptable sample size for recordings was guided by the COSMIN panel and other literature, which indicated 100 is considered excellent, 30 or more as fair and below 30 poor methodology (Stevens, 1996).

A decision was made not to include ‘cross-cultural validity’, since it is only relevant if assessing papers of a measure adapted from a different language (Mokkink et al., 2010c). ‘Responsiveness’ was included in the CATCS, since it is important for a CCS to be able to detect changes in competence over time, as well as between groups which is measured with ‘discriminant validity’ within ‘hypothesis testing’.

The CATCS was developed by the lead author [KR] but consultation was sought with the research team to assess its face validity. Following some amendments, the CATCS was trialled on a sample of papers to assess its utility, which was then discussed with the research

team. The trial found that some measurement property terms were not applied consistently, and the tool was refined to provide clearer definitions. Specifically, the term ‘responsiveness’ was not used consistently within the studies and therefore an extra statement at the end of the CATCS was added to aid the user in appraising this criterion (see CATCS Appendix C). The results of the quality assessment were synthesised narratively due to the heterogeneity of the studies.

Results

Study selection

Article selection was conducted by the lead author [KR]. After 642 duplicates were removed, the remaining articles were assessed for inclusion by title or abstract and 925 excluded as clearly irrelevant. Full checks of the remaining 136 articles were then conducted, which led to 10 final papers that met inclusion criteria (see Figure 2 for study flow diagram).

Study Characteristics

Three studies reported the measurement properties for the CTS (Dobson et al., 1985; Dittman et al., 2017; Vallis et al., 1986) and two for the CTS-R (Blackburn et al., 2001; Gordon, 2006). Adapted disorder specific versions of the CTS/R were reported in four papers (Dittman et al., 2017; Gordon, 2006; Haddock et al., 2001; Von Consbruch et al., 2012). Two studies reported a competence subscale within a scale that also examined adherence (Barber et al., 2003; Carrol et al., 2000). One scale was a report of a newly developed global measure of CBT competence (Muse et al., 2017). See Table 2. for an overview of the studies.

Table 1. Definitions of measurement properties adapted from COSMIN (Mokkink et al., 2010c).

Domain	Measurement property	Aspect of measurement property	Definition
Generalisability			The degree studies have provided sufficient information that one can assign qualitative meaning to an instrument's quantitative scores or change in scores.
Reliability	Inter-rater reliability Test-retest reliability Measurement error Internal consistency		The ability of an instrument to score performance that has not changed, the same way for repeated measures, under several conditions. Different raters scoring the same treatment session the same way. Scoring the same treatment session, the same way on different occasions. The difference between the obtained score and its theoretical true score. The degree of the interrelatedness among the items.
Validity	Construct validity Criterion validity Content validity	Structural validity Hypothesis testing Face validity	The degree to which an instrument truly measures the construct(s) it purports to measure. The degree to which the scores of an instrument are consistent with hypotheses (for instance about internal relationships, relationships to scores of other instruments, or differences between relevant groups) based on the assumption that the instrument validly measures the construct to be measured. The degree to which the scores of an instrument are an adequate reflection of the dimensionality of the construct to be measured. The extent to which scores on a questionnaire relate to other measures in a manner that is consistent with theoretically derived hypotheses concerning the concepts that are being measured. Convergent validity tests whether constructs on a scale that should be related are related. Discriminant validity tests whether constructs on a scale that are not supposed to be related, are actually unrelated. E.g. detecting difference between novice and expert therapists. The extent to which scores on an instrument are an adequate reflection of a 'gold standard'. The degree to which an instrument includes all the necessary items to represent the concepts to be measured. The degree to which (the items of) an instrument indeed looks as though they are an adequate reflection of the construct to be measured.
Responsiveness			The ability of an instrument to detect important change over time in the construct to be measured.

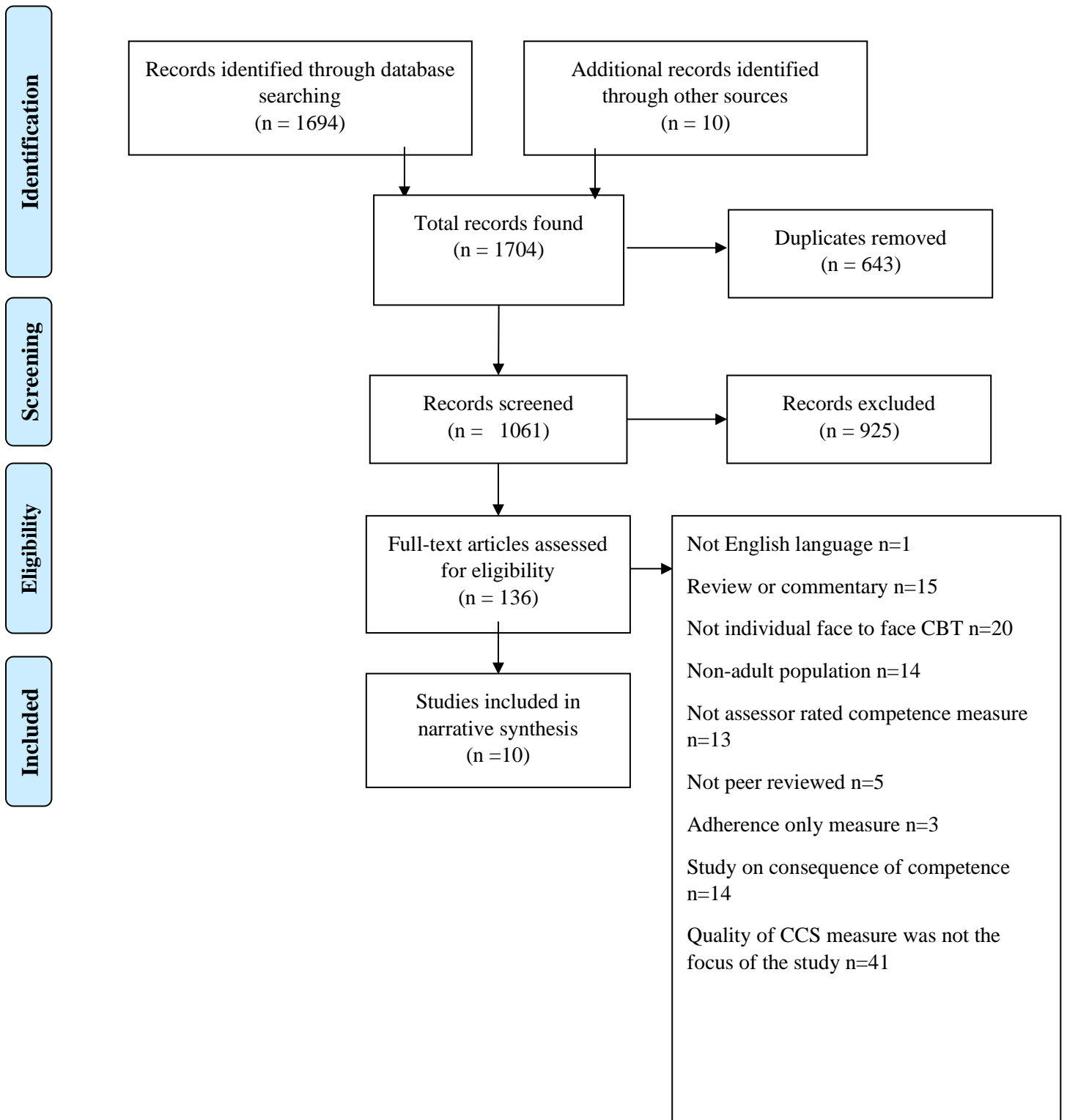


Figure 2. Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA: Moher et al., 2009) study flow diagram.

Table 2. Overview of studies included in the review in chronological order.

Study	CCS examined in the study	Purpose of scale/s
Dobson et al., 1985	Cognitive Therapy Scale: CTS	The CTS is a rating scale to assess the quality of cognitive therapy. Originally developed for assessing the quality of cognitive therapy for depression by Young & Beck (1980).
Vallis et al., 1986;	Cognitive Therapy Scale- Revised: CTS-R	Developed as a transdiagnostic measure of adherence and competence of cognitive therapy.
Carrol et al, 2000	Yale Adherence and Competence Scale: YACS	Developed to rate therapist adherence and competence in delivering behavioural treatments for substance use disorders.
Blackburn et al., 2001	Cognitive Therapy Scale- Revised: CTS-R	As above.
Haddock et al., 2001	Cognitive Therapy Scale- Psychosis: CTS-PSY	The CTS-PSY was developed to assess the quality of CBT with patients experiencing psychosis. It was adapted from the CTS.
Barber et al., 2003	Cognitive Therapy Adherence and Competence Scale: CTACS	Developed to measure adherence and competence of cognitive therapists treating cocaine dependant patients, but authors report it can also be used on non-drug-dependant patients.
Gordon et al., 2006	Cognitive Therapy Scale- Psychosis: CTS-PSY & Cognitive Therapy Scale- Revised: CTS-R	As above.
von Consbruch et al., 2012	Cognitive Therapy Competence Scale for Social Phobia: CTCS- SP	Adapted from the CTS to measure therapist competence in delivering cognitive therapy for social phobia.
Dittman et al., 2017	Competence Rating Scale for Cognitive Processing Therapy: CRS-CPT, Competence Rating Scale for PTSD: CRS-PTSD & Cognitive Therapy Scale: CTS	The CRS-CPT was developed as a treatment and disorder specific competence rating scale for treating PTSD with Cognitive Processing Therapy. The CRS-PTSD was developed as a disorder specific competence rating scale for the treatment of PTSD.
Muse et al., 2017	Assessment of Core CBT Skills: ACCS	The ACCS aims to assess therapist competence in core general therapeutic and CBT-specific skills, that reflect the current evidence base for the presenting problem.

Table 3. Critical Appraisal results for Generalisability using the CATCS.

Study and CBT Competence Scale Examined	Study purpose	Protocol for scale	Therapy/ patients/ setting	Recordings	No. of raters	Raters	No. of therapists	Therapists	Total (max 16)
Barber et al., 2003 CTACS	2	2	2	1	0	2	2	2	13
Blackburn et al., 2001 CTS-R	2	2	2	2	1	0	2	2	13
Carrol et al, 2000 YACS	2	2	2	1	1	2	2	0	12
Dittman et al., 2017 CRS-CPT, CRS-PTSD & CTS	2	1	2	1	0	0	1	2	9
Dobson, Shaw & Vallis, 1985 CTS	2	2	2	0	1	2	2	2	13
Gordon, 2006 CTS-PSY & CTS-R	2	2	2	0	2	2	2	2	14
Haddock et al., 2001 CTS-PSY	2	2	2	0	1	1	2	2	12
Muse et al., 2017 ACCS	2	2	2	2	2	2	2	2	16
Vallis et al., 1986 CTS-R	2	2	2	1	2	2	2	2	15
von Consbruch et al., 2012 CTCS-SP	2	2	2	1	2	2	2	1	14

Scoring criteria for quality: 0 = Poor, 1 = Fair, 2 = Excellent.

ACCS= Assessment of Core CBT Skills; CTS= Cognitive Therapy Scale: CTS; CTS-R = Cognitive Therapy Scale-Revised; CTACS = Cognitive Therapy Adherence and Competence Scale; YACS= Yale Adherence and Competence Scale; CRS-CPT= Competence Rating Scale for Cognitive Processing Therapy; CRS-PTSD = Competence Rating Scale for PTSD; CTCS-SP= Cognitive Therapy Competence Scale for Social Phobia; CTS-PSY= Cognitive Therapy Scale-Psychosis.

Table 4. Reliability and validity methodology ratings using the CATCS.

CBT Competence Scale	Inter-rater reliability	Test-retest reliability	Measurement error	Internal consistency	Structural validity	Hypothesis testing	Criterion validity	Content validity	Responsiveness
Barber et al., 2003 CTACS	1 (92)			1(?)	1(?)	1(92)		2	
Blackburn et al., 2001 CTS-R	2(102)			1(?)				2	0 (22)
Carrol et al, 2000 YACS	0 (19)				1 (83)	1 (79-576)			
Dittman et al., 2017 CRS-CPT, CRS-PTSD & CTS	0 (21)			0 (21)				2	
Dobson, Shaw & Vallis, 1985 CTS	1 (30)			1 (30)		1 (30)		2	
Gordon, 2006 CTS-PSY & CTS-R	1 (20-26)		1 (20-26)			0 (20-26)		2	
Haddock et al., 2001 CTS-PSY	0 (5)					0(24)		1	
Muse et al., 2017 ACCS	1(55)			2 (111)		1 (68- 76)		2	0 (17)
Vallis et al., 1986 CTS	0 (10)			1 (90)	1 (90)	1 (53)		1	
von Consbruch et al., 2011 CTCS-SP	2 (161)	1 (15)		1 (161)					

Scoring criteria for quality: 0 = Poor, 1 = Fair, 2 = Excellent. Blank boxes indicate the domain was not reported on in the study. Items in brackets denotes the sample size the analysis was performed on; ‘?’ indicates that the sample size was not clear.

ACCS= Assessment of Core CBT Skills; CTS= Cognitive Therapy Scale: CTS; CTS-R = Cognitive Therapy Scale-Revised; CTACS = Cognitive Therapy Adherence and Competence Scale; YACS= Yale Adherence and Competence Scale; CRS-CPT= Competence Rating Scale for Cognitive Processing Therapy; CRS-PTSD = Competence Rating Scale for PTSD; CTCS-SP= Cognitive Therapy Competence Scale for Social Phobia; CTS-PSY= Cognitive Therapy Scale-Psychosis.

Findings of the quality assessment

The quality check of the studies was conducted by the lead author [KR]. A random sample of half of the studies was independently assessed by a colleague independent from the review. After the lead author trained the colleague in the use of the tool they piloted its use by comparing results on one paper. There were no disagreements, but uncertainties were discussed, and agreements made on scoring. The colleague then rated the remaining sample and results compared with the lead author. Inter-rater reliability was assessed using a Linear Weighted Kappa (Cohen, 1968) and was found to be good $k = 0.76$ (95% CI, 0.70 to 0.88), $p < 0.0005$ (Altman, 1991). The few differences were discussed and resolved for the final ratings. Results of the quality assessment using the CATCS are reported in Table 3. for generalisability and Table 4. for quality of measurement property methodology and reporting.

Generalisability

All but one study (Dittman et al., 2017) had a total score ≥ 10 for generalisability. Thus, most of the studies provided sufficient information that the results can be meaningfully interpreted qualitatively within the contexts specified. All the studies provided clear information about the purpose of the study, protocol for the CCS and the types of patients treated.

Three of the studies (Barber et al., 2003; Blackburn et al., 2001; Dittman et al., 2017) received a poor rating for number of raters used or for types of raters used. Risk of bias was increased in three studies which employed raters who were either supervisors or trainers of the therapists or were part of the research team, as independent raters tend to rate competence lower than supervisors (Rozek et al., 2018). The seven studies that received an excellent rating for 'Raters' employed at least one rater that was truly independent and provided a clear explanation

of the training the raters underwent. Training of raters has been shown to improve inter-rater reliability (Reichelt, James & Blackburn, 2003). Four studies were assessed as excellent both for the number of raters used and the characteristics of the raters (Gordon, 2006; Muse et al., 2017; Vallis et al., 1986; von Consbruch et al., 2012).

All studies reported using an acceptable number of different therapists, with no studies receiving a poor rating in this domain. Similarly, most of studies provided an excellent description of therapists and their training, with only one study receiving a poor rating (YACS: Carrol et al, 2000).

Reliability

Inter-rater reliability

Inter-rater reliability of competence scales can be measured for the total scales and individual items. Often the inter-rater reliability of total scales is found to be good but lower for individual items (e.g. Barber et al., 2003; Blackburn et al., 2001; Dobson, Shaw & Vallis, 1985; von Consbruch et al., 2011). All but one study (Vallis et al., 1986) reported both total scale and individual item correlations using appropriate statistical analysis.

Overall the quality of the assessment of inter-rater reliability was affected by variable samples sizes. Caution should be exercised when interpreting the inter-rater reliability results of the YACS (Carrol et al., 2000), CRS-CPT (Dittman et al., 2017) and CPT-PTSD (Dittman et al., 2017) due to small sample sizes of 19 and 21 respectively. This is also true for the CTS, which used small sample sizes in three studies (Vallis et al, 1986 n=10; Dittman et al., 2017 n=30, Dobson et al., 1985 n=30).

Test-retest reliability

Only one study (von Consbruch et al., 2012) conducted a test-retest reliability assessment for a CCS. Some researchers have suggested that the retest method should not be used to estimate reliability, preferring internal consistency (Nunnally and Bernstein, 1994). Reasons cited include the stability of the attribute being measured and carryover effects in the second rating (Polit, 2015). Carryover effects in relation to rating CCSs could include the rater recalling their previous ratings or wanting to appear consistent. Von Consbruch and colleagues (2012) attempted to reduce the influence of carryover effects by ensuring there was 18 to 24 months between each rating. They found high retest reliability for the total CTCS score and moderate to substantial intra-class correlations for individual items. Despite this, the sample size used for the analysis was only 15 tapes so test-retest reliability methodology received a ‘poor’ rating.

Measurement error

Measurement error was reported in only one study (Gordon, 2006). Although the analysis used was appropriate the sample size was <30 and so received a poor rating. Assessing measurement error appears to be a neglected area of CCS measurement property evaluation, despite its importance. For example, health measurements such as physiological markers of disease are reasonably stable characteristics but measuring competence could be influenced by other components which are not the subject of measurement (Rosenkoetter & Tate, 2018). This means that when measuring competence by a single assessor, a degree of error may exist between the true theoretical score and the actual given score. If a CCS has a cut off score for competence (e.g. CTS-R) then calculating the measurement error can provide a confidence interval of the estimate of the score (Gordon, 2006).

Internal consistency

Internal consistency was reported in seven studies with varying quality and sample sizes. Only one study received an excellent rating (ACCS: Muse et al., 2017). Studies that received a fair rating for internal consistency did so because they did not calculate factor analysis per dimension (Barber et al., 2003; von Consbruch et al., 2011) or they had small sample sizes. Caution should be exercised in interpreting the internal consistency results of the CRS-CPT and CRS-PTSD, as this domain received a 'poor' quality rating due to the small sample size in the study (Dittman et al., 2017). There are no studies which have examined the internal consistency of the CTS-PSY (Gordon, 2006; Haddock et al., 2001) and YACS (Carrol et al., 2000).

Validity

Criterion validity

Barber and colleagues (2003) was the only study to report criterion validity but the description they provide fits better with a definition of discriminant validity and so it was considered as such. Criterion validity was included in the quality assessment tool as initially it appeared that some studies reported this construct, but an actual 'gold standard' for CCSs may not currently exist.

Content validity

Content validity is less relevant in studies of instruments that have been adapted from an original scale or if the scale has already demonstrated content validity reported elsewhere.

Only two studies did not report content validity. It is not clear why it was not reported for the YACS (Carrol et al., 2000), since this was a novel instrument. Von Consbruch and colleagues (2011) may not have reported on this for the CTCS-SP since it was adapted from the CTS, but they should then have reported this for the new items. Overall the quality of reporting of content validity was excellent in six studies; but two studies scored ‘fair’ as they did not cover the domain in sufficient detail (Haddock et al., 2001; Vallis et al., 1986).

Construct validity

Construct validity includes structural validity, hypothesis testing and cross-cultural validity. Cross-cultural validity refers to how well an instrument has been adapted for different cultures or languages but was not included in this review as although some CCSs have been adapted into different languages (e.g. German version of the CTS: Weck, Hautzinger, Heidenreich & Stangier, 2010), the search strategy found no such studies published in English that met inclusion criteria.

Structural validity

Structural validity was reported in only three papers with each achieving a ‘fair’ score. In two papers the method of analysis was good but the sample size was not high enough to achieve an ‘excellent’ rating (Carrol et al., 2000 n=83; Vallis et al., 1986 n=90), and the sample size was not clear in another (Barber et al., 2003).

Some psychometricians recommend performing confirmatory factor analysis on samples as large as 200-300 as a minimum standard (Polit, 2015). This may be unachievable

for studies examining the properties of CCSs and clarity is needed as to a minimum sample size to assess structural validity of CCSs. What is clear is that further research examining the structural validity of CCSs with larger sample sizes is needed.

Hypothesis testing

Hypothesis testing was included in seven of the papers. Five studies were only rated 'fair' due to sample sizes of 30-99 or not making explicit hypotheses a priori. The two studies examining the CTS-PSY both received a 'poor' rating for hypothesis testing, again due to small sample sizes (Gordon, 2006 n= 20-26; Haddock et al., 2001 n=24).

Responsiveness

For the purposes of clarity, this review adopted the COSMIN definition of responsiveness as the ability of a scale to detect changes longitudinally. In this case, it refers to a CCS detecting changes in competence over time, perhaps because of experience or training. If studies assessed the same therapists at different time points and calculated their change in scores, then this was considered a measure of responsiveness of the scale. If, however, this was done using a cross sectional design, where change was not calculated for each individual therapist, then it was considered discriminant validity, since the aim was to assess if the scale can discriminate between different groups: e.g. expert versus novice.

Two studies (Blackburn et al., 2001; Muse et al., 2013) reported discriminant validity, but the description they used fits the definition of responsiveness used in this review. This discrepancy is understandable given some psychometricians have argued that responsiveness

does not require its own label, since it is longitudinal construct validity (Streiner, Norman & Cairney, 2015; Terwee et al., 2003). This may also be why no CCSs have examined this measurement property explicitly. Unfortunately, both studies received a ‘poor’ rating for the methodology due to small sample sizes.

Discussion

This review found that overall the quality of the studies was very mixed, but no studies demonstrated ‘excellent’ quality throughout. The quality was significantly affected by small sample sizes. A sample size of <30 is defined as ‘poor’ based on the COSMIN guidelines for assessing the quality of patient HMIs (Mokkink et al., 2010a, 2010b, 2012). The COSMIN benchmark was used due to a lack of any other guidelines, around sample sizes for measurement property research in competence scales, but using this benchmark requires caution. There are high costs involved in rating CBT treatment sessions, since experts (Weck, Hilling, Schermelleh-Engel, Rudari, & Stangier, 2011) or supervisors (Kazantzis, 2003) are usually required, because they are more reliable judges of competence. Further consensus is needed to clarify the minimum number of recordings of rated sessions needed for each measurement property, since this may vary per dimension.

From this detailed analysis some inferences about overall quality of studies can be made. The methodologies of the studies examining the measurement properties of the CTS (Dobson et al., 1985; Vallis et al., 1986; Dittman et al., 2017), CTS-R (Blackburn et al, 2001; Gordon, 2006) and CTS-PSY (Gordon, 2006; Haddock et al., 2001) were assessed as ‘poor’ to ‘fair’. The exceptions to this were content validity reporting for most studies of the CTS and

inter-rater reliability methodology in one CTS-R study (Blackburn et al., 2001), which were all rated as 'excellent'. The CTS and CTS-R are the most widely used CBT competence measures in the UK, with the above studies having been used to report the reliability and validity of both measures. The findings of this review suggest the quality of these studies is not robust enough, and that conclusions about their reliability and validity need to be held tentatively.

The study examining the CTCS-SP (von Consbruch et al., 2011) had quality ratings between 'fair' and 'excellent'. The ACCS (Muse et al., 2017) had quality ratings from 'poor' to 'excellent'. 'Fair' and 'poor' scores were awarded due to small sample sizes but methodology was appropriate otherwise. In some ways these more recent studies have addressed some of the previous methodological problems in previous studies on the CTS and CTS-R but not consistently. For example, the study examining the CRS-CPT and CRS-PTSD (Dittman et al., 2017) was the only study to not receive an acceptable score for generalisability and was awarded 'poor' for methodology in all domains, except the 'content validity' domain, which received an excellent rating.

The implications of these findings are significant for training, research and clinical practice. Overall the quality of the studies means conclusions about the validity and reliability of all CCSs should be held tentatively particularly regarding criterion validity, measurement error, test-retest reliability, responsiveness and criterion validity.

Firstly, to assess 'criterion validity' it is necessary to identify a 'gold standard' to compare against the measure being examined. Although the CTS-R (Blackburn et al., 2001) is used extensively in research and training to assess CBT competence, there is no empirical evidence that it is the 'gold standard' or that another exists. In future research examining the measurement properties of CCSs, 'criterion validity' should not be assessed unless the study presents good evidence that the comparative measure is a 'gold standard'. This 'gold standard'

is unlikely to be just one measure of competence, as multiple measures from different sources are more reliable (Muse & McManus, 2013). Instead, ‘convergent validity’, which measures whether constructs on a scale that should be related are related, might be more appropriate.

Secondly, researchers, trainers and supervisors should exercise caution if using single assessors to rate therapist’s competence based on a suggested cut off score, since the score given may be subject to measurement error. Best practice would be to ensure a session is rated by two different assessors, as is usual on BABCP accredited training programmes (all CTSs and CTS-Rs are marked and moderated so heard by two assessors). Further examination of measurement error in research is need for CCSs that have a suggested cut off score, especially if it is known that the CCSs are used by single assessors.

Thirdly, test-retest reliability was a neglected area of measurement with only one study reporting it (i.e. von Consbruch et al., 2012). Future research should consider examining this measurement property since scoring the same treatment session, the same way on different occasions should be an important feature of CCSs. It is, however, understandable that some studies are not able to run for sufficient time to provide conditions to assess test-retest reliability, which would enable a reduction in carryover effects. In these cases, calculating internal consistency only requires the rating of competence at one-time point (Polit, 2015), which might be preferable given the time and costs involved in rating the same session twice.

Finally, there is difficulty in interpreting responsiveness in CCS studies, due to the property it is measured against. To know that a scale can detect change longitudinally you would need to have some way of ensuring that the competence level had in fact changed. There is research that supports the view that competence increases because of training (James et al., 2001; McManus, Westbrook, Vazquez-Montes, Fennell & Kennerley, 2010), but these studies only measure competence using CCS scores, when multiple methods would strengthen their

designs (Alberts & Edelstein, 1990). Although the COSMIN group reached consensus that responsiveness should be its own distinct domain for health measurement instruments, further clarity is needed to understand if and how this should be applied to CCS research. Regardless of whether responsiveness or discriminant validity is assessed, the research would benefit from including multiple measures of competence from which CCSs could be measured against.

The current review sought to define the properties clearly to assign quality scores, but there is difficulty in defining these constructs. Some researchers assert that responsiveness is in fact a version of (longitudinal) construct validity (Streiner et al., 2015). Similarly, criterion validity and convergent validity were often confused, as they may be evaluating the same construct. The COSMIN panel identified the similarity between responsiveness, construct validity and criterion validity (Mokkink et al., 2010c). Although the COSMIN team have attempted to define these properties for HMIs, further consensus is again needed to specify these terms in relations to therapy competence scales.

Limitations

The review developed a novel tool (CATCS) to assess the quality of studies examining the measurement properties of CCSs and which may have utility for assessing the quality of other competence measures research in psychotherapy. The CATCS presents a starting point from which competence measures research can be assessed, but it would benefit from further refinement. Experts from psychometrics, HMI fields and psychotherapy may add further clarity to the construct definitions and adequate samples sizes. Inter-rater reliability of the CATCS was found to be good, but the analysis was only conducted on half of the studies. Further

assessment of the CATCS's measurement properties is required to ascertain its reliability and validity.

The exclusion criteria were intentionally narrow to only assess the quality of the research that specifically aims to examine the measurement properties of CCSs, which resulted in a small number of studies examined. There are other studies that also report some of the measurement properties of these tools, which this review did not include e.g. RCTs using a CSS to assess fidelity. Further, the present review did not have the resources to include non-English language studies, which may have limited the review by excluding scales translated into other languages. This led to the review not examining cross-cultural validity, since it is only appropriate for translated instruments (Mokkink et al., 2010c). Given that the CTS/R has been translated into other languages, further research could include a review of the language adaptations that CCSs have undergone and the measurement properties of these scales, including cross-cultural validity.

Conclusions

This systematic review presents the first attempt to assess the quality of the research examining measurement properties of CCSs. The review found only ten studies that met inclusion criteria and overall quality was assessed as 'poor' to 'fair', mostly due to sample sizes. Given the widespread use of CCS to assess competence in research, practice and training, it is of concern that the quality of the research reporting the properties of CCS was not better. Better quality research is needed to ensure the results of studies can be accurately interpreted.

The review also sought to make recommendations to improve future research of measurement properties of CCS, recommending clarity and consensus regarding definitions of measurement properties and adequate samples sizes.

Acknowledgements

None.

Ethical statement

No ethical approval required as publication is a review.

Conflict of Interest

Kathryn Rayson has no conflict of interest with respect to this publication.

Financial Support

This research received no specific grant from any funding agency, commercial or not-for-profit sectors.

References

- Alberts, G., & Edelstein, B. (1990). Therapist training: A critical review of skill training studies. *Clinical Psychology Review, 10*(5), 497-511. [https://doi.org/10.1016/0272-7358\(90\)90094-Q](https://doi.org/10.1016/0272-7358(90)90094-Q).
- Altman, D.G. (1991). *Practical statistics for medical research*. London: Chapman and Hall. <http://dx.doi.org/10.1002/sim.4780101015>.
- Barber, J. P., Liese, B. S., & Abrams, M. J. (2003). Development of the cognitive therapy adherence and competence scale. *Psychotherapy Research, 13*(2), 205-221. <http://dx.doi.org/10.1093/ptr/kpg019>.
- Beck, A. T., Rush, A. J., Shaw, B. F., & Emery, G. (1979). *Cognitive therapy of depression*. New York: Guilford Press.
- Blackburn, I. M., James, I. A., Milne, D. L., Baker, C., Standart, S., Garland, A., & Reichelt, F. K. (2001). The revised cognitive therapy scale (CTS-R): psychometric properties. *Behavioural and Cognitive Psychotherapy, 29*(4), 431-446. <http://dx.doi.org/10.1017/S1352465801004040>.
- Branson, A., Shafran, R., & Myles, P. (2015). Investigating the relationship between competence and patient outcome with CBT. *Behaviour Research and Therapy, 68*, 19-26. <https://doi.org/10.1016/j.brat.2015.03.002>.
- Carroll, K. M., Nich, C., Sifry, R. L., Nuro, K. F., Frankforter, T. L., Ball, S. A., ... & Rounsaville, B. J. (2000). A general system for evaluating therapist adherence and competence in psychotherapy research in the addictions. *Drug and alcohol dependence, 57*(3), 225-238. [https://doi.org/10.1016/S0376-8716\(99\)00049-6](https://doi.org/10.1016/S0376-8716(99)00049-6).
- Clark, D. M. (2011). Implementing NICE guidelines for the psychological treatment of depression and anxiety disorders: the IAPT experience. *International Review of Psychiatry, 23*(4), 318-327. <https://doi.org/10.3109/09540261.2011.606803>.

- Cohen, J. (1968). Weighted kappa: Nominal scale agreement provision for scaled disagreement or partial credit. *Psychological Bulletin*, 70(4), 213-220.
<http://dx.doi.org/10.1037/h0026256>.
- Crits-Christoph, P., Baranackie, K., Kurcias, J., Beck, A., Carroll, K., Perry, K., ... & Gallagher, D. (1991). Meta-analysis of therapist effects in psychotherapy outcome studies. *Psychotherapy Research*, 1(2), 81-91.
<https://doi.org/10.1080/10503309112331335511>.
- Dittmann, C., Müller-Engelmann, M., Stangier, U., Priebe, K., Fydrich, T., Görg, N., ... & Steil, R. (2017). Disorder-and Treatment-Specific Therapeutic Competence Scales for Posttraumatic Stress Disorder Intervention: Development and Psychometric Properties. *Journal of Traumatic Stress*, 30(6), 614-625.
<https://doi.org/10.1002/jts.22236>.
- Dobson, K. S., & Kazantzis, N. (2003). The therapist in cognitive-behavioral therapy: Introduction to a special section. *Psychotherapy Research*, 13(2), 131-134.
<https://doi.org/10.1080/713869635>.
- Dobson, K. S., Shaw, B. F., & Vallis, T. M. (1985). Reliability of a measure of the quality of cognitive therapy. *British Journal of Clinical Psychology*, 24(4), 295-300.
<http://dx.doi.org/10.1111/j.2044-8260.1985.tb00662>.
- Fairburn, C. G., & Cooper, Z. (2011). Therapist competence, therapy quality, and therapist training. *Behaviour Research and Therapy*, 49(6), 373-378.
<https://doi.org/10.1016/j.brat.2011.03.005>.
- Gordon, P. K. (2006). A comparison of two versions of the Cognitive Therapy Scale. *Behavioural and Cognitive Psychotherapy*, 35(3), 343-353.
<https://doi.org/10.1017/S1352465806003390>.

- Haddock, G., Devane, S., Bradshaw, T., McGovern, J., Tarrier, N., Kinderman, P., ... & Harris, N. (2001). An investigation into the psychometric properties of the cognitive therapy scale for psychosis (CTS-Psy). *Behavioural and Cognitive Psychotherapy*, 29(2), 221-233. <http://dx.doi.org/10.1017/S1352465801002089>.
- Hofmann, S. G., Asnaani, A., Vonk, I. J., Sawyer, A. T., & Fang, A. (2012). The efficacy of cognitive behavioral therapy: A review of meta-analyses. *Cognitive Therapy and Research*, 36(5), 427-440. <https://doi.org/10.1007/s10608-012-9476-1>.
- Jacobson, N. S., & Gortner, E. T. (2000). Can depression be de-medicalized in the 21st century: Scientific revolutions, counter-revolutions and the magnetic field of normal science. *Behaviour Research and Therapy*, 38(2), 103-117. [https://doi.org/10.1016/S0005-7967\(99\)00029-7](https://doi.org/10.1016/S0005-7967(99)00029-7).
- James, I. A., Blackburn, I. M., Milne, D. L., & Reichfelt, F. K. (2001). Moderators of trainee therapists' competence in cognitive therapy. *British Journal of Clinical Psychology*, 40(2), 131-141. <https://doi.org/10.1348/014466501163580>.
- Kazantzis, N. (2003). Therapist competence in cognitive-behavioural therapies: Review of the contemporary empirical evidence. *Behaviour Change*, 20(1), 1-12. <https://doi.org/10.1375/bech.20.1.1.24845>.
- Liness, S., Lea, S., Nestler, S., Parker, H., & Clark, D. M. (2017). What IAPT CBT high-intensity trainees do after training. *Behavioural and Cognitive Psychotherapy*, 45(1), 16-30. <https://doi.org/10.1017/S135246581600028X>.
- Loades, M. E., & Armstrong, P. (2016). The challenge of training supervisors to use direct assessments of clinical competence in CBT consistently: a systematic review and exploratory training study. *The Cognitive Behaviour Therapist*, 9, e27. <https://doi.org/10.1017/S1754470X15000288>.

- McManus, F., Westbrook, D., Vazquez-Montes, M., Fennell, M., & Kennerley, H. (2010). An evaluation of the effectiveness of diploma-level training in cognitive behaviour therapy. *Behaviour Research and Therapy*, 48(11), 1123-1132. <https://doi.org/10.1016/j.brat.2010.08.002>.
- Miller, G. E. (1990). The assessment of clinical skills/competence/performance. *Academic Medicine*, 65(9), S63-7. Retrieved on 15th December 2017 from <http://winbev.pbworks.com/f/Assessment.pdf>.
- Moher D., Liberati A., Tetzlaff J., Altman D.G. & The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: the PRISMA Statement. *PLoS Medicine* 6(7), e1000097. <https://doi.org/10.1371/journal.pmed.1000097>.
- Mokkink, L. B., Terwee, C. B., Patrick, D. L., Alonso, J., Stratford, P. W., Knol, D. L., Bouter, L. M. & de Vet, H. C. W. (2010a). The COSMIN checklist for assessing the methodological quality of studies on measurement properties of health status measurement instruments: An international Delphi study. *Quality of Life Research*, 19, 539–549. <https://doi.org/10.1007/s11136-010-9606-8>.
- Mokkink, L. B., Terwee, C. B., Knol, D. L., Stratford, P. W., Alonso, J., Patrick, D. L., Bouter, L. M. & de Vet, H. C. W. (2010b). The COSMIN checklist for evaluating the methodological quality of studies on measurement properties: A clarification of its content. *BMC Medical Research Methodology*, 10, 22. <https://doi.org/10.1186/1471-2288-10-22>.
- Mokkink, L. B., Terwee, C. B., Patrick, D. L., Alonso, J., Stratford, P. W., Knol, D. L., ... & de Vet, H. C. (2010c). The COSMIN study reached international consensus on taxonomy, terminology, and definitions of measurement properties for health-related patient-reported outcomes. *Journal of Clinical Epidemiology*, 63(7), 737-745. <https://doi.org/10.1016/j.jclinepi.2010.02.006>.

- Mokkink, L. B., Terwee, C. B., Patrick, D. L., Alonso, J., Stratford, P. W., Knol, D. L., ... & de Vet, H. C. (2012). *COSMIN Checklist Manual*. Amsterdam: COSMIN. Retrieved on 9th February 2018 from <http://www.cosmin.nl/images/upload/files/COSMIN%20checklist%20manual%20v9.pdf>.
- Muse, K., & McManus, F. (2013). A systematic review of methods for assessing competence in cognitive-behavioural therapy. *Clinical Psychology Review*, 33(3), 484-499. <https://doi.org/10.1016/j.cpr.2013.01.010>.
- Muse, K., & McManus, F. (2016). Expert insight into the assessment of competence in cognitive-behavioural therapy: A qualitative exploration of experts' experiences, opinions and recommendations. *Clinical Psychology & Psychotherapy*, 23(3), 246-259. <https://doi.org/10.1002/cpp.1952>.
- Muse, K., McManus, F., Rakovshik, S., & Thwaites, R. (2017). Development and psychometric evaluation of the Assessment of Core CBT Skills (ACCS): An observation-based tool for assessing cognitive behavioral therapy competence. *Psychological Assessment*, 29(5), 542-555. <http://dx.doi.org/10.1037/pas0000372>.
- National Health Service Education for Scotland (2015). *The Matrix: A Guide to Delivering Evidence-Based Psychological Therapies in Scotland*. Edinburgh: NHS Education for Scotland.
- National Institute for Clinical Excellence (2004). Eating Disorders. Clinical Guideline 9. London: National Institute for Health and Clinical Excellence.
- National Institute for Health and Clinical Excellence (2007). Drug Misuse: Psychosocial Intervention. Clinical guideline 51. London: National Institute for Health and Clinical Excellence.

- National Institute for Health and Clinical Excellence (2011). Common mental health problems: identification and pathways to care. Clinical Guideline 123. London: National Institute for Health and Clinical Excellence.
- National Institute for Health and Clinical Excellence (2014a). Psychosis and schizophrenia in adults: treatment and management. Clinical Guideline 178. London: National Institute for Health and Clinical Excellence.
- National Institute for Health and Clinical Excellence (2014b). Bipolar Disorder: the management and assessment of bipolar disorder in adults, children and young people in primary and secondary care. Clinical Guideline 185. London: National Institute for Health and Clinical Excellence.
- National Psychological Therapies Management Committee (2017). *Matrics Cymru: Guidance for Delivering Evidence-Based Psychological Therapy in Wales*. NPTMC, Public Health Wales.
- Nunnally, J., & Bernstein, I.H. (1994). *Psychometric Theory, 3rd ed.* McGraw Hill: New York.
- Perepletchikova, F., Hilt, L. M., Chereji, E., & Kazdin, A. E. (2009). Barriers to implementing treatment integrity procedures: Survey of treatment outcome researchers. *Journal of Consulting and Clinical Psychology, 77*(2), 212. <https://doi.org/10.1037/a0015232>.
- Polit, D. F. (2015). Assessing measurement in health: beyond reliability and validity. *International Journal of Nursing Studies, 52*(11), 1746-1753. <https://doi.org/10.1016/j.ijnurstu.2015.07.002>.
- Reichelt, F. K., James, I. A., & Blackburn, I. M. (2003). Impact of training on rating competence in cognitive therapy. *Journal of Behavior Therapy and Experimental Psychiatry, 34*(2), 87-99. [https://doi.org/10.1016/S0005-7916\(03\)00022-3](https://doi.org/10.1016/S0005-7916(03)00022-3).

- Rosenkoetter, U., & Tate, R. L. (2018). Assessing features of psychometric assessment instruments: A comparison of the COSMIN checklist with other critical appraisal tools. *Brain Impairment*, *19*(1), 103-118. <https://doi.org/10.1017/BrImp.2017.29>.
- Roth, A. D., & Pilling, S. (2007). The competences required to deliver effective cognitive and behavioural therapy for people with depression and with anxiety disorders. Retrieved on 23rd January 2018 from https://www.ucl.ac.uk/pals/sites/pals/files/migrated-files/CBT_competences_-_map_Sept_2015.pdf.
- Roth, A. D., & Pilling, S. (2008). Using an evidence-based methodology to identify the competences required to deliver effective cognitive and behavioural therapy for depression and anxiety disorders. *Behavioural and Cognitive Psychotherapy*, *36*(2), 129-147. <https://doi.org/10.1017/S1352465808004141>.
- Rozek, D. C., Serrano, J. L., Marriott, B. R., Scott, K. S., Hickman, L. B., Brothers, B. M., ... & Simons, A. D. (2018). Cognitive Behavioural Therapy Competency: Pilot Data from a Comparison of Multiple Perspectives. *Behavioural and Cognitive Psychotherapy*, *46*(2), 244-250. <https://doi.org/10.1017/S1352465817000662>.
- Shafran, R., Clark, D. M., Fairburn, C. G., Arntz, A., Barlow, D. H., Ehlers, A., ... & Salkovskis, P. M. (2009). Mind the gap: Improving the dissemination of CBT. *Behaviour Research and Therapy*, *47*(11), 902-909. <https://doi.org/10.1016/j.brat.2009.07.003>.
- Stevens, J. P. (2012). *Applied multivariate statistics for the social sciences, 3rd Edition*. New York: Routledge.
- Streiner, D. L., Norman, G. R. & Cairney, J. (2015) *Health measurement scales: a practical guide to their development and use, 5th Edition*. USA: Oxford University Press.
- Terwee, C. B., Bot, S. D., de Boer, M. R., van der Windt, D. A., Knol, D. L., Dekker, J., ... & de Vet, H. C. (2007). Quality criteria were proposed for measurement properties of

- health status questionnaires. *Journal of Clinical Epidemiology*, 60(1), 34-42.
<https://doi.org/10.1016/j.jclinepi.2006.03.012>.
- Terwee, C. B., Dekker, F. W., Wiersinga, W. M., Prummel, M. F., & Bossuyt, P. M. M. (2003). On assessing responsiveness of health-related quality of life instruments: guidelines for instrument evaluation. *Quality of Life Research*, 12(4), 349-362.
<https://doi.org/10.2307/4038855>.
- Terwee, C. B., de Vet, H.C.W., Prinsen, C.A.C, & Mokkink, L.B. (2011). Protocol for systematic reviews of measurement properties. *COSMIN: Knowledgecenter Measurement Instruments*. Retrieved on 9th February 2018 from [http://www.cosmin.nl/images/upload/files/Protocol%20klinimetrische%20review%20version%20nov%202011\(1\).pdf](http://www.cosmin.nl/images/upload/files/Protocol%20klinimetrische%20review%20version%20nov%202011(1).pdf).
- Terwee, C. B., Mokkink, L. B., Knol, D. L., Ostelo, R. W., Bouter, L. M., & de Vet, H. C. (2012). Rating the methodological quality in systematic reviews of studies on measurement properties: a scoring system for the COSMIN checklist. *Quality of Life Research*, 21(4), 651-657. <https://doi.org/10.1007/s11136-011-9960-1>.
- Vallis, T. M., Shaw, B. F., & Dobson, K. S. (1986). The Cognitive Therapy Scale: psychometric properties. *Journal of Consulting and Clinical Psychology*, 54(3), 381-385. <https://doi.org/10.1037/0022-006x.54.3.381>.
- von Consbruch, K., Clark, D. M., & Stangier, U. (2012). Assessing therapeutic competence in cognitive therapy for social phobia: Psychometric properties of the cognitive therapy competence scale for social phobia (CTCS-SP). *Behavioural and Cognitive Psychotherapy*, 40(2), 149-161. <https://doi.org/10.1017/S1352465811000622>.
- Waltz, J., Addis, M. E., Koerner, K., & Jacobson, N. S. (1993). Testing the integrity of a psychotherapy protocol: assessment of adherence and competence. *Journal of*

Consulting and Clinical Psychology, 61(4), 620. <http://dx.doi.org/10.1037/0022-006X.61.4.620>.

Weck, F., Hautzinger, M., Heidenreich, T., & Stangier, U. (2010). Erfassung psychotherapeutischer Kompetenzen. *Zeitschrift für Klinische Psychologie und Psychotherapie*, 39, 244-250. <https://doi.org/10.1026/1616-3443/a000055>.

Weck, F., Hilling, C., Schermelleh-Engel, K., Rudari, V., & Stangier, U. (2011). Reliability of adherence and competence assessment in cognitive behavioral therapy: Influence of clinical experience. *The Journal of Nervous and Mental Disease*, 199(4), 276-279. <https://doi.org/10.1097/NMD.0b013e3182124617>.

Yeaton, W. H., & Sechrest, L. (1981). Critical dimensions in the choice and maintenance of successful treatments: strength, integrity, and effectiveness. *Journal of Consulting and Clinical Psychology*, 49(2), 156. <http://dx.doi.org/10.1037/0022-006X.49.2.156>.

Young, J., & Beck, A. T. (1980). *The development of the cognitive therapy scale*. Unpublished manuscript. Philadelphia, USA: Center for Cognitive Therapy.

Paper 2: The Empirical Study

Exploration of Post-Graduate Certificate Cognitive Behavioural Therapy Students’ Personal and Professional Development using Repertory Grids

Manuscript prepared in accordance with the guidance for the *Cognitive Behavioural
Therapist* journal (see Appendix D)

Word count (excluding Table, Figures and References†): (7277)

†References to Appendices will be removed before submission for publication.

Abstract

This study explored the personal and professional development of eight students over the course of a post-graduate certificate in Cognitive Behavioural Therapy (CBT). Personal Construct Theory was put into practice using the repertory grid technique. Each participant was interviewed using the Triadic Difference method, with nine elements, until ten bipolar constructs were elicited. The participants then ranked each element along each of the bipolar constructs. The results suggest that students perceived an increase in CBT competence but at the expense of perceived interpersonal effectiveness. The results highlight possible differences between certificate and diploma level students as well as individual differences within the certificate cohort sampled. Implications for students, trainers and commissioners are discussed. Suggestions are offered to increase reflection among students and to further research into the personal and professional impact of cognitive behavioural therapy.

Key words: Cognitive Behavioural Therapy training, personal construct theory, repertory grids, personal development, professional development.

Learning objectives (3-5):

- To understand how the repertory grid method can be used to explore the personal and professional development of CBT students;
- To appreciate the similarities and differences of personal and professional development between certificate and diploma students in CBT;
- To appreciate some of the ways in which reflection can be increased on CBT post-graduate certificate courses.

Introduction

Cognitive behavioural therapy (CBT) has established a strong evidence base for the treatment of a variety of mental health problems (Hoffman et al., 2012) and is the recommended first line psychological treatment for common mental health problems in the UK (National Institute for Health and Clinical Excellence, 2004, 2007, 2011, 2014a, 2014b). National guidelines in Wales and Scotland recommend CBT for a variety of commonly presenting mental health difficulties e.g. *Matrics Cymru* (National Psychological Therapies Management Committee, 2017) and *Scottish Matrix* (NHS Education for Scotland, 2015), and the Increasing Access to Psychological Therapies (IAPT) initiative in England has led to the wide spread training of CBT therapists in England (Department of Health, 2008).

The effective delivery of CBT within public health services relies on the effective training of enough therapists to meet the needs of the population (Rakovshik & McManus, 2010). At the time of writing (May 2018), there is only one training provider in Wales offering post-graduate training in high intensity CBT accredited with the British Association of Cognitive and Behavioural Psychotherapies (BABCP, 2018a). The BABCP accredit courses at different levels, with Level one accredited BABCP training defined as “*courses qualitatively meet all BABCP standards and, quantitatively, some or most of the Minimum Training Standards requirements to varying degrees*” (BABCP, 2018b). This differs from Level two accredited courses that “*are fully accredited with BABCP and meet all the Minimum Training Standards within the course curriculum*” (BABCP, 2018b). In Wales, the only BABCP accredited courses are at Cardiff University, comprising one year post graduate certificate and diploma programmes that are both accredited at Level One. For comparison, in England, IAPT high intensity CBT diploma courses are accredited at Level Two and typically one year long.

Published research concerning CBT training is often focused on the development of competence (e.g. Barnfield et al., 2007; McManus, Westbrook, Vazquez-Montes, Fennell & Kennerley, 2010) with little discussing the broader personal or professional development through training. A review examining the evidence base for CBT training found that research on training is often the ‘by product’ of dissemination and treatment studies, and called for more research to be conducted primarily on CBT training (Rakovshik & McManus, 2010).

A recent systematic review of studies looking at the impact of training on perceptions and perspectives of CBT, found only 13 studies focused on the students’ perspective (Jenkins et al., 2018). The review identified themes relating to the experience of benefit, internal processes of engagement, and external influences on engagement during training. Influences on internal processes of engagement included prior therapeutic orientation (Owen-Pugh, 2010; Wolff & Auckenthaler, 2014) and engagement of both ‘personal’ and ‘professional’ self during self-reflection (Bennett-Levy et al., 2015; Bennett-Levy & Lee, 2014; Chaddock et al., 2014). The authors concluded that if trainees are enthusiastic, engage in training and expect to learn, they will have more positive training experiences and are more likely to experience an increase in skill and competence.

Evidence suggests that postgraduate training in CBT does indeed lead to increased competence (McManus et al., 2010) and students’ self perception of their competence (Bennett-Levy and Beedie, 2007). Bennett-Levy and Beedie (2007) found that CBT diploma students’ perceived their competence increase in the structural aspects of CBT and the technical interventions, with smaller (but still statistically significant) increases in interpersonal effectiveness. Based on grounded theory analysis they developed a model hypothesising the ‘Influences on Self-Perception of Competence’ (Figure 1).

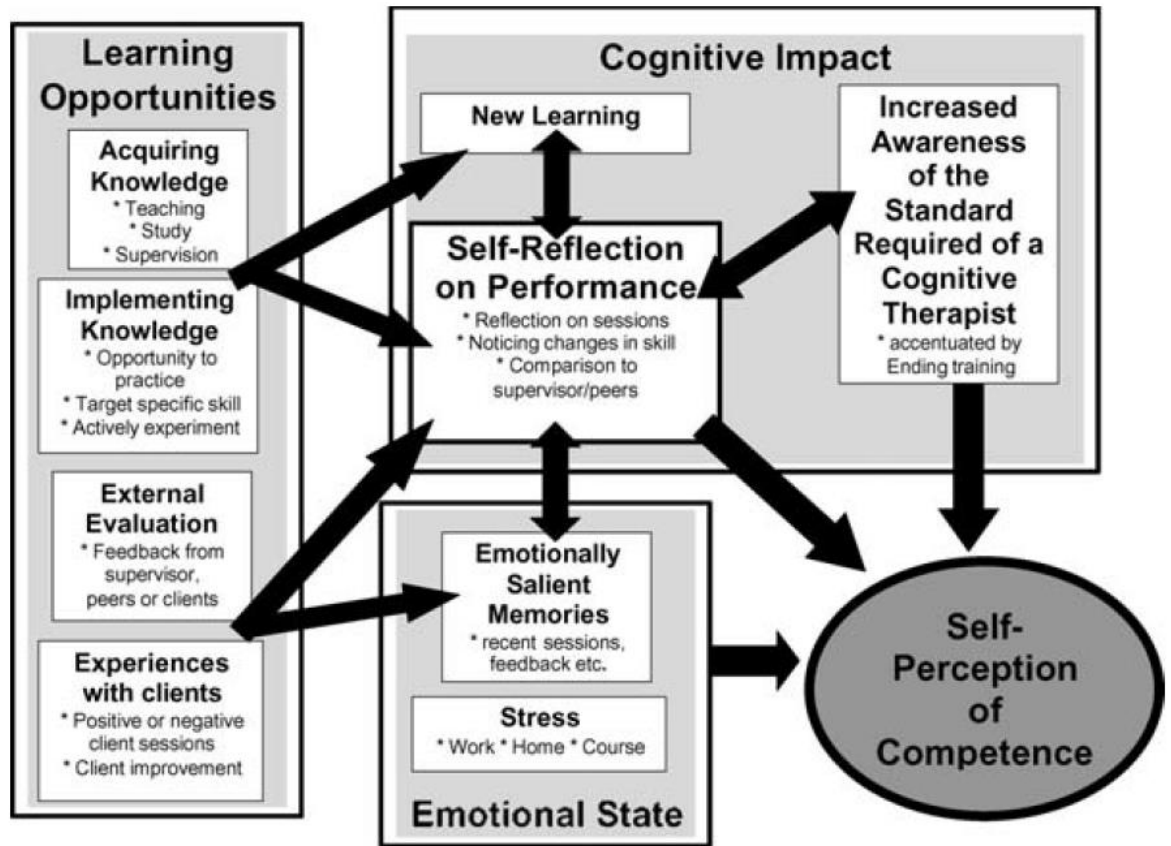


Figure 1. ‘Influences on Self-Perception of Competence’ model (Bennett-Levy & Beedie, 2007).

In the ‘Influences on Self-Perception of Competence’ model (Bennett-Levy & Beedie, 2007) learning opportunities, their cognitive impact and the students’ emotional state can all impact on the self perception of competence. The ‘Emotional State’ within this model could relate to the therapists ‘personal self’, therefore highlighting the importance of attending to personal development in training through a reflective process.

Bennett-Levy & Beedie, 2007 highlight the role of reflection for self-perception of competence, with the importance of reflection further highlighted in the ‘Declarative, Procedural and Reflective’ (DPR) model of therapist skill acquisition proposed by James

Bennet-Levy (2006). Within this model novice therapists learn declarative knowledge of a therapy skill, practice it in role play, and then use these skills in clinical situations to develop procedural skills. It is said that it is through evaluation and feedback that these skills are refined. Reflection is described as the principal strategy that converts an average therapist into an expert. In the original representation of the DPR model (Bennett-Levy, 2006) each of the systems were given equal weight, but has been refined to privilege the contribution of the reflective system; see Figure 2 (Bennett-Levy, Thwaites, Chaddock & Davis, 2009).

[This image has been removed by the author for copyright reasons]

Figure 2. The DPR model highlighting the role of reflection and interpersonal skills in therapist skill development (Bennett-Levy et al., 2009).

In this model the personal self and professional self (Therapist self) are separated but it is clear there is some overlap and interaction between these concepts. Personal development can be defined as knowing yourself and understanding how your experiences influence your encounters with the world (Cross & Papadopoulos, 2003). This is of importance for therapists since it has a direct influence on how a person responds

professionally and how they react personally to the difficult work of being a therapist. Development of the personal self (through reflection) is necessary to develop interpersonal perceptual and relational skills, which in turn increase therapy-specific skill. Within this model personal development can be seen as necessary to professional development, but personal development should not be seen as necessary only for professional skill development. Emotional exhaustion is relatively common in IAPT clinicians (Steel, Macdonald & Mellor-Clark, 2015), with around half of high intensity therapists reporting burnout (Westwood, Morison, Allt & Holmes, 2017). Through the nature of their role, CBT practitioners have good knowledge of the strategies required to look after their personal selves, yet they need to develop the self-reflective ability to recognise when and how to apply these strategies.

Personal development can occur on CBT training through a number of methods. A model of self-experiential learning in the form of ‘Personal Practice’ (PP: Bennett-Levy & Finlay-Jones, 2018) has been proposed to directly enhance personal development, well-being, therapist self-awareness and to build superior interpersonal and reflective skills. The model suggests three main activities of PP: personal therapy, meditation and self-practice/self-reflection (SP/SR) (Bennett-Levy & Finely-Jones, 2018). In support of this model, there is increasing evidence that self practice/self reflection (SP/SR) impacts on both personal development and professional development of CBT trainees (Bennett-Levy, 2005; Bennett-Levy et al., 2001; Davis et al., 2008).

Personal and professional development can be researched using both qualitative and quantitative methods, both of which have limitations. Qualitative methods, involving open questionnaires and interview data, introduce researcher bias, since researchers must make assumptions about the participants’ intended meaning. Quantitative methods, such as assessing competence using competence rating scales, have proven problematic (Muse & McManus,

2013) and the use of questionnaires is open to social desirability bias (Krumpal, 2013). Personal construct theory (PCT) (Kelly 1955) has advantages as a framework for exploring personal and professional development. Kelly (1955) proposed that people act as scientists, developing ‘constructs’ to make predictions about ourselves and the world, testing these predictions and continually adapting in response to experience; a process termed ‘construing’. A PCT informed approach would thus enable researchers to examine the impact of professional training on how people construe both themselves and their practice. Kelly devised a method for formally eliciting constructs, namely the repertory grid technique (Fransella et al., 2004), which yields a large amount of information that can be analysed using both qualitative and quantitative methods, at both individual and group levels. The repertory grid technique is less confounded by interviewer or response bias and can reveal information that is not reported in interviews, such as implicit attitudes (Winter, 1992).

The format of the repertory grid technique is based on Kelly’s proposal that constructs are bipolar (with two opposing poles) and arranged in a hierarchical system that is revised according to experience. To elicit constructs, the repertory grid interviewer asks participants to consider the *elements* of interest (which could be events or people) and notice important ways in which they are similar and different (*constructs*). These ‘elements’ and ‘constructs’ form the ‘repertory grid’.

Personal construct theory provides such a good fit for exploring the experience of professional training that repertory grids have been used already to explore nursing, medicine, social work and teaching professions (Hill, 2014 cited in Hill et al., 2015) as well as the personal and professional development of trainee clinical psychologists (Hill et al., 2015). There is no peer-reviewed literature that explores how trainee Cognitive Behavioural Therapists construe their personal and professional selves throughout their training, despite the BABCP suggesting both personal and professional development should be recognised

(Macdonald & Haddock, 2012). Jenkins (2017) used the repertory grid technique to explore the impact of diploma level training in CBT and found that participants construed themselves as nearer to desirable elements such as *ideal self*, *ideal therapist* and *compassionate therapist* at the end of their training, but also that their understanding of what an ideal therapist is shifted through training. Participants were also observed to elicit more ‘Intellectual/Operational’ constructs post training, suggesting the training stimulated their intellectual or skill based development. Jenkins concluded that participants may have moved from a position of ‘unconscious incompetence’ to ‘conscious incompetence’ over the diploma training (Conscious Competence Learning Model, n.d.). Jenkins suggested this could have been due to students undertaking a Level one accredited diploma, representing a smaller amount of training than Level two; hence the additional training offered by a Level two programmes may equip trainees with more confidence.

To date, research examining the experience of CBT trainees’ personal or professional development has focused on trainees undertaking diploma level courses (e.g. Barnfield et al., 2007; Bennett-Levy & Beedie, 2007; Jenkins, 2017; McManus et al., 2010). There are also CBT training programmes that offer post-graduate certificate programmes, but little has been researched with this population. Although some certificate students may go on to complete the diploma, some may not, so certificate students present a heterogeneous group that should be examined.

Aims of this study

To date, research examining the experience of CBT trainees’ personal or professional development has focused on trainees undertaking diploma level courses (e.g. Barnfield et al., 2007; Bennett-Levy & Beedie, 2007; Jenkins, 2017; McManus et al., 2010). There are also

CBT training programmes that offer post-graduate certificate programmes, but little has been researched with this population. Although some certificate students may go on to complete the diploma, some may not, so certificate students present a heterogeneous group that should to be examined.

The present study aimed to explore how post-graduate CBT trainees construed their personal and professional selves through their training journey; before, at the end and six months after successful completion. This was an exploratory study, therefore no hypotheses were tested or proposed but certain research questions will be address:

- 1) How do post-graduate certificate CBT trainees construe their personal and professional selves through their training journey?
- 2) What similarities and differences in construal of personal and professional selves are there between certificate CBT students, diploma CBT students and other mental health professionals?

Method

Study design

The study used a within-subjects design to consider changes in personal and professional construing following post-graduate certificate CBT training. Participants were interviewed at a single time point (at the end of their training days, but before receiving final marks) and asked to consider themselves before, during and after training.

Participants

All students were recruited from the 2016/2017 intake of the one-year part time post-graduate certificate CBT training course at Cardiff University. Students were invited via email and supplied with the Participant Information Sheet (Appendix E). There were no exclusion criteria.

The training course

The post-graduate certificate CBT training course is for professionals working in mental health settings and is accredited by the BABCP as Level One training. The course is delivered via 14 skills-based training days focusing on the ‘Fundamentals of CBT’ and ‘CBT for Specific Disorders’. Students are assessed via an essay and two case reports. Students must also evidence 100 hours of CBT practice and a minimum of five hours of supervision from a BABCP accredited supervisor, in addition to their routine clinical supervision.

Design of the repertory grid

Elements were selected to reflect the stages of personal and professional development before, during and after formal psychotherapeutic training. Elements were chosen based on a combination of information from literature on repertory grids (Jankowicz, 2004; Kelly, 1955), theoretical knowledge and empirical research on CBT personal and professional development, and from previous repertory grid studies with CBT students (Jenkins, 2017) and trainee clinical psychologists (Hill et al., 2015). The elements were adapted from the previous CBT study (Jenkins, 2017), in consultation with the research team [LW and DJH], and the previous study author [HJ]. Author LW is a clinical psychologist with extensive experience of delivering CBT

therapy, training and research. Author DJH is a clinical psychologist with extensive experience in clinical training and has published widely on the repertory grid method. Table 1. shows the original elements used in Jenkins’ study, the amended elements and the reasons for the changes.

Table 1. Selection of elements and explanation of amendments from Jenkins (2017).

Elements in Jenkins (2017)	Elements in current paper	Reasons for changes
<i>Ideal self</i>	<i>Ideal self</i>	-
<i>Actual (current) self</i>	<i>Actual (current) self</i>	-
<i>Self before training (post-graduate Certificate in CBT)</i>	<i>Self before post-graduate certificate CBT training</i>	-
<i>Self after training (post-graduate Diploma in CBT)</i>	<i>Self-6 months after successful completion of post-graduate certificate CBT training</i>	Setting a time frame ensured less overlap with other elements.
<i>Someone doing the same job who doesn’t have CBT training</i>	<i>Someone doing the same job but without CBT training</i>	-
<i>A compassionate therapist</i> <i>A compassionate person</i>	<i>Compassionate person</i>	Collapsed into one element, as participants in Jenkins study could not distinguish between a compassionate person and therapist.
<i>Someone you would turn to for help</i> <i>Someone who is helpful in your team</i>	<i>Helpful clinician</i>	Collapsed into one element, as participants in Jenkins study had in mind the same person for both elements.
<i>A skilful therapist / a skilled helper</i>	<i>Newly BABCP accredited CBT therapist</i>	Changed to distinguish between this and <i>Ideal therapist</i> .
<i>An ideal therapist</i>	<i>Ideal therapist</i>	-

Procedure

After participants indicated interest, a meeting was arranged either at Cardiff University or in their work place. At the meeting the researcher went through the participant information sheet again (Appendix E) and answered any questions the participant had before gaining informed written consent (Appendix F). Participants then completed a short demographics questionnaire (Appendix G).

A repertory grid (Kelly, 1955) interview was then conducted with each participant, lasting an average of one hour. Participants were initially asked to think of a person they knew who fitted in to one of the elements five through to ten. Elements were prepared on cards and placed faced down. Constructs were elicited using the Triadic Difference method, which involves the participant selecting three element cards at random and considering how two elements are the same and different from the third (Fransella et al., 2004). The participants were asked what would represent the opposite of that difference to elicit the bipolar construct. They were also asked which their preferred pole was and asked to describe the constructs in more detail to ensure it was understood by the researcher, which was then recorded onto a grid. This process was repeated until 10 bipolar constructs were elicited, then participants were asked to rank the elements against the constructs by assigning ranks to each element along the construct pole. After each interview was completed, participants were provided with a Participant Debrief Sheet (Appendix H) and thanked again for their participation.

All interviews were recorded to allow further qualitative evaluation of the interviews and to allow the researcher to remain focused on the grid construction during the interviews. Pilot interviews were conducted with a colleague, independent from the research, who had previously completed post-graduate training in CBT.

Data analysis

The grid data was entered into Idiogrid Version 2.4 (Grice, 2002) and principle component analysis (PCA) was conducted on the elements. Eigenvalues, or the percentage variance accounted for by each principle component, were calculated for each principle component with the eigenvalue for the first principal component representing the tightness of a participant's construing. Higher eigenvalues represent less complex and tighter construing (Winter, 2003).

Euclidean distance is the sum of squared differences between the ratings on two different elements. There are, however, no standardized measures, as the distances strongly depend on the number of constructs, elements and the rating range. Euclidian distances are taken as an index of how any two elements were construed as similar/dissimilar, with higher Euclidian distances indicating greater construed dissimilarity (Winter, 2003). To examine the construed similarity/dissimilarity of elements as a group, firstly each of the Euclidean distances for each individual grid was calculated in Idiogrid. Distances were calculated between elements related to self and the 'desirable' elements: *Ideal self*, *Ideal therapist*, *Compassionate person*, *Helpful clinician* and 'undesirable' element: *Someone doing the same job but without CBT training*. Secondly, these Euclidean distances were then entered into IBM SPSS Statistics v23.0 (IBM Corp, 2015) to calculate the mean, standard deviation and ranges for the group.

The Classification System for Personal Constructs (CSPC: Feixas., Geldschläger & Neimeyer 2002, see Appendix I) was used to perform content analysis on all 80 constructs. Two researchers independently rated the constructs with 96.25% agreement, and subsequent calculation of Cohen's kappa yielded a score of $\kappa = .79$ ($p < 0.005$), indicating a very high level of agreement (Landis & Koch, 1977).

Results

Eight participants out of a possible 25 were recruited. All were white British and 62.5% female (N=5). Professional backgrounds were nursing (N=6) and occupational therapy (N=2). Most had used CBT previously in their practice but at a basic informal level. Previous experience in other models of psychological therapy included Solution Focused, Dialectical Behavioural, Acceptance and Commitment, Mindfulness, Family Therapy and Counselling. The mean age of the participants was 40.1 (Standard deviation [SD]= 5.7, Range= 33-48).

Principle component analysis (PCA) provides a representation of construct correlations in a spatial picture, with the first component accounting for the most variation in the data, the second the next largest and so on. The higher the variance accounted for by the first principal component, the fewer dimensions the participant is likely to be using in their construing. Principle component analysis showed the data was predominantly loaded on Principal Component 1 (see Table 2.), demonstrating very little variance in the data. This meant participants' construct systems were tight and unidimensional (Winter, 2003).

Table 2. Principle Component Analysis

Participant	Principle Component 1	Principle Component 2	Principle Component 3	Total
1	78.21	20.09	1.7	100
2	57.18	24.80	10.76	92.74
3	69.05	22.36	5.53	96.95
4	84.10	15.46	0.44	100
5	58.89	29.75	8.54	97.18
6	70.53	23.95	3.86	98.33
7	71.90	11.78	7.88	91.57
8	100	0	0	100

Table 3. Descriptive statistics for all element pairs Euclidean Distances

Element Pair	Mean	SD	Range
<i>Actual (current) self and:</i>			
<i>Ideal self</i>	9.70	2.26	5.48-13.23
<i>Self before post-graduate certificate training</i>	5.73	2.94	2.24- 11.31
<i>Self 6 months after successful completion of post-graduate certificate training</i>	6.12	3.05	2.83-11.62
<i>Compassionate person</i>	10.73	4.06	7.62- 19.80
<i>Helpful clinician</i>	8.92	3.61	5.66-16.97
<i>Newly BABCP accredited therapist</i>	7.19	3.57	2.83-13.75
<i>Ideal therapist</i>	9.78	4.20	2.83-14.76
<i>Someone doing the same job but without CBT training</i>	8.38	2.65	5.66-14.14
<i>Ideal self and:</i>			
<i>Self before Post-graduate certificate training</i>	11.68	4.64	2.83-16.55
<i>Self 6 months after successful completion of post-graduate certificate training</i>	8.41	3.16	2.83-12.41
<i>Compassionate person</i>	14.97	1.75	11.31-16.46
<i>Helpful clinician</i>	11.70	3.51	4.9-15.65
<i>Newly BABCP accredited therapist</i>	8.32	2.59	4.47-12.04
<i>Ideal therapist</i>	5.79	3.42	2.24-11.31
<i>Someone doing the same job but without CBT training</i>	14.02	4.99	5.66-20.37
<i>Self before Post-graduate certificate training and:</i>			
<i>Self 6 months after successful completion of post-graduate certificate training</i>	7.08	2.48	4.47-11.62
<i>Compassionate person</i>	9.09	1.65	7.21-12.61
<i>Helpful clinician</i>	7.49	2.93	4.47-12.88
<i>Newly BABCP accredited therapist</i>	8.93	3.37	5.66-16.52
<i>Ideal therapist</i>	13.38	3.51	8.54-17.92
<i>Someone doing the same job but without CBT training</i>	4.22	1.33	2.24-6.48

Self 6 months after successful completion of post-graduate certificate training and:

<i>Compassionate person</i>	12.46	1.70	9.17-14.14
<i>Helpful clinician</i>	10.13	1.49	8.12-12.45
<i>Newly BABCP accredited therapist</i>	3.48	.88	2.24-5.10
<i>Ideal therapist</i>	8.79	3.06	3.74-13.08
<i>Someone doing the same job but without CBT training</i>	9.13	1.57	6.08-10.82

Euclidean distances between elements underwent further analysis by calculating the means and standard deviations of all element pairs; higher distances indicating greater construed dissimilarity (Winter, 2003). The smallest distance observed was between *Self 6 months after successful completion of post-graduate certificate training* and *Newly BABCP accredited therapist* (ED= 3.48, SD=0.88) suggesting the participants construed these as the most psychologically similar elements compared to the others. In contrast, the largest distance observed was between *Ideal self* and *Compassionate person* (ED= 14.97, SD= 1.75) suggesting the participants construed these as the most psychologically dissimilar elements compared to the others. Other interesting pairs were selected based on literature regarding repertory grids. For example *Actual (current) self* and *Ideal self* is often used as a measure of self esteem.

To understand possible changes in construal of the participant's personal and professional development over the course of training and beyond, mean Euclidean distances were compared between *Self before Post-graduate certificate training*, *Actual (current) self* and *Self 6 months after successful completion of post-graduate certificate training*, and all other elements. (see Table 4. for details).

Table 4. Comparison of elements over the training journey

Desirable Elements	Self before Post-graduate certificate training	Actual (current self)	Self 6 months after successful completion of post- graduate certificate training
<i>Compassionate person</i>	9.09	10.73	12.46
<i>Helpful clinician</i>	7.49	8.92	10.13
<i>Newly BABCP accredited therapist</i>	8.93	7.19	3.48
<i>Ideal therapist</i>	13.38	9.78	8.79
<i>Someone doing the same job but without CBT training</i>	4.22	8.38	9.13
<i>Ideal self</i>	11.68	9.70	8.41

Table 4. shows that over the course of training participants have construed themselves as growing psychologically further away from interpersonal elements *Compassionate person* and *Helpful clinician*, and *Someone doing the same job but without CBT training*. It also shows that participants have construed themselves as growing psychologically nearer to elements *Newly BABCP accredited therapist*, *Ideal therapist*, and *Ideal self*.

Categorisation of constructs using the Classification System for Personal Constructs (CSPC: Feixas et al., 2002) demonstrated most participants' constructs were within the 'Intellectual/Operational' category followed by 'Personal', 'Moral', 'Emotional', 'Relational' and 'Existential'. Examples of the types of constructs that emerged in this study and their categories can be found in Table 5.

Table 5. Categorisation of constructs using the CSPC (Feixas et al, 2002).

Category	No.	Percentage	Rank	Example of constructs
Intellectual/Operational	53	66.25%	1	“Knowledgeable-Unknowledgeable” “Qualified-Unqualified” “Experience-Inexperience”
Personal	9	11.25%	2	“Adaptable-Inflexible” “Flexible-Rigid” “Limitless-Restricted”
Moral	8	10%	3	“Human decency-Status driven” “Helpful-Unhelpful” “Trustful-Closed”
Emotional	5	6.25%	4	“Warmth-Cold” “Consolidating-Chaotic” “Emotional warmth-Disinterest”
Relational	4	5%	5	“Acceptance-Ignorant” “Challenging-Passive” “Personable-Distance”
Existential	1	1.25%	6	“Aspirational-Mundane”

Discussion

Summary and interpretation of results

One of the main findings in the current study was that the participants' construct systems appeared to be tight, unidimensional and rigid, as indicated by the loading onto the first two components of the PCA (Winter, 2003). Fransella (2005) suggests tight construing of this kind indicates less openness to change, which may have made it harder for students in the current study to update or change their construing through training.

Euclidean distance is used to understand the perceived psychological similarity or dissimilarity between elements (Leach et al., 2001), with previous research demonstrating that construing is generally static over time without intervention (Feixas et al., 1992). The mean Euclidean distances reported in Table 4. suggest that participants construed themselves as psychologically closer to some elements after their training: *Newly BABCP accredited therapist*, *Ideal therapist* and *Ideal self* but as further away from: interpersonal elements *Compassionate person* and *Helpful Clinician*, and *Someone doing the same job but without CBT training* after completion of the training. The results also show that participants expect these distances to change in the same directions six months after successful completion of post-graduate certificate training. It should, however, be noted that there were some large ranges in the Euclidean distances between participants, meaning caution should be exercised when interpreting the results.

The other main finding is that participants elicited 66.25 per cent of constructs in the Intellectual/Operational, suggesting that the participants were focused on the development of technical skill.

How do post-graduate certificate CBT trainees construe their personal and professional selves through their training journey?

A number of the findings suggest that certificate students perceived themselves to have developed more professionally than personally over the course of their training. Firstly, smaller Euclidean distances were observed between elements *Newly BABCP accredited therapist* and *Self 6 months after successful completion of post-graduate certificate training* (ED= 3.48), compared with *Newly BABCP accredited therapist* and *Self before post-graduate certificate training* (ED= 8.93). Secondly, certificate students construed themselves nearer to their idea of *Ideal therapist* at the end of training (ED= 9.70) compared to before training (ED= 11.68). Thirdly, participants elicited more constructs in the Intellectual/Operational than all others put together. Finally, participants construed themselves further away from interpersonal elements *Compassionate person* and *Helpful Clinician* over their training journey, which relate more to their interpersonal development.

The participants' perception that they were developing technical skill at the expense of interpersonal skills is a phenomenon found in other therapeutic training. Studies of training in dynamic interpersonal or family therapy have found that technical skills can sometimes improve at the expense of therapeutic alliance skills (Henry et al., 1993; Stolk and Perlesz, 1990). This may also be related to the participants in this present study having limited prior experience in CBT but many years of mental health working experience, thus they had a lower starting point in CBT skills, so perceived them to increase more than interpersonal. It may be that the students are accurate in their self-perceptions, since ratings on competence measures (e.g. *Cognitive Therapy Rating Scale*: Blackburn et al. 2001) suggest that CBT skills improve more than interpersonal effectiveness over CBT training (Bennett-Levy & Beedie, 2007; McManus et al., 2010).

The participants' core professional training in nursing or occupational therapy may also have influenced their construal of interpersonal effectiveness through training. Research examining CBT training has found clinical psychologists tend to score higher on interpersonal effectiveness compared to colleagues from other professional groups (Brosan et al., 2007; James et al., 2001). Non-psychologists have less core training in psychological theory and practice, and clinical psychologists are likely to be exposed to CBT as part of their core training (McManus et al., 2010). CBT Students may find maintaining the therapeutic relationship hard while focusing on learning the specific techniques and structure of CBT (Brosan et al., 2007; James et al., 2001). It is possible that other professions with less grounding during basic training in psychological theory and practice must concentrate harder on structural and technical aspects of therapy than psychologists, with greater disruption to the quality of the relationship occurring.

The study found a decreasing Euclidean distance between element pairs *Ideal self* and *Self before post-graduate certificate training self* (ED= 11.68), *Ideal self* and *Actual (current) self* (ED= 9.70), and *Ideal self* and *Self 6 months after successful completion of post-graduate certificate training* (ED= 8.41). The Euclidean distance between *Ideal self* and *Actual (current) self* is often used as a measure of self-esteem (Leach et al., 2001), therefore these results suggest certificate students experienced their self esteem increasing during training and that they expected this increase to continue post training. Self-esteem has been demonstrated as an important part of personal development, in relation to emotional wellbeing (Mann et al., 2004) and professional development, in relation to academic success (Marsh & Yeung., 1997), thus it might be useful to examine this in further research. To examine the development of CBT students it might be useful to use both the repertory grid method and a questionnaire on self-esteem (e.g. Rosenberg Self-Esteem Questionnaire: Rosenberg, 1979). This would allow analysis of repertory grid data to be checked against questionnaire data and vice versa.

What similarities and differences in construal of personal and professional selves are there between certificate CBT students, diploma CBT students and other mental health professionals?

In the present study certificate students perceived themselves to move nearer towards *Ideal therapist* over their training, but Jenkins (2017) found diploma students saw themselves as further away from their idea of an *'Ideal therapist'* post training, and Bennett-Levy and Beedie (2007) found that self-perception of competence at the end of diploma CBT training decreased. One possible explanation for this finding is that the certificate students had little prior experience of CBT, so they are likely to perceive more development. In contrast, the diploma students have already undertaken the certificate and may have been seeking to refine their skills. Scores of CBT competence measures have been shown to increase less when trainees have previous experience of CBT (Bennett-Levy & Beedie, 2007; Williams et al., 1991). Similarly, James and colleagues (2001) found prior experience of cognitive therapy helps in the acquisition of cognitive therapy skill but general therapeutic experience does not.

An alternative explanation suggested by Jenkins (2017) and Bennett-Levy and Beedie (2007) is that diploma students show increased awareness of what is involved in developing a high level of competence and therefore have greater humility. Jenkins' analysis indicated that diploma students' view of an *'Ideal therapist'* shifted over the course of training so that students were measuring themselves against a higher standard at the end. Jenkins also suggests that diploma students became more aware of the requirements for BABCP accreditation and the amount of work needed to fulfil these.

Why do students on the diploma programme develop increased awareness of the requirements for full competence and not students on the Certificate programme? To some extent this may be pragmatic; diploma students often take the second (diploma) year because

they would like to eventually become accredited and through the year are mapping how much further they have to go. A significant difference between the certificate and diploma programmes is the amount of specialist CBT supervision and feedback on recorded sessions. In the certificate training there is a requirement of students to receive at least five hours of CBT supervision with a BABCP accredited therapist, with the remainder of supervision unregulated. The IAPT programme in England sets explicit guidelines for the supervision of High Intensity CBT trainees (Turpin & Wheeler, 2011) and therapists by BABCP accredited therapists, but in Wales the guidance is less robust. On the Cardiff diploma course the students receive a minimum of 50 hours of supervision provided by course staff and must pass a CTS-R recording. Diploma students are receiving constant feedback about their practice and are therefore more aware of areas for development, whereas certificate students may be less aware of this. In research examining shorter training programmes, CBT skill development is perceived to continue only if practitioners receive clinical supervision (Mannix et al., 2006). Trainees have reported on the importance of supervision on a short training programme (Westbrook et al., 2008) and supervision has been rated as the most important training tool to impact the development of CBT skills (Rasovshik & McManus, 2013). As mentioned previously the 'DPR' model of therapist skill acquisition (Bennett-Levy, 2007:) and the 'Influences on Self-Perception of Competence' model (Bennett-Levy & Beedie, 2007) posits reflection as the principal strategy that converts an average therapist into an expert. Reflection can be stimulated internally by the therapist reflecting on their own practice, but often supervision is the vehicle that facilitates deeper reflection.

The finding that most constructs were in the 'Intellectual/Operational' category (CSPC: Feixas et al., 2002) suggests that certificate students were more in tune with their professional development, and specifically on technical skill development. Similar findings were present for diploma CBT students (Jenkins, 2017). In contrast, Hill and colleagues (2015) found

trainee clinical psychologists were more focused on the emotional impact of their training. The focus on technical skills may also explain the low number of constructs in the ‘Relational’ category and the larger mean Euclidean distances between elements relating to self after training (*Actual [current] self* or *Self six months after successful completion of post-graduate CBT training*), and relational elements (*Helpful clinician* or *Compassionate person*). This contrasts with Jenkins’ study, who found smaller Euclidean distances post training between *Self before training* and *Compassionate therapist*, suggesting diploma students construed themselves as becoming more compassionate therapists at the end of training.

Strengths and limitations of this study

For many reasons the results of this study may not be generalised to participants in other settings. Most participants were female, from a nursing background, all were white British, and all were studying and working in Wales. Service structures are not comparable to the rest of the UK, and unlike England and Scotland, training places are not offered according to a strategic plan. The training programme is also different in structure from other CBT training programmes: for example, IAPT High Intensity Training programmes in England are usually a condensed one-year diploma level course. Finally, the results cannot be generalised to different cohorts from the same programme who may have a different experience. Caution is also needed when interpreting findings from multiple grid analyses. By combining the grid data, the richness from the original grids is reduced and individual participant differences lost (Leach et al., 2001). This is particularly noteworthy as there were some variations in ranges of Euclidean distance observed.

Repertory grids make no assumptions about a person’s experiences, and uses participants’ own language to elicit constructs. Pre-selecting the elements was the only

meaning imposed on the participants. Although it is possible to allow people to create their own elements, this was not appropriate for this study for a few reasons. Firstly, the lead author wanted to be able to compare rankings of elements between participants, and so it was necessary to have consistent elements. Secondly, similar previous studies using repertory grids to examine personal and professional development have used pre-selected elements (Hill et al., 2015; Jenkins, 2017). These previous studies and the theoretical knowledge base provided enough information to ensure that elements selected were relevant and appropriate for examining the construct systems of CBT certificate students. The enhanced 'DPR' model (Bennett-Levy et al., 2009) outlines the importance of both interpersonal perceptual skills and interpersonal relational skills and the 'Influences on Self-Perception of Competence' model (Bennett-Levy & Beedie, 2007) highlights the role of the 'Emotional state'. In this study and Jenkins (2017), elements were chosen that reflected interpersonal relational skills (e.g. *Compassionate person* or *Helpful Clinician*) but not interpersonal perceptual skills or the 'Emotional State'. Future repertory grid studies with CBT trainees or practitioner could reflect this better by including elements that relate to both types of interpersonal skills and the 'Emotional state'.

The timing of the interviews may have impacted on the perception of competence since most participants were interviewed just after feedback from a major piece of coursework and before they knew they had passed the course. Bennett-Levy and Beedie (2007) found course stress and negative feedback from a supervisor can lead to decreased self-perceived competence. This did not seem to be the case in this study since participants construed themselves psychologically nearer to *ideal therapist*. There was, however, variance in Euclidean distances amongst participants (3.74-13.08), which suggests some participants did perceive greater psychological distance than others. Without knowing the nature of the feedback received by the participants, it is difficult to know the impact this had on them.

Further research would be necessary to understand the impact of feedback on the construal systems of certificate students.

There were several confounding variables not investigated that may have influenced the elicitation of constructs and their ranking. These can include influences of self-perception of competences such as learning opportunities and cognitive impact (for a detailed description see Bennett-Levy & Beedie, 2007), which were not measured in this study. Related to this, a limitation of the study is that interviews only took place at the end of the participants' training. A longitudinal design could have increased the accuracy of participants' construing as they would not have had to rely on imagining how they might have been in the past (Hill et al., 2015), however this means that elements would need to change as a result, which then impacts on the type of analysis possible.

The participants in this study construed themselves as further away from relational elements. While this may reflect their true construct systems, it is worth noting that the ranking method forces participants to indicate differences. This creates ordinal data that does not provide a measure of the distance between the rankings. Indeed, during the interviews some participants stated that they found the ranking difficult for some constructs as they did not think any elements fitted at one end of the construct. For example, when the elements were ranked along the bipolar construct "Personable- Distance", the participant expressed that they did not think those elements ranked nearest "Distance" were distance from their clients but just that in comparison to other elements they were perceived as less "Personable". This could be remedied in future research by instead having a 5-point-scale along the construct pole from one to five and participants rating each element along this scale. This would allow participants to rate some elements the same and prevent them from forcing a rank onto an element which does not feel appropriate to them.

One of the strengths of the repertory grid method is it allows for a great deal of information to be collected which can then be analysed at many levels, both quantitatively and qualitatively, which can then allow for different analysis to be compared. In addition, the method reduces researcher bias, as there is no researcher interpretation of participants' information provided at interview. Instead the participants' idiosyncratic language is used to elicit the constructs, which allows the individual nature of participants' construal systems to be captured, thus reducing social desirability bias (Jankowicz, 2004). During the interviews care was taken to use participants' own language which indeed revealed constructs that were at times surprising to the participants. Some participants commented that they found the interviews had stimulated reflection on their training journey and revealed information that they were not conscious of before. There was the risk this new information could have been unsettling to participants, so when this occurred the interviewer enquired what this meant to the participant. Instead of feeling unsettled participants reported finding the process interesting and enlightening, which was also the experience of participants in previous repertory grid studies (Hill et al., 2015; Jenkins, 2017).

Implications and future research

The findings suggest that certificate students may only be engaging with training at an intellectual level, thus course providers may need to find ways to help students engage more completely. In the therapy room cognitive behavioural therapists now recognise that treatment needs to address both the head and the heart. The Interacting Cognitive Subsystems model (Teasdale, 1997) has developed the understanding that meaning can be held in implicit form and requires active and experiential methods to address it e.g. behavioural experiments. The same understanding taken into a training context would suggest

that for CBT trainees, heart as well as the head needs to be addressed. Further, the BABCP highlights that CBT training should be concerned with personal development (MacDonald & Haddock, 2012), and places this within suggested course curriculum (Hool, 2010). So how can CBT courses support trainees to develop personally, as well as professionally?

Additional supervision with BABCP accredited practitioners, seems like an obvious way to provide constructive feedback and enhance reflection (Bennett-Levy, 2006), but this is not straightforward in Wales. The Cardiff certificate course is unable to provide additional supervision due to time and resource constraints. It would also be difficult for services to provide additional specialist CBT supervision as there are significantly less BABCP CBT accredited therapists in Wales compared to England. This presents a timely opportunity for decision makers in Wales to consider how to support the training of new CBT practitioners to deliver CBT in line with the Matrix Cymru Plan (NPTMC, 2017).

Since increasing supervision on the certificate course is not likely in the short term, other methods for increasing personal development are needed. If the goal of supervision is to increase reflection, then improving self-reflection may be helpful for both personal and professional development (Bennett-Levy, 2006; Bennett-Levy et al, 2009; Bennett-Levy & Beedie, 2007). As mentioned in the introduction, the 'Personal Practice' model of self-experiential learning (PP: Bennett-Levy & Finlay-Jones, 2018) has been proposed to directly enhance personal development, well-being, therapist self-awareness and to build superior interpersonal and reflective skills. The three main activities of PP are personal therapy, meditation and self-practice/self-reflection (SP/SR) (Bennett-Levy & Finely-Jones, 2018). While personal therapy may enhance PP, it would be unfeasible for the course to mandate. The course could more easily encourage meditation practice, since meditation resources are readily accessible online. Self-Practice/Self-Reflection (SP/SR) involves trainees practising CBT techniques on themselves then reflecting on this practice and has been successfully

introduced on other training programmes (Bennett-Levy et al., 2001). One of the benefits of mediation and SP/SR from the training courses' perspective, is that the main activity is undertaken outside of formal teaching, with just teaching time needed to set up activities as private study. Internet blogs could be used to help monitor students PP activities and encourage reflection on their practice (for an example see Farrand, Perry & Linsley, 2010).

Whereas previous research has suggested that diploma students need support to understand that training may decrease their perception of competence (Bennett-Levy & Beedie, 2007), the opposite seemed to be true for the certificate students in this study. While the completion of the post-graduate certificate training increases progress towards accreditation, it is not sufficient. Participants would need to meet many additional criteria to meet minimum training standards to apply for Provisional Practitioner accreditation with the BABCP (MacDonald & Haddock, 2012). It is important that CBT training courses manage students' and commissioning services' expectations of the post-graduate certificate CBT training. The course might consider setting more explicit expectations of what level the certificate training provides and how to practice within the limits of students' competence.

Repertory grids have now been used to investigate the personal and professional development of both post-graduate Certificate and Diploma level CBT students in Wales. Although there were similarities in personal and professional construing of certificate students in this study and diploma students in the Jenkins study (2017), there were some distinct differences. Further research could examine how many practitioners go on to complete the diploma training and what the differences are between these two groups. As has been previously mentioned, much of the research on development of CBT trainees is regarding competency development (McManus et al., 2010) and predominantly focused on diploma level students (e.g. Barnfield et al., 2007; Bennett-Levy & Beedie, 2007) rather than certificate training. Further research is needed to understand the unique development of CBT trainees

from certificate level all the way through to accreditation. The repertory grid technique could be used with participants at different intervals from pre- to post training to further understand how their personal and professional development may or may not change over time. CBT continues to be a core evidence based therapy recommended by national guidelines (e.g. *IAPT*, *Matrix Cymru*, *Scottish Matrix* & *NICE*) for a variety of psychological difficulties. Continuing research into the personal and professional development of future CBT practitioners is important to maximise training benefits, which could eventually lead to improved outcomes for service users. This could inform workforce planning in Wales and might inform how to adapt delivery to enhance the training of both certificate and diploma students at different stages of their personal and professional development.

The students construed themselves as further away from interpersonal elements of *helpful clinician* and *compassionate person* after the CBT training. It would be interesting and important to examine if clients and supervisors also perceive that these elements decrease over the course of a CBT therapist's training. Further research might be to examine this perception from students', supervisors', patients' and trainers' perspectives.

Summary of main points including additional reading

This study was the first of its kind to investigate the personal and professional development of CBT certificate students using the repertory grid method. The results suggest that this group of certificate students developed a greater perception of CBT skill but that they perceived this to be at the expense of their interpersonal effectiveness. The results of this study highlighted distinct differences in personal and professional development between certificate and diploma students, and within the certificate cohort. The findings indicate that the certificate students did

undergo personal and professional development through the training, suggesting the course influences both.

For further reading on personal construct theory see Kelly (1955). For more information on conducting repertory grids in clinical practice see Fransella (2005) and in research see Fransella et al., (2004).

Acknowledgements

Gratitude is expressed to all the participants who gave up their time to take part in the study and were willing to explore their personal and professional selves. Thanks also to Hannah Jenkins who acted as the independent rater for the categorisation of the constructs and provided invaluable advice on many areas of the methodology.

Ethical statement

The author has abided by the Ethical Principles of Psychologists and Code of Conduct as set out by the APA and BPS. Ethical approval for the study was granted by Cardiff University School of Psychology Ethics Committee (Reference: EC.17.05.09.4899, see Appendix J).

Conflict of Interest

The author has no conflict of interest with respect to this publication.

Financial Support

This research received no specific grant from any funding agency, commercial or not-for-profit sectors.

References

- Barnfield, T. V., Mathieson, F. M., & Beaumont, G. R. (2007). Assessing the development of competence during post-graduate cognitive-behavioral therapy training. *Journal of Cognitive Psychotherapy, 21*(2), 140-147.
- Bennett-Levy, J. (2005). What role does the 'person of the therapist' play in therapist skill development? Empirical and theoretical perspectives. In: M. Jackson & G. Murphy (Eds.): *Theory and practice in contemporary Australian cognitive and behaviour therapy: Proceedings of the 28th National AACBT Conference* (p.32-37). Melbourne: Australian Association for Cognitive and Behaviour Therapy.
- Bennett-Levy, J. (2006). Therapist skills: A cognitive model of their acquisition and refinement. *Behavioural and Cognitive Psychotherapy, 34*(1), 57-78.
- Bennett-Levy, J., & Beedie, A. (2007). The ups and downs of cognitive therapy training: What happens to trainees' perception of their competence during a cognitive therapy training course?. *Behavioural and Cognitive Psychotherapy, 35*(1), 61-75.
- Bennett-Levy, J., & Finlay-Jones, A. (2018). The role of personal practice in therapist skill development: a model to guide therapists, educators, supervisors and researchers. *Cognitive Behaviour Therapy, 47*(3), 185-205.
- Bennett-Levy, J., & Lee, N. K. (2014). Self-practice and self-reflection in cognitive behaviour therapy training: what factors influence trainees' engagement and experience of benefit?. *Behavioural and Cognitive Psychotherapy, 42*(1), 48-64.
- Bennett-Levy, J., Thwaites, R., Chaddock, A., & Davis, M. (2009). Reflective practice in cognitive behavioural therapy: the engine of lifelong learning. In Stedmon, J., & Dallos, R. *Reflective practice in psychotherapy and counselling*, (pg.115-135). Maidenhead, UK: McGraw-Hill Education.

- Bennett-Levy, J., Turner, F., Beaty, T., Smith, M., Paterson, B., & Farmer, S. (2001). The value of self-practice of cognitive therapy techniques and self-reflection in the training of cognitive therapists. *Behavioural and Cognitive Psychotherapy*, 29, 203–220.
- Bennett-Levy, J., Wilson, S., Nelson, J., Rotumah, D., Ryan, K., Budden, W., Stirling, J. & Beale, D. (2015). Spontaneous self-practice of cognitive behavioural therapy (CBT) by Aboriginal counsellors during and following CBT Training: A retrospective Analysis of facilitating conditions and impact. *Australian Psychologist*, 50, 329-334.
- Blackburn, I. M., James, I. A., Milne, D. L., Baker, C., Standart, S., Garland, A., & Reichelt, F. K. (2001). The revised cognitive therapy scale (CTS-R): psychometric properties. *Behavioural and Cognitive Psychotherapy*, 29(4), 431-446.
- British Association for Behavioural & Cognitive Psychotherapies (2018a). *Accredited Courses*. <http://www.babcp.com/Training/Accredited-Courses.aspx>.
- British Association for Behavioural & Cognitive Psychotherapies (2018b). *Becoming Qualified and Accredited as a Cognitive Behavioural Psychotherapist*. <http://www.babcp.com/files/Training/Careers-Guide-V1-0612.pdf>.
- Brosan, L., Reynolds, S., & Moore, R. G. (2007). Factors associated with competence in cognitive therapists. *Behavioural and Cognitive Psychotherapy*, 35(2), 179-190.
- Chaddock, A., Thwaites, R., Bennett-Levy, J. and Freeston, M.H. (2014). Understanding individual differences in response to self-practice and self-reflection (SP/SR) during CBT training. *The Cognitive Behaviour Therapist*, 7, 1-7.
- Conscious competence learning model, n.d. <https://www.businessballs.com/self-awareness/conscious-competence-learning-model-63/>.
- Cross, M. C., & Papadopoulos, L. (2003). *Becoming a therapist: A manual for personal and professional development*. London: Routledge.

- Davis, M., Thwaites, R., Freeston, M., & Bennett-Levy, J. (2008). *SP/SR with Experienced CBT Therapists: A measurable impact on beliefs and therapeutic skills*. BABCP Conference Presentation, Edinburgh.
- Department of Health (2008). *IAPT Implementation Plan: national guidelines for regional delivery*. London: The Stationary Office. Available at <http://www.iapt.nhs.uk/silo/files/implementation-plannational-guidelines-for-regional-delivery.pdf>.
- Farrand, P., Perry, J., & Linsley, S. (2010). Enhancing self-practice/self-reflection (SP/SR) approach to cognitive behaviour training through the use of reflective blogs. *Behavioural and Cognitive Psychotherapy*, 38(4), 473-477.
- Feixas, G., Geldschläger, H., & Neimeyer, R.A. (2002). Content Analysis of Personal Constructs. *Journal of Constructivist Psychology*, 15, 1-19.
- Fransella, F. (Ed.). (2005). *The essential practitioner's handbook of personal construct psychology*. Chichester: John Wiley & Sons Ltd
- Fransella, F., Bell, R., & Bannister, D. (2004). *A manual for repertory grid technique*. (2nd Ed). Chichester: John Wiley and Sons Ltd.
- Grice, J. W. (2002). Idiogrid: Software for the management and analysis of repertory grids. *Behaviour Research Methods, Instruments & Computers*, 34, 338-341.
- Henry, W. P., Strupp, H. H., Butler, S. F., Schacht, T. E., & Binder, J. L. (1993). Effects of training in time-limited dynamic psychotherapy: Changes in therapist behavior. *Journal of Consulting and Clinical Psychology*, 61(3), 434.
- Hill, K. (2014). *Personal and professional development: a repertory grid approach*. Unpublished ClinPsyD thesis: University of Manchester.

- Hill, K., Wittkowski, A., Hodgkinson, E., Bell, R., & Hare, D. J. (2015). Using the repertory grid technique to examine trainee clinical psychologists' construal of their personal and professional development. *Clinical Psychology and Psychotherapy*, 23, 425-437.
- Hofmann, S. G., Asnaani, A., Vonk, I. J., Sawyer, A. T., & Fang, A. (2012). The efficacy of cognitive behavioral therapy: A review of meta-analyses. *Cognitive Therapy and Research*, 36(5), 427-440.
- Hool, N. (2010). *Core Curriculum Reference Document*. Retrieved on 21st May 2018 from <http://www.babcp.com/files/Accreditation/Course/Appendix-6-BABCP-Core-Curriculum.pdf>
- IBM Corp. (2015). *IBM SPSS Statistics for Windows, Version 23.0*. Armonk, NY: IBM Corp.
- Jankowicz, D. (2004). *The easy guide to repertory grids*. Chichester: John Wiley & Sons Ltd.
- James, I. A., Blackburn, I. M., Milne, D. L., & Reichfelt, F. K. (2001). Moderators of trainee therapists' competence in cognitive therapy. *British Journal of Clinical Psychology*, 40(2), 131-141.
- Jenkins, H. (2017). *Exploring Cognitive Behavioural Therapy Diploma Students' Construal of their Personal and Professional Development*. Unpublished ClinPsyD thesis: Cardiff University.
- Jenkins, H., Waddington, L., Thomas, N., & Hare, D. J. (2018). Trainees' experience of cognitive behavioural therapy training: a mixed methods systematic review. *the Cognitive Behaviour Therapist*, 11.
- Kelly, G. A. (1955). *The psychology of personal constructs*. New York: Norton.
- Krumpal, I. (2013). Determinants of social desirability bias in sensitive surveys: a literature review. *Quality & Quantity*, 47, 2025–2047.
- Landis, J. R. & Koch, G. G. (1977). The measurement of observer agreement for categorical data. *Biometrics*, 33, 159–174.

- Leach, C., Freshwater, K., Aldridge, J., & Sunderland, J. (2001). Analysis of repertory grids in clinical practice. *British Journal of Clinical Psychology*, 40(3), 225-248.
- MacDonald, H., & Haddock, G. (2012). *BABCP Minimum Training Standards for the Practice of Cognitive Behavioural Therapy*. <http://www.babcp.com/files/Minimum-training-standards-V6-0413.pdf>.
- Mann, M. M., Hosman, C. M., Schaalma, H. P., & De Vries, N. K. (2004). Self-esteem in a broad-spectrum approach for mental health promotion. *Health Education Research*, 19(4), 357-372.
- Mannix, K., Blackburn, I-M., Garland, A., Gracie, J., Moorey, S., Reid, B., Standart, S. and Scott, J. (2006). Effectiveness of brief training in cognitive behaviour therapy techniques for palliative care practitioners. *Palliative Medicine*, 20, 579–584.
- Marsh, H.W. and Yeung, A.S. (1997) Causal effects of academic self-concept on academic achievement: structural equation models of longitudinal data. *Journal of Educational Psychology*, 89, 41–54
- McManus, F., Westbrook, D., Vazquez-Montes, M., Fennell, M., & Kennerley, H. (2010). An evaluation of the effectiveness of diploma-level training in cognitive behaviour therapy. *Behaviour Research and Therapy*, 48(11), 1123-1132.
- Muse, K., & McManus, F. (2013). A systematic review of methods for assessing competence in cognitive-behavioural therapy. *Clinical Psychology Review*, 33(3), 484-499.
- National Health Service Education for Scotland (2015). *The Matrix: A Guide to Delivering Evidence-Based Psychological Therapies in Scotland*. Edinburgh: NHS Education for Scotland.
- National Institute for Clinical Excellence (2004). *Eating Disorders. Clinical Guideline 9*. London: National Institute for Health and Clinical Excellence.

- National Institute for Health and Clinical Excellence (2007). *Drug Misuse: Psychosocial Intervention. Clinical guideline 51*. London: National Institute for Health and Clinical Excellence.
- National Institute for Health and Clinical Excellence (2011). *Common mental health problems: identification and pathways to care. Clinical Guideline 123*. London: National Institute for Health and Clinical Excellence.
- National Institute for Health and Clinical Excellence (2014a). *Psychosis and schizophrenia in adults: treatment and management. Clinical Guideline 178*. London: National Institute for Health and Clinical Excellence.
- National Institute for Health and Clinical Excellence (2014b). *Bipolar Disorder: the management and assessment of bipolar disorder in adults, children and young people in primary and secondary care. Clinical Guideline 185*. London: National Institute for Health and Clinical Excellence.
- National Psychological Therapies Management Committee (2017). *Matrics Cymru: Guidance for Delivering Evidence-Based Psychological Therapy in Wales*. NPTMC, Public Health Wales.
- Owen-Pugh, V. (2010). The dilemmas of identity faced by psychodynamic counsellors training in cognitive behavioural therapy. *Counselling and Psychotherapy Research, 10*(3), 153-162.
- Rakovshik, S. G., & McManus, F. (2010). Establishing evidence-based training in cognitive behavioral therapy: A review of current empirical findings and theoretical guidance. *Clinical Psychology Review, 30*(5), 496-516.
- Rosenberg, M. (1979). *Conceiving the Self*. New York: Basic Books.

- Steel, C., Macdonald, J., Schröder, T., & Mellor-Clark, J. (2015). Exhausted but not cynical: burnout in therapists working within Improving Access to Psychological Therapy Services. *Journal of Mental Health, 24*(1), 33-37.
- Stolk, Y., & Perlesz, A. J. (1990). Do better trainees make worse family therapists? A followup study of client families. *Family Process, 29*(1), 45-58.
- Teasdale, J.D. (1997). The Transformation of Meaning: The Interacting Cognitive Subsystems Approach. In Power, M.J. & Brewin, C.R.(Eds.). *The Transformation of Meaning: Integrating theory and practice* (pp. 141-156). Chichester: John Wiley & Sons.
- Turpin, G. & Wheeler, S. (2011). IAPT Supervision Guidance (Revised March 2011). Improving Access to Psychological Therapy: NHS. <https://www.uea.ac.uk/documents/246046/11919343/IAPT+Supervision+Guidance+2011.pdf/3a8f6c76-cea0-4f76-af78-e2f0a1f64c5e>
- Westwood, S., Morison, L., Allt, J., & Holmes, N. (2017). Predictors of emotional exhaustion, disengagement and burnout among improving access to psychological therapies (IAPT) practitioners. *Journal of mental health, 26*(2), 172-179.
- Westbrook, D., Sedgwick-Taylor, A., Bennett-Levy, J., Butler, G., & McManus, F. (2008). A pilot evaluation of a brief CBT training course: Impact on trainees' satisfaction, clinical skills and patient outcomes. *Behavioural and Cognitive Psychotherapy, 36*(5), 569-579.
- Williams, R. M., Moorey, S., & Cobb, J. (1991). Training in cognitive-behaviour therapy: Pilot evaluation of a training course using the Cognitive Therapy Scale. *Behavioural and Cognitive Psychotherapy, 19*(4), 373-376.
- Winter, D. A. (1992). *Personal construct psychology in clinical practice: theory, research and applications*. London, Routledge.

Winter, D. A. (2003). Repertory grid technique as a psychotherapy research measure. *Psychotherapy Research, 13*(1), 25-42.

Wolff, S., & Auckenthaler, A. (2014). Processes of theoretical orientation development in CBT trainees: What internal processes do psychotherapists in training undergo as they “integrate”? *Journal of Psychotherapy Integration, 24*(3), 223-237.

Paper 3: Critical Review and Reflection on this Research

Word count (excluding Table and References): 7725

Introduction

This paper will critically review the research process, including both the systematic review and empirical paper. The strengths and limitations will be discussed, as well as the lead authors' personal and professional development as a scientist/practitioner.

Paper 1: Systematic Review

Rationale for the topic

The thesis was developed with initial focus on the empirical paper, examining the personal and professional development of post-graduate certificate Cognitive Behavioural Therapy trainees. The intention was to maintain the focus of the systematic review on the personal and professional development of CBT therapists but deciding on a topic area presented problems. A recent publication (Jenkins, Waddington, Thomas & Hare, 2018) had already identified a gap in the CBT literature regarding the absence of the CBT trainee voice in research (Bennett-Levy et al., 2001; Bennett-Levy & Beedie, 2007) and conducted a review of the experience of CBT training from the trainee perspective. For the present review initial searches were conducted on CBT personal and professional development, to determine if a review could be extended beyond Jenkins and colleagues (2018) work. It seemed clear that Jenkins and colleagues had comprehensively examined this area and that it would be difficult to extend the scope further, with regards to a review examining the personal development of CBT trainees. Instead it seemed prudent to shift the focus of the review away from personal development and onto professional development.

CBT in the UK is predominately focused on professional development, rather than personal development. The British Association of Behavioural and Cognitive Psychotherapies (BABCP) stipulates that continued accreditation requires a range of activities for continuing

professional development (CPD) but mentions nothing of personal (BABCP, 2018). Within the range of CPD activities, six hours of it must include skills workshops (BABCP, 2018). This correlates with the research literature on CBT training which is focused on competence development (e.g. Barnfield, Mathieson & Beaumont, 2007; McManus, Westbrook, Vazquez-Montes, Fennell & Kennerley, 2010).

Ensuring therapists are competent in the delivery of CBT is important to ensure treatment is delivered with fidelity to the model. As described in Paper 1 this is important in research, training and clinical practice. While exploring ideas for the focus of the review, a paper by Muse and McManus (2013) was discovered which presented a framework for CBT competence measures. Within this framework it was identified that clinical practice assessments present the highest level of competence assessment. The authors described the ‘gold standard’ as rating therapists in session performance with CBT Competence Scales (CCSs), but highlight that further empirical validation is needed to establish their reliability and validity. Although it was a detailed article, Muse and McManus (2013) did not include a quality assessment of studies in the review. Another previous review of CBT competence found the reliability and validity of existing CCSs to be mixed (Kazantzis, 2003), but again did not include a quality assessment of studies. Further database searches established that there were no other systematic reviews examining the measurement properties of CCSs.

CCSs are used extensively in clinical trials to assess which therapists to use and to monitor therapists’ delivery of CBT and are used in most UK CBT training courses to assess the competence of trainees. It is important that those developing competence measures describe clearly the rationale for the design and methods used, as any statistical results can only be interpreted based on the suitability of those methods (Rosenkoetter & Tate, 2018). In discussions with the research supervisors [LW and DJH], it was agreed it would be useful to explore the quality of the research underpinning CCSs’ measurement properties. It was

envisaged that a systematic review on this topic would assist researchers, trainers and supervisors to make better judgements of how to use existing measures and improve future research by making recommendations on improved methodology.

Design and the search process (including inclusion and exclusion criteria)

The COnsensus-based Standards for the selection of health Measurement INstruments (COSMIN) Protocol for systematic reviews of measurement properties was used to guide the process of the systematic review (Terwee, de Vet, Prinsen & Mokkink, 2011). Scoping searches were performed to help determine if the review topic would yield sufficient results. There appeared initially to be a wealth of papers examining the measurement properties of CCSs. On closer inspection, a great deal of these were randomised control trials (RCTs) that had used competence measures to check treatment fidelity (e.g. Huppert et al., 2001). Often the CCSs' scores were reported and those studies of higher quality also reported the inter-rater reliability. From these scoping searches it was clear that the most frequently used CCSs were the Cognitive Therapy Scale (CTS: Dobson, Shaw & Vallis, 1985; Vallis, Shaw & Dobson, 1986) and the CTS-R (Blackburn et al., 2001). Inter-rater reliability is a very important property for CCSs as it is important that two raters score the same session consistently. Inter-rater reliability for the CTS and CTS-R has been shown to be variable (Loades & Armstrong, 2016), with individual items being lower than total score. Due to the importance of inter-rater reliability, the review could have captured any studies that reported this measurement property for a CCS, but it was agreed that this would not be appropriate for a few reasons. Firstly, consultation with the subject librarian highlighted that procedures to search databases would not be sensitive enough to identify papers reporting CCSs inter-rater reliability and instead would involve full paper checking of thousands of CBT RCT papers. Secondly, the intention of the review was

to report on the quality of research examining the measurement properties of CCSs. By including papers which did not have the examination of measurement properties as the primary goal the review would instead be examining the quality of many RCTs. This would have diluted the results and would not have provided useful information about the nature of research that seeks to examine the measurement properties. Although useful data, it was decided in discussion with a supervisor [LW] that capturing this data was beyond the scope of the present review. There were also many papers that primarily reported on the outcomes of training courses. These often used the CTS or CTS-R and reported on the scales' inter-rater reliability but these were also excluded for the same reason as RCTs. Inclusion criteria was set at papers that were primarily reporting on the validity or reliability of CCSs.

The search strategy was adapted from the Muse and McManus (2013) systematic review, in consultation with a supervisor [LW] and the university subject librarian. The librarian advised that some of the search terms could be simplified and amended to improve sensitivity and specificity. In addition, it was important to ensure any article referring to either of the two most common CCSs were included (CTS: Vallis, Shaw & Dobson; CTS-R: Blackburn et al., 2001), so a separate search phrase was created, which was then combined with the primary search strategy using the Boolean operator (AND). The term 'CTS' was considered for inclusion in the search strategy, but was later excluded as it yielded too many irrelevant studies. For example, just searching Medline alone with 'CTS' yielded 7592 results, whereas the term 'CTS-R' just 18. The librarian advised that it was not necessary to search all the same databases as Muse and McManus (2013), since these would all be searched under just four databases: Medline (includes PubMed), PsychINFO (includes PsychARTICLES), Scopus (searches the same database as Science Direct) and Web of Science (includes Web of Knowledge).

Following the advice from the librarian, four separate search strategies were constructed based on the nature of each database (see Appendix B). The time frame for searches, from 1980, was selected in consultation with a research supervisor [LW]. The first known CBT competence measure was produced in 1979 (CCCT: Beck et al., 1979), but research into its measurement properties was not published. The first known publication of a study examining the measurement properties of a CCS was in 1985 (CTS: Dobson et al., 1985), therefore 1980 was selected to ensure any unknown publications just before this 1985 were captured. After the database searches were conducted, the number of articles identified (N=1694) were compared with the number from the Muse and McManus (2013) search (N=1458). It was anticipated that the present search should yield slightly more results than the previous one, since more articles would have been published over this time. The studies included in Muse and McManus (2013) review were cross-checked with the articles generated from the new search. The new search had successfully identified all the included articles in Muse and McManus (2013), which was used to confirm that the new search strategy was successful.

There were some papers identified in the search that were noteworthy but not included in the present review. Firstly, two papers that were included in Muse and McManus (2013) created CBT competence measures specifically for the trials (Huppert et al., 2001; Davidson et al., 2004), but were excluded in the present review because they were RCTs. Secondly, one paper was excluded (Barber, Foltz, Crits-Christoph & Chittams, 2004) as the results were published elsewhere in a more comprehensive examination of psychometric properties of the CTACS (Barber, Liese & Abrams, 2003). Thirdly, two papers were excluded as no psychometric properties of the scale had been published yet (UCL scale for Structured Observation: Roth, 2016; Behaviour Therapy Scale: Freiheit & Overholser, 1997).

The management of the searches was aided using a bibliography management website. Mendeley was trialled but was found to be difficult to navigate, so Endnote was used. Endnote

was useful but there were some features that proved problematic. Several initial errors were made when moving papers from one folder to another, which resulted in duplicates being formed or papers being deleted entirely. This meant the papers had to be extracted into Endnote a second time to ensure no papers were lost. This was time consuming but was necessary to ensure accuracy.

Critical appraisal tool

A thorough literature search was conducted to identify a suitable tool to appraise the quality of the selected papers. Although many tools exist for assessing the quality of quantitative and qualitative studies, there are few that are suitable for assessing the methodological quality of studies on measurement properties. To bridge this gap, an international Delphi study developed the COnsensus-based Standards for the selection of health Measurement INstruments checklist (COSMIN) for assessing the methodological quality of studies on measurement properties (Mokkink et al., 2010a; 2010b). The COSMIN checklist was developed initially to be used with health status measurement instruments (HSMIs). Although there is much overlap between the measurement properties of HSMIs and CCSs, there are some distinct differences. The COSMIN checklist was considered for use within the present review but it was agreed, in discussions with the a research supervisor [DJH], that the tool was too broad in scope generally and lacked specificity in relation to studies reporting the measurement properties of CCSs.

As no such tool exists for measuring the quality of the papers reporting measurement properties of CCSs, the lead author created one in consultation with the research team. Developing the Checklist for the Appraisal of Therapeutic Competence Scale Studies (CATCS: Appendix C) presented one of the biggest challenges to the lead author, since little empirical

evidence exists to support what quality criteria should be applied (Terwee et al., 2007). The COSMIN website proved to be very useful in identifying resources that could help in the tool's development. The tool was based on the criteria in COMSIN, its accompanying definitions of measurement properties and information from a precursor to COSMIN proposing quality criteria (Terwee et al., 2007). The lead author had some basic knowledge of measurement properties from their undergraduate degree and doctoral training. More recently the lead author was undertaking an elective in Neuropsychology, so was becoming more familiar with the measurement properties of neuropsychological assessments. This knowledge was a starting point but was insufficient to be able to create the CATCS, so a great deal of reading on the topic was necessary. This led to a greater understanding of the measurement properties relevant to CCSs but also highlighted the lack of agreement between psychometricians and health measurement developers on this subject.

A decision was made not to include 'cross-cultural validity', since it is only relevant if assessing papers of a measure adapted from a different language (Mokkink et al., 2010c). The inclusion criteria were limited to papers written in the English language, which meant several language adapted versions were not included (e.g. a German version of the CTS: Weck, Hautzinger, Heidenreich & Stangier, 2010). There was one paper included that did examine the properties of a German version of the Cognitive Therapy Competence Scale for Social Phobia (CTCS-SP: von Consbruch, Clark & Stangier, 2012). The CTCS-SP was adapted from the English version of the Cognitive Therapy of Social Phobia: checklist of therapist competency (Clark, Consbruch, Hinrichs & Stangier, 2007), however von Consbruch and colleagues did not perform a 'cross-cultural validity' check. The COSMIN panel define 'cross-cultural validity' as "*the degree to which the performance of the items on a translated instrument are an adequate reflection of the performance of the items of the original version of the instrument*" (Mokkink, Prinsen, Bouter, de Vet, & Terwee, 2016: Pg.108). Von

Consbruch and colleagues may not have measured ‘cross-cultural validity’ since it was the first time the measurement properties of the CTSP-SP had been examined and therefore there was no previous performance of the English version to compare it to.

The reasons to include a ‘generalisability’ measure were included in Paper 1. In one of the earlier drafts of the CATCS the number of recordings used was included in the ‘generalisability’ section and not included on each area of ‘reliability’, ‘validity’ or ‘responsiveness’. When the lead author trialled the use of an early draft of the CATCS it was difficult to identify one value for the number of recordings used overall, as this often varied between measurement properties. Instead, the number of recordings used was included as a methodological factor for each measurement property (apart from ‘content validity’, as it is not dependant on sample size). When deciding on what would be an acceptable sample size for recordings, this was guided by the COSMIN panel and other literature, which indicated 100 is considered excellent, 30 or more as fair and below 30 poor methodology (Stevens, 1996). This was adopted into the CATCS due to a lack of any other guidance on adequate sample sizes for competence measures.

As discussed in Paper 1, the sample size criteria used in the CATCS may not be appropriate for assessing methodological quality of papers exploring measurement properties of CCSs. Some of the COSMIN authors acknowledge that the samples sizes specified by Stevens (1996) are a rule of thumb and that researchers should make decisions regarding sample sizes based on the unique nature of the instrument (Terwee et al., 2012). Appropriate sample sizes may also be dependent on the property to be measured. For example, factor analysis may require larger sample sizes, even as high as five to seven times the number of items (de Vet, Ader, Terwee & Pouwer, 2005). As already highlighted, the literature used to inform the CATCS is based on HSMIs, which may not relate exactly to competence measures.

Further agreement is needed to confirm appropriate sample sizes when examining properties of CCSs, which may result in the CATCS being adapted accordingly.

The decision to include ‘responsiveness’ in the CATCS initially appeared to be straight forward. It seemed important that CCSs can detect both differences between groups (‘discriminant validity’ within ‘hypothesis testing’) and changes over time (‘responsiveness’). This distinction appeared reasonably clear, until the CATCS was used to assess the quality of the studies. Once all the papers had been quality assessed by the lead author [KR], the findings were discussed with one of the research supervisors [LW]. There was uncertainty regarding how to deal with the two studies (Blackburn et al., 2001; Muse, McManus, Rakovshik & Thwaites, 2017) that reported ‘discriminant validity’ but the description the papers used fits the definition of ‘responsiveness’. It was agreed that the CATCS should mirror the definitions used by the COSMIN panel, therefore those two articles were deemed to have assessed ‘responsiveness’. It also seemed clear that the CATCS should be amended to clarify the distinction, hence the following additional paragraph added at the end of the tool.

“It is important to clearly distinguish between hypothesis testing and responsiveness. Responsiveness refers to the ability of a scale to detect changes longitudinally/over time. So, in the case of competence scales this refers to therapists improving over time because of experience or training. Hypothesis testing is done to determine if scores of a scale are consistent with hypotheses (for instance regarding internal relationships, relationships to scores of other instruments, or differences between relevant groups). Good convergent validity would mean constructs on a scale that should be related are related. Good discriminant validity would mean constructs on a scale that should not be related are not related (Mokkink et al., 2010c). For example, if a scale has good

discriminant validity it would be able to detect differences between novice and experienced therapists.”

Paper 1: CATCS, Pg.122

The lead author [KR] conducted the critical appraisal assessment of the selected papers and to ensure accuracy of ratings, 50% of the studies were independently rated by a colleague not connected with the research team. After the lead author trained the colleague in the use of the tool they piloted its use by comparing results on one paper. There were no disagreements, but uncertainties were discussed and agreements made on scoring. The colleague then rated the remaining sample and results compared with the lead author. A variety of different enquiries were made to source the independent rater for the quality checking. The checking of measurement properties requires at least basic undergraduate psychology knowledge, so it would not have been appropriate to approach undergraduate students for the task. Instead trainee clinical psychologists were approached at Cardiff University in the second and third years, and trainee colleagues at other universities. Those approached were fully briefed about the nature of the task, but many felt they either did not have the skills or the time to help. The only person that offered was a colleague also in the third year and completing their large-scale research project. Due to the demands on their time the independent rater did not have capacity to rate all the studies. With regards to inter-rater reliability checks, a 20-25% sample is deemed adequate for this purpose (Boland, Cherry & Dickson, 2014); so the 50% performed in this study was above this threshold. Despite this, it is possible that the independent rater may have rated the remaining papers differently from the lead author, and a full inter-rater reliability assessment comparing scoring on all papers would have been optimal.

When the independent rater was being trained to use the CATCS, distinguishing between 'discriminant validity' within 'hypothesis testing' and 'responsiveness' proved difficult. The independent rater was also a clinical psychology doctoral student and therefore had basic knowledge of measurement properties, but needed more support to make this distinction. After the independent rater had completed their final ratings, both raters agreed that two papers (Blackburn et al., 2001; Muse et al., 2017) were measuring 'responsiveness'. Despite this, it remains a difficult area in which to make the distinction and as stated in Paper 1, further consensus regarding whether to include both is needed.

When calculating the inter-rater reliability, simply calculating the percentage of agreement does not correct for how much the variance in the rated score is a result of chance (Hallgren, 2012). Instead a Kappa calculation is required which provides a measure of the agreement that is not due to chance. A straightforward Kappa is only appropriate for nominal data, but the rating system on the CATCS is ordinal. Instead a weighted Kappa calculation was performed in SPSS after downloading the necessary plug-in. Although inter-rater reliability for the CATCS was found to be good -Linear Weighted Kappa (Cohen, 1968) $k=0.76$ (95% CI, 0.70 to 0.88), $p < 0.0005$ (Altman, 1991)- individual items were not calculated separately. Further research into the inter-rater reliability of individual items of the CATCS would be helpful to determine if researchers can distinguish between these concepts.

An overall quality score for the CATCS was not used, as this would assume that all quality criteria hold the same value. For instance, 'content validity' is considered one of the most important criteria and necessary to evaluate other criteria (Terwee et al., 2007). More specifically, CCSs require good 'inter-rater reliability', so that whoever is assessing the competence of a therapist they would reach the same conclusion as another. Further, regardless of the label assigned, CCSs need to show that changes or differences in competence can be detected because of practice, assessment, training or supervision, especially when they are used

to make important decisions. A quality score was included for ‘generalisability’ as all the criteria in this section was deemed to have reasonably equal weighting. The cut off score was decided based on the total possible maximum of 16. A score of ≥ 10 would indicate that a paper had provided sufficient information about the study and that the reader could make judgments about how the results could or could not be generalised to other settings or populations.

Clinical implications and future research

It was stated in Paper 1 that ‘criterion validity’ was included in the CATCS, as on initial viewing of the included studies, one reported this property (Barber et al., 2003). To assess ‘criterion validity’ it is necessary to identify a ‘gold standard’ to compare against the measure being examined. Although the CTS-R (Blackburn et al., 2001) is used extensively in research and training to assess CBT competence, there is no empirical evidence that it is the ‘gold standard’ or that another exists. In future research examining the measurement properties of CCSs, ‘criterion validity’ should not be assessed unless the study presents good evidence that the comparative measure is a ‘gold standard’. This ‘gold standard’ is unlikely to be just one measure of competence, as multiple measures from different sources are more reliable (Muse & McManus, 2013). Instead, ‘convergent validity’, which measures whether constructs on a scale that should be related are related, might be more appropriate.

The review has implications for researchers examining the measurement properties of CCSs. The review recommended larger sample sizes but that further consensus is needed to understand what these might be. Research indicates that expert raters (Rozek et al., 2018; Weck, Hilling, Schermelleh-Engel, Rudari, & Stangier, 2011) and supervisors (Kazantzis, 2003) are more accurate in their rating of competence. While methodologically sound, this involves a larger labour cost than employing novice raters (Muse & McManus, 2013), which

researchers much consider when designing studies. Similarly, developing studies with multiple methods of competence assessment would strengthen the designs of future research (Alberts & Edelstein, 1990), but again there are significant cost implications to this.

It is hoped that the results of the review will enlighten researchers to improve the quality of the research in this area but this may take time. Until the measurement properties of CCSs are demonstrated in better quality studies, trainers and supervisors should observe caution when using these measures. The review found that only the CTS-PSY (Gordon, 2006) reported measurement error. When using a competence measure, a degree of error may exist between the true theoretical score and the actual given score. Measurement error calculates this difference, which is important to know if a measure has a cut off score. This finding is of key relevance to CBT training courses, since they commonly use a cut off score to assess competence. It would be prudent for courses to observe that the score awarded on a competence measure may not be the true theoretical score and that a degree of flexibility should be observed. This is important as without knowing the measurement error some trainers may pass a trainee when the theoretical true score is lower or may fail a trainee when the theoretical true score is higher. Good practice would be to ensure all competence measures are marked and moderated independently.

Paper 2: Empirical paper

Identification of the research topic

The lead author's [KR] professional and personal interest in CBT training initially attracted them to develop a thesis topic in this area. They had worked in the Improving Access to

Psychological Therapies (IAPT) initiative in England as a low intensity CBT clinician, as an Associate Lecturer on undergraduate and post-graduate low intensity CBT programmes, and as a researcher into low intensity CBT. Their professional interest in high intensity CBT training was also influenced due to their clinical psychology training. Through the doctoral training clinical placements, the awareness of the significant differences in the use and dissemination of CBT between England and Wales was also noted.

Due to the imminent publication of the *Matrics Cymru* (National Psychological Therapies Management Committee, NPTMC: 2017), an early research project was proposed to capture the way in which lead clinical psychologists viewed the new guidelines regarding the delivery of CBT. Discussions with both research supervisors [LW and DJH] highlighted the potential political barriers in conducting this research and it was agreed to develop a thesis that was more focused on the training of CBT therapists.

Ultimately, the training of CBT therapists should be to benefit those service users that utilise their therapy services. Although not directly examining the impact of CBT training on service users, the personal and professional development of practitioners impacts on the quality of services and individual therapy outcomes (Jacobson & Gortner, 2000). Service users need to have confidence that those supporting them have been trained to a high standard and that the training ultimately leads to an improved experience and outcome. By understanding how trainee CBT therapists construe their personal and professional development through training, we can begin to understand the potential impact on their practice with service users.

A previous unpublished thesis explored the personal and professional development of CBT diploma students at Cardiff University (Jenkins, 2017). As described in Paper 2, Jenkins used the repertory grid method and found participants construed themselves as nearer to desirable elements of professional development post training. The study suggested the training

stimulated trainees' intellectual or skill based development, but that they felt further away from the idea of an 'ideal therapist' post training. Jenkins concluded that participants may have moved from a position of 'unconscious incompetence' to 'conscious incompetence' over the diploma training (Conscious Competence Learning Model, n.d.), having become more aware of the requirements to deliver effective CBT.

The Cardiff post-graduate certificate CBT course director and research supervisor [LW] highlighted that to complete the diploma all trainees must first complete the certificate, however not all certificate students continue onto the diploma. The courses also vary significantly in structure: the certificate predominantly delivered via large-group teaching and the diploma via small group supervision. It was, therefore, identified that CBT trainees may be a heterogenous group with important differences between certificate and diploma students. Additionally, replication in research is important to determine if the findings of the original research can be applied to other participants, and therefore assesses the reliability and external validity of research findings (Thompson, 1994). It seemed appropriate to conduct a similar study design to Jenkins (2017), to be able to compare findings and establish if certificate CBT students differ in their construal of personal and professional development from diploma students.

Reason for selection of repertory grids and limitations

There were several reasons that repertory grids were used in this study instead of other qualitative or quantitative methods. Firstly, questionnaires were considered, but they are often focused on information that the researcher believes is relevant and the researcher cannot ask for more information if information is not clear, which threatens ecological validity (Jankowicz, 2004). While previous research and theory can appropriately guide researchers,

this study sought to be exploratory, therefore reducing researcher assumptions was important. Secondly, quantitative questionnaires can be open to social desirability bias (Krumpal, 2013), limit the amount of information gathered and can be inflexible. Qualitative questionnaires on the other hand rely on the researcher accurately interpreting the participants' meaning which is open to bias. Grounded theory (Glaser & Strauss, 2017) could have been feasible, as it may have enabled the exploration of social relationships to generate or discover a theory to understand the personal and professional development of CBT certificate trainees. Alternatively, interpretative phenomenological analysis (IPA: Smith, 1996) may have been useful to understand the phenomena of personal and professional development through training, and is useful for under-examined areas. Again, both these methods rely on the researcher extrapolating meaning from interview data which is open to researcher bias. The lead author [KR] was conscious, not just of their prior experience of CBT training, but also of their current position as a trainee clinical psychologist, which could have further influenced the interpretation of data. The repertory grid technique's imposed structure still allows the interviewer to explore meaning in the data the participant supplies, but reduces researcher bias since the exploration is based on the participants' own meaning and language. Repertory grids can also reduce social desirability bias, since they can uncover material that participants are unaware of (Kelly, 1955). Finally, repertory grids have been successfully used to explore the personal and professional development of other psychology professionals; with clinical psychology trainees (Hill, Wittkowski, Hodgkinson, Bell & Hare, 2015) and CBT diploma trainees (Jenkins, 2017).

No research methodology is without its limitations, so it was important to recognise methodological difficulties that arose from the use of repertory grids. It may have been difficult for participants to bring to mind a *Newly BABCP accredited CBT therapist* due to the lack of accredited CBT therapists in Wales, although they may have been able to draw on the

knowledge of the accredited course staff. This could explain why participants construed themselves as much nearer to this element post training, whereas diploma students might have a more realistic expectation of the demands of becoming accredited.

The methodology and design

The Triadic Difference method was used to elicit constructs, which involves the participant selecting three elements at random and considering how two elements are the same and different from the third (Fransella, Bell & Bannister, 2004). The possibility of selecting element triads systematically instead of randomly was considered. For example, a Balanced Incomplete Block design could have been used to generate 30 triads of elements (Leach, Freshwater, Aldridge & Sunderland, 2001). This is balanced because each pair of elements appears twice, and from these 30 triads, ten could have been selected at random. These same ten triads could then have been used with all eight participants which could have allowed for more direct comparison between grids, but would have limited the breadth of element combinations. Alternatively, a Sequential Form method (Fransella et al., 2004) could have been used, which involves element triads being presented by changing one element each time but this would have meant a lengthy process to ensure all combinations of elements were involved, and the aim of the study was for only ten constructs to be elicited. The Triadic Difference method was used as it allowed for a breadth of triad combinations to be explored and removed any potential influence from the researcher.

During administration, the lead author recorded the element triads that were selected to manage replication. Replication of element triads is acceptable, as the participant may be able to identify more than one important way in which two of the elements are the same and different from a third. The repetition of the element triads did occur on several occasions. Sometimes

participants could identify a different construct but if they struggled, the lead author highlighted that those three elements had been selected previously and gave the participant the option to select a different three.

Knowledge of the repertory grid method

Personal Construct Theory and the repertory grid technique were unknown to the lead author [KR] initially, aside from a short teaching session on the clinical psychology training programme. Background reading provided a useful overview of Kelly's (1955) original Personal Construct Theory and two books helped to develop knowledge and understanding of the repertory grid method (Fransella et al., 2004 & Janowicz, 2004). Using the Idiogrid package Version 2.4 (Grice, 2002) presented more of a problem for the lead author, since there is a lack of guidance or manual on how to conduct specific analysis. Fortunately, the lead author could seek supervision on this from a supervisor [DJH] well experienced with the software.

Before conducting the interviews on participants, the lead author practiced the technique on a colleague who had previously undertaken post-graduate training in CBT. This allowed the lead author to practice authentically and any difficulties with the method would have emerged from these practices. Since the technique is participant led the lead author found all the interviews ran smoothly. Even when a participant was struggling to identify any new constructs, this gave valuable information about the tightness of their construct system. The lead author was always careful to reassure participants that there were no right or wrong answers, and that all information they gave was relevant and useful.

Ethical approval, recruitment, consent and data collection

A total of eight participants out of a possible 25 were recruited for the study. A sample of 32% is acceptable for idiographic enquiry modes, such as repertory grids, and is similar to previous repertory grid studies (Jenkins, 2017; Ralley, Allot, Hare & Wittkowski, 2009; Woodrow, Fox & Hare, 2012). During the participants' first week of the course, the lead author presented the study and answered any questions. At that time, ethics approval had not been given, and so it was not possible to formally recruit. After ethical approval had been granted the students were invited via email. At the original meeting there appeared to be interest in the study, and if it had been possible to recruit at this meeting the number of participants may have increased.

The CBT post-graduate certificate course at Cardiff University includes students from a wide geographical area across Wales and occasionally England. To promote recruitment, the lead author of the study offered interviews at Cardiff University or participants' place of work, if it was in an NHS building. This required a more complicated risk assessment for ethics approval and some extensive travel, but was necessary to ensure enough participants were recruited. On one occasion the lead author [KR] had travelled for 90 minutes to conduct an interview but the participant did not turn up. Another member of staff informed the interviewer that the staff member was unavoidably detained dealing with a serious incident. Fortunately, this interview could be rearranged but another participant withdrew from the study due to work demands. These difficulties reflect the reality of recruiting participants who work in demanding NHS Mental Health settings.

Data analysis

The aim of repertory grid data analysis is to highlight underlying patterns and exceptions to these patterns (Leach et al., 2001). Repertory grid data can be analysed in many ways, at different levels, on one hand providing maximum detail, to a broad picture on the other (Leach et al., 2001). It is important to do different types of analysis concurrently, since different forms and levels of analysis make different assumptions. This allows for a check on assumptions and means different patterns can be emphasized (Leach et al., 2001). To understand the similarity or dissimilarity between elements, Euclidean distance is most commonly used (Leach et al., 2001). Correlational methods are not appropriate to assess similarity or dissimilarity between elements, as results are affected by reversing the poles of constructs (Fransella et al., 2004).

The repertory grid method can also allow combined analysis of several grids. This is only possible if the grids have the same elements and constructs. As this research was an exploratory study it was important not to limit the possible constructs elicited. This meant, although there was overlap of constructs, each participant elicited a unique set of constructs, so combined analysis of the grids was not possible. Instead this allowed for the Categorisation of Constructs analysis (Feixas, Geldschläger & Neimeyer, 2002) to be conducted, which provided very interesting information about the nature of the constructs elicited. Each grid was analysed separately, then combined to produce the group analysis. This served to protect the anonymity of the participants but meant that individual differences in personal and professional development were not examined. This could have been done if a case series approach was taken. The inter-rater reliability assessment of the categorisation of constructs was performed using a Kappa (Cohen, 1960), as this is suitable for fully-crossed designs with two raters (Hallgren, 2012).

Strengths and limitations of the study

The timing of the interviews could have potentially influenced the constructs the participants elicited. Participants had recently received summative feedback on a major assignment, which could have influenced their self-perception of competence (Bennett-Levy & Beedie, 2007), and therefore influenced the construal of themselves and their ability. It is difficult to predict if interviewing participants before this feedback would have impacted on the constructs elicited, and receiving feedback is part of the overall course experience. Perhaps delaying the interviews for a few more weeks could have given them time to integrate this feedback with their existing personal constructs, instead of interviewing them when this information was so raw. Data collection was conducted in June and July 2017 under advisement of the CBT course director and research supervisor [LW]. The students were due to finish the taught component of the course in August, and along with summer leave this would make them harder to contact after this date, when many of them had booked annual leave. There was a balance to be struck between ensuring most of the course had been completed, but trying to conduct the interviews before feedback from a major piece of work and before they went on annual leave.

Paper 2 reported that the participants found the interviews enlightening and revealed information they were not aware of; one of the known benefits of the repertory grid method. Participants in the study commented that the interviews stimulated thinking about their personal and professional development in ways they had not anticipated. The participants appeared to treat this finding with interest and considered the interview an enlightening rather than threatening experience. Kelly (1955) assumed a great deal of human construing takes place outside of consciousness, and described this in terms of 'levels of awareness'. At the highest level of awareness is 'conscious construing' and at the 'lowest preverbal construing'. Kelly describes how seemingly irrational actions can be understood because of preverbal

construing. As infants, humans have no verbal labels to make sense of their experiences, but as they grow and develop language they can assign labels to them. This then allows humans to decide if those constructs make sense in their worlds and adjust just them accordingly (Fransella, 2005). In the context of Paper 2, the participants may not have had verbal labels to describe their experiences of training prior to the interviews, but the repertory grid process provided this opportunity. The participants' experience adds further weight to support the use of repertory grids in research examining personal and professional development, as it allows more information outside of awareness to be revealed compared to other interview methods.

Clinical implications and future research

Repertory grid data can provide a useful marker of how much someone feels the need to change by examining the Euclidean distance between *ideal self* and *actual (current) self*. This distance can be used as a measure of self-esteem (Leach et al., 2001). In future research, it might be interesting to examine CBT trainees' personal and professional development using both repertory grids, and questionnaires that examine areas related to personal development. For example, it might be interesting to use a self-esteem questionnaire score, to enhance the interpretation of grid analysis. Bennett-Levy and Beedie (2007) suggest that stress can influence the self-perception of competence, so measurements of stress could also be included to make sense of changes in Euclidean distances over time. Due to the differences found between this study of certificate students and the previous study of diploma students (Jenkins, 2017), longitudinal research examining the entire CBT therapists' personal and professional development would be beneficial.

The empirical study found a discrepancy between the personal and professional development of certificate students, and diploma students in the Jenkins (2017) study. Jenkins

concluded that diploma students might have developed a more realistic view of the *ideal therapist*, since they construed themselves as further away from this element post training. Conversely, the certificate students in this study construed themselves nearer to *ideal therapist* and *newly BABCP accredited CBT therapist* post training. While trying to make sense of this finding, the lead author considered that certificate students may not have a realistic understanding of the requirements of accreditation. This has implications for those continuing onto the diploma, as it will be a shock to realise how much further development is required. It also has implications for certificate students who do not pursue further CBT training and their services. The students may not be aware of the limits of their own competence, and as previously mentioned there may be a lack of suitably qualified CBT supervisors to monitor this adequately. Services would benefit from ensuring that CBT certificate students are supervised by an accredited CBT practitioner. This may be difficult for services to do given the lack of central funding for psychological therapy training in Wales. In addition, the *Matrics Cymru: Delivering Evidence-Based Psychological Therapy in Wales* (NPTMC, 2017) does not provide information about minimum supervision requirements or a plan to develop the skills of the existing workforce to deliver CBT. Without increased funding for training and specific guidance on supervision, it is unclear how services will be able to safely and competently meet the demands of CBT delivery in Wales, in-line with the *Matrics Cymru* (NPTMC, 2017).

Professional and personal impact of the empirical study

Personal construct theory (Kelly, 1955) and the repertory grid method were both unknown to the lead author before conducting this research. As the lead author [KR] learnt more about the repertory grid method in a research context, they began to understand how this method might be used in their therapeutic work with clients. The lead author can recall many different clients,

from various specialities, that felt they should engage in therapeutic work or were pressured into it. In these cases, the use of the repertory grid might be useful to understand their current construal regarding how much they perceive the need or desire to change. This can be easily measured by including the elements *actual (current) self* and *ideal self* and calculating the Euclidean distances between the elements. Repertory grids have also been used to help assess clients' progress through therapy (Leach et al., 2001) and can identify sub-conscious beliefs that were not apparent through other psychotherapeutic devices. The use of repertory grids has been reported with numerous client groups. It can be adapted to be used with people with learning difficulties (Hare, 1997; Hare, Searson & Knowle, 2010) and with children (Fransella et al., 2004). The lead author is currently undertaking an elective placement in neuropsychology and can appreciate some of the ways repertory grids could be used in this specialty. Identity significantly impacts on a persons' sense of acceptance and coping with their difficulties after brain injury (Gracey, Evans & Malley, 2009), and has been explored in research using repertory grids (Gracey et al., 2008). Repertory grids can also be used with older adults to examine the impact of aging on views of self and others (Williams & Harter, 2010).

Dissemination

The systematic review will be submitted to the *Behavioural and Cognitive Psychotherapy* journal. This journal was selected by considering its impact factor rating and as the systematic review is of relevance to the journal's target audience. The empirical paper will be submitted to the *Cognitive Behavioural Therapist* journal, again as the impact factor is good and the journal is interested in submissions related to the training and education of CBT therapists.

The lead author is also considering presenting the findings of both papers at national conferences. The ideal conference is the BABCP National Conference. This may take the form of a poster presentation or short verbal presentation. The findings may be of interest to local branch BABCP meetings in Wales, so the lead author intends to approach the branch leaders to offer to present.

Personal reflection on the overall research process

The systematic review was harder to conceptualise than first realised. Several avenues were explored before concluding that a move away from the specific theme of CBT personal and professional development would be necessary. The lead author experienced concern that they may not find an appropriate review that linked to the empirical study. As has been previously highlighted, research into CBT training is often focused on the development of competence. While performing scoping exercises, it became clear that there was not enough research published that explored other facets of CBT therapist development to conduct a review. The lead author initially felt uncomfortable that yet again the focus of a research article was on CBT competence. This subsided, however, after recognising that the systematic review subject could provide a valuable contribution to the CBT field, not just in training but in everyday practice and in examining fidelity on research trials.

Towards the end of the research process the lead author noticed their own professional development journey. Although still keen to seek advice from the research supervisors, they noticed that they were becoming more confident in their own decision making. They reflected on this with their appraisal tutor and noted that this was an appropriate step to be taking as they neared the end of the doctoral training. Prior to beginning the doctoral training, the lead author

had many years of therapeutic and teaching experience, with only one year of research. The lead author always valued the importance of the scientist-practitioner role of clinical psychologists, but felt a great deal more confident as a practitioner. Having undertaken this research project, the lead author now feels more confident that they have a more solid research skills base on which to continue to develop further and contribute to the clinical psychology evidence base.

References

- Alberts, G., & Edelstein, B. (1990). Therapist training: A critical review of skill training studies. *Clinical Psychology Review, 10*(5), 497-511.
- Altman, D.G. (1991). *Practical statistics for medical research*. London: Chapman and Hall.
- Barber, J. P., Foltz, C., Crits-Christoph, P., & Chittams, J. (2004). Therapists' adherence and competence and treatment discrimination in the NIDA Collaborative Cocaine Treatment Study. *Journal of Clinical Psychology, 60*(1), 29-41.
- Barber, J. P., Liese, B. S., & Abrams, M. J. (2003). Development of the cognitive therapy adherence and competence scale. *Psychotherapy Research, 13*(2), 205-221.
- Barnfield, T. V., Mathieson, F. M., & Beaumont, G. R. (2007). Assessing the development of competence during postgraduate cognitive-behavioral therapy training. *Journal of Cognitive Psychotherapy, 21*(2), 140-147.
- Bennett-Levy, J., & Beedie, A. (2007). The Ups and Downs of Cognitive Therapy Training: What Happens to Trainees' Perception of their Competence During a Cognitive Therapy Training Course? *Behavioural and Cognitive Psychotherapy, 35*, 61-75.
- Bennett-Levy, J., Turner, F., Beaty, T., Smith, M., Paterson, B., & Farmer, S. (2001). The value of self-practice of cognitive therapy techniques and self-reflection in the training of cognitive therapists. *Behavioural and Cognitive Psychotherapy, 29*, 203-220.
- Blackburn, I. M., James, I. A., Milne, D. L., Baker, C., Standart, S., Garland, A., & Reichelt, F. K. (2001). The revised cognitive therapy scale (CTS-R): psychometric properties. *Behavioural and Cognitive Psychotherapy, 29*(4), 431-446.
- Boland, A., Cherry, G., & Dickson, R. (Eds.). (2014). *Doing a Systematic Review: A Student's Guide*. Croydon, GB: Sage.

- British Association for Behavioural & Cognitive Psychotherapies (2018). *Continuing Professional Development; Reflective Practice Statements*.
<http://www.babcp.com/Accreditation/Accreditation-CPD.aspx>
- Clark, D. M., Consbruch, K. V., Hinrichs, J., & Stangier, U. (2007). *Cognitive Therapy of Social Phobia: checklist of therapist competency*. Unpublished manuscript. London: Kings College London.
- Cohen, J. (1960). A coefficient of agreement for nominal scales. *Educational and Psychological Measurement*, 20(1), 37-46.
- Cohen, J. (1968). Weighted kappa: Nominal scale agreement provision for scaled disagreement or partial credit. *Psychological Bulletin*, 70(4), 213-220.
- Conscious competence learning model, n.d. <https://www.businessballs.com/self-awareness/conscious-competence-learning-model-63/>
- Davidson, K., Scott, J., Schmidt, U., Tata, P., Thornton, S., & Tyrer, P. (2004). Therapist competence and clinical outcome in the Prevention of Parasuicide by Manual Assisted Cognitive Behaviour Therapy Trial: the POPMACT study. *Psychological Medicine*, 34(5), 855-863.
- de Vet, H. C. W., Ader, H. J., Terwee, C. B., & Pouwer, F. (2005). Are factor analytical techniques appropriately used in the validation of health status questionnaires? A systematic review on the quality of factor analyses of the SF-36. *Quality of Life Research*, 14, 1203–1218.
- Dobson, K. S., Shaw, B. F., & Vallis, T. M. (1985). Reliability of a measure of the quality of cognitive therapy. *British Journal of Clinical Psychology*, 24(4), 295-300.
- Feixas, G., Geldschläger, H., & Neimeyer, R.A. (2002). Content Analysis of Personal Constructs. *Journal of Constructivist Psychology*, 15, 1-19.

- Fransella, F. (Ed.). (2005). *The essential practitioner's handbook of personal construct psychology*. Wiltshire, UK: John Wiley & Sons.
- Fransella, F., Bell, R., & Bannister, D. (2004). *A manual for repertory grid technique, 2nd Edition*. Chichester: John Wiley and Sons Ltd.
- Freiheit, S. R., & Overholser, J. C. (1997). Training issues in cognitive-behavioral psychotherapy. *Journal of Behavior Therapy and Experimental Psychiatry*, 28(2), 79-86.
- Glaser, B. G., & Strauss, A. L. (2017). *Discovery of grounded theory: Strategies for qualitative research*. Oxon: Routledge.
- Gordon, P. K. (2006). A comparison of two versions of the Cognitive Therapy Scale. *Behavioural and Cognitive Psychotherapy*, 35(3), 343-353.
- Gracey, F., Palmer, S., Rous, B., Psaila, K., Shaw, K., O'Dell, J., ... & Mohamed, S. (2008). "Feeling part of things": Personal construction of self after brain injury. *Neuropsychological Rehabilitation*, 18(5-6), 627-650.
- Gracey, F., Evans, J. J., & Malley, D. (2009). Capturing process and outcome in complex rehabilitation interventions: A "Y-shaped" model. *Neuropsychological Rehabilitation*, 19(6), 867-890.
- Grice, J. W. (2002). Idiogrid: Software for the management and analysis of repertory grids. *Behaviour Research Methods, Instruments & Computers*, 34, 338-341.
- Hallgren, K. A. (2012). Computing inter-rater reliability for observational data: an overview and tutorial. *Tutorials in Quantitative Methods for Psychology*, 8(1), 23-34.
- Hare, D. J. (1997). Use of repertory grid techniques in working with people with teaming disabilities. *Journal of Learning Disabilities for Nursing, Health, and Social Care*, 1(3), 115-119.

- Hare, D. J., Searson, R., & Knowles, R. (2010). Real listening—using personal construct assessment with people with intellectual disabilities: two case studies. *British Journal of Learning Disabilities*, 39(3), 190-197.
- Hill, K., Wittkowski, A., Hodgkinson, E., Bell, R., & Hare, D. J. (2015). Using the repertory grid technique to examine trainee clinical psychologists' construal of their personal and professional development. *Clinical Psychology and Psychotherapy*, 23, 425-437.
- Huppert, J. D., Bufka, L. F., Barlow, D. H., Gorman, J. M., Shear, M. K., & Woods, S. W. (2001). Therapists, therapist variables, and cognitive-behavioral therapy outcome in a multicenter trial for panic disorder. *Journal of Consulting and Clinical Psychology*, 69(5), 747-755.
- Jacobson, N. S., & Gortner, E. T. (2000). Can depression be de-medicalized in the 21st century: Scientific revolutions, counter-revolutions and the magnetic field of normal science. *Behaviour Research and Therapy*, 38(2), 103-117.
- Jankowicz, D. (2004). *The easy guide to repertory grids*. Chichester: John Wiley & Sons Ltd.
- Jenkins, H. (2017). *Exploring Cognitive Behavioural Therapy Diploma Students' Construal of their Personal and Professional Development*. Unpublished ClinPsyD thesis: Cardiff University.
- Jenkins, H., Waddington, L., Thomas, N., & Hare, D. J. (2018). Trainees' experience of cognitive behavioural therapy training: a mixed methods systematic review. *the Cognitive Behaviour Therapist*, 11.
- Kazantzis, N. (2003). Therapist competence in cognitive-behavioural therapies: Review of the contemporary empirical evidence. *Behaviour Change*, 20(1), 1-12.
- Kelly, G. A. (1955). *The psychology of personal constructs*. New York: Norton.
- Krumpal, I. (2013). Determinants of social desirability bias in sensitive surveys: a literature review. *Quality & Quantity*, 47, 2025-2047.

- Leach, C., Freshwater, K., Aldridge, J., & Sunderland, J. (2001). Analysis of repertory grids in clinical practice. *British Journal of Clinical Psychology*, 40(3), 225-248.
- Loades, M. E., & Armstrong, P. (2016). The challenge of training supervisors to use direct assessments of clinical competence in CBT consistently: a systematic review and exploratory training study. *The Cognitive Behaviour Therapist*, 9, e27.
- McManus, F., Westbrook, D., Vazquez-Montes, M., Fennell, M., & Kennerley, H. (2010). An evaluation of the effectiveness of diploma-level training in cognitive behaviour therapy. *Behaviour Research and Therapy*, 48(11), 1123-1132.
- Mokkink, L. B., Prinsen, C. A., Bouter, L. M., de Vet, H. C., & Terwee, C. B. (2016). The COnsensus-based Standards for the selection of health Measurement INstruments (COSMIN) and how to select an outcome measurement instrument. *Brazilian Journal of Physical Therapy*, 20(2), 105-113.
- Mokkink, L. B., Terwee, C. B., Patrick, D. L., Alonso, J., Stratford, P. W., Knol, D. L., Bouter, L. M. & de Vet, H. C. W. (2010a). The COSMIN checklist for assessing the methodological quality of studies on measurement properties of health status measurement instruments: An international Delphi study. *Quality of Life Research*, 19, 539–549.
- Mokkink, L. B., Terwee, C. B., Knol, D. L., Stratford, P. W., Alonso, J., Patrick, D. L., Bouter, L. M. & de Vet, H. C. W. (2010b). The COSMIN checklist for evaluating the methodological quality of studies on measurement properties: A clarification of its content. *BMC Medical Research Methodology*, 10, 22.
- Mokkink, L. B., Terwee, C. B., Patrick, D. L., Alonso, J., Stratford, P. W., Knol, D. L., ... & de Vet, H. C. (2010c). The COSMIN study reached international consensus on taxonomy, terminology, and definitions of measurement properties for health-related patient-reported outcomes. *Journal of Clinical Epidemiology*, 63(7), 737-745.

- Muse, K., & McManus, F. (2013). A systematic review of methods for assessing competence in cognitive-behavioural therapy. *Clinical Psychology Review, 33*(3), 484-499.
- Muse, K., McManus, F., Rakovshik, S., & Thwaites, R. (2017). Development and psychometric evaluation of the Assessment of Core CBT Skills (ACCS): An observation-based tool for assessing cognitive behavioral therapy competence. *Psychological Assessment, 29*(5), 542-555.
- National Psychological Therapies Management Committee (2017). *Matrics Cymru: Guidance for Delivering Evidence-Based Psychological Therapy in Wales*. NPTMC, Public Health Wales.
- Ralley, C., Allott, R., Hare, D.J., & Wittkowski, A. (2009). The use of the repertory grid technique to examine staff beliefs about clients with dual diagnosis. *Clinical Psychology and Psychotherapy, 16*, 148-158.
- Rosenkoetter, U., & Tate, R. L. (2018). Assessing features of psychometric assessment instruments: A comparison of the COSMIN checklist with other critical appraisal tools. *Brain Impairment, 19*(1), 103-118.
- Roth, A. D. (2016). A New Scale for the Assessment of Competences in Cognitive and Behavioural Therapy. *Behavioural and Cognitive Psychotherapy, 44*(5), 620-624.
- Rozek, D. C., Serrano, J. L., Marriott, B. R., Scott, K. S., Hickman, L. B., Brothers, B. M., ... & Simons, A. D. (2018). Cognitive Behavioural Therapy Competency: Pilot Data from a Comparison of Multiple Perspectives. *Behavioural and Cognitive Psychotherapy, 46*(2), 244-250.
- Smith, J. A. (1996). Beyond the divide between cognition and discourse: Using interpretative phenomenological analysis in health psychology. *Psychology and Health, 11*(2), 261-271.

- Stevens, J. P. (2012). *Applied multivariate statistics for the social sciences, 3rd Edition*. New York: Routledge.
- Terwee, C. B., de Vet, H.C.W., Prinsen, C.A.C, & Mokkink, L.B. (2011). Protocol for systematic reviews of measurement properties. *COSMIN: Knowledgecenter Measurement Instruments*.
[http://www.cosmin.nl/images/upload/files/Protocol%20klinimetrische%20review%20version%20nov%202011\(1\).pdf](http://www.cosmin.nl/images/upload/files/Protocol%20klinimetrische%20review%20version%20nov%202011(1).pdf)
- Terwee, C. B., Bot, S. D., de Boer, M. R., van der Windt, D. A., Knol, D. L., Dekker, J., ... & de Vet, H. C. (2007). Quality criteria were proposed for measurement properties of health status questionnaires. *Journal of Clinical Epidemiology*, *60*(1), 34-42.
- Terwee, C. B., Mokkink, L. B., Knol, D. L., Ostelo, R. W., Bouter, L. M., & de Vet, H. C. (2012). Rating the methodological quality in systematic reviews of studies on measurement properties: a scoring system for the COSMIN checklist. *Quality of Life Research*, *21*(4), 651-657.
- Thompson, B. (1994). The pivotal role of replication in psychological research: Empirically evaluating the replicability of sample results. *Journal of Personality*, *62*(2), 157-176.
- Vallis, T. M., Shaw, B. F., & Dobson, K. S. (1986). The Cognitive Therapy Scale: psychometric properties. *Journal of Consulting and Clinical Psychology*, *54*(3), 381-385.
- von Consbruch, K., Clark, D. M., & Stangier, U. (2012). Assessing therapeutic competence in cognitive therapy for social phobia: Psychometric properties of the cognitive therapy competence scale for social phobia (CTCS-SP). *Behavioural and Cognitive Psychotherapy*, *40*(2), 149-161.

- Williams, B. D., & Harter, S. L. (2010). Views of the self and others at different ages: Utility of repertory grid technique in detecting the positivity effect in aging. *The International Journal of Aging and Human Development, 71*(1), 1-22.
- Weck, F., Hautzinger, M., Heidenreich, T., & Stangier, U. (2010). Erfassung psychotherapeutischer Kompetenzen. *Zeitschrift für Klinische Psychologie und Psychotherapie, 39*, 244-250.
- Weck, F., Hilling, C., Schermelleh-Engel, K., Rudari, V., & Stangier, U. (2011). Reliability of adherence and competence assessment in cognitive behavioral therapy: Influence of clinical experience. *The Journal of Nervous and Mental Disease, 199*(4), 276-279.
- Winter, D. A. (2003). Repertory grid technique as a psychotherapy research measure. *Psychotherapy Research, 13*(1), 25-42.
- Woodrow, C., Fox, J. R. E., & Hare, D. J., (2010). Staff construal of inpatients with Anorexia Nervosa. *Clinical Psychology & Psychotherapy, 19*, 70-77.

Appendix A:

**Guidelines for the submission for publication to the *Behavioural and
Cognitive Psychotherapy* journal**

Instructions for contributors

EDITORIAL OFFICE

Professor Paul M Salkovskis – *Editor*

Ms Lydia Holt – *Editorial Assistant*

Email: journal.office@babcp.com

Editorial Statement

Behavioural and Cognitive Psychotherapy is an international multidisciplinary journal for the publication of original research of an experimental, or clinical nature that contributes to the theory, practice and evaluation of cognitive and behavioural therapies. As such the scope of the journal is very broad, and articles relevant to most areas of human behaviour and human experience which would be of interest to members of the helping and teaching professions will be considered for publication.

As an applied science the concepts, methodology and techniques of behavioural psychotherapy continue to change. The journal seeks both to reflect and to influence those changes. While the emphasis is placed on empirical research, articles concerned with important theoretical and methodological issues as well as evaluative reviews of the behavioural literature are also published. In addition, given the emphasis of behaviour therapy on the experimental investigation of the single case, the journal from time to time publishes case studies using single case experimental designs. For the majority of designs this should include a baseline period with repeated measures; in all instances the nature of the quantitative data and the intervention must be clearly specified. Other types of case report can be submitted for the Brief Clinical Reports section.

Articles should concern original material that is neither published nor under consideration for publication elsewhere. This applies also to articles in languages other than English.

Sections of the Journal

Main

Reports of original research employing experimental or correlational methods and using within or between subject designs. Review or discussion articles that are based on empirical data and that have important new theoretical, conceptual or applied implications.

Accelerated Publication

The accelerated publication section is intended to accommodate a small number of important papers. Such papers will include major new findings for which rapid dissemination would be of considerable benefit and impact. For example: reports of the results of important new clinical trials; innovative experimental results with major implications for theory or practice; other work of unusually high calibre. If submitting a manuscript to this section you must specify in your cover letter why it should be considered as Accelerated.

Empirically Grounded Clinical Interventions

This section is intended for reviews of the present status of treatment approaches for specific psychological problems. It is intended that such articles will draw upon a combination of treatment trials, experimental evidence and other research, and be firmly founded in phenomenology. It should take account of, but also go beyond, treatment outcome data.

Brief Clinical Reports

Material suitable for this section includes unusual case reports and accounts of potentially important techniques, phenomena or observations; for example, descriptions of previously unreported techniques, outlines of available treatment manuals, descriptions of innovative variations of existing procedures, details of self-help or training packages, and accounts of the application of existing techniques in novel settings. The BCR section is intended to extend the scope of the clinical section. Submissions to this section should be **no longer than 1800 words** and should include **no more than six references, one table or figure**, and an **extended report** that contains fuller details. There are no restrictions on the size or format of the extended report as it will be published online only. It may, for instance, be a treatment manual, a fully detailed case report, or a therapy transcript. If a submission is accepted for publication as a Brief Clinical Report, the author(s) must be prepared to send the fuller document to those requesting it, free of charge or at a price agreed with the editor to reflect the cost of materials involved. The extended document will also be mounted on [the journal's website](#) as a PDF format (the document will not be copyedited).

Study Protocols

Protocols of proposed and ongoing trials in behavioural and cognitive therapies will be considered. Your study must be registered and have ethical approval, and proof of this will be required. The abstract should be **structured** under the following four headings; **Background, Aims, Method, Discussion**.

Please use the *Standard Protocol Items: Recommendations for Interventional Trial* (SPIRIT) checklist for protocols of randomised controlled trials (see the reporting standards section below). Manuscripts should be **under 2000 words** at the point of first submission, and include no more than **15 references**, and no more than **three tables/figures in total**. A PDF with additional, unlimited text, figures and tables may be included designated for online only publication.

Reporting Standards

Behavioural and Cognitive Psychotherapy supports standardised reporting practices, consult the following table to ensure your submission meets the reporting standards for your manuscript type. Please include the relevant supporting information (such as diagrams and checklists) with your submission files. See <http://www.equator-network.org/reporting-guidelines/> for more information on manuscript types not described below.

The journal also encourages clarity in describing interventions sufficient to allow their replication through the use of the [Template for Intervention Description and Replication Checklist](#) (TIDieR).

Randomised Controlled Trial	CONSORT	http://www.consort-statement.org/
Systematic reviews and Meta-Analysis	PRISMA	http://www.prisma-statement.org/
Study Protocols	SPIRIT	http://www.spirit-statement.org/

Preparing Your Manuscript

Articles must be under 5,000 words at the point of submission, excluding references, tables and figures (please see separate instructions for Brief Clinical Reports and Study Protocols). Manuscripts describing more than one study may exceed this limit but please make this clear to the editorial office in your cover letter.

Authors who want a blind review should indicate this at the point of submission of their article, omitting details of authorship and other identifying information from the main manuscript. Authors who do not omit this information will be assumed as submitting a non-blinded manuscript. Submission for blind review is encouraged.

All submissions should be submitted via this portal: <http://mc.manuscriptcentral.com/babcp>

Style

APA style should be followed throughout. <http://www.apastyle.org/>

Abbreviations where used must be standard. The Systeme International (SI) should be used for all units. Probability values and power statistics should be given with statistical values and degrees of freedom (e.g. $t(34) = 2.39, p < .001$), but such information may be included in tables rather than in the main text. Spelling must be consistent within an article, using either British spelling (*The Shorter Oxford English Dictionary*), or American (*Webster's New World College Dictionary*). However, spelling in the list of references must be literal to each publication.

In-text references

In-text references should be cited as follows: "...Given the critical role of the prefrontal cortex (PFC) in working memory (Cohen et al., 1997; Goldman-Rakic, 1987; Perlstein et al., 2003a, 2003b)..." with multiple references in alphabetical order. Another example: "...Cohen et al. (1994, 1997), Braver et al. (1997), and Jonides and Smith (1997) demonstrated..."

References cited in the text with two authors should list both names. References cited in the text with three, four, or five authors, list all authors at first mention; with subsequent citations include only the first author's last name followed by et al. References cited in the text with six or more authors should list the first author et al. throughout. In the reference section, for works with up to seven authors, list all authors. For eight authors or more, list the first six, then ellipses followed by the last author's name.

Details of style not specified here may be determined by reference to the *Publication Manual of the American Psychological Association*.

Manuscripts Should Conform to the Following Scheme

1. Title Page

The title should phrase concisely the major issues. Author(s) to be given with departmental affiliations and addresses, grouped appropriately. A running head of no more than 40 characters should be indicated and carried through the document as a header. This should be uploaded as a separate file.

2. Main Manuscript

a. Abstract. Unless a Study Protocol (see separate guidelines), a 250 word abstract should be structured under the following five headings: Background, Aims, Method, Results, and Conclusions. Include up to six key words that describes the article.

b. Main Text. Following APA guidelines, this should contain the sections *Introduction* (including overview and theoretical background), *Method* (participants, design and data analyses), *Results* (described in detail with summary figures and tables), *Discussion* (including conclusions and limitations).

c. Required Sections

Acknowledgements

You may acknowledge individuals or organizations that provided advice, support (non-financial). Formal financial support and funding should be listed in the following section.

Ethical statements

All papers should include a statement indicating that authors have abided by the Ethical Principles of Psychologists and Code of Conduct as set out by the APA <http://www.apa.org/ethics/code/>. Authors should also confirm if ethical approval was needed, by which organisation, and provide the relevant reference number. If no ethical approval was needed, the authors should state why.

Conflict of Interest

Please provide details of all known financial, professional and personal relationships with the potential to bias the work. Where no known conflicts of interest exist, please include the following statement: “(Authors names) have no conflict of interest with respect to this publication”.

Where conflict of interest, ethical statements and acknowledgements would compromise blind review, these may be anonymized from the main manuscript, but should be included in full on the separate title page which is not seen by reviewers. During the review process within the main text it is acceptable to replace identifiable information by using XXXXXX or similar.

Financial Support

Please provide details of the sources of financial support for all authors, including grant numbers. For example, “This work was supported by the Medical research Council (grant number XXXXXXXX)”. Multiple grant numbers should be separated by a comma and space, and where research was funded by more than one agency the different agencies should be separated by a semi-colon, with “and” before the final funder. Grants held by different authors should be identified as belonging to individual authors by the authors’ initials. For example, “This work was supported by the Wellcome Trust (A.B., grant numbers XXXX, YYYY), (C.D., grant number ZZZZ); the Natural Environment Research Council (E.F., grant number FFFF); and the National Institutes of Health (A.B., grant number GGGG), (E.F., grant number HHHH)”. Where no specific funding has been provided for research, please provide the following statement: “This research received no specific grant from any funding agency, commercial or not-for-profit sectors.”

d. References. References should be consistent with the *Publication Manual of the American Psychological Association (6th Edition)*.

If a DOI has been assigned to an article that you are citing, you should include this after the page numbers for the article. If no DOI has been assigned and you are accessing the periodical online, use the URL of the website from which you are retrieving the periodical.

Examples of the APA reference style are as follows:

Online/Electronic Journal Article (with DOI):

Kaltenthaler, E., Parry, G. & Beverley, C. (2004). Computerized cognitive behaviour therapy: a systematic review. *Behavioural and Cognitive Psychotherapy*, 32, 31–55. doi:10.1017/S135246580400102X.

Book:

Tharp, R. G. and Wetzel, R. J. (1969). *Behaviour Modification in the Natural Environment*. New York: Academic Press.

Book Chapter:

Roskies, E. and Lazarus, R.S. (1980). Coping theory and the teaching of coping skills. In P. O. Davidson and S. M. Davidson (Eds.), *Behavioural Medicine: Changing health lifestyles* (pp. 38-69). New York: Brunner/Mazel.

Manual, Diagnostic Scheme, etc.:

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Arlington, VA: American Psychiatric Publishing.

Authors are encouraged to make use of referencing software packages (e.g. Endnote, Mendeley, Reference Manager etc.) to assist with formatting - extensions for APA formatting are easily accessible. However,

you are also reminded to check citations and reference lists in detail and not to rely on software packages to format references correctly.

Detailed guidelines on the APA citation and referencing style can be obtained online from sources including the via [the Writing Center of the University of Wisconsin–Madison](#).

e. Footnotes. The first, and preferably only, footnote will appear at the foot of the first page of each article, and subsequently may acknowledge previous unpublished presentation (e.g. dissertation, meeting paper), financial support, scholarly or technical assistance, or a change in affiliation.

3. Tables and Figures

Manuscripts should not usually include more than five tables and/or figures. They should be supplied as *separate files*, but have their intended position within the paper clearly indicated in the manuscript. They should be constructed so as to be intelligible without reference to the text.

Figures. Tints and shading in figures may be used, but colour should be avoided unless essential. Although colour is possible in the online version, when designing a figure please ensure that any line variation/distinction demonstrated by colour can still be noted when in black and white. Colour figures are free of charge for online published articles but if authors wish figures to be published in colour in the print version the cost is £200. Numbered figure captions should be provided. All artwork should be submitted as separate TIFF format files.

The minimum resolution for submission of electronic artwork is:

- Halftone Images (Black and White Photographs only): 300 dpi (dots per inch).
- LineTone (Black and White Photographs plus Line Drawings in the same figure): 600 dpi.
- Bitmap (Line Drawings only): 1200 dpi

Please follow [this link](#) for full guidance on artwork.

Tables should be provided in editable Word format. They should be numbered and given explanatory titles.

4. Appendices. If any, are intended for inclusion in the printed version of the manuscript and should be kept to a minimum. Please consider the use of supplementary information instead.

5. Supplementary Information – Online only

Where unpublished material e.g. behaviour rating scales or therapy manuals are referred to in an article, copies should be submitted as an additional document (where copyright allows) to facilitate review.

Supplementary files can be used to convey supporting or extra information to your study, however, the main manuscript should be able to ‘stand-alone’ as these documents are not published in the printed issues.

Supporting documents are reviewed but not copyedited on acceptance of the article. They can therefore be submitted in PDF format, and include figures and tables within the text. There is no word limit for supporting online information.

Suggested Reviewers

During the submission process, you will be asked to indicate your preferred and non-preferred reviewers, and the reasons for your choices.

Preferred reviewers:

- Should not have a conflict of interest (such as a recent or current close working relationship, or from the same institution)
- At least half of the list should be international to yourself
- Please consider early career researchers as well as field leaders
- Please suggest both niche experts and those with wider knowledge of the subject

Non-preferred reviewers:

- May have personal or subjective bias to your work which disregards the scientific merit
- May have seen or commented on the submitted manuscript, or prior versions.

Ethical Standards

Behavioural and Cognitive Psychotherapy is committed to actively investigating any cases of suspected misconduct, even in the event of the manuscript being withdrawn. All manuscripts are screened for plagiarism before being accepted for publication. All editors and reviewers are asked to disclose any conflict of interest when they are assigned a manuscript. If deemed necessary, alternative or additional opinions will be sought in order to maintain the balance of fair and thorough peer review.

The journal is a member of COPE.

Retractions

Behavioural and Cognitive Psychotherapy follows the COPE guidelines on retractions.

Transfer Of Files For Submission To *the Cognitive Behavioural Therapist*

Editors for *Behavioural and Cognitive Psychotherapy* (BCP) can choose to recommend submission of a manuscript not suitable for BCP to *the Cognitive Behavioural Therapist* (tCBT), thus effectively submitting to both journals sequentially. This allows the automatic transfer of the manuscript files, including, as appropriate, transmission of reviewers' comments (at the discretion of the handling Editor) where this seems likely to facilitate manuscript handling. Selection of a manuscript to be transferred to tCBT is at the Editor's discretion, and is then subject to the peer-review process of that journal. No guarantee of suitability for tCBT or acceptance is made. Those papers not passed on to tCBT by a BCP Editor can be submitted by the author via the usual channels.

[The homepage for tCBT can be found here.](#)

Open Access

Upon acceptance of your paper, you may choose to publish your article via Gold Open Access (following payment of an Article Processing Charge). Current APC rates for *Behavioural and Cognitive Psychotherapy* can be found [here](#).

Please note: APC collection is managed by Rightslink, who will contact authors who have elected to publish via Open Access.

Green Open Access is also supported by Cambridge Open and full details can be found on the journal copyright form.

Note: Open Access publication under a CC-BY licence may be required when funding has been received from some funding bodies. If this applies to your paper make sure to let us know during the submission process, and complete the appropriate Open Access copyright form. You can also indicate through the ScholarOne system that your paper should be deposited in PubMed Central if accepted, which may also be required by funders.

Proofs And Copyright

Proofs of accepted articles will be sent electronically to authors for the correction of printers' errors; authors' alterations may be charged. Authors submitting a manuscript do so on the understanding that if it is accepted for publication exclusive copyright of the paper shall be assigned to the Association. The publishers will not put any limitation on the personal freedom of the author to use material contained in the paper in other works.

Author Language Services

Cambridge University Press recommends that authors have their manuscripts checked by an English language native speaker before submission; this will ensure that submissions are judged at peer review exclusively on academic merit. We [list a number of third-party services](#) specialising in language editing and / or translation, and suggest that authors contact as appropriate. Use of any of these services is voluntary, and at the author's own expense.

(Revised May 2017)

Appendix B:

Systematic review final search strategy

Medline search strategy: yielded 382

Medline was searched on 12th February 2018 using the following strategy:

1. “therap* competen*” OR “clinical competen*” OR “therap* skill” OR “assess* competen*” OR “competen* assess*” OR “therap* quality” OR “intervention competen*” OR “intervention quality” OR “clinical expertise”: in keyword
2. “cognitive therapy” OR “behav* therapy” OR “cognitive-behavo*” OR “cognitive behavio*” OR “CBT”:in any field
3. “cognitive therapy scale” OR “revised cognitive therapy scale” OR “CTS-R”: in any field
4. (1 AND 2) OR 3
5. Timespan 1980-current
6. Include: English language only

PsychINFO search strategy: yielded 411

PsychINFO was searched on 12th February 2018 using the following strategy:

1. “therap* competen*” OR “clinical competen*” OR “therap* skill” OR “assess* competen*” OR “competen* assess*” OR “therap* quality” OR “intervention competen*” OR “intervention quality” OR “clinical expertise”: in keyword
2. “cognitive therapy” OR “behav* therapy” OR “cognitive-behavo*” OR “cognitive behavio*” OR “CBT”:in any field
3. “cognitive therapy scale” OR “revised cognitive therapy scale” OR “CTS-R”: in any field
4. (1 AND 2) OR 3
5. Timespan 1980-current
6. Include: English language only

Scopus search strategy: yielded 739

Scopus was searched on 12th February 2018 using the following strategy:

1. “therap* competen*” OR “clinical competen*” OR “therap* skill” OR “assess* competen*” OR “competen* assess*” OR “therap* quality” OR “intervention competen*” OR “intervention quality” OR “clinical expertise”: in title/abstract/keyword
2. “cognitive therapy” OR “behav* therapy” OR “cognitive-behavo*” OR “cognitive behavio*” OR “CBT”: in title/abstract/keyword
3. “cognitive therapy scale” OR “revised cognitive therapy scale” OR “CTS-R”: in title/abstract/keyword
4. (1 AND 2) OR 3
5. Timespan 1980-current
6. Limit to language: English language only
7. Exclude: Letter/conference paper/note

Web of Science search strategy: yielded 162

Web of Science was searched on 12th February 2018 using the following strategy:

1. “therap* competen*” OR “clinical competen*” OR “therap* skill” OR “assess* competen*” OR “competen* assess*” OR “therap* quality” OR “intervention competen*” OR “intervention quality” OR “clinical expertise”: in topic
 2. “cognitive therapy” OR “behav* therapy” OR “cognitive-behavo*” OR “cognitive behavio*” OR “CBT”:in topic
 3. “cognitive therapy scale” OR “revised cognitive therapy scale” OR “CTS-R”:in topic
 4. (1 AND 2) OR 3
 5. Timespan 1980-current
 6. Limit to language: English language only
- NB- searching with Title yields only 16 results in total

Appendix C:

Checklist for the Appraisal of Therapeutic Competence Scale Studies

(CATCS)

	Criteria	Description	Excellent 2	Fair 1	Poor 0
1	Generalisability				
1.1	Study purpose	The purpose of the study is clearly defined and aims and objectives are clear	Study is clearly defined and clear aims and objectives	Study is clearly defined but no specific aims and objectives stated	Purpose of study unclear and no aims or objectives.
1.2	Protocol for scale	The scale is described and there a standardised protocol for administration and scoring which is fully described or reference to protocol is provided	Described in study or reference provided to protocol	Mentioned but not in sufficient detail	No reference to protocol
1.3	Therapy/patients /setting	Type of disorders treated (severity and/or disorder), stage of therapy and demographics of patients/service setting provided	All or most of details are provided	Brief details are provided	No information is provided
1.4	Recordings	There was a clear explanation of how tapes were selected for analysis	Clear explanation of tape sampling included	Brief explanation of sampling	No explanation of sampling included
1.5	Number of raters	Identify the number of raters used	7 or more raters	Between 3 and 6 raters	Less than 3 raters
1.6	Raters	There was at least some raters who were independent from the research team, well experienced and sufficiently trained	There was multiple raters who were independent from research team, well experienced and trained	There was at least one rater who was independent from the research team, experienced and trained	No information is provided or raters were not independent from the study or the rater was not trained and experienced
1.7	Number of therapists	Identify the number of therapists used	10 or more therapists	Between 5 and 10 therapists	Less than 5 therapists
1.8	Therapists	Therapists were independent from the research team; experience of therapist and their training is described and demographics of therapists is described	All or most of details are provided	About half of the details are provided	None or little information is provided
2	Reliability				

2.1	Inter-rater reliability	Appropriate statistical measures been used to assess agreement between two or more different raters. For excellent both total scale and individual items should be reported	Agreement is reported by Kappa or ICC agreement (with confidence limits reported). Total scale AND individual items both reported AND sample size ≥ 100	Statistical analysis is provided but only total scale without individual items OR Pearson correlation coefficient calculated OR sample size 30-99	Not best practice e.g. absolute percentages reported OR sample size < 30
2.2	Test-retest reliability	Appropriate statistical measures been used to assess agreement between two or more occasions using the same rater. For excellent both total scale and individual items should be reported	Agreement is reported by Kappa or ICC agreement (with confidence limits reported). Total scale AND individual items both reported AND sample size ≥ 100	Statistical analysis is provided but only total scale without individual items OR Pearson correlation coefficient calculated OR sample size 30-99	Not best practice e.g. absolute percentages reported OR sample size < 30
2.3	Measurement error	There were two measurements available to calculate measurement error, with an appropriate time interval and using appropriate statistical measures	Time interval described AND Standard error of Measurement (SEM), Smallest Detectable Change (SDC) or Limits of Agreement (LoA) reported AND sample size ≥ 100	Time interval not provided or data provided but not calculated OR sample size 30-99	SEM calculated based on Cronbach's alpha or SDC from another population OR sample size < 30
2.4	Internal consistency	An internally consistent (homogeneous or unidimensional) scale is achieved through good construct definitions, good items, then principal component analysis or exploratory factor analysis, followed by confirmatory factor analysis	Factor analyses performed AND Cronbach's alpha(s) calculated per dimension AND sample size ≥ 100	No factor analysis OR doubtful design or method OR sample size 30-99	Analysis not calculated for each subscale OR sample size < 30
3	Validity				

3.1	Structural validity	Structural validity should be assessed to determine or confirm existing subscales, for multi-item instruments	Exploratory or confirmatory factor analysis performed OR Item Response Theory tests for determining (uni)dimensionality performed AND sample size ≥ 100	A method was reported but alternative would have been more suitable OR sample size 30-99	N/A
3.2	Hypothesis testing*	Specific hypothesis made that relate to convergent or divergent/discriminant validity	Specific hypotheses were formulated before data collection AND reported usually with correlation coefficients AND sample size ≥ 100	Doubtful design or method OR sample size 30-99	N/A
3.4	Criterion validity	This can be assessed if a study has identified a gold standard, and describes predictive validity when measured in the future, and concurrent validity when measured in the present	Convincing arguments that comparable measure is gold standard/or prominent measure AND correlation reported AND sample size ≥ 100	No convincing arguments that comparable measure is gold standard/or prominent measure OR doubtful design OR sample size 30-99	Criterion used can NOT be considered the gold standard OR sample size < 30
3.5	Content Validity	Either opinion or consensus on usefulness of scale/measure was gathered	Reported in study sufficiently	Briefly mentioned	N/A
4	Responsiveness*	Scale measures improvement in competence over time. Floor or ceiling effects are presented if more than 15% of respondents achieved the lowest or highest possible score	Effect size reported AND floor or ceiling effects presented if relevant AND sample size ≥ 100	Only effect size reported or doubtful design OR sample size 30-99	Not longitudinal design or time interval not described OR sample size < 30

*It is important to clearly distinguish between hypothesis testing and responsiveness. Responsiveness refers to the ability of a scale to detect changes longitudinally/over time. So, in the case of competence scales this refers to therapists improving over time because of experience or training. Hypothesis testing is done to determine if scores of a scale are consistent with hypotheses (for instance regarding internal relationships, relationships to scores of other instruments, or differences between relevant groups). Good convergent validity would mean constructs on a scale that should be related are related. Good discriminant validity would mean constructs on a scale that should not be related are not related (Mokkink et al., 2010c). For example, if a scale has good discriminant validity it would be able to detect differences between novice and experienced therapists.

Appendix D:

Guidelines for the submission for publication to the *Cognitive Behavioural*

Therapist journal

Instructions for contributors

Jump to:

Aims	and	Scope
Editorial		Governance
BABCP		
Scope	of	Content
Submission	of	a
Style		manuscript
References		Guide
Tables	and	Figures
Open		Access
Required		Statements
Author	Language	Services
Publication Ethics		

Aims and Scope

the Cognitive Behaviour Therapist is an interdisciplinary peer reviewed journal aimed primarily at cognitive and behavioural practitioners in the helping and teaching professions. Published online, the journal features articles covering clinical and professional issues, which contribute to the theory, practice and evolution of the cognitive and behavioural therapies. The journal will publish papers that describe new developments; articles that are practice focussed and detailed clinical interventions, research reports concerning the practice of cognitive behaviour therapy, detailed case reports, audits that are relevant to practice, and reviews of clinical scales and other assessment methods. The journal will also publish articles that have an education, training or supervision focus. It will also include reviews of recently published literature that is directly relevant to practitioners. A particular feature of the journal is that its electronic nature is designed to ensure timeliness of publication and professional debate whilst also ensuring rigorous standards in the dissemination of high quality materials with relevance to the practice of the cognitive and behaviour therapies.

Editorial Governance

the Cognitive Behaviour Therapist encompasses most areas of human behaviour and experience, and represents many different research methods, from quantitative to qualitative research, how to do clinical interventions to detailed case studies.

Under the guidance of its editorial board *the Cognitive Behaviour Therapist* aims to reflect and influence the continuing changes in the concepts, methodology, and techniques within the cognitive and behaviour therapies.

BABCP

the Cognitive Behaviour Therapist is published for the British Association for Behavioural and Cognitive Psychotherapies and is the sister Journal to *Behavioural and Cognitive Psychotherapy*

Editorial Statement – scope of journal content

The Editors welcome authoritative contributions from people working, or otherwise involved, in the practice, research, education, training and supervision in the cognitive and behaviour therapies. Articles must be original and focused upon cognitive and/or behaviour therapy. All articles must include a set of 3-5 learning objectives that will be achieved through reading the paper after the abstract. At the end of each paper a summary of the main points from the paper must be included with suggestions for follow-up reading. This stipulation is in keeping with the practitioner and professional development aims of the journal. There is no formal word limit but concision is recommended.

The journal also welcomes additional or standalone multimedia materials that support, enhance or illustrate specific aspects of CBT or Education the submitted papers such as video or audio, power point presentations or transcripts of therapy sessions.

Practice Articles

The practice of the cognitive and behaviour therapies is based upon empirically grounded interventions. This section will explore this area by the publication of articles that describe cognitive and behavioural interventions and the research evidence that underpins them or innovative interventions based on cognitive behavioural models. For new areas of application of CBT, articles providing an overview of CBT treatment issues could be considered, whereas in well-established areas, a more detailed approach to one or two specific aspects of therapy may be appropriate. All articles must include a set of 3-5 learning objectives that will be achieved through reading the paper. At the end of each paper a summary of the main points from the paper must be included with suggestions for follow-up reading. This stipulation is in keeping with the practitioner and professional development aims of the journal.

Reviews

Reviews of historical, contemporary, or innovative approaches to practice are also sought providing that they demonstrate relevance to the practice of the current cognitive and behavioural psychotherapies. Prospective authors for review papers should initially discuss their proposals with one of the editors.

Case Studies

Dissemination of effective practice will be promoted through the publication of case studies that involve cognitive and behavioural psychotherapy with individuals, couples, groups and families. A suggested template is provided which is designed to ensure sufficient information is provided to allow other therapists to replicate successful therapy. All articles must include 3-5 learning objectives that will be achieved through reading the article. At the end of each paper a summary of the main points should be included with suggestions for follow-up reading. This stipulation is in keeping with the practitioner and professional development aims of the journal. The case study should contribute to the development of theory or clinical practice, and feed into CBT practice as a whole rather than just relating to the specific case.

Case studies should generally follow this structure:

- Abstract
- Learning objectives (3-5)
- Introduction: including an outline of theoretical research and clinical literature relevant to the case
- Presenting problem: including information on the presenting problem and associated goals of treatment, diagnosis, relevant history and development of problems, scores on standard and idiographic measures, relevant history
- Conceptualisation: including a relevant theory-based CBT model used as a framework for formulation.
- Course of therapy: including methods used linked to theory and assessment of progress; difficulties encountered and any innovations in therapy
- Outcome: including clinical change, progress towards goals, change to measures, plans for follow-up
- Discussion: including relating to theory and evidence-base as well as reflections on own practice; implications for therapy and recommendations for other clinicians
- Summary: main points of the paper including suggestions for follow-up reading

Original research

Research evidence is at the heart of the practice of cognitive and behavioural psychotherapists. Original research will be published that is about and is directly relevant to the practice of the cognitive and behaviour therapies, such as the therapeutic relationship, therapeutic process and the evaluation of therapeutic strategies and techniques. It is expected that such reports meet both the necessary standards of scientific rigour and the journal's requirement of clear implications for the practice of the cognitive and behavioural therapies. Consequently, the description of the research and the presentation of results should be sufficiently brief to enable sufficient discussion of the practice implications. Consideration will be given to quantitative, qualitative and mixed approaches given appropriate fit between the question, methodology and methods of research chosen. All articles must include a set of 3-5 learning objectives that will be achieved through reading the paper. At the end of each paper a summary of the main

points from the paper must be included with suggestions for follow-up reading. This stipulation is in keeping with the practitioner and professional development aims of the journal.

Education and Supervision

The dissemination of effective cognitive and behaviour therapy through evidence based education and supervision strategies is important to ensure that service users receive proficient therapy and therapists remain up to date. This section will explore educational models, evaluations of innovative education strategies and approaches to the supervision of practice within the cognitive and behavioural psychotherapies. All articles must include a set of 3-5 learning objectives that will be achieved through reading the paper. At the end of each paper a summary of the main points from the paper must be included with suggestions for follow-up reading. This stipulation is in keeping with the practitioner and professional development aims of the journal.

Service Models and Forms of Delivery

The service model is the framework that exists to support the therapist with the delivery of either cognitive and behaviour therapies and services. This section will explore all aspects of the theory and application of service models and the delivery of therapy. Successes and failures have equal part to play in examining the practical application and the role of evidence within the provision of effective cognitive and behavioural interventions within a service context. Papers are invited which explore the structure of teams, processes adopted, the methods and designs involved. Papers that examine the outcomes of audits and their recommendations will also be considered. All articles must include a set of 3-5 learning objectives that will be achieved through reading the paper. At the end of each paper a summary of the main points from the paper must be included with suggestions for follow-up reading. This stipulation is in keeping with the practitioner and professional development aims of the journal.

Reviews of Assessment Tools and Methods

Reviews of clinical scales and other assessment methods will also be considered.

These reviews should provide the practitioner with a review of a scale's or other tool's purpose and properties, sufficient information to know how and when to use it, and how to interpret the results and make use of them. All articles must include a set of 3-5 learning objectives that will be achieved through reading the paper. At the end of each paper a summary of the main points from the paper must be included with suggestions for follow-up reading. This stipulation is in keeping with the practitioner and professional development aims of the journal.

Submission of a manuscript

Papers should be submitted online at <http://mc.manuscriptcentral.com/cbt>

Style Guide

Title page

The title should phrase concisely the major issues. Author(s) to be given with departmental affiliations and addresses, grouped appropriately. A running head of no more than 40 characters should be indicated. This should be a separate file to the main text. Three required statements must also be included on this page. See the 'Required Statements' section below for further details.

Main Text (anonymised with no author information)

- Abstract. The abstract should include up to six key words that could be used to describe the article. This should summarize the article in no more than 250 words, references should not be included in the abstract.
- All articles must include a set of 3-5 learning objectives that will be achieved through reading the paper. At the end of each paper a summary of the main points from the paper must be included with suggestions for follow-up reading. This stipulation is in keeping with the practitioner and professional development aims of the journal.
- Text. This should begin with an introduction, succinctly introducing the point of the paper to those interested in the general area of the journal. Attention should be paid to the Editorial Statement. The appropriate positions of tables and figures should be indicated in the text. Footnotes should be avoided where possible.

References

In text: Give two authors in full, for three or more authors use *et al.* at first occurrence, e.g. (Wilson *et al.* 2005; Jones & Smith, 2012; Allen & Green, 2015). Citations should be listed in chronological order.

Reference section: List authors alphabetically by surname. Include all authors. Attention should be paid to punctuation, and to use of bold and italics. All authors and journal volume numbers should be in bold. All journal and book names should be in italic. For multiple works by same author(s)/year list using a, b, etc. It would be helpful to look at a Reference section from a previously published work in the Journal. Examples below:

Journal:

Kaltenthaler E, Parry G, Beverley C (2004). Computerized cognitive behaviour therapy: a systematic review. *Behavioural and Cognitive Psychotherapy* **32**, 31-55.

Book:

Milne DL (2009). *Evidence-based Clinical Supervision*. Chichester: BPS Blackwell.

Chapter in a book:

Liese BS, Beck JS (1997). Cognitive therapy supervision In: *Handbook of Psychotherapy Supervision* (ed. C. E. Watkins), pp. 114-133. New York: Wiley.

Give DOI number and publication date if article is published online only, e.g.:

Willson R, Veale D, Freeston M (2015). Imagery rescripting for body dysmorphic disorder: a multiple-baseline single-case experimental design. *Behavior Therapy*. Published online: 3 September 2015. doi:10.1016/j.beth.2015.08.006.

'Submitted' and 'under review' papers:

These should not appear in the Reference section but are cited in the main text as e.g. 'B. Jones *et al.*, unpublished data'.

Tables and Figures

- These should be supplied as separate files, but have their intended position within the paper clearly indicated in the manuscript. They should be constructed so as to be intelligible without reference to the text.
 - Numbered figure captions should be provided.
 - All artwork should be submitted as separate TIFF format files.
 - The minimum resolution for submission of electronic artwork is:
 - Halftone Images (Black and White Photographs only): 300 dpi (dots per inch).
 - LineTone (Black and White Photographs plus Line Drawings in the same figure): 600 dpi (dots per inch).
 - Bitmap (Line Drawings only): 1200 dpi (dots per inch).
- Please see [this link](#) for full guidance on artwork

Tables should be provided in editable Word format. They should be numbered and given explanatory titles.

Open Access

Upon acceptance of your paper, you may choose to publish your article via Gold Open Access (following payment of an Article Processing Charge). Current APC rates for the journal can be found [here](#).

Please note: APC collection is managed by Rightslink, who will contact authors who have elected to publish via Open Access.

Green Open Access is also supported by Cambridge Open and full details can be found on the [journal copyright form](#)

Note: Open Access publication under a CC-BY licence may be required when funding has been received from some funding bodies. If this applies to your paper make sure to let us know during the submission process, and complete the appropriate Open Access copyright form. You can also indicate through the ScholarOne system that your paper should be deposited in PubMed Central if accepted, which may also be required by funders.

Required Statements

While 'Acknowledgements' are optional, the other three sections detailed below must be included before your references.

Acknowledgements

You may acknowledge individuals or organizations that provided advice, support (non-financial). Formal financial support and funding should be listed in the following section.

Ethical statements

All papers should include a statement indicating that authors have abided by the Ethical Principles of Psychologists and Code of Conduct [as set out by the APA](#). Authors should also confirm if ethical approval was needed, by which organisation, and provide the relevant reference number. If no ethical approval was needed, the authors should state why. Please see the section on [Publication Ethics](#) for more information.

Conflict of interest

Please provide details of all known financial, professional and personal relationships with the potential to bias the work. Where no known conflicts of interest exist, please include the following statement: "*(Authors names) have no conflict of interest with respect to this publication.*"

Where conflict of interest, ethical statements and acknowledgements would compromise blind review, these may be anonymized from the main manuscript, but should be included in full on the separate title page which is not seen by reviewers. During the review process within the main text it is acceptable to replace identifiable information by using XXXXXX or similar.

Financial support

Please provide details of the sources of financial support for all authors, including grant numbers. For example, "*This work was supported by the Medical Research Council (grant number XXXXXXXX)*". Multiple grant numbers should be separated by a comma and space,

and where research was funded by more than one agency the different agencies should be separated by a semi-colon, with "and" before the final funder. Grants held by different authors should be identified as belonging to individual authors by the authors' initials. For example, "*This work was supported by the Wellcome Trust (A.B., grant numbers XXXX, YYYY), (C.D., grant number ZZZZ); the Natural Environment Research Council (E.F., grant number FFFF); and the National Institutes of Health (A.B., grant number GGGG), (E.F., grant number HHHH)*". Where no specific funding has been provided for research, please provide the following statement: "*This research received no specific grant from any funding agency, commercial or not-for-profit sectors.*"

Author Language Services

Cambridge recommends that authors have their manuscripts checked by an English language native speaker before submission; this will ensure that submissions are judged at peer review exclusively on academic merit. We list a number of third-party services specialising in language editing and / or translation [here](#), and suggest that authors contact as appropriate. Use of any of these services is voluntary, and at the author's own expense

Publication Ethics

The Cognitive Behaviour Therapist is committed to actively investigating any cases of suspected misconduct, even in the event of the manuscript being withdrawn. All editors and reviewers are asked to disclose any conflicts of interest when they are assigned a manuscript. If deemed necessary, alternative or additional opinions will be sought in order to maintain the balance of fair and thorough peer review. All authors are also [required to provide](#) statements pertaining to conflicts of interest and ethical principles.

The journal is a member of COPE and abides by the [COPE code of conduct](#). *The Cognitive Behaviour Therapist* and Cambridge University Press take issues of copyright infringement, plagiarism, or other breaches of best practice in publication very seriously. We seek to protect the rights of our authors and we always investigate claims of plagiarism or misuse of articles published in the journal. Equally, we seek to protect the reputation of the journal against malpractice. Submitted articles may be checked using duplication-checking software. Where an article is found to have plagiarised other work or included third-party copyright material without permission or with insufficient acknowledgement, or where authorship of the article is contested, we reserve the right to take action including, but not limited to: publishing an erratum or corrigendum (correction); retracting the article (removing it from the journal); taking up the matter with the head of department or dean of the author's institution and/or relevant academic bodies or societies; banning the author from publication in the journal, or appropriate legal action. Further information regarding Cambridge University Press' ethical policies can be found [here](#).

Proofs and Copyright

Proofs of accepted articles will be sent electronically to authors for the correction of printers' errors; authors' alterations may be charged. Authors submitting a manuscript do so on the understanding that if it is accepted for publication exclusive copyright of the paper shall be assigned to the Association. The publishers will not put any limitation on the personal freedom of the author to use material contained in the paper in other works.

Updated: 8th February 2018

Appendix E:

Participant information sheet



NHS
WALES
GIG
CYMRU

School of Psychology
Ysgol Seicoleg

South Wales Doctoral Programme in Clinical Psychology
De Cymru Rhaglen Doethuriaeth mewn Seicoleg Glinigol



Cardiff University
Tower Building
Park Place
Cardiff CF10 3AT
Wales UK
www.cardiff.ac.uk/psych
Prifysgol Caerdydd
Adellad y Tŷr
Plas y Parc
Caerdydd CF10 3AT
Cymru Y Deyrnas Unedig

PARTICIPANT INFORMATION SHEET

Study: A repertory grid analysis of the impact of cognitive behavioural therapy training on the personal and professional development of post-graduate certificate students.

You are being invited to take part in a research project that is being undertaken as part of a Doctorate in Clinical Psychology. Please read the information below carefully before deciding whether to take part. If you have any questions, please contact the researcher.

Why is the study being done?

This study will examine the impact CBT training has had on your personal and professional development by looking at your personal constructs. Personal construct theory describes how people continually create and adapt how they construe themselves and the world through experience. People use ‘constructs’ to make predictions about themselves and the world, and these constructs are arranged in a hierarchical system that is revised according to experience.

What will the study involve?

The study would involve a 45-60 minute interview with the main researcher, which can be arranged at a time convenient to you, at Cardiff University or your place of work. The repertory grid interview would involve the researcher showing you ten ‘elements’. Elements are related to how someone views themselves or others e.g. ‘Myself before training’ or ‘My ideal self’. Three elements are chosen at random and you would be asked ‘Tell me how two of these are similar in some way, and different from the third’. The answer is then used to form a

‘construct’ with two opposing ends. Once you have identified ten constructs these would then be used to construct a grid. Participants will then rank the elements against these constructs. Interviews will be recorded so the researcher can focus on the interview process, but capture useful contextual information.

Do I have to take part?

No, it is your choice whether to participate or not. If you do decide to take part you are free to change your mind and withdraw from the study at any time.

What I will happen if I decide to take part?

If you want to participate in this study, please reply by email to the researcher Kathryn Rayson: raysonk@cardiff.ac.uk. The researcher will then arrange a convenient time and location to conduct the interview. At the interview you will be read these instructions again and asked for your full written consent. You will also be asked to complete a short demographics questionnaire as well.

What are the possible disadvantages of taking part?

There are minimal anticipated disadvantages to participating in the study. You will be asked to give up to an hour of your time. There is a small possibility that the process of examining your personal constructs can reveal previously hidden views you may hold about yourself and the world, but this would not normally lead to significant psychological distress. If this happens, you are free to withdraw from the study and/or speak to the researcher or research supervisor conducting the study.

What are the possible benefits of taking part?

Previous participants of personal construct interviews have reported to find the interviews enlightening. You will be provided with a copy of your completed grid, from which you are able to perform your own analysis. Your participation will contribute to a study that may improve our understanding of how CBT training impacts on the personal and professional development of trainees. This could have implications on the way future CBT or psychological therapy training is delivered at Cardiff University and other training providers.

What will happen to the information I provide?

All information which is collected about you during the research is strictly confidential. Only the consent form will contain identifiable information; which will be solely accessible to the researcher and will be stored separately from your other data, in a locked filing cabinet. All other information you provide will be completely anonymous and stored in a separate locked filing cabinet. The information will be kept for 12 months.

What will happen when the study ends?

The results of the study will be written up and submitted to Cardiff University to fulfil the requirements for a Doctorate in Clinical Psychology. A report may also be sent to a peer-reviewed journal for publication and disseminated at professional conferences. You will not be identified in any report or publication that follows this study.

Who has reviewed the study?

The study has been reviewed and approved by an ethics committee panel at Cardiff University.

Contact for further information?

If you would like any further information or have any queries please contact:

Researcher: Kathryn Rayson (Trainee Clinical Psychologist/Post graduate student)

Email: raysonk@cardiff.ac.uk

Clinical research supervisor: Dr Louise Waddington (Clinical Psychologist)

Email: WaddingtonL1@cardiff.ac.uk

Academic research supervisor: Dr Dougal Hare (Clinical Psychologist)

Email: hared@cardiff.ac.uk

Thank you for taking the time to read this information sheet.

Appendix F:
Consent form



NHS
WALES
GIG
CYMRU

School of Psychology
Ysgol Seicoleg

South Wales Doctoral Programme in Clinical Psychology
De Cymru Rhaglen Doethuriaeth mewn Seicoleg Glinigol



Cardiff University
Tower Building
Park Place
Cardiff CF10 3AT
Wales UK
www.cardiff.ac.uk/psych
Prifysgol Caerdydd
Adellad y Tŷr
Plas y Parc
Caerdydd CF10 3AT
Cymru Y Deyrnas Unedig

PARTICIPANT CONSENT FORM

Title of Project: A repertory grid analysis of the impact of cognitive behavioural therapy training on the personal and professional development of post-graduate certificate students.

Name of Researcher: Kat Rayson

Please initial all boxes you agree with and sign below

1. I confirm that I have read and understand the information sheet (Version 2) for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.

2. I understand that my participation is entirely voluntary and that I am free to withdraw at any time without giving any reason. If I choose to withdraw from the study there will be no adverse consequences.

3. I understand that participation will involve my interview being audio-recorded, with possible use of anonymised word for word quotation in the research report.

4. I understand that my information will be stored securely in a filing cabinet, and the information I provide will be anonymised for use in the study.

5. I agree to take part in the above study.

Name of Participant

Date

Signature

(PLEASE PRINT)

Name of Researcher

Date

Signature

(PLEASE PRINT)

Appendix G:
Demographics questionnaire



NHS
WALES
GIG
CYMRU

School of Psychology
Ysgol Seicoleg

South Wales Doctoral Programme in Clinical Psychology
De Cymru Rhaglen Doethuriaeth mewn Seicoleg Glinigol



Cardiff University
Tower Building
Park Place
Cardiff CF10 3AT
Wales UK
www.cardiff.ac.uk/psych
Prifysgol Caerdydd
Adellad y Tŷr
Plas y Parc
Caerdydd CF10 3AT
Cymru Y Deyrnas Unedig

Demographics questionnaire

Please complete the following information. All information will be kept strictly confidential and will not be identifiable. If you wish to decline giving any of the below information, please indicate this with a – next to the item.

Participant ID:

Age:

Gender:

Ethnicity:

Professional background/formal qualifications:

Previous experience of using CBT professionally:

Previous experience of delivering psychotherapy:

Previous training in CBT:

Appendix H:
Participant debrief sheet



NHS
WALES
GIG
CYMRU

School of Psychology
Ysgol Seicoleg

South Wales Doctoral Programme in Clinical Psychology
De Cymru Rhaglen Doethuriaeth mewn Seicoleg Glinigol



Cardiff University
Tower Building
Park Place
Cardiff CF10 3AT
Wales UK
www.cardiff.ac.uk/psych
Prifysgol Caerdydd
Adellad y Tŷr
Plas y Parc
Caerdydd CF10 3AT
Cymru Y Deyrnas Unedig

PARTICIPANT DEBRIEF

Study: A repertory grid analysis of the impact of cognitive behavioural therapy training on the personal and professional development of post-graduate certificate students.

Thank you for taking part in this research. Your participation in this research may improve our understanding of how CBT training impacts on the personal and professional development of trainees. This could have implications on the way future CBT or psychological therapy training is delivered at Cardiff University and other training providers.

The results of the study will be written up and submitted to Cardiff University to fulfil the requirements for a Doctorate in Clinical Psychology. A report may also be sent to a peer-reviewed journal for publication and disseminated at professional conferences. You will not be identified in any report or publication that follows this study.

If you would like any further information or have any queries please contact:

Researcher: Kathryn Rayson (Trainee Clinical Psychologist/Post graduate student)

Email: raysonk@cardiff.ac.uk

Clinical research supervisor: Dr Louise Waddington (Clinical Psychologist)

Email: WaddingtonL1@cardiff.ac.uk

Academic research supervisor: Dr Dougal Hare (Clinical Psychologist)

Email: hared@cardiff.ac.uk

Appendix I:

Classification System for Personal Constructs (Feixas et al., 2002)

Construct Category	Description	Examples
Moral	This area concerns an assessment made by the subject with respect to the moral value of the person or element described. This assessment assumes a judgment regarding the person's kindness, generosity, fairness, or other characteristics of this type.	Good-Bad Humble-Proud Respectful-Judgemental
Emotional	This area concerns an element of differentiation with respect to the degree of emotionality or sexuality of the person described, to his/her emotional attitude towards life—optimistic—with regards to certain specific feelings.	Warm-Cold Optimist-Pessimist Balanced-Unbalanced
Relational	This area concerns all those aspects that describe types of relationship with others. Although, in the final analysis, all constructs influence relationships, this area concentrates primarily on those aspects limited to the scope of relationships.	Extroverted-Introverted Direct-Devious Conformist-Rebel
Personal	This area refers to a variety of characteristics traditionally pertaining to the area of personality, character, or way of being. It excludes those traits typically thought of as moral, relational, or emotional, since these have been included in previous areas.	Strong-Weak Active-Passive Flexible-Rigid
Intellectual/ Operational	This area refers to a variety of skills, abilities, and knowledge both at the intellectual and operational levels.	Capable-Incapable Cultured-Uncultured Creative-Not creative
Values and interests	As its name indicates, the constructs included in this area refer to ideological, religious, or distinct values as well as diverse interest—music, culture, sports, etc.	Conservative-Liberal Athletic-Bookish Idealist-Materialist
Existential	This area concerns an assessment of central existential projects or appraisals, often of the respondent's own core sense of self or life, bearing on issues of purpose, meaning, or ultimate direction.	Purposeful-Purposeless Self-actualising-Neurotic Living fully-Just existing
Concrete descriptors	As its name indicates, the constructs included in this area refer to concrete, as opposed to abstract, features or positions of people, as well as their actions. No clear implication about their dispositional qualities is given.	Attractive-Ugly Professor-Student Rich-Poor

Appendix J:
Ethical approval

Ethics Feedback - EC.17.05.09.4899

psychethics

Reply all

Tue 06/06/2017, 12:09

Kathryn Rayson;
Ethics

Action Items

Dear Kathryn,

The Ethics Committee has considered your PG project proposal: A repertory grid analysis of the impact of cognitive behavioural therapy training on the personal and professional development of post-graduate certificate students (EC.17.05.09.4899).

The project has been approved.

Please note that if any changes are made to the above project then you must notify the Ethics Committee.

Best wishes,
Mark