



**Skill Development in Cognitive Behavioural Therapy: A Review of Self-Practice/Self-Reflection and
a Comparative Analysis of Therapy Session Reflections**

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Overall Abstract

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This research area this work addresses is skill development in cognitive behavioural therapy (CBT). Understanding how knowledge and skills develop and accurate measurement of these allows specific targeting of learning needs in trainees and experienced therapists (Davis et al., 2015; Muse & McManus, 2013).

The literature review addresses a training method, self-practice/self-reflection (SP/SR), which is purported to enhance CBT skill development (Thwaites et al., 2014). SP/SR was first conceptualised approximately 25 years ago. Gradual development of the evidence base has led proponents to call for research which moves from addressing *whether* it works to enhance CBT skills, to *how* it works to enhance CBT skills (Thwaites, Bennett-Levy & Haarhoff, 2015). As such, this work asked what has been learned since the last review in 2015 about how SP/SR impacts the development of conceptual knowledge and technical skills in CBT. Ten studies were systematically reviewed, critically appraised and synthesised using thematic synthesis. Four themes were constructed which may be suggestive of potential learning processes, such as SP/SR supporting the development of a personal experiential understanding of CBT and facilitating meta-competence. It was acknowledged that a major limitation to this evidence base which prevented the research question in this review being answered fully is the complexity of measuring skill development (Bennett-Levy, 2019). This has led to the lack of a reliable measure of meta-competences, particularly reflective skill.

The empirical paper forms part of broader programmatic research aiming to develop a reliable measure of meta-competences which may address the lack of such a measure noted in the literature review. Research on meta-competences in CBT is in its early stages. The empirical paper reports an exploratory study analysing differences between trainee and qualified CBT therapists in reflective functioning by examining their reflections about a recent therapy session. This primary aim

of this work was to replicate Campbell et al. (2024) that experienced CBT therapists make more reflective statements than trainees. That study addressed practitioner reflections on hypothetical clinical scenarios, whilst this project examined practitioners' reflections on a session with a current client. Forty-one trainees and qualified CBT therapists were interviewed using a newly developed measure delivered in a semi-structured interview format. Therapists' reflections were coded using a schema that classified therapist statements into nine types based on two dimensions at three levels: knowledge type (declarative, procedural, reflective) and interpersonal focus (client, therapist, dyad). Qualified therapists made more statements overall, but this may be related to using more words during the semi-structured interview. No significant between-group differences were observed in the knowledge type or interpersonal focus of statements. Although there were no between-group differences with respect to knowledge type and interpersonal focus, these factors interacted significantly. The measure may be a useful formative tool to support therapists' reflections about their sessions. Further replication is advised.

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**The Impact of Self-Practice/Self-Reflection on Conceptual Knowledge and Technical Skills in
Cognitive Behavioural Therapy: A Thematic Synthesis of Studies from 2015-2025**

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Abstract

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Objectives: Proponents of self-practice/self-reflection (SP/SR) have been calling for research to move from examining whether this training tool impacts skills to exposing how it impacts skills (Thwaites, Bennett-Levy & Haarhoff, 2015). This review aims at considering the evidence published in the past ten years to explore the processes by which SP/SR impacts conceptual knowledge and technical skills in cognitive behavioural therapy (CBT) practitioners.

Methods: A systematic review was completed using the PRISMA framework (Moher et al., 2009). Thematic synthesis was utilised to interpret first and second-order constructs in the context of a paucity of process data reporting in included studies.

Results: Ten studies were identified that examined conceptual and technical skill gains related to SP/SR participation. Most studies utilised trainee samples. Four learning process related themes were constructed with reference to the heterogeneity and homogeneity of the identified studies: a qualitatively deeper understanding; credibility of CBT related to personal experience of the model; development of meta-competences; and the role of reflection.

Conclusions: A set of interpretative themes were constructed that may represent potential areas to be explored in future SP/SR research. Recommendations were made regarding the continued move towards process-based SP/SR studies, and the development of a pragmatic measure of reflective skill for use in future studies. SP/SR appears to remain a valuable tool for inclusion in CBT training programs.

The Impact of Self-Practice/Self-Reflection on Conceptual Knowledge and Technical Skills in Cognitive Behavioural Therapy: A Thematic Synthesis of Studies from 2015-2025

What is Self-Practice/Self-Reflection?

Self-practice/self-reflection (SP/SR) was developed by its proponents as a training tool for cognitive behavioural therapists (Bennett-Levy et al., 2009). Over time, these proponents had come to understand that SP/SR supports therapists' personal and professional development (Thwaites et al., 2014). SP/SR requires participants to practice cognitive behavioural therapy (CBT) techniques on themselves and then reflect on their experiences, considering the implications for future clinical practice (Freeston et al., 2019). It is typically delivered in a group-based, co-therapy or self-guided format (Bennett-Levy, Thwaites, et al., 2015). Proponents suggest that the degree of learning gained from self-practice is highly dependent on engagement with and the quality of self-reflection on the self-practice (Bennett-Levy & Finlay-Jones, 2018). As such, SP/SR is a formalised program which promotes structured written self-reflective work alongside systematic self-practice of CBT techniques and interventions (Bennett-Levy, Thwaites, et al., 2015).

The Theoretical Underpinnings of SP/SR

Across the SP/SR evidence base, two dominant models are used to explain how it might impact the acquisition and development of therapists' skills. The first is the declarative-procedural-reflective (DPR) model (Bennett-Levy, 2006; Figure A1). This cognitive model posits that therapist skills develop via the interaction of three interconnected systems in the context of the personal and therapist selves (Bennett-Levy, 2006). The first is the declarative system, which comprises intellectual model-specific and interpersonal knowledge. The second is the procedural system, a depository of procedural knowledge and skills, self-schema and therapist-as-self schema, attitudes and behaviours (Bennett-Levy et al., 2009). The third is the reflective system, whose role is to reconstruct and analyse an experience, compare it with previous experience and/or pre-existing knowledge, and help refine knowledge and skill. For this reason, it holds no information in and of itself, but information

from the declarative and procedural systems acts as both inputs and outputs of the reflective system (Bennett-Levy, 2006). The DPR model also defines three types of therapist knowledge or skills: conceptual, technical and interpersonal. These three types of knowledge and skills are represented in both the declarative and procedural systems (Bennett-Levy et al., 2009). As understanding of the impacts of SP/SR on therapist development has grown over time, Bennett-Levy and Finlay-Jones (2018) have since extended the DPR model by constructing the personal practice model (Figure A2). The personal practice model conceptualises how SP/SR and other personal practices (meditation and personal therapy) may uniquely contribute to therapist skill development. A key update in the personal practice model is that it differentiates between self-reflection on the personal self and the therapist self. The model posits that explicit self-questioning allows the bridging of the personal self and therapist self, supporting therapists to transform personal experience into therapist skill (Bennett-Levy & Finlay-Jones, 2018). The authors suggest that higher levels of reflective skill will enhance conceptual and technical learning.

One interpretation of these models and their accompanying literature (Bennett-Levy, 2006; Bennett-Levy et al., 2009; Bennett-Levy & Finlay-Jones, 2018) may be that that multiple interacting processes are involved in learning and development from SP/SR. The DPR model offers the conceptualisation of bi-directional relationships or processes between the reflective system and different aspects of the personal and therapist self. Drawing on Bennett-Levy et al.'s (2009) metaphor of the reflective system as the learning engine to support interpretation, it may be that self-practice's cognitive and emotional outputs are the fuel. Repeated self-questioning may be the engine igniting that fuel, providing the necessary force which enables therapists to shuttle between these bi-directional relationships or processes as they generate output, i.e. learning. These movements may not be linear or uniform. Rather, following the initial reflection on personal experience, therapists may engage with different areas of the model in varying sequences and frequencies. This reflects the possibility that multiple processes may be involved in learning from SP/SR, depending on individual context and experience.

Evidence for the Impact of SP/SR on Therapist Skill Development

Since the development of SP/SR, work has been underway to explore its efficacy. Reviews and studies have suggested that SP/SR improves conceptual and technical skills (Bennett-Levy et al., 2001; Chaddock et al., 2014; Gale & Schröder, 2014), reflective skills (Bennett-Levy et al., 2003), self-awareness (Presley & Jones, 2024), cultural competence (Chowdhury et al., 2025) and therapeutic empathy (Davis et al., 2015). Furthermore, whilst it was traditionally viewed as a training tool for novices, it has also been suggested to support skill development in more experienced practitioners (Davis et al., 2015). There is also growing evidence for SP/SR supporting skill development in other therapeutic modalities, such as compassion-focused therapy (Bell et al., 2022). However, a small number of individuals have reported little benefit or adverse effects from SP/SR (Bennett-Levy & Lee, 2014). Competing therapist demands in busy psychotherapy services can also be a barrier to engagement, thus limiting or negating therapist benefits (Bennett-Levy & Lee, 2014).

While there is growing evidence for SP/SR, there are challenges and limitations in this body of work. Challenges are akin to those in the wider therapist competence literature (e.g., Muse et al., 2022). Ideally, it could be established whether the effects of SP/SR on therapist competence in turn positively impact patient outcomes. However, competence measurement is complex due to the multiple factors influencing it (Muse & McManus, 2013). Attempts to link therapist competence to patient outcomes in CBT have also yielded inconsistent results across studies (Branson et al., 2015). From a purely SP/SR perspective, many studies examine skill development in trainees, and it can be challenging to discriminate between changes in skills due to SP/SR and other aspects of their training, limiting the development of knowledge on the unique impacts of SP/SR. Studies have also tended to be smaller and completed on convenience samples with limited resources (Thwaites, Bennett-Levy & Haarhoff, 2015). The burdens of the COVID-19 pandemic and the necessity at that time to focus CBT research on managing its impacts have also likely affected the ongoing growth of the SP/SR evidence base. Nevertheless, SP/SR has gradually become recognised by the wider CBT

community for its merits, reflected in the publication of implementation guidelines for training providers (Freeston et al., 2019).

Rationale for the Current Review

Whilst the evidence base for SP/SR has its challenges and limitations, it has been recognised by clinical experts as an important tool for therapist skill development (Thwaites, Bennett-Levy & Haarhoff, 2015). As such, reviews and expert commentary on the subject suggest that we should no longer limit our enquiries to whether SP/SR is effective, but ask: if it is effective, how and for whom? (Bennett-Levy, 2019; McGilvray et al., 2015; Thwaites, Bennett-Levy & Haarhoff, 2015). This review aims to explore the developments in the evidence base since 2015 concerning how SP/SR impacts conceptual knowledge and technical skills, as one of SP/SR's primary aims is skill development (Bennett-Levy et al., 2001). Pre-2015 evidence is well-documented in systematic reviews (Gale & Schröder, 2014; McGilvray et al., 2015). McGilvray et al. (2015) conducted a qualitative meta-synthesis which suggested links between SP/SR and a range of CBT skills, such as increased understanding of therapeutic models and refined when-then skills. Their work questioned whether SP/SR impacts therapists' conceptual knowledge and technical skills and their interpretation of the evidence was that despite methodological limitations, it does. As such, the current review aims to take the next step and capture the available evidence published since 2015. It seeks to discuss how, not whether, SP/SR impacts conceptual knowledge and technical skills, as recommended by SP/SR experts (Bennett-Levy, 2019; Thwaites, Bennett-Levy & Haarhoff, 2015). Changes in the framing of research questions concerning SP/SR from outcome-based to process-based and the growth of the evidence base over the past ten years warrant a further review of the evidence.

Furthermore, the personal practice model (Bennett-Levy & Finlay-Jones, 2018) suggests that higher levels of reflective skill will enhance conceptual and technical learning – an idea explored in this review. In addition, drawing upon the DPR model (Bennett-Levy, 2006) and the personal practice model (Bennett-Levy & Finlay-Jones, 2018), this work further proposes the idea that reflective

bridging represents self-questioning on personal experience supporting the therapist to shuttle between the multiple bi-directional processes between the different aspects of the personal and therapist selves and the reflective system, which generates conceptual and technical learning. This may differ from therapist to therapist, dependent on their individual experiences and contexts.

Ongoing research into the unique impacts of different CBT training methods is pertinent and timely. The UK government have increased the provision of CBT training places (Department of Health and Social Care, 2021). Knowing how different training methods, such as SP/SR, may impact different skill areas could increase the efficiency of CBT training provision (Collard, 2024). SP/SR can also act as a cost-effective method of supporting lifelong learning and development in qualified CBT therapists and help decrease the potential for complacency and drift (Thwaites et al., 2014).

Review Aim

The current review aims to explore research evidence published since 2015. It aims to adopt a constructivist lens to explore the specific learning processes initiated or supported by SP/SR by which it impacts conceptual knowledge and technical skills in CBT, recognising that these processes may be influenced by individual experiences and contextual factors.

Primary Objectives

- Identify available published evidence from 2015-2025 which relates to the development of conceptual knowledge and technical skills via engagement with SP/SR
- To construct an interpretive understanding of how reflective processes may support conceptual and technical learning in SP/SR using primary and secondary data, building on the theoretical propositions of Bennett-Levy and Finlay-Jones (2018).
- To explore whether the proposition that multiple relationships or processes may be involved in learning through SP/SR is reflected in the primary and secondary data

Methods

Search Strategy

The following databases were searched on 10th-12th February 2025: PsycINFO, MEDLINE, Embase, ProQuest, Scopus, CINAHL and Web of Science. Searches were conducted via keyword search. Self-practice and self-reflection were the search terms. This strategy was deliberately broad and did not specify the type of paper, study design or outcomes, or therapeutic model. Casting a wide net was deemed necessary as the evidence base, whilst growing, is relatively small, increasing the importance of each additional study. In addition, forward snowball searches were also undertaken as hybrid searches are considered superior to database searching alone in identifying relevant studies (Wohlin et al., 2022). Appendix B contains the list of studies utilised for the forward snowball searches.

Screening Method

Double screening would have been preferable, but it was not feasible as this review was completed as part of a postgraduate taught program thesis. As such, the candidate completed the initial title, abstract, and full-text screens. Where the candidate was unsure about the inclusion or exclusion of a study, it was discussed and agreed with the supervisor, StB, an experienced CBT researcher and trainer.

Eligibility Criteria

The following eligibility criteria were derived with several considerations in mind. Original research published in peer-reviewed journals provided a minimum benchmark from which scientific quality could be inferred. The ten-year review period was from January 2015 to January 2025. It was also decided that the review would focus on studies based on traditional CBT (excluding third-wave approaches), as conceptual knowledge and technical skills are essentially model-specific and acquired during training in that model (Bennett-Levy, 2006). Furthermore, Thwaites, Bennett-Levy

and Haarhoff (2015) postulate that to develop SP/SR research, we must clearly define and examine SP/SR programs. As such, this review limited studies to those in which participants engaged in self-experiential programs which involved structured written reflection on the experience.

Criteria for Inclusion

- Primary research study, published or advanced published online by a peer-reviewed journal
- Published January 2015 - January 2025
- English language article
- Cognitive behavioural therapy or cognitive therapy
- A study examining the impact of SP/SR with outcomes that can be classified as conceptual and/or technical knowledge and/or skills according to the DPR model (Bennett-Levy, 2006).

Criteria for Exclusion

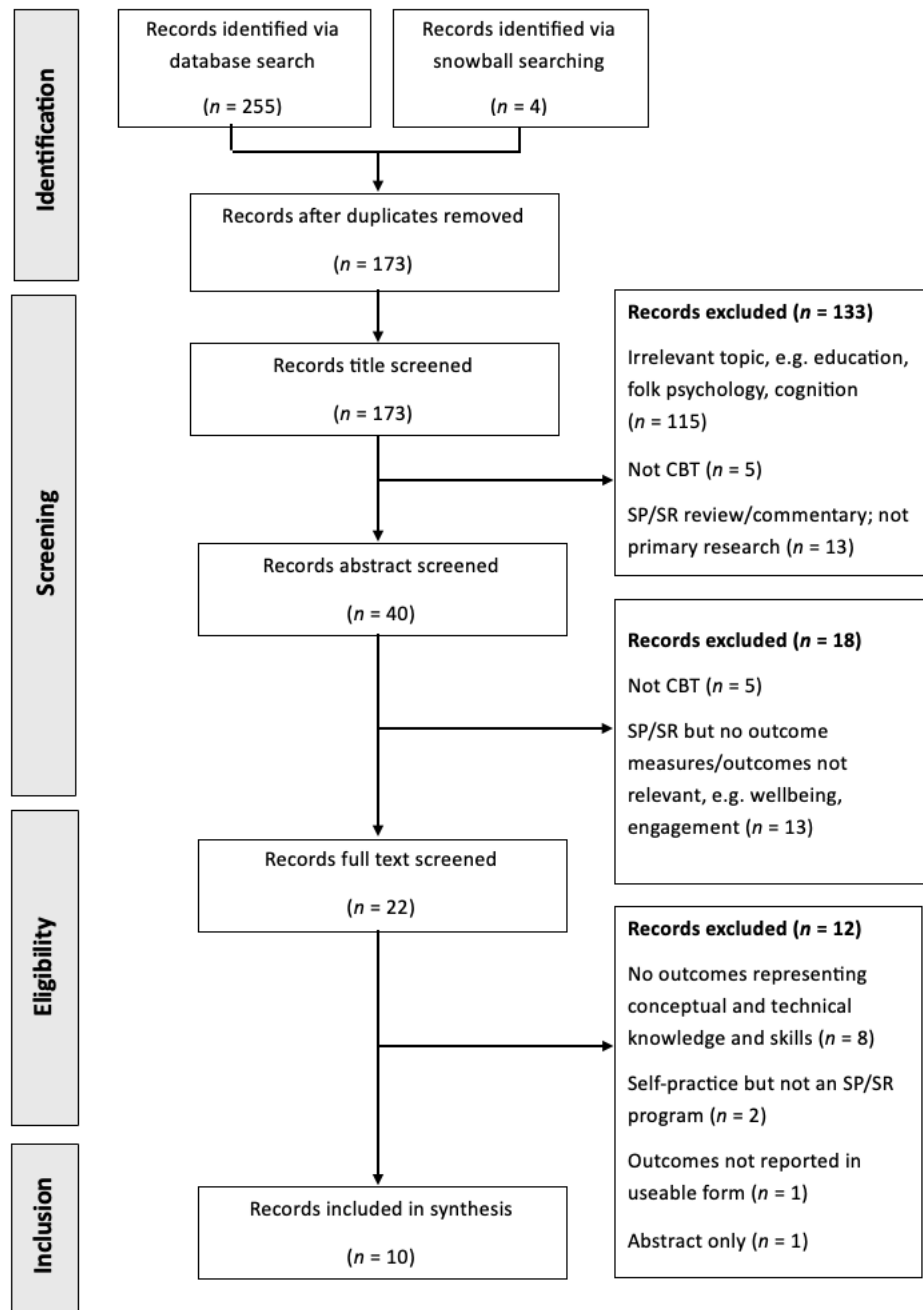
- Studies exploring the impact of SP/SR on therapist skills in third-wave approaches, e.g. compassion-focused therapy
- Studies exploring the impact of self-experiential work on therapist skill development in CBT where the self-experiential work is not explicitly stated to be SP/SR and/or does not meet the definition of SP/SR given by proponents (Thwaites, Bennett-Levy & Haarhoff, 2015).

Search Outcome

The systematic review followed the PRISMA guidance (Figure 1; Moher et al., 2009). Searches of the seven databases and the forward snowball searches returned 259 results. Following the removal of 86 duplicate records, 173 records were title screened. The screening process removed 151 records (Figure 1), leaving 22 for a full-text eligibility check (see Appendix C for the list of studies that underwent eligibility check). Exclusion at this stage was for various reasons, the most common being that the study did not report outcomes representing conceptual and technical knowledge or skill (n=8). Ten studies remained for review.

Figure 1.

PRISMA Flowchart of Study Selection (Moher et al., 2009).



Critical Appraisal

This review was exploratory rather than confirmatory. Thus, capturing available evidence took precedence over demanding a high methodological quality for the included studies. As such, all studies which met the eligibility criteria were included in the review. Critical appraisal of included

studies was undertaken to contextualise the results of this work and indicate the current state of the available evidence. Due to the heterogeneous nature of the included study designs, the Quality Assessment with Diverse Studies tool was utilised (QuADS; Harrison *et al.*, 2021). The predecessor to this tool has been utilised in similar reviews in this area, e.g. Jenkins *et al.* (2018). The QuADS facilitates the assessment of methodological and reporting quality in mixed and multi-method healthcare research studies (Harrison *et al.*, 2021). The tool demonstrates substantial inter-rater reliability ($k=.66$) face and content validity (Harrison *et al.*, 2021). Appendix D reports the QuADS rating criteria (Figures D1a-D1d) and the application of these criteria to the ten reviewed studies (Figure D2).

Data Extraction

The data extracted for this review included contextual information about the SP/SR method, setting, participants, sample size, therapist training level, study aim, and design, as well as evidence interpreted as relevant to understanding learning mechanisms, conceptual knowledge and technical skill, and reflection or reflective capacity. This included first-order constructs (participants' quotes) and second-order constructs (study authors' interpretations of learning processes experienced by participants). Additional contextual data were also extracted, such as quantitative findings and descriptions of how SP/SR interventions were implemented to support the construction of third-order interpretations. The rationale for the methodological decision to extract data from outcome studies and use quantitative findings to construct interpretations was to enhance, rather than reduce, the richness of understanding — particularly as outcome studies may offer study authors' interpretations or reflections alongside quantitative data. Quantitative findings were not privileged or treated as less important than participant accounts, study author interpretations or other contextual data. Rather, they were seen as an additional layer of knowledge from which to construct meaning.

Initial extraction indicated limited availability of process-based data in published articles. As such, study authors were contacted to request further process-based data (participant quotes, author interpretations and information about how SP/SR interventions were implemented) which may not have been published. Where correspondence was received, it was included in the synthesis to support interpretation¹.

Data Synthesis

Rationale for Thematic Synthesis

A thematic synthesis was undertaken according to established guidance (Thomas & Harden, 2008). The primary rationale was that although the included studies referenced or speculated on the learning processes involved in SP/SR, none explicitly addressed these processes. As such, a textual approach to synthesis was adopted to capture information that may elucidate how SP/SR is understood to support the development of conceptual knowledge and technical skills in the methods, results and discussion sections of included studies. In addition, similar textual approaches to synthesis have also been utilised in prior reviews (e.g. McGilvray et al., 2015), allowing themes and patterns across reviews to be compared.

Process of Thematic Synthesis

Following Thomas and Harden's (2008) guidance, immersion in the data occurred first. This involved several readings of the included studies prior to any code generation. Then, line-by-line generation of initial codes occurred. All data extracted was compiled in a single file to support a

Personal communication from two authors, R. Thwaites (personal communication, April 1st, 2025) and K. Yap (personal communication, April 8th, 2025) representing three studies reported no further information. J. Collard (personal correspondence, April 8th, 2025) responded in relation to two studies. Attempts to contact the remaining authors were unsuccessful.

recursive process of moving between immersion, code generation and theme development. Descriptive themes were used initially to group data. Themes were refined three times in the development of higher-order themes which offered interpretation of the data. This process moved beyond description of the data to creating explanations of what processes or process-factors may be involved in conceptual and technical learning from SP/SR.

As a trainee clinical psychologist with an interest in cognitive therapy, I approached the synthesis with an awareness of my own theoretical orientation and assumptions. I have an interest in cognitive behavioural therapy and have engaged in self-practice previously. I recognised that these perspectives might influence how I interpreted data during synthesis. As such, the process of synthesis was discussed in supervision to enhance reflexivity. Final higher-order themes were also discussed in supervision. This discussion focused on the face validity of the themes, both from a clinical perspective and in relation to the underlying data. One sub-theme was refined and reworded because of this discussion.

Results

Description of Studies

The final review included ten studies (Table 1). Seven were conducted in the UK and Ireland, and the rest in Australia. Four studies were quantitative or mixed methods pre-post studies examining the outcomes of SP/SR in trainees ($n=2$), experienced CBT therapists ($n=1$) and experienced psychological wellbeing practitioners ($n=1$). Two further records were pre-post studies conducted without a baseline. These studies examined the utility of SP/SR activity in assessing competence in trainees. Three additional studies examined participants' experiences of SP/SR using primarily qualitative methods. The remaining study was a personal case study of applying SP/SR and autoethnographic reflective writing. Quality was assessed across studies (See Appendix D for the quality appraisal). The average quality of the included studies on the QuADS tool was 29/36 ($range=26-32$; Harrison et al., 2021).

Table 1*Description of Studies*

Study	Aim	Sample	Design	Method/Analysis	Impact of SP/SR on conceptual knowledge and technical skills
Davis et al. (2015) UK	Explore whether completing a 10-week SP/SR program results in a measurable change in self-perceived therapeutic skill	7 experienced CBT therapists ($m=8$, range = 4-16 years post-qualification experience)	Quantitative	Analysis of self-ratings of the impact of SP/SR on technical and empathic skill using the cognitive therapy self-monitoring scale (CTSMS) and the cognitive therapy empathy scale (Thwaites et al., 2003a, 2003b)	Statistically significant increases on the CTSMS (scale 0-100) in scores for cognitive therapy skills (agenda-setting, eliciting appropriate emotional expression and cognitions and behaviours, guided discovery, conceptual integration, change methods and homework setting) from pre-SP/SR to post-SP/SR (m difference=+10.03, $sd=8.90$ -11.10)
Thwaites, Cairns, et al. (2015) UK	Evaluate the self-rated impact of a 12-module SP/SR program on personal and therapist beliefs and CBT skill	7 experienced PWPs ($m=2.57$ years post-qualification experience)	Mixed methods	Analysis of self-rated measures of engagement, personal and therapy-related beliefs, goal-attainment and perceived skill ratings in relation to the average patient and the most challenging patient on the CTSMS. Narrative commentary on participants' self-reflections was also presented.	An increased score for one participant on eliciting key cognitions on the CTSMS for the average patient increased from 60-80 over the 22-week SP/SR program. An increased score for another participant on self-perceived agenda-setting skill from 5 to 6 (0-7 scale) from pre-post SP/SR. Themes from participant self-reflections included increased flexibility and problem-solving ability with their most challenging clients and a deeper understanding of change methods such as behavioural experiments.
Spendelow & Butler (2016) Australia	Explore the positive and negative outcomes of engagement with an SP/SR program	31 postgraduate clinical psychology trainees. 40% had 1-3 years of previous CBT experience, the rest <1 year.	Mixed methods	Thematic analysis of written reflections on the experience of SP/SR. Limited quantitative analysis on self-ratings of therapist skill development	Trainees rated the benefits of SP/SR on a 0-11 scale (strongly disagree-strongly agree). Trainees in the <1 year pre-training CBT experience group and the 1-3 year pre-training CBT experience group agreed that SP/SR increased their ability to flexibly apply CBT techniques ($m=6.29$, $sd=2.45$). Only the <1 year pre-training CBT experience group agreed that SP/SR increased their ability to convey CBT concepts ($m=6.72$, $sd=2.32$) and CBT-specific skills ($m=5.83$, $sd=2.07$). The thematic analysis noted increased socialisation to the CBT model and improved problem-solving abilities in therapy. Confounds included concurrent CBT training.
Chigwedere et al. (2018) Ireland	Explore the utility of SP/SR as an alternative to personal training-therapy	16 foundation and postgraduate-level CBT trainees and 3 CBT clinical supervisors.	Qualitative	Thematic analysis of six journaled reflections on self-practice exercises	SP/SR impacted knowledge of CBT concepts and how to use them. Changes also represented an increased experience-based understanding of CBT principles and a deep socialisation to CBT. Novices noted broader impacts, including declarative gains, whilst experts described more procedural impacts. Confounds included concurrent CBT training for trainees.

Study	Aim	Sample	Design	Method/Analysis	Impact of SP/SR on conceptual knowledge and technical skills
Chigwedere (2019) Ireland	Explore how the use of autoethnography can help CBT therapists write up their SP/SR experiences	1 experienced CBT therapist	Qualitative	Analysis of reflections informed by thematic analysis and CBT theory.	Deepened understanding of CBT models of worry, including the impact of developmental experiences on current worry.
Collard & Clarke (2020) UK	Review the use of SP/SR in facilitating competency-based assessment using a shame attack exercise	41 postgraduate clinical psychology trainees	Mixed methods	Thematic analysis of participants' written reflections, with basic quantitative analysis (frequencies) of key themes	Assessors noted that reflections on self-formulations indicated all trainees gained learning around maintenance cycles in social anxiety and a more nuanced understanding of challenges and limitations when implementing behavioural experiments. Confounds included concurrent CBT training.
Chigwedere et al. (2021) Ireland	Explore the self-rated impact of SP/SR versus personal therapy on therapist practice	43 CBT trainees and 31 counselling trainees	Quantitative	Analysis of self-ratings of the impact of SP/SR or personal therapy on the personal and therapist self via the SFPQ (Chigwedere et al., 2017).	Statistically significant increases on the SFPQ therapist-self subscale (scale 0-27) pre-post SP/SR $t=-4.89$, $p<.001$. Participants rated their technical skill in CBT and their internalisation of the CBT model as an impact of SP/SR. Confounds included concurrent CBT training.
Scott et al. (2021) Australia	Explore the impact of SP/SR versus control group on wellbeing, self-awareness, confidence and CBT knowledge	30 postgraduate psychology trainees	Quantitative	Analysis of self-ratings of personal wellbeing, self-awareness and of CBT skill on the CBT knowledge questionnaire (Bennett-Levy et al., 2012)	Significant increases in confidence in applying CBT techniques for SP/SR groups versus the control book study group. No impact was noted on CBT knowledge or utilisation. Confounds included concurrent CBT training.
Collard & Clarke (2022) UK	Review the use of SP/SR in facilitating competency-based assessment using a low frustration tolerance exercise	41 postgraduate clinical psychology trainees	Mixed methods	Thematic analysis of participant reflections, with basic quantitative analysis (frequencies) of key themes	Assessors noted trainees demonstrated a deepened understanding of CBT maintenance cycles and the factors influencing the implementation of change techniques in CBT. Confounds included concurrent CBT training.
Jona, Sheen & O'Shea (2022) Australia	Evaluate the benefits and challenges of engaging in an online CBT training group based on SP/SR principles	11 postgraduate clinical psychology trainees	Qualitative	Thematic analysis of interviews with trainees on their experiences of the SP/SR group	Trainees noted a deeper understanding of CBT, including the process of change, planning interventions, and potential therapy barriers. Trainees also developed skills in delivering CBT online. Confounds included concurrent CBT training.

Note. *PWP – psychological wellbeing practitioner. All other trainee/qualified practitioners used traditional CBT. CTSMS - cognitive therapy self-monitoring scale (Thwaites et al., 2003a). SFPQ - self-focused practice questionnaire (Chigwedere et al., 2017).

Main Synthesis

Four themes were constructed relating to the relationships or processes through which SP/SR may influence the development of conceptual knowledge and technical skills (see Table 2). These themes represent one interpretation of the data. Each theme is presented and discussed with reference to the supporting evidence and its limitations.

Table 2.

Themes Derived from the Thematic Synthesis of the Ten Reviewed Studies

Themes	Sub-themes	Description	Example extract
A qualitatively deeper understanding	- Personal experiential understanding - Internalisation of the model	Studies referred to changes in the qualitative depth of participants' understanding of CBT concepts and techniques because of SP/SR	"[participants gained] <i>an experience-based understanding of the approach...and a deep socialisation to it</i> " (Chigwedere et al., 2018, p.79)
Credibility	- Person-first, therapist-second² - Confidence in the techniques	Credibility of CBT concepts and techniques for participants following SP/SR	Following SP/SR using models of worry: " <i>The IoU model of worry...held personal credibility for me</i> " (Chigwedere, 2019, p.9)
Meta-competences	- Attention to processes - Flexibility - Adaptability	SP/SR supports the development of CBT meta-competences	"[participants' reflections indicate] <i>fine-tuning and increased artistry... with greater attention to the process of change</i> " (Thwaites et al., 2015, p. 318)
The role of reflection		Studies referred to the role of reflection in conceptual and technical learning from SP/SR	"<i>Little evidence was found for the reflexive system in action...</i>" (Spendelow & Butler, p. 608) Chigwedere et al. (2018, p. 433) wrote about more significant gains from SP/SR than personal therapy: "<i>The process of reflection after SP/SR is thorough and formalised... In the personal therapy group, there was no such formalised process of reflection.</i>"

² Reflective discussion with the supervisor led to the renaming of this sub-theme from 'personal experience of the power of CBT' to 'person-first, therapist-second'.

Theme 1: Qualitative Depth of Understanding of CBT Concepts and Techniques

Several qualitative and mixed-methods studies ($n=6$) referred to changes in the qualitative depth of conceptual and technical understanding due to SP/SR. Interpretation of this change in understanding suggests participants may have been developing a personal experiential understanding of CBT concepts and techniques.

The theme of a qualitatively deeper understanding seems particularly salient for trainees. Most studies (70%) used trainee samples. Trainees in two studies noted their experience of SP/SR deepening their declarative and procedural knowledge from traditional didactic training methods (Jona, Sheen & O'Shea, 2022; Spendelow & Butler, 2016). Two further studies (Collard & Clarke, 2020, 2022) examined the utility of SP/SR activity as a tool for assessing competence in trainee clinical psychologists. As part of a course requirement, trainees engaged in behavioural experiments about shame and frustration tolerance. In their review of reflective journals from the shame-based behavioural experiment, Collard and Clarke (2020) noted that all participants described observing their own thought-feeling-behaviour patterns, suggesting that participants gained an experiential understanding of the cognitive cycle in action. Reports from Jona, Sheen and O'Shea (2022) concur, noting that trainees in their study identified that self-practice using weekly activity schedules and thought diaries provided a deeper understanding of CBT concepts and implementation. Moreover, Chigwedere et al. (2018) conceptualised the deepening of trainees' understanding as their *internalisation of the model*. The authors suggest this represents their participants developing an emotional and embodied experience of cognitive models and techniques via SP/SR.

While these studies converge on a potential mechanism whereby SP/SR influences the qualitative depth of understanding of CBT concepts and techniques by enabling therapists to access CBT from their personal selves, synthesis highlights shared contextual factors which may limit interpretations. Four of these studies were completed on trainees who completed SP/SR as part of a formal course requirement during training (Collard & Clarke, 2020, 2022; Chigwedere et al., 2018;

Jona, Sheen & O'Shea, 2022). Whilst common in practice, the combination of reflective journals being linked to summative assessment (Collard & Clarke, 2020, 2022) and the authors being known to trainees (all four studies) may have introduced bias. The authors attempted to mitigate bias by using voluntary post-intervention recruitment (Collard & Clarke, 2020, 2022). Furthermore, these studies were primarily qualitative. No baseline measures of conceptual knowledge and technical skills were taken. As such, it would be inappropriate to draw causal conclusions.

Given calls for more quantitative research on learning from SP/SR (McGilvray et al., 2015), outcomes from a quantitative study with a purpose-developed measure could also be interpreted as providing additional support for this theme. Chigwedere et al. (2021) utilised the self-focused practice questionnaire (Chigwedere, 2017), which includes a construct from previous work - internalisation of the model. A comparison of the impact of SP/SR on CBT trainees and personal therapy on counselling trainees was undertaken. Results suggested that CBT trainees perceived SP/SR as beneficial to their internalisation of the model. They also suggested that their perceived benefit from SP/SR was significantly higher than counselling trainees' from personal therapy. Notably, the SP/SR group self-reported significant gains across all five areas of the personal and therapist selves on the measure. In contrast, the personal therapy group only noted gains in internalisation of the model. One possible interpretation is that the greater internalisation of the model gains for SP/SR participants were related to what the personal practice model (Bennett-Levy & Finlay-Jones, 2018) terms 'reflective bridging', given the explicit reflective process in SP/SR, which may not be present in personal therapy. A further tentative interpretation presented here is that the greater internalisation of the model gains reported by SP/SR participants, in the context of gains in all areas of the personal and therapist selves, could represent participants shunting between the bi-directional processes in the personal and therapist selves, enhancing their learning.

Interestingly, Chigwedere et al. (2021) found no effect of experience level on gains. In contrast, two prior studies (one mixed method and one qualitative) noted differences in outcomes

related to experience level. Spendelow and Butler (2016) reported that trainees with less than one year of prior CBT experience made significant conceptual skill gains from SP/SR; there were no significant differences in conceptual skill for trainees with 1-3 years of previous CBT experience. Comparably, Chigwedere et al. (2018) did not examine the effects of experience level but reported their observations on the differing content of trainees and qualified therapists' reflective journals. They observed that novices reported broader impacts on CBT skills, whereas experienced therapists described more precise procedural gains. These mixed findings for experience level may be understood as related to a range of possible contextual and methodological factors that varied between studies. For example, multiple study design and reporting factors may have influenced the variation in quantitative results. First, the findings are based on Spendelow and Butler (2016) measuring the benefit to participants' ability to convey a CBT framework and Chigwedere et al. (2021) investigating the benefits to participants' internalisation of the model. On reflection, internalisation of the model is a broader construct than conceptual skill and speaks to the qualitative depth of understanding. This nuance may have contributed to variability in findings. Second, both studies addressed trainee CBT therapists. However, only one study reported on pre-training CBT experience levels (Spendelow & Butler, 2016), meaning there's a possibility of significant differences in pre-training CBT experience between trainees in the two studies, which may explain their differing results. Third, it may be that the highly granular 11-point Likert-type scale utilised by Spendelow and Butler (2016) was more sensitive to detecting more subtle differences in benefit, whether meaningful or noise. As it stands, no other included quantitative studies directly compared the learning impacts of SP/SR across experience levels. As most included studies were also based on trainee participants, an understanding of whether SP/SR mechanisms vary by experience level cannot be constructed. It is unclear at this stage whether the learning processes for trainees and experienced therapists differ or whether they are the same processes, but the outputs differ. Further studies on participants with more significant variations in CBT-specific experience are required. Nevertheless, the synthesis of this group of studies suggests that SP/SR may impact conceptual

knowledge and technical skills in CBT by influencing the qualitative depth of participants understanding.

Theme 2: Credibility in CBT Concepts and Techniques

A key theme constructed from the data is increased credibility in CBT concepts and techniques related to experiencing CBT from a personal standpoint. In a personal case study of an experienced CBT therapist and trainer, Chigwedere (2019) reflected that self-practice with CBT models of worry held personal credibility. Their reflections on their self-practice led to them understanding how difficult it was for clients to hold imagined feared scenarios, helped them develop a deeper understanding of the impact of developmental experiences on worry, and increased their enthusiasm for further SP/SR using CBT theories and models. They concluded by likening CBT therapists to chefs who need to taste their recipes to understand and improve them. While generalising the findings from a single case study should be avoided, Chigwedere's (2019) experiences are consistent with reports from other included studies (Chigwedere et al., 2018; Spendelow & Butler, 2016; Thwaites, Cairns, et al., 2015). Experienced psychological wellbeing practitioners in Thwaites and Cairns et al.'s (2015) study described the power of positive data logs and behavioural experiments to change their personal and professional beliefs and behaviour. Their experiences made them feel more motivated to apply these techniques with patients. They also noted motivation to continue their SP/SR journey due to their progress in developing their skills, consistent with Chigwedere's (2019) findings on increased motivation for further SP/SR. These findings, taken together, could be interpreted as SP/SR developing a feedback loop between skill development and motivation.

While Thwaites, Cairns and colleagues (2015) focused on psychological wellbeing practitioners, Chigwedere et al.'s (2018) findings extend to trainee and qualified CBT therapists. Codes from reflective journals gathered and written during their SP/SR program indicated that participants experienced CBT concepts and techniques as powerful, credible, and personally

impactful. The study authors also noted surprise at how candid participants' self-reflections were when discussing knowledge and skill gains from SP/SR (Chigwedere et al., 2018). This may suggest SP/SR facilitates an openness that impacts conceptual and technical learning.

Reflecting on the evidence, SP/SR may increase confidence in and appreciation for CBT concepts and techniques via experiencing the model from a personal standpoint. This contrasts with traditional didactic teaching methods, where concepts and techniques are experienced professionally. When discussion of the face validity of themes was undertaken with the supervisor, they described the candidate's interpretation as "the chef not just tasting their recipe but becoming a patron of the restaurant... having a fully personal experience which deepens credibility" (S. Barton, personal communication, April 11th, 2025). Further reflection suggests that SP/SR may promote conceptual and technical learning by enabling therapists to access CBT through the personal self, fostering a sense of credibility in the model for participants' that emerges from them being emotionally open or vulnerable to the process. However, not everyone has positive experiences with SP/SR. Spendelow & Butler (2016) reported a small number of participants had negative experiences during SP/SR, such as increased anxiety. Chigwedere et al. (2018) also reported that approximately half of their sample experienced challenges and/or negative emotions during SP/SR. How negative experiences during SP/SR impact therapists' sense of the credibility of CBT is currently unclear and warrants further research.

Theme 3: Development of CBT Meta-Competences

The third theme constructed relates to SP/SR facilitating participants' engagement with their CBT meta-competences, i.e., the higher-order skills governing how therapists apply their conceptual knowledge and technical skills (Campbell-Lee et al., 2024). Thwaites, Cairns and colleagues (2015) report observing that participants who engaged in SP/SR demonstrated increased attention to processes in CBT. Similar patterns were reported across studies, with authors noting their participants demonstrated increased awareness and focus on processes in CBT, including the process

of developing their CBT-specific skills (Thwaites, Cairns, et al., 2015), the relational process between them and the patient (Davis et al., 2015; Spendelow & Butler, 2016) and the change process, both within and between sessions (Collard & Clarke, 2020, 2022; Jona, Sheen & O'Shea, 2022). An interpretative synthesis of these findings is that SP/SR enhances therapists' self-monitoring skills, a key element of meta-competence.

Furthermore, SP/SR appears to support the development of an increased understanding of client and therapist barriers in CBT, alongside increased skill in adapting and flexibly implementing conceptual and technical skills. This may be interpreted as developing through personal experience of these barriers. Participants reflective logs in qualitative and mixed-method studies discuss increased awareness of barriers (Collard & Clarke, 2022; Jona, Sheen & O'Shea, 2022; Spendelow & Butler, 2016), enhanced ability to problem-solve in therapy (Spendelow & Butler, 2016), noticing the need to readjust skills (Thwaites, Cairns, et al., 2015), improved ability to adapt techniques (Collard & Clarke, 2022) and flexibility in skill implementation (Spendelow & Butler, 2016). Mapping the skill changes across studies onto the widely used Roth and Piling (2007) CBT competence framework suggests they represent developing meta-competence for study participants.

Whilst the included studies show promise for SP/SR in developing CBT meta-competence, their results must be contextualised in their use of convenience samples, small sample sizes and a paucity of quantitative evidence. Still, interpretation of the evidence supports a tentative positive impact of SP/SR on CBT-specific meta-competences. Reflection on this evidence suggests that engagement with meta-competences may deepen participants' conceptual understanding or contextualisation of their skills. They appear to be developing a process-based understanding of *why* they are delivering techniques and not just *how* to deliver them.

Theme 4: The Role of Reflection in Gaining Conceptual and Technical Learning from SP/SR

The final theme constructed in this review was the role of reflection. Reflection is a generic meta-competence in CBT (Whittington & Grey, 2014). All included studies noted in their

methodology sections that SP/SR participants engaged in written self-reflection of their experiences. Other than the two studies which used a single SP/SR activity to assess trainee competence (Collard & Clarke, 2020, 2022), the rest describe a process of prolonged systematic self-practice followed by structured self-reflection over several weeks or months. Seven of those eight studies described how shared reflection on the process of self-reflection also occurred via shared online message boards, group sessions, or both. The one study that did not was the experienced practitioner case study, which notes the therapist reflected on their written reflections with other colleagues and patients but not in a formalised SP/SR group (Chigwedere, 2019). In addition, earlier in this work, it was discussed how Chigwedere et al. (2021) reported significantly greater gains on their internalisation of the model factor for CBT trainees undergoing SP/SR versus counselling trainees undergoing personal therapy. Whilst acknowledging that there was limited data on counselling trainees' actual personal therapy experiences, the authors proposed that one possible explanation for the difference was that personal therapy does not necessarily include structured written self-reflection or reflection with peers. Considering that (a) structured self-reflection was a component in all studies; and (b) Chigwedere et al.'s (2021) SP/SR participants noted more conceptual and technical gains than personal therapy participants, with formalised reflection being the key difference between the two personal practices, may suggest that structured self-reflection plays a role in enhancing participants' conceptual and technical gains in SP/SR. However, this is a tentative interpretation based on limited studies and further research is warranted.

Interestingly, despite a consensus among all included study authors in their discussions on self-reflection being critical to bridging personal experience and conceptual and technical skill development, some included study results do not support these conclusions. Spendelow and Butler (2016) reported their view that participants' reflective journals showed little evidence of the reflective system in action. Yet, quantitative results suggested that participants noticed benefits to CBT-specific skills, such as conveying a CBT framework and flexibly applying CBT techniques. Similarly, Collard and Clarke (2020, 2022) noted that whilst their trainees developed an experiential

understanding of CBT concepts and techniques, only four participants (<10%) made links regarding how their experiences would impact future clinical work with patients in their reflective log.

However, Collard and Clarke (2020) acknowledge that they provided a general prompt for reflection, which may not have supported the repeated, systematic reflection on professional gains typical of SP/SR programs. Haarhoff and Thwaites (2016) suggest that the reflective system develops with experience. One interpretation of these results may be that as all three of these studies were also completed on trainees in their first semester, their reflective systems were likely less developed, leading to less evidence of the reflective system in action in their logs.

Furthermore, there remains a notable gap in quantitative research into the role of reflection in supporting conceptual and technical learning from SP/SR. None of the included quantitative studies directly measured reflection, despite study authors discussing it throughout their work . Notably, the results of the one cohort control study in this review might not appear, at first glance, to support reflection's role in developing conceptual and technical gains from SP/SR. Scott et al. (2021) reported that they found no significant differences in CBT knowledge between the SP/SR group and the book study group, which did not undertake structured reflection on their book study. However, the scale used to measure CBT knowledge appears to assess whether knowledge is present/not present³ and does not consider the qualitative depth of the knowledge, which is how SP/SR may impact knowledge. Also, there were significant pre-post differences between the SP/SR group and the book study group in CBT confidence, with a large effect size, $F=5.17$, $p=.03$, $\eta^2p=.16$. These results may reflect SP/SR playing a role in changing how trainees in this study related to CBT concepts and techniques. Bandura (1977, 1997) suggests that confidence and skill are interlinked, noting increasing confidence can increase domain-specific mastery. However, no participant accounts or quantitative measures of CBT competence were included in this study. Thus, it remains unclear whether participants' increased confidence in applying CBT concepts and techniques translated to increased

³ A request for copy of this measure in April 2025 was unsuccessful.

competence in their delivery. More process-focused research is required to construct a deeper understanding of the relationships between reflection, skill confidence and skill development.

Methodological Considerations

Methodological Heterogeneity and Homogeneity. Heterogeneity is observed in the methodologies of these studies, with six different approaches used to examine conceptual and technical skill change in ten studies. Homogeneity is observed across these studies in several areas. First, there is a small authorship base, with one or more of three authors (J. Bennett-Levy, C. Chigwedere, & R. Thwaites) involved in 70% of included studies. Alignment between this small authorship group appears to have benefitted the evidence base as all studies were guided by or utilised a version of the now published Bennett-Levy and Thwaites et al. (2015) SP/SR program. This consistency in SP/SR intervention supports the validity and interpretability of the studies as a group. However, it may also open the evidence to enthusiasm bias. The second area of homogeneity is that many studies (70%) used trainees in their sample populations. It can be tricky to extricate the process of change and outcomes pertaining to SP/SR alone when trainees are exposed to several training methods. There are also considerations around researchers being known to trainees and vice versa, limiting the independence of observer interpretation of reflective journals. Only two studies explicitly used SP/SR to measure competence (Collard & Clarke, 2020, 2022). However, the potential impact of social desirability bias on reflective journal entries across all studies utilising trainees cannot be dismissed. Furthermore, the dominance of trainee-based studies prevents the development of interpretations relating to whether SP/SR learning processes or their outputs differ by experience level.

Critical Appraisal. Quality has been considered across included studies, rather than study-by-study, to offer a more holistic understanding of methodological strengths and weaknesses and support a review of the current condition of the evidence. The average quality rating on the QuADS tool was 29/36, with a range of 26-32 (see Figure D2 for the quality appraisal). This score is linked to

a few consistent patterns across studies. The first was the potential for sampling bias. All studies included small, non-randomised convenience samples. Whilst small sample sizes were likely most feasible, it limits generalisability. Second, there were high rates of attrition and low opt-in rates across studies, with some studies reporting $\geq 50\%$ attrition or failure of eligible practitioners to opt-in (Chigwedere et al., 2018; Jona, Sheen & O'Shea, 2022; Scott et al., 2021; Thwaites, Cairns, et al., 2015), further limiting the diversity of participant perspectives represented. Third, there was limited evidence of stakeholders' involvement with research design. However, this limitation may be a reporting rather than a design issue, as it is common in SP/SR programs for participants to be involved in how it is set up and implemented (Bennett-Levy, Thwaites, et al., 2015).

Discussion

Main Findings

This review explored how SP/SR may impact conceptual knowledge and technical skills in CBT. Ten studies published during the last ten years were identified. Notably, none of the included studies directly examined learning processes in SP/SR. As such, the outcomes of this review aren't conclusive. Instead, they represent a set of themes on processes or process factors regarding how SP/SR impacts conceptual knowledge and technical skills which may inform future research questions. The main findings tentatively suggest that SP/SR impacts conceptual knowledge and technical skills through the development of: (a) a qualitatively deeper understanding of CBT, (b) credibility in the model, (c) meta-competences, and (d) supporting reflection. Reflection on these findings suggests that, while therapists typically access CBT in their therapist selves, SP/SR may facilitate conceptual and technical learning by enabling access from the personal self. This appears to provide a qualitatively different understanding of and relationship with conceptual knowledge and technical skills.

While the themes developed in this work offer valuable insight from the perspective of SP/SR participants and study authors, they are not conclusive findings. Process research in this area is still

in its early stages. The findings tentatively suggest that there may be a role for reflective skills in translating personal experience into conceptual knowledge and technical skills. However, the complexity of measuring reflective ability has made it difficult to capture it reliably (Bennett-Levy, 2019). As reflection is purported to be central to learning from SP/SR (Bennett-Levy, 2019), it could be considered that a key component of future progress in the evidence base would be for proponents to focus on developing pragmatic measures of reflective skill before developing further outcome or process studies. Development of such a tool may support the robustness of future research in this area.

Contextualisation of Findings

Overall, this review demonstrates a convergence in the SP/SR literature concerning conceptual knowledge and technical skill development over the past ten years, building upon the previous fifteen years of research. The findings in this review align with prior literature, which suggests that conceptual and technical learning from SP/SR cements learning from didactic teaching methods (Whittington & Grey, 2014), is facilitated by written reflection and reflection with peers, and supports participants in developing confidence with their knowledge and skills (Gale & Schröder, 2014). Theoretically, this review aligns, at least in part, with the personal practice model (Bennett-Levy & Finlay-Jones, 2018). The review suggests that SP/SR impacts conceptual and technical ability by offering the opportunity to experience CBT in the personal self, which qualitatively deepens and changes how practitioners relate to their knowledge and skills. However, at this stage, a lack of primary research studies and the heterogeneity of measures used prohibits exploration of whether increased reflective skill leads to increased gains from SP/SR. Nevertheless, on a practical level, the outcomes of these studies support the continued inclusion of SP/SR in training programs to facilitate the development of reflective, meta-competent practitioners who can adapt their practice to meet patient needs (Bennett-Levy, 2019; Muse et al., 2022).

Limitations

Study Limitations

The limitations of the studies included in this review, such as small sample sizes and reliance on self-reporting, are not unique. They are reflected across studies on SP/SR and in the wider therapist skill development literature. They speak to the challenges of examining therapist skill development feasibly and pragmatically in real-world settings. However, rigour was attempted where feasible in the included studies. There was broad alignment in studies between the research question and study design, methods were well described, and confounding factors were considered.

Furthermore, chronologically looking at the included studies provides a sense of credibility and developing sophistication in the evidence base despite methodological constraints. It tells a story of slow but increasingly sophisticated yet pragmatic approaches to examining the impact of SP/SR on conceptual knowledge and technical skills. Over the past ten years, movement in the evidence base has been documented, from primarily qualitative studies (McGinn, 2015) to developing purpose-made measures on the impact of SP/SR on therapist skills (Chigwedere, 2017) to the first cohort control study in this area (Scott et al., 2021).

Review Limitations

This review was limited by insufficient evidence to answer the research question comprehensively. Further primary studies replicating and extending the work to date are required for a more robust answer, and several additional studies are likely necessary before further review of the topic. Nevertheless, themes on potential processes or process-factors involved in conceptual and technical learning from SP/SR were constructed, and the current condition of the evidence base was presented. The pragmatic approach to quality assessment was also helpful, given the heterogeneous methodologies of the included studies.

Another limitation of this review is that it was not possible to consider the dose-response effects of length, duration or intensity of SP/SR and whether the process differs for participants due to changes in the dose of SP/SR program. It was also not possible to consider whether SP/SR learning processes work differently based on experience level. Moreover, it was not feasible to consider the role of therapist engagement in SP/SR. Participant accounts and study author views suggest that those who engage in SP/SR and see benefits appear motivated to continue engaging (Thwaites, Cairns, et al., 2015). Yet, many people choose not to engage or drop out of SP/SR programs (Bennett-Levy & Lee, 2014). It may be that the process of how SP/SR impacts conceptual knowledge and technical skills is different for those groups, which may affect the external validity of these results due to participants in included studies being a self-selected group.

Further limitations may be related to the search strategy. To be satisfied that this review examined how SP/SR impacts conceptual knowledge and technical skills, only studies that mentioned conceptual knowledge and technical skills as outcomes of SP/SR were included. Whilst this ensured what was being examined was reliable, it may have opened results to reporting bias via non-significant results that were not reported. Also, it is a strength of this work that all identified studies had strongly consistent definitions of SP/SR and implemented it similarly. This strength was likely linked to the search terms being self-practice and self-reflection which was a decision made to increase the face validity of the work. However, it could be viewed as taking a narrow lens as studies in other languages or using different terms to describe similar practices were excluded.

Conclusion

This review utilised thematic synthesis to explore how SP/SR impacts conceptual knowledge and technical skills in CBT, focusing on the evidence developed in the last ten years. It was suggested that the mechanism by which SP/SR impacts conceptual knowledge and technical skill is by supporting therapists to experience CBT from within their personal selves. Four themes were derived, which represent potential component hypotheses for further exploration in future studies.

These include SP/SR supporting the development of a qualitatively deeper understanding of CBT concepts and techniques, credibility in CBT, meta-competences and reflection. Findings were in alignment with the Bennet-Levy and Finlay-Jones (2018) personal practice model. Feasibility and the complexity of the research topic mean there is a lack of experimental studies. Still, the research which has been completed shows alignment within studies and convergence between studies. Overall, SP/SR appears to be a valuable tool in supporting conceptual knowledge and technical skill development. The evidence base seems to be at the interface of moving from an outcome to a process-based focus. It is recommended that the process-based focus continues and is underpinned by the identification and widespread use of a pragmatic measure of reflective skill. Following this, additional primary research studies on processes in SP/SR will then allow us to discern further what works for who, when, and how (Bennett-Levy, 2019).

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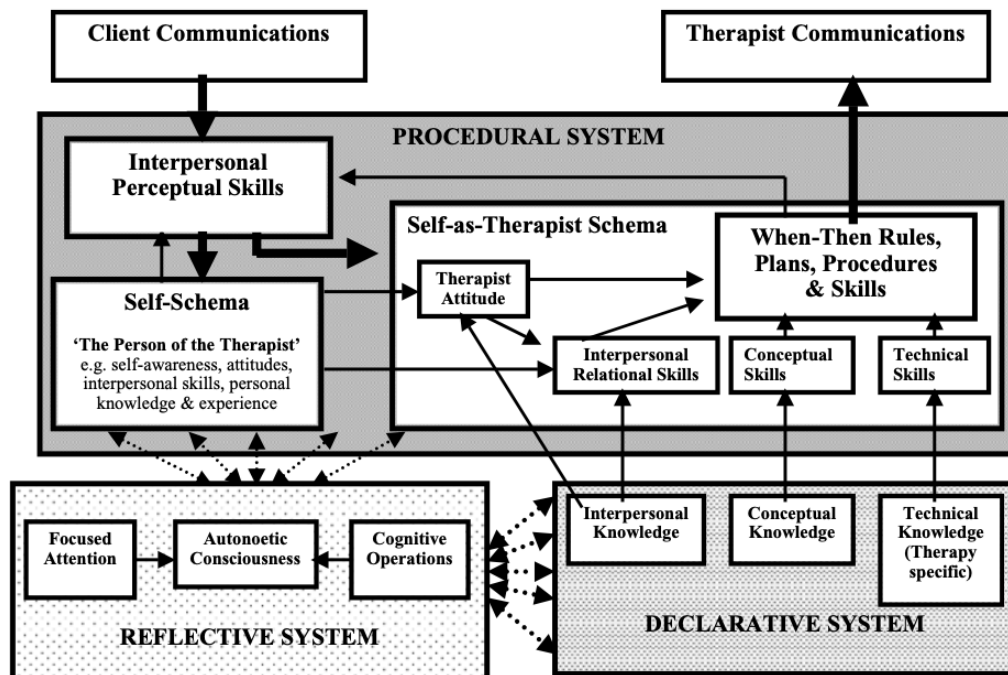
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Appendix A

Cognitive Models of Therapist Skill Acquisition

Figure A1.

The Declarative-Procedural-Reflective Model of Therapist Skill Acquisition (Bennett-Levy, 2006)



Note. From "Therapist Skills: A Cognitive Model of Their Acquisition and Refinement" (p.63), by J.

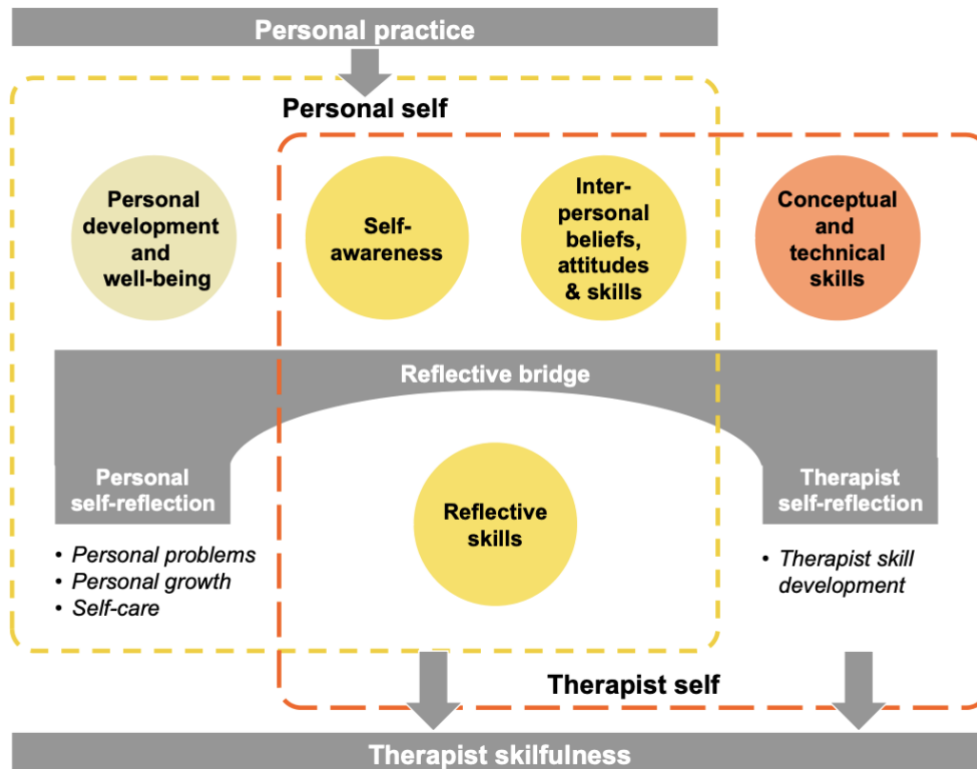
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<https://doi.org/10.1017/S1352465805002420>. Copyright 2006 by Cambridge University Press.

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Figure A2.

The Personal Practice Model of Therapist Skill Development (Bennett-Levy & Finlay-Jones, 2018)



Note. From “The Role of Personal Practice in Therapist Skill Development: A Model to Guide Therapists, Educators, Supervisors and Researchers” (p. 189), by J. Bennett-Levy and A. Finlay-Jones, 2018, *Cognitive Behaviour Therapy*, 47(3), 185–205.

<https://doi.org/10.1080/16506073.2018.1434678>. Copyright 2018 by Informa UK Limited, trading as Taylor & Francis Group. Reprinted with permission.

Appendix B

List of Studies Utilised for the Forward Snowball Searches

Type	Author(s) and Publication Date	Title
Primary research	Davis et al. (2015)	A measurable impact of a self-practice/self-reflection programme on the therapeutic skills of experienced cognitive-behavioural therapists.
Primary research	Thwaites, Cairns, et al. (2015)	Developing meta-competence in low-intensity cognitive-behavioural therapy (CBT) interventions: evaluating a self-practice/self-reflection programme for experienced low intensity CBT practitioners
Primary research	Spendelow & Butler (2016)	Reported positive and negative outcomes associated with a self-practice/self-reflection cognitive-behavioural therapy exercise for CBT trainees.
Primary research	Chigwedere et al. (2018)	Self-practice/self-reflection as an alternative to personal training-therapy in cognitive behavioural therapy training: A qualitative analysis.
Primary research	Chigwedere (2019)	Writing the 'self' into self-practice/self-reflection (SP/SR) in CBT: learning from autoethnography.
Primary research	Collard & Clarke (2020)	Experiential learning for trainee therapists through a shame attack exercise
Primary research	Chigwedere et al. (2021)	Personal practice in counselling and CBT trainees: the self-perceived impact of personal therapy and self-practice/self-reflection on personal and professional development.

Type	Author(s) and Publication Date	Title
Primary research	Scott et al. (2021)	Should personal practice be part of cognitive behaviour therapy training? Results from two self- practice/self-reflection cohort control pilot studies.
Primary research	Collard & Clarke (2020)	Use of a low frustration tolerance exercise for trainee therapists in an SP/SR framework.
Primary research	Jona et al. (2022)	Benefits and challenges of an online CBT group, utilising self-practice/self-reflection paradigm for psychology trainees.
Review	Gale & Schröder (2014)	Experiences of self-practice/self-reflection in cognitive behavioural therapy: a meta-synthesis of qualitative studies.
Review	McGilvray et al. (2015)	Self-practice and self-reflection in training of psychological interventions and therapist skills development: a qualitative meta-synthesis review.
Commentary	McGinn (2015)	Enhancing cognitive-behavioural therapy (CBT) skill acquisition through experiential and reflective learning: A commentary on studies examining the impact of self-practice and self-reflection in CBT.
Commentary	Thwaites, Bennett-Levy & Haarhoff (2015)	Invited Response to Commentaries: Self- Practice/Self-Reflection (SP/SR): Contexts, Challenges and Ways Forward.
Review	Bennett-Levy (2019)	Why therapists should walk the talk: The theoretical and empirical case for personal practice in therapist training and professional development

Appendix C

Studies Excluded at Full-Text Screening

Studies excluded at the full-text screening stage in order of publication date <i>n</i> = 11	Rationale for exclusion
Bennett-Levy, Wilson, et al. (2015)	Practitioners spontaneously engaged in self-practice and did not engage with a structured SP/SR program, violating the inclusion criteria.
Thwaites et al. (2017)	No outcomes were noted that represented conceptual knowledge and technical skills.
Waite et al. (2017)	Abstract only. The study did not proceed to full-text publication. Unable to access further information.
So et al. (2018)	No outcomes were noted that represented conceptual knowledge and technical skills.
Andersson et al. (2020)	No outcomes were noted that represented conceptual knowledge and technical skills.
Jona, Sheen, Anderson, et al. (2020)	No outcomes were noted that represented conceptual knowledge and technical skills.
Hahn et al. (2023)	Participants in this study rated the perceived usefulness of various personal practice activities on therapeutic competencies. However, self-practice is grouped with other personal practices, and it's unclear what the perceived usefulness of self-practice alone is on any specific therapeutic competency. The self-practice program also did not meet the inclusion criteria of being a structured SP/SR program.

Studies excluded at the full-text screening stage in order of publication date <i>n</i> = 11	Rationale for exclusion
Mösler et al. (2023)	No outcomes were noted that represented conceptual knowledge and technical skills.
Fischer & Cáceres Videla (2024)	No outcomes were noted that represented conceptual knowledge and technical skills.
Presley & Jones (2024)	No outcomes were noted that represented conceptual knowledge and technical skills.
Walker et al. (2024)	No outcomes were noted that represented conceptual knowledge and technical skills.
Williams et al. (2024)	The deliberate self-practice participants engaged did not meet the structured SP/SR program inclusion criteria.

Appendix D

Quality Assessment of the Ten Reviewed Studies

Figure D1a.

The Quality Assessment of Diverse Studies Tool Criteria (QuADS; Harrison et al., 2021) Page 1 of 4

QuADS Criteria	0	1	2	3
1. Theoretical or conceptual underpinning to the research	No mention at all.	General reference to broad theories or concepts that frame the study. e.g. key concepts were identified in the introduction section.	Identification of specific theories or concepts that frame the study and how these informed the work undertaken. e.g. key concepts were identified in the introduction section and applied to the study.	Explicit discussion of the theories or concepts that inform the study, with application of the theory or concept evident through the design materials and outcomes explored. e.g. key concepts were identified in the introduction section and the application apparent in each element of the study design.
2. Statement of research aim/s	No mention at all.	Reference to what the sought to achieve embedded within the report but no explicit aims statement.	Aims statement made but may only appear in the abstract or be lacking detail.	Explicit and detailed statement of aim/s in the main body of report.
3. Clear description of research setting and target population	No mention at all.	General description of research area but not of the specific research environment e.g. 'in primary care.'	Description of research setting is made but is lacking detail e.g. 'in primary care practices in region [x]'.	Specific description of the research setting and target population of study e.g. 'nurses and doctors from GP practices in [x] part of [x] city in [x] country.'
4. The study design is appropriate to address the stated research aim/s	No research aim/s stated or the design is entirely unsuitable e.g. a Y/N item survey for a study seeking to undertake exploratory work of lived experiences. .	The study design can only address some aspects of the stated research aim/s e.g. use of focus groups to capture data regarding the frequency and experience of a disease.	The study design can address the stated research aim/s but there is a more suitable alternative that could have been used or used in addition e.g. addition of a qualitative or	The study design selected appears to be the most suitable approach to attempt to answer the stated research aim/s.

Figure D1b.

The Quality Assessment of Diverse Studies Tool Criteria (QuADS; Harrison et al., 2021) Page 2 of 4

			quantitative component could strengthen the design.	
5. Appropriate sampling to address the research aim/s	No mention of the sampling approach.	Evidence of consideration of the sample required e.g. the sample characteristics are described and appear appropriate to address the research aim/s.	Evidence of consideration of sample required to address the aim. e.g. the sample characteristics are described with reference to the aim/s.	Detailed evidence of consideration of the sample required to address the research aim/s. e.g. sample size calculation or discussion of an iterative sampling process with reference to the research aims or the case selected for study.
6. Rationale for choice of data collection tool/s	No mention of rationale for data collection tool used.	Very limited explanation for choice of data collection tool/s. e.g. based on availability of tool.	Basic explanation of rationale for choice of data collection tool/s. e.g. based on use in a prior similar study.	Detailed explanation of rationale for choice of data collection tool/s. e.g. relevance to the study aim/s, co-designed with the target population or assessments of tool quality.
7. The format and content of data collection tool is appropriate to address the stated research aim/s	No research aim/s stated and/or data collection tool not detailed.	Structure and/or content of tool/s suitable to address some aspects of the research aim/s or to address the aim/s superficially e.g. single item response that is very general or an open-response item to capture content which requires probing.	Structure and/or content of tool/s allow for data to be gathered broadly addressing the stated aim/s but could benefit from refinement. e.g. the framing of survey or interview questions are too broad or focused to one element of the research aim/s.	Structure and content of tool/s allow for detailed data to be gathered around all relevant issues required to address the stated research aim/s.
8. Description of data collection procedure	No mention of the data collection procedure.	Basic and brief outline of data collection procedure e.g. 'using a questionnaire distributed to staff'.	States each stage of data collection procedure but with limited detail or states some stages in detail but	Detailed description of each stage of the data collection procedure, including when, where and how

Figure D1c.

The Quality Assessment of Diverse Studies Tool Criteria (QuADS; Harrison et al., 2021) Page 3 of 4

			omits others e.g. the recruitment process is mentioned but lacks important details.	data was gathered such that the procedure could be replicated.
9. Recruitment data provided	No mention of recruitment data.	Minimal and basic recruitment data e.g. number of people invited who agreed to take part.	Some recruitment data but not a complete account e.g. number of people who were invited and agreed.	Complete data allowing for full picture of recruitment outcomes e.g. number of people approached, recruited, and who completed with attrition data explained where relevant.
10. Justification for analytic method selected	No mention of the rationale for the analytic method chosen.	Very limited justification for choice of analytic method selected. e.g. previous use by the research team.	Basic justification for choice of analytic method selected e.g. method used in prior similar research.	Detailed justification for choice of analytic method selected e.g. relevance to the study aim/s or comment around of the strengths of the method selected.
11. The method of analysis was appropriate to answer the research aim/s	No mention at all.	Method of analysis can only address the research aim/s basically or broadly.	Method of analysis can address the research aim/s but there is a more suitable alternative that could have been used or used in addition to offer a stronger analysis.	Method of analysis selected is the most suitable approach to attempt answer the research aim/s in detail e.g. for qualitative interpretative phenomenological analysis might be considered preferable for experiences vs. content analysis to elicit frequency of occurrence of events.
12. Evidence that the research stakeholders have been considered in research design or conduct.	No mention at all.	Consideration of some the research stakeholders e.g. use of pilot study with target sample but no	Evidence of stakeholder input informing the research. e.g. use of pilot study with feedback influencing the study	Substantial consultation with stakeholders identifiable in planning of study design and in preliminary work e.g. consultation in the

Figure D1d.

The Quality Assessment of Diverse Studies Tool Criteria (QuADS; Harrison et al., 2021) Page 3 of 4

		stakeholder involvement in planning stages of study design.	design/conduct or reference to a project reference group established to guide the research.	conceptualisation of the research, a project advisory group or evidence of stakeholder input informing the work.
13. Strengths and limitations critically discussed	No mention at all.	Very limited mention of strengths and limitations with omissions of many key issues. e.g. one or two strengths/limitations mentioned with limited detail.	Discussion of some of the key strengths and weaknesses of the study but not complete. e.g. several strengths/limitations explored but with notable omissions or lack of depth of explanation.	Thorough discussion of strengths and limitations of all aspects of study including design, methods, data collection tools, sample & analytic approach.

Note. Figures D1a-D1d comprise the Quality Assessment in Diverse Studies Rating Criteria. From “Quality Assessment with Diverse Studies (QuADS): An Appraisal Tool for Methodological and Reporting Quality in Systematic Reviews of Mixed-or Multi-Method Studies” (Additional File 2), by R. Harrison et al., 2021, *BMC Health Services Research*, 21(1), 144. <https://doi.org/10.1186/s12913-021-06122-y>. Copyright 2021 by Biomed Central Limited. CC-BY 4.0 Reprinted with permission. No modifications were made to the original figure.

Figure D2.

Quality Assessment of the Ten Reviewed Studies using the Quality Assessment with Diverse Studies tool (QuADS; Harrison et al., 2021)

QuADS criteria													
1	Theoretical or conceptual underpinning to the research												
2	Statement of research aim/s												
3	Clear description of the research setting and target population												
4	The study design is appropriate to address the stated research aim/s												
5	Appropriate sampling to address the research aim/s												
6	Rationale for choice of data collection tool/s												
7	Format and content of the data collection tool are appropriate to address the research aim/s												
8	Description of the data collection procedure												
9	Recruitment data provided												
10	Justification for the analytic method selected												
11	The method of analysis was appropriate to answer the research aims												
12	Evidence that stakeholders have been considered in research design or conduct												
13	Strengths and limitations critically discussed												
Application of the QuADS criteria to the studies included in the review													
Criterion	1	2	3	4	5	6	7	8	9	10	11	12	13
Davis et al., 2015	3	3	2	3	1	3	3	2	3	2	3	1	3
Thwaites, Cairns et al., 2015	3	3	2	3	2	1	3	2	3	0	3	1	2
Spendelow & Butler, 2016	3	2	3	2	2	3	3	2	3	3	2	0	2
Chigwedere et al., 2018	2	2	3	2	1	3	3	3	3	3	2	1	2
Chigwedere, 2019	3	2	3	3	2	3	3	2	0	3	3	2	2
Collard & Clarke, 2020	3	3	3	2	1	1	2	3	2	2	3	1	3
Chigwedere et al., 2021	3	3	3	2	3	3	3	2	2	2	3	0	3
Scott et al., 2021	3	2	3	3	1	2	2	2	2	2	3	0	3
Collard & Clarke, 2022	2	2	3	2	1	3	3	2	1	2	3	1	2
Jona, Sheen & O'Shea, 2022	1	3	3	3	1	2	1	2	2	2	3	1	2

Note. QuADS – Quality assessment with diverse studies tool (Harrison et al., 2021).

**Exploring Differences in Meta-Competence Between Trainee and Qualified Cognitive Behavioural
Therapists: An Investigation of Therapy Session Reflections**

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Abstract

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Objectives: Meta-competences in cognitive behavioural therapy (CBT), such as reflective functioning, remain underexplored. This work aimed to replicate Campbell-Lee et al.'s (2024) finding that experienced CBT therapists demonstrate higher reflective functioning than trainees by analysing their statements about a recent CBT session. The primary hypotheses were that qualified CBT therapists would make more reflective statements than trainees and that trainees would make proportionally more self-focused statements.

Methods: Forty-one trainees and qualified CBT therapists participated in a semi-structured interview. The interview elicited quantitative ratings and open-ended responses regarding their skill use during a recent therapy session. Therapists' statements were coded using a schema that classified therapist statements into nine types based on two dimensions at three levels: knowledge type (declarative, procedural, reflective) and interpersonal focus (client, therapist, dyad).

Results: Qualified therapists made more statements overall, but this may be related to using more words during the semi-structured interview. No significant between-group differences were observed in the knowledge type or interpersonal focus of statements. Although there were no between-group differences with respect to knowledge type and interpersonal focus, these factors interacted significantly. Across the groups, most statements about the therapy session were reflective statements about the dyad, and neither group was particularly self-focused.

Conclusions: This work did not replicate Campbell-Lee et al.'s (2024) finding that experienced therapists make more reflective statements than trainees, possibly related to differences in sample composition and the use of a new method of structured session recollection. Additional methodological considerations are discussed. Replication is recommended.

Exploring Differences in Meta-Competence Between Trainee and Qualified Cognitive Behavioural Therapists: An Investigation of Therapy Session Reflections

Cognitive behavioural therapy (CBT) experts agree that meta-competence is critical in developing therapist effectiveness (Haarhoff & Thwaites, 2016; Muse et al., 2022; Roth & Piling, 2007; Whittington & Grey, 2014). It is thus important to define and measure it and then train CBT therapists to cultivate it. Meta-competence is the capacity to flexibly adapt one's practice to the needs of the patient whilst maintaining fidelity to core CBT principles (Roth & Piling, 2007; Whittington & Grey, 2014). Meta-competences are the higher-order CBT skills that deploy basic skills in a responsive way, such as the capacity to manage obstacles in therapy, use and respond to humour and use clinical judgment (Roth & Piling, 2007). Despite clinical consensus on the definition of meta-competences, there are challenges in measuring them, seemingly related to them being less observable than technical skills, and less amenable to direct self-report. There has also been a historical focus on outcomes research in CBT, limiting research into process factors such as therapist skills. Nevertheless, there has been growing recognition of the need to develop reliable measures of meta-competence which are valid in real-world settings (Boyle, 2025). This work explores the challenges in measuring meta-competence and tests a novel method of eliciting it in trainee and qualified CBT therapists.

Theoretical Underpinnings of Meta-Competence in CBT

How meta-competence develops in CBT may be informed by general learning theories, such as Kolb's (1984) experiential learning cycle or the four stages of competence model (Adams, 2021). Purpose-developed models of therapist skill acquisition, such as the declarative-procedural-reflective model (DPR model; Bennett-Levy, 2006), may also inform its development. This model posits that therapists develop declarative knowledge and procedural skills through a cyclical process of reflection on experience to refine and update their understanding (Thwaites et al., 2014). It centralises reflection as a key meta-competence critical to learning from experience and

recommends ongoing development of reflective functioning in all CBT therapists, from novices to experts (Haarhoff & Thwaites, 2016).

Roth & Piling's (2007) model of the competences required to deliver CBT effectively is arguably the prominent model of CBT competence in the UK. This model describes generic and CBT meta-competences as procedural rules that can support therapists in adapting and tailoring interventions to client needs. Experts have suggested that it would be valuable to extend this model to make meta-competences more explicit (Whittington & Grey, 2014). However, the implicit nature of meta-competences may hamper the model's expansion. Meta-competences need to be explicated and measured to test the model. Yet, due to the challenges of explicating and measuring meta-competences, there isn't evidence to confirm or disconfirm the model, creating difficulty in generating evidence to expand it.

Challenges in Measuring Meta-Competence

Competence measures used in summative assessment of CBT skills in trainees, such as the revised edition of the cognitive therapy scale (CTS-R; Blackburn et al., 2001), typically do not measure how an intervention was delivered (Muse et al., 2022). As meta-competences govern how other skills are deployed, measuring them can be challenging (Campbell-Lee et al., 2024). They are seemingly less like direct observable skills and more like descriptions of how an intervention was delivered, e.g. flexibly and in a client-focused manner. Where they are observable, subjectivity often impacts their assessment (Muse & McManus, 2013). For example, appropriate humour differs from session to session, patient to patient and therapist to therapist. Observers often only rate a single session for summative assessment purposes (Muse & McManus, 2013), which reduces their understanding of the context of skill application. Self-assessment can also be open to bias as meta-competences may not be directly accessible to introspection. As competence moves from conscious to unconscious (Adams, 2021), highly experienced therapists might not be aware of their meta-competent practice and less experienced therapists may be unaware of their lack of meta-

competence (Brosan et al., 2008; Muse & McManus, 2013). As such, reviews on the topic recommend that multiple raters (client, therapist, supervisor, observer) are taken when possible (McLeod et al., 2023; Muse & McManus, 2013). However, this isn't always feasible in clinical settings, and it still leaves the issue of making meta-competences explicit enough to measure. These are direct examples of the complexities facing researchers attempting to identify and measure meta-competence.

Research Evidence for Meta-Competence

Whilst there is limited direct evidence for meta-competence, some authors have purported to measure meta-competences. Boyle (2025) reviewed the self-practice/self-reflection training and self-development tool and found it may support meta-competence development. Studies in that review addressed meta-competences such as reflective skills (Collard & Clarke, 2020, 2022), flexibility in applying the CBT model (Spendelow & Butler, 2016; Thwaites, Cairns et al., 2015), and skills relating to therapy processes (Collard & Clarke, 2020, 2022; Jona et al., 2022; Spendelow & Butler, 2016). However, the review found that the evidence was limited by the lack of quantitative studies and a reliable and valid measure of reflective skill (Boyle, 2025).

Rationale

The CBT field is in the early stages of defining and identifying meta-competences. As such, an exploratory method is appropriate to learn more about relevant phenomenology. While the full range of CBT meta-competences remains unclear, they likely have an organising effect on more basic declarative knowledge and procedural skills. Put differently, meta-competences may be expressions of therapists' reflective functioning processes or outcomes - their abilities to reconstruct and think critically about their practice and adaptively and flexibly apply skills. This work will focus on reflective competence as it is a key meta-competence from theory (Bennett-Levy, 2006; Bennett-Levy & Finlay-Jones, 2018) and emerging evidence (Boyle, 2025; Campbell-Lee et al., 2024). Based on skill acquisition literature, meta-competences such as reflective functioning are expected to be more

developed and evident in the routine skill use of experienced therapists than in trainee therapists (Bennett-Levy, 2006; Whittington & Grey, 2014). As such, this study was developed as a linked project to the work of Campbell-Lee et al. (2024). Their study investigated meta-competence among trainees and newly qualified and experienced CBT therapists. A semi-structured interview format was successfully applied to explore responses to hypothetical complex clinical scenarios. Results suggested a highly significant difference in the number of reflective statements between trainees and experienced CBT therapists, which the authors interpreted as an expression of higher reflective functioning.

Aim

The primary aim of this study is to replicate Campbell-Lee et al.'s (2024) findings that more experienced therapists have higher reflective functioning than trainees. Where Campbell-Lee et al. (2024) utilised hypothetical clinical scenarios, this work will assess differences between trainees and qualified CBT therapists in their reflective statements about a CBT session with a current client. Real therapy sessions are used based on the assumption that real sessions can potentially access relevant phenomena more directly than hypothetical scenarios. Therapists' responses will be collected using a semi-structured interview format with questions structured on an established CBT competency scale, the CTS-R (Blackburn et al., 2001), as a valid and credible foundation.

Within the primary aim to replicate the findings of Campbell-Lee et al. (2024) and based on the literature (Bennett-Levy, 2006; Bennett-Levy et al., 2009; Jennings et al., 2003; Roth & Piling, 2007; Whittington & Grey, 2014) several hypotheses were developed to test how differences in reflective functioning may be expressed in practice. Firstly, this study will use the DPR model framework to test the hypothesis that experienced therapists will make more reflective statements about a recent therapy session, classifying statements into three knowledge types: declarative, procedural and reflective. An additional factor was the interpersonal focus of therapist statements (i.e. client, therapist, dyad), with a second hypothesis that trainee therapists would be more self-

focused in their memories and statements about the therapy session due to their developmental stage. Campbell-Lee et al. (2024) found no group differences in statements involving therapists' actions but significant differences in reflective statements seeking to formulate and make sense of a client's presentation. The present study will explore knowledge-type and interpersonal focus in a more differentiated way, grounded in reflections of a therapy session. Consistent with the findings of Campbell-Lee et al. (2024), no significant difference was expected in the number of words spoken between trainee and experienced CBT therapists. There were additional exploratory hypotheses that qualified therapists may become more selective in their application of CBT skills within a specific therapy session and differentiate their importance. In contrast, trainees would hold themselves to the requirement to use a full range of CBT skills in all sessions, including the one sampled, and appraise them with equal importance. Lastly, it is hypothesised that as experienced therapists are likely to have had more reflective practice than trainees, they may demonstrate greater confidence in their self-rated competence.

Primary hypotheses

- Qualified therapists will make more reflective statements than trainees about a recent therapy session, with no difference in the number of words used
- Trainees will make proportionally more self-focused statements than qualified therapists

Secondary hypothesis

- Qualified therapists will prioritise some CBT skills over others within a therapy session, with higher self-rated competence on the skills deployed and lower mean importance of CBT skills overall

Methods

Design

This work was a single-phase study with a cross-sectional design. There was a between and within-group focus.

Participants

This study aimed to recruit a convenience sample of CBT therapists and trainees (Figure A1, Appendix A). The primary inclusion criterion was that the therapist was a trainee attending or had qualified from a postgraduate CBT training course or clinical psychology doctorate in the UK or Ireland. The participants were also required to routinely practice CBT during recruitment as participation involved reflecting on a session with a current client. Participation was voluntary. Minimal demographic information was collected (Figure B2, Appendix B).

Sample Size Considerations

An a priori power analysis was utilised to determine the sample size required for this study. The minimum number of participants was considered, as this study was exploratory. As the study measure is novel, a priori sample size calculations were based on the means, standard deviations, and effect size reported by Campbell-Lee et al. (2024) in their analysis exploring differences in reflective statements between trainees and experienced therapists. Their reported effect size was $f = 0.9$, which became the predicted effect size in this work. Calculations based on those parameters with $f = 0.9$, $\alpha = .05$ and $power = .80$, indicated that 20 participants would be required per group for a between-groups analysis of variances.

Ethical Considerations

This study was subject to peer review by the research leads for the doctorate in clinical psychology at Newcastle University. The study received ethical approval from the Newcastle University Research Ethics Committee in October 2024 (Appendix D). Patients were not sampled,

and their data was not collected, so NHS ethical approval was not required. Informed consent was sought from all prospective participants, and they were made aware of their right to withdraw. In line with the American Psychological Association research ethics guidance (2017), minimal demographic data was collected to reduce the risk of unnecessary harm to participants. There was an element of deception involved, with participants not being aware that meta-competence was being explored to prevent priming. As such, post-interview debriefing was provided to all participants to ensure they had time to respond and feedback. Lastly, a data management plan that conforms to Newcastle University policy (Emmerson, 2018) was created and followed (Appendix E).

Materials

Development of the Study Measure

A measure which could be delivered in a semi-structured interview format was developed to elicit therapist statements and test the study hypotheses. The measure was designed to promote reflection on skill use rather than evaluation on performance alone to elicit meta-competence. The measure is based on an established CBT competence measure, the CTS-R (Blackburn et al., 2001). The CTS-R is widely used in CBT training programs in the UK. Thus, it was hoped that the therapists would be familiar with the format. Guidance on creating materials for neurodiverse populations also informed the measure design (Coleman et al., 2021). The measure was piloted with the supervisor five times and once with three other local clinicians and trainers. Piloting resulted in the measure being shortened to focus on key items and reduce participant fatigue⁴. Piloting also led to the

⁴ During piloting, measures of skill governance, a list of options of why weren't successfully applied and self-rated confidence were added and removed. There were approximately ten iterations of the measure from initial development through piloting. It was decided to narrow the focus of the questionnaire to focus on the key components for this initial exploratory study and to reduce participant fatigue.

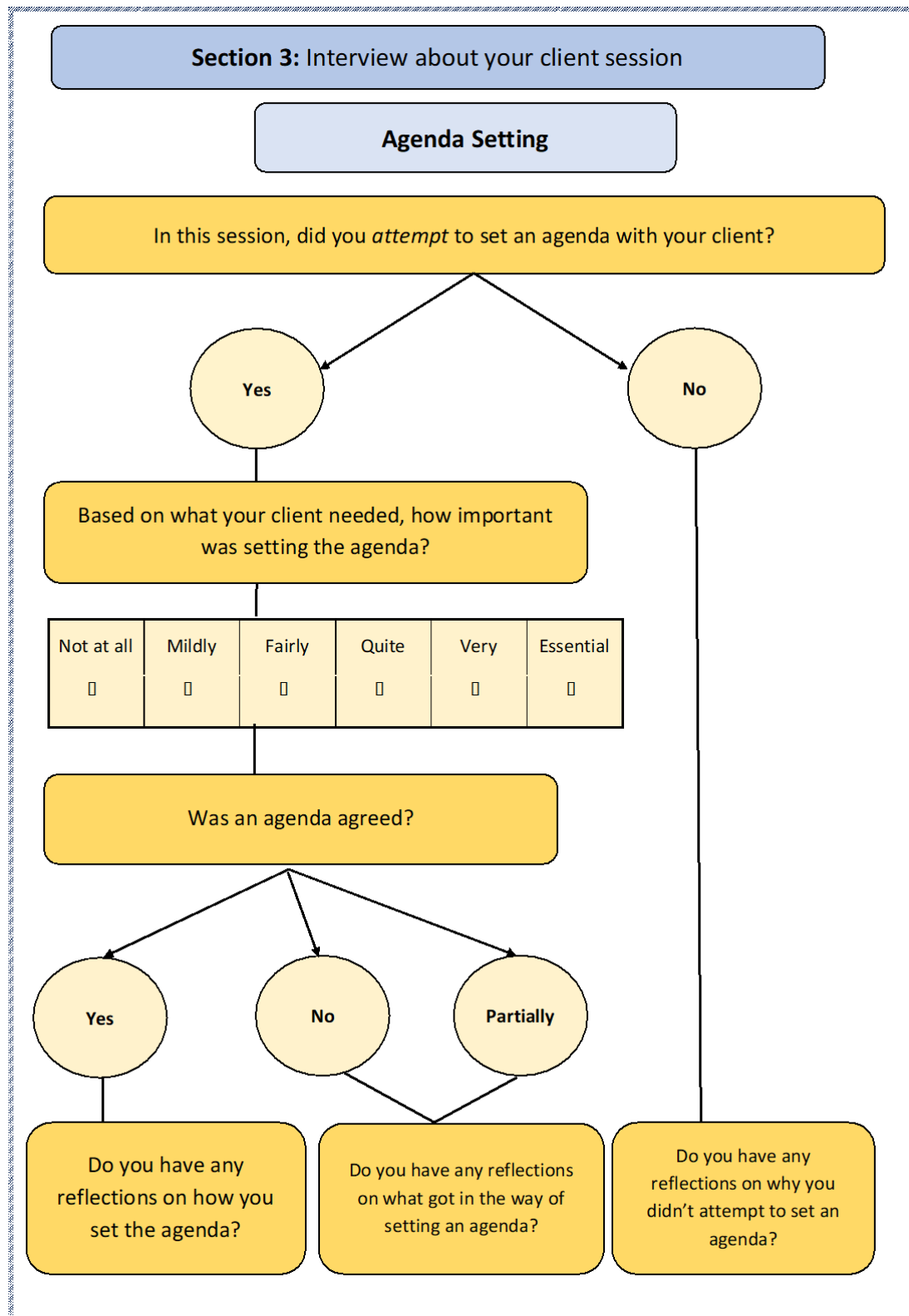
discovery that the measure works best as a semi-structured interview with a combination of quantitative ratings and free speech. Furthermore, during piloting, a decision was made to add information at the start of the interview referring to the measure being based on the CTS-R but not being a scored CTS-R to reduce the potential for fear of negative evaluation during the interview. This decision was linked to not providing participants with the measure prior. It was hoped that not providing the measure prior but assuring them it was not being individually scored provided the optimum balance between priming the therapist participants enough to feel safe but not so much that they may have consciously or unconsciously rehearsed before the interview.

Study Measure

The final measure is presented in Appendix B in fifteen parts (Figures B1a-B1o). The measure requests that the participants reflect retrospectively on a CBT session they completed with a client in the past two weeks. It has three sections: participant background, session information and the reflective section. The reflective section comprises twelve sections, one for each skill on the CTS-R. The items in the twelve CTS-R skill sections were derived from the CTS-R but are also informed by the broader literature around meta-competences in CBT (Roth & Piling, 2007; Whittington & Grey, 2014). The items aim to gather the therapists' reports of which skills they used, the relevance of the skill to the session based on client needs, how successfully the skill was applied, and any reflections they had on their application of the skill, including what got in the way if it was partially or not successfully applied. Figure 1 on the next page shows the agenda-setting reflective section as an example.

Figure 1.

The Agenda-Setting Section of the Measure Developed for this Study.



Procedure

Recruitment Procedure

CBT and clinical psychology training programs were approached and asked to disseminate the research poster to their staff and trainees⁵. Recruitment also occurred via trust-wide emails in local NHS mental health trusts and through advertisements on Facebook and LinkedIn across the UK. Whilst not a formal part of the recruitment strategy, it became apparent during recruitment that a snowball effect was happening, with past participants referring new participants.

Furthermore, the recruitment materials indicated that the study was interested in how trainees and qualified therapists used their skills. The aim of exploring meta-competence was not shared to prevent priming. Participants booked their interviews via Microsoft Outlook to reduce selection bias. Recruitment began in December 2024⁶. By early February 2025, twenty qualified therapists and ten trainees had participated. At this time, purposeful recruitment of only trainees was pursued, and the recruitment flyer was revised. One qualified practitioner was booked during this time, and the interview proceeded. Recruitment stopped at the end of February 2025 when the final ten trainees were interviewed.

Interview Procedure

The candidate conducted all interviews. At the start of the interview, the participants were given time to ask questions and decide whether to participate via discussion of consent, risks and

⁵ The training programs contact details were found on lists of accredited courses from the British Association for Behavioural and Cognitive Psychotherapies and Clearing House for Postgraduate Courses in Clinical Psychology.

⁶ Entry to a draw for two £25 Amazon vouchers was offered for inducement and the draw took place via a random number generator on 6-7th March 2025.

benefits. If participants chose to proceed, they were asked to email the consent form to the researcher with their electronic consent (see Figure A3 in Appendix A for a blank copy). The interview was then conducted using the study measure via recorded Microsoft Teams interview. The researcher presented the measure on screen and talked the participant through it. First, the session was chosen. Participants were briefed that integrative approach sessions, which included CBT, were not eligible for reflection; Only sessions using pure CBT were suitable. A decision was made to allow participants to choose a session themselves rather than a more systematic selection method, e.g. choose the second-to-last CBT session you've completed this week. The purpose of allowing participant selection was to increase participants' sense of control and safety. Whilst participants choosing the session may have been more open to bias, it was essential to allow control to participants where possible, as the literature indicates that it promotes authentic reflection, engagement with and experience of benefit when reflecting (Bennett-Levy & Lee, 2014). Following the interview, participants were debriefed, including checking in on their experience and sharing the study's aim of exploring meta-competence.

Coding Procedure

A coding schema based on the DPR model (Bennett-Levy, 2006) was developed to inform the coding of the participant's responses on the free speech sections for each of the twelve CTS-R skill sections (see Figure 2 on the next page). The DPR model is an established model of therapist skill development, and its use was led by its credibility and a desire to increase accessibility via the use of a shared language (Foster & Dubeck, 2017; Haarhoff & Thwaites, 2016). The coding schema classified statements into nine types based on two dimensions at three levels: knowledge type (declarative, procedural, reflective) and interpersonal focus (client, therapist, dyad).

The development of the coding schema was iterative. The candidate first coded an interview. Then, the candidate and supervisor, StB, jointly coded an interview. Potential codes were considered, and convergence was achieved via discussion and clarification. The aim of this process

was to ensure the coding schema was theoretically grounded, enhance face validity and maximise the extraction of potential data from the dataset.

The candidate then created the coding grid (Figure 2) and second rater instructions (Appendix C). A decision was made to count duplicate statements when coding, which diverges from the linked project's coding procedure (Campbell-Lee et al., 2024). This decision was based on the overall research goal of investigating differences in the volume of statements of different types. Counting repetitions also allowed for a more sensitive analysis of therapists' communications, as when repeating statements in a different context, therapists may introduce new knowledge and understanding that is relevant or nuanced.

The candidate coded all interviews by hand using the coding grid. Clinical judgement was applied to interpret the number of distinct statements and statement categories. Independently, second rater PF, a qualified clinical psychologist, coded a subsection of interviews ($n = 5$)⁷, making their own clinical judgements on the application of the coding schema to determine the number of distinct statements and statement categories. The rationale for use of a second rater was to contribute to the potential validity of the coding procedure. Independent second rating of the total number of statements and statement categories was aimed at reducing contamination of the second rater's findings by the candidate's existing ratings. In addition, it was pertinent to understand whether the coding framework can be applied reliably across raters and contexts, or whether it is overly influenced each individual rater's expectations or assumptions.

⁷ Preparing transcripts for coding was time-consuming, and only half were anonymized when the second coder became available. A random number generator was then used to select three qualified and two trainee transcripts for second coding from those anonymized

Figure 2.

Coding Schema Based on the DPR Model (Bennett-Levy, 2006).

Declarative – Client <i>Description of the client</i>	Declarative - Therapist <i>Description of the therapist, including their knowledge of the model, themselves and their practice</i>	Declarative - Dyad <i>Description of the therapeutic process of both the client and therapist</i>
Procedural – Client <i>The client's actions</i>	Procedural – Therapist <i>The therapist's actions</i>	Procedural - Dyad <i>An action or active process undertaken by both the client and therapist</i>
Reflective - Client <i>A hypothesis or formulation which relates to the client only</i>	Reflective - Therapist <i>A hypothesis or formulation which relates which relates to the therapist only</i>	Reflective - Dyad <i>A hypothesis or formulation which relates to the dyad</i>

Analysis

For the main analyses, independent samples t-tests and Mann-Whitney U tests were planned to ascertain if there were significant mean differences between trainee and qualified therapists on the number of days since the session, the client session number, and potential client complexity confounds. A three-way analysis of variance was planned to test if there were significant variations in the frequency and type of statements made between groups. T-tests were also planned to consider differences in the number of words spoken during the therapists' reflections. The calculation of inter-rater agreement using Cohen's Kappa was also planned, as done in the linked

project (Campbell-Lee et al., 2024). Next, independent samples t-tests were intended to ascertain whether significant mean differences were present in the skills attempted, the skill importance ratings and the skills successfully applied.

Results

Interview data were analysed using Statistical Package for the Social Sciences version 29. There was no missing data. A priori tests for the statistical assumptions of normality and homogeneity of variances were completed for the planned analyses. Where variables were ordinal, or Shapiro-Wilk tests indicated non-normality, Mann-Whitney U tests were used instead of independent samples t-tests. Levene’s test for homogeneity of variances suggested that the assumption of equal variances was met ($p=>.05$) for all variables in the main analyses.

Participant Background

Participants’ background information is provided in Table 1 on the next page, stratified by therapist experience. The pattern of gender and core profession was comparable between groups. Experience levels between qualified therapists varied greatly, from practitioners qualified just a few months to those qualified for over two decades ($m=6.71, sd=6.98$).

Table 1

Participant Characteristics by Therapist Experience

	Trainee				Qualified			
	<i>n</i>	%	<i>m(sd)</i>	<i>range</i>	<i>n</i>	%	<i>m(sd)</i>	<i>range</i>
Therapist experience	20				21			
Age								
25-34	10	50			7	33.3		
35-44	5	25			9	42.9		
45-54	4	20			4	19		
44-64	1	5			1	4.8		
65+								
Gender								

Male	3	15	4	19		
Female	17	85	17	81		
Years qualified in CBT					6.71 (6.98)	0-22
Service type						
Primary care	8	40	9	42.9		
Secondary care	9	45	5	23.8		
Tertiary Care	3	15	4	19		
Inpatient Care						
Self-employed/ Private			2	9.5		
Other			1	4.8		
Core profession						
No	12	60	12	57.1		
Yes	8	40	9	42.9		
Core profession type						
Clinical psychology			4	19		
Mental health nursing	3	15	1	4.8		
Occupational therapy	3	15	2	9.5		
Social work	2	10	1	4.8		
Counselling			1	4.8		
Years qualified in the core profession		14.13 (6.73)	6-23		16.11(7.04)	5-25

Session Information

Session information is provided in Table 2. This information includes the group means for the number of days since the session and session number, in addition to the client's main problem. Mann Whitney U tests indicated no significant differences between groups in the means for the days since the session and the client session number. Factors on the potential confound of case complexity are also presented. These include the average number of therapist-reported comorbid mental, neuropsychological or physical health problems reported for each group. Average ratings of therapist-perceived client collaborative ability were also presented, along with averages for therapist-perceived service suitability and therapist-perceived suitability of standard CBT methods. Mann-Whitney U tests were conducted to compare groups on these therapist-perceived client complexity variables to reduce the risk of these factors influencing the main analysis. Results indicated no significant differences between trainees and qualified therapists in the mean number of client

comorbid problems, client collaborative ability, service suitability and the suitability of standard CBT methods. This suggests that any observed effects in the main analysis are less likely to be related to client complexity factors.

Table 2.*Session Information by Therapist Experience*

	Trainee				Qualified				Mann-Whitney <i>U</i>	Asymptotic (2-tailed) <i>p</i>
	<i>n</i>	%	<i>m(sd)</i>	range	<i>n</i>	%	<i>m(sd)</i>	range		
Days since session			6(4.27)	0-14			4.62(5.06)	0-14	157.5	.17
Session number			7.4(4.75)	3-20			8.33(6.83)	1-30	203.5	.87
Primary client problem										
Depression	2	10			3	14.3				
PTSD	3	15			5	23.8				
GAD	1	5			6	28.6				
OCD	1	5			3	14.3				
Panic					2	9.5				
Psychosis/Bipolar Disorder	5	25			1	4.8				
Social phobia	6	30			1	4.8				
Phobia (other)	2	10			3	14.3				
Secondary client problem(s)			1(1.07)	0-4			1.48(1.25)	0-4	159.5	.17
Client collaborative ability (0-4 scale, seldom-always)			3.2(.95)	1-4			3(.89)	1-4	177	.35
Service suitability (0-5 scale, not at all-highly)			4.25(.97)	2-5			4.24(.94)	1-5	203.5	.85
Suitability of standard CBT (0-5 scale, not at all-highly)			3.95(.95)	2-5			3.81(.91)	2-5	191.5	.61

Analysis of Therapists' Statements***Descriptive Statistics***

Descriptive statistics for each of the nine types of statements made by trainees and qualified CBT therapists about their client sessions are presented in Table 4. The means represent the mean number of statements of each type made across the twelve sections of the semi-structured interview based on CTSR skills.

Table 4.*Means for the Nine Types of Therapist Statement Made by Trainees and Qualified CBT**Therapists Across the Twelve Sections of the Semi-Structured Interview*

Interpersonal Focus	Knowledge Type <i>m(sd)</i>						Total Statements <i>m(sd)</i>	
	Declarative		Procedural		Reflective		Trainee	Qualified
	Trainee	Qualified	Trainee	Qualified	Trainee	Qualified		
							86 (43.11)	111.19 (33.54)
Client	3.45 (1.90)	6.43 (4.40)	4.90 (4.73)	6.20 (4.20)	4.35 (4.00)	7.52 (5.15)		
Therapist	3.05 (5.71)	3.52 (5.70)	19.60 (19.89)	17.71 (9.95)	7.75 (7.90)	8.81 (11.05)		
Dyad	4.75 (3.14)	5.29 (3.44)	13.25 (8.92)	20.52 (11.97)	24.90 (11.94)	35.19 (22.56)		

Analysis of Variance

Preliminary analyses. Preliminary analyses were completed to understand the impact of word count on the main analysis. Comparison of means indicates that the number of words spoken during the reflective portions of the interview by trainees ($m=2846$, $sd=1004$) and qualified ($m=3494$, $sd=1375$) CBT therapists varied markedly, $t(1, 39)=2.49$, $p=.02$. There was also a strong positive correlation between the number of words spoken and the total number of statements elicited, $r=.84$, $p<.001$. Qualified CBT therapists ($m =111.19$, $sd=33.54$) made significantly more statements overall than trainees ($m=86$, $sd=43.11$). As such, any observed variation between groups in the frequencies of the nine statement types may be confounded by the significant differences in frequency of words spoken and the total number of statements made. To account for this in the main analysis, the frequencies of each of the nine statement types were expressed as proportions of the total number of statements made by each participant, rather than raw counts⁸.

⁸ Analyses were also conducted with the frequencies of the nine statement types expressed as raw values rather than as proportions. The pattern of results was similar to the results noted in Table 5.

Main Effects. A three-way ANOVA was conducted (Table 5) with one between-subject factor at two levels (group: trainee, qualified) and two within-subjects factors, both at three levels (knowledge-type: declarative, procedural, reflective; interpersonal focus: client, therapist, dyad). Significant main effects with large effect sizes were also noted for knowledge type $F(2, 23) = 35.39, p = <.001, \eta p^2 = .48$, and interpersonal focus $F(2, 23) = 35.55, p = <.001, \eta p^2 = .48$.

Table 5.

Main Effects and Interaction Effects for Group, Knowledge Type and Interpersonal Focus on Frequency of Therapist Statements Expressed as Proportions of Total Statements for Each Participant

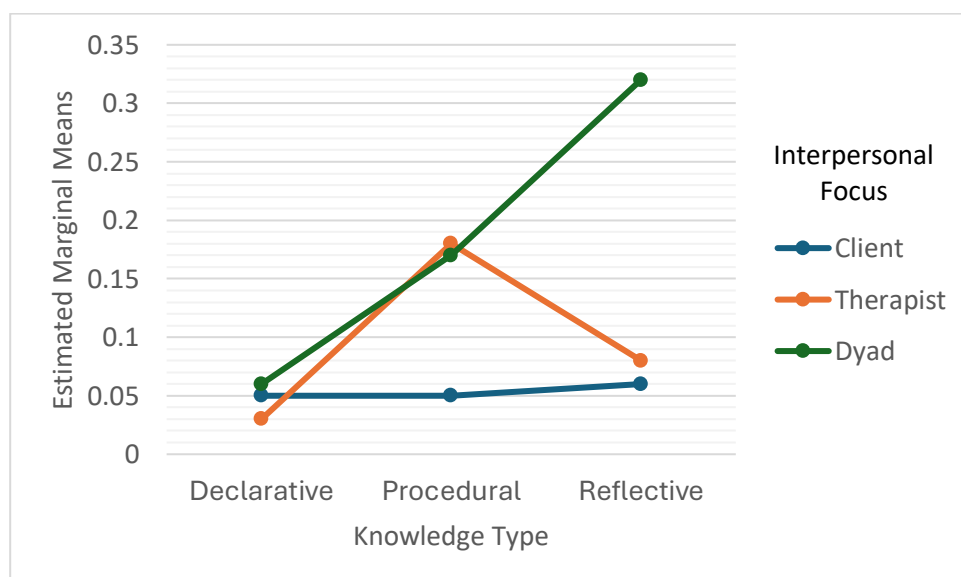
	Analysis of Variance			
	<i>F</i>	<i>df</i>	<i>p</i>	ηp^2
Main effects				
Group	4.39	1	.04	.10
Knowledge Type	56.14	1.35	<.001	.59
Interpersonal Focus	75.41	1.31	<.001	.66
Two-way interaction effects				
Group × Knowledge Type	.02	1.35	.94	.001
Group × Interpersonal Focus	.65	1.26	.46	.02
Knowledge × Interpersonal Focus	57.84	2.21	<.001	.60
Three-way interaction effect				
Group × Knowledge Type × Interpersonal Focus	1.08	2.21	.35	.03

Note. The main effect for Group is reported using raw counts as the total number of statements made by each group made cannot be expressed proportionally. For Knowledge Type and Interpersonal Focus, violations of sphericity (Mauchly's test) were corrected using the Greenhouse-Geisser adjustment.

Interaction Effects. Two-way interaction effects for group $\times$ knowledge type and group $\times$ interpersonal focus were non-significant. These non-significant interaction effects suggest that the knowledge type of therapists' expressions did not differ across groups, nor did their interpersonal focus. There was a significant two-way interaction effect of knowledge type $\times$ interpersonal focus, suggesting that the frequency of statements made by all therapists in the sample varied significantly based on both the type of statement and whether the focus was on the client, therapist, or dyad. Pairwise comparisons using Bonferroni correction indicated trainees and qualified therapists produced significantly more dyad-focused reflective statements than client-focused (m difference = .13, 95% CI [.11, .15], $p = <.001$) or therapist-focused (m difference = .08, 95% CI [.05, .12], $p = <.001$) statements. No significant differences were found between interpersonal focus categories within declarative statements, suggesting that factual statements were similarly distributed across client, therapist and dyad. Figure 2 illustrates how the interaction effect between knowledge type and interpersonal focus impacts the frequency of statements made across the whole sample.

Figure 2.

Mean Frequency of Therapist Statements Expressed as Proportions of Total Statements by Interaction of Knowledge Type and Interpersonal Focus



Lastly, the three-way interaction effect between group, knowledge type and interpersonal focus was non-significant, suggesting that there were no significant differences between trainees and qualified CBT therapists across the nine types of therapist statements, irrespective of the combination of knowledge type and interpersonal focus.

Interrater Reliability

Rater Agreement. Rater agreement could not be calculated using Cohen's Kappa as the total number of statements found by Raters A and B differed. Correlation analysis was utilised in lieu. The total number of statements found by the raters for each of the five second-rated transcripts is presented in Table 6. Correlation analysis suggests that there was a strong positive correlation between Rater A ($m=93$) and Rater B ($m=109$) in the total number of statements, $r=.98$, $p<.01$.

Table 6

Comparison of the Frequency of Statements Found on Double-Rated Interview Transcripts

	Total Statements		Word count
	Rater A	Rater B	
Trainee interview transcript U	77	94	2192
Trainee interview transcript V	38	51	873
Qualified interview transcript X	135	151	3170
Qualified interview transcript Y	92	95	1830
Qualified interview transcript Z	125	157	3794

Comparisons of Skill Use

Results of independent samples t-tests addressing differences in the mean number of skills attempted the mean skill importance ratings and the mean number of skills successfully applied are presented in Table 3. Results indicate no significant differences between trainees and qualified

therapists on all three variables. Notably, there was a high degree of variation within groups, particularly in the ratings of skill importance based on client needs. Descriptive statistics indicate that 55% of trainees and 71% of qualified therapists attempted all twelve CTS-R skills, with a range of 9-12 CTS-R skills attempted across both groups.

Table 3.

Comparison of trainee and qualified CBT therapists' self-rated skill use

	Trainee		Qualified		<i>df</i>	<i>t</i>	<i>p</i> (two-tailed)	Cohen's <i>d</i>
	<i>m</i>	<i>sd</i>	<i>m</i>	<i>sd</i>				
Skills attempted (0-12 scale)	11.30	.92	11.62	.74	39	-1.22	.29	-.38
Skill importance rating (0-5 scale, not at all- essential)	3.98	3.36	3.87	3.36	24	.787	.44	.31
Successful skill application (0-12 scale)	8.9	2.5	9.7	1.7	23	-.99	.33	.39

Discussion

Main Findings

This study examined differences in meta-competence between trainee and qualified cognitive behavioural therapists by analysing their reflective functioning. The primary aim was to replicate the findings of Campbell-Lee et al. (2024), who reported that qualified CBT therapists produced more reflective statements than trainees when considering hypothetical clinical scenarios. It was also hypothesised that trainees would produce proportionally more self-focused statements.

Qualified therapists made more statements overall about a recent therapy session than trainees, but this may be an artefact of being more expressive during the semi-structured interview, i.e. using more words. Different potential explanations exist for this group difference: qualified therapists may be more knowledgeable or confident to speak. Another possible explanation is that as qualified therapists are more likely to have automated procedural skills (Bennett-Levy et al., 2009), they have more attentional capacity in session and thus could recall more of the session, leading to more words said and a greater chance of making statements. When knowledge type was analysed, qualified CBT therapists did not differ from trainees with respect to the proportions of declarative, procedural, or reflective statements produced, which did not replicate Campbell-Lee's (2024) findings. When interpersonal focus was analysed, no between-group differences were observed with respect to the proportions of client, therapist and dyad-focused statements produced, providing no evidence to reject the null hypothesis, i.e. trainees did not produce proportionally more self-focused statements than qualified CBT therapists. Although there were no group differences with respect to knowledge type and interpersonal focus, these factors interacted significantly, as depicted in Figure 2. Neither group was particularly self-focused. Across the groups, most statements about the therapy session were reflective statements which were dyadic. This suggests that dyad-focused reflective statements may hold particular importance for understanding skill application and development in routine clinical practice, warranting further research. The non-replication of previous findings (Campbell-Lee et al., 2024) may be related to a genuine lack of variation in reflective functioning by experience level. It may also be related to limitations within the present study or methodological differences between this study and Campbell-Lee et al.'s (2024) study, such as the sample composition and the use of a new method of structured session recollection. These issues are discussed further in the Methodological Considerations section (p.26).

A secondary hypothesis was developed to test whether there were differences in reflective functioning between trainees and qualified CBT therapists expressed as differences in skills

attempted, skill importance ratings and self-rated competence measured using skills successfully applied in the session. Non-significant results suggest that, in this sample, trainees and qualified therapists broadly prioritised and attempted CBT skills similarly and reported comparable levels of perceived competence in skill delivery. One interpretation is that trainees and qualified CBT therapists in this sample demonstrated similar levels of reflective functioning. Alternatively, it may be that methodological issues masked an actual difference. For example, trainees may have overestimated their self-competence, which masked differences in successful skill application. This fits with clinical literature, which notes that less competent therapists tend to rate their competence less accurately and can overrate it compared to observer ratings (Brosan et al., 2008). However, observer ratings of competence based on a single session can also be unreliable and resource-intensive (Keen & Freeston, 2008), so they were not considered justifiable at this exploratory research stage.

Contextualisation of Main Findings

The findings of this study align with and diverge from existing clinical literature. In agreement with Campbell-Lee et al. (2024), this work found no significant between-group differences in procedural statements. These findings diverge from previous literature, which reports that less experienced therapists tend to make more self-focused statements due to their developmental stage (Jennings et al., 2003). In contrast with previous literature, which reports that qualified therapists make more abstract client conceptualisations (e.g. Jennings et al., 2003), this study found no significant between-group differences in client-focused reflective statements. A possible explanation may be that contemporary CBT training programs are placing greater emphasis on client formulation and reflection during training (e.g. Armstrong, 2016; Haarhoff & Thwaites, 2016), possibly reducing developmental differences previously observed in the use of client-focused reflective statements.

Skill development theory posits that experienced therapists have higher reflective functioning (Bennett-Levy et al., 2009; Bennett-Levy & Finlay-Jones, 2018). This work found no

significant differences between trainees and qualified CBT therapists in Reflective statements.

Synthesis of this finding with skill development theory and emerging evidence from a recent review (Boyle, 2025) may support an alternative explanation: practitioners across experience levels similarly engage their reflective systems, but the qualitative depth of their reflections differs rather than the frequency of statements. This study attempted to address the quality of statements by addressing knowledge type and interpersonal focus, which has led to the understanding that dyad-focused reflections were the most produced statements irrespective of experience level. A possible extension of this work may be to investigate the hypothesis that although there are no between-group differences in the frequency of dyad-focused reflective statements, there may be significant differences in the qualitative depth of those reflections. To illustrate, an example dyad-focused reflection on eliciting behaviours from trainee Participant K: “I think because we're doing cognitive therapy for depression, it's been very much more focused on the thoughts and what the cognitions are... so we haven't really focused on the behaviours”. In contrast, a qualitatively deeper dyad-focused reflection from a highly experienced therapist, Participant S, when talking about eliciting key cognitions:

“...there are beliefs we haven't quite got to that are quite global regarding her value as a person. And I don't think we're fully got to those and I don't know if it's because it's too painful on her part, and there's an element of avoidance. I don't know if it's because I'm titrating the emotion too much or I don't know if I'm just not quite asking the right questions”.

Methodological Considerations

This work aimed to elicit differences in reflective functioning in a manner feasible in real-world settings. This work's strengths include considering putative confounding variables, which may have enhanced the internal validity of findings. There were no systematic differences between groups in terms of days since the session, session number, number of comorbid conditions, therapist-

perceived capacity to form an alliance, and therapist-perceived suitability of service provision and standard CBT. It's possible that the use of proxy variables to measure client case complexity led to group differences in how participants understood and approached these questions, i.e. it may be trainee and qualified CBT therapists have differing perceptions of what makes a case complex. This study attempted to mitigate that risk by using four questions to assess different domains of case complexity rather than a single global question. Nonetheless, future studies may benefit from providing definitions of concepts such as 'standard CBT' to improve consistency in participant responses to these questions. An additional strength was using a structured approach to coding with an explicit coding guideline to promote consistency. However, several methodological compromises were made, which may have impacted the results. The four primary methodological considerations relating to methodological differences between this study and the study it aimed to replicate, sampling, measure design and procedure are discussed here, along with a reflective account of balancing methodological and ethical issues in this work.

First, it is essential to note the methodological differences between this study and the one it aimed to replicate. This study used a new method: structured session recollection. Campbell-Lee et al. (2024) measured reflective statements about hypothetical scenarios whilst reflective statements related to actual clinical contacts in this work. As such, therapists' reflective statements may not be comparable across studies, which could explain non-replication. Another methodological difference relates to sampling. This study used qualification status to indicate therapist experience. A minimum level of post-qualification experience for qualified CBT therapists was not specified. Not restricting recruitment in this way meant that the natural variation in post-qualification experience was not controlled. The mean post-qualification experience level was 6.7 years, with approximately 70% ($n=15$) of the qualified CBT therapists having post-qualification experience of six years or less and the rest having more than ten years ($n=6$). In contrast, Campbell-Lee et al. (2024) specified a minimum of years post-qualification experience. They separated qualified therapists into two groups: recently qualified (5-10 years post-qualification experience) and experienced (>10 years post-qualification

experience). All qualified therapists in that study had 5+ years of experience, with approximately 55.26% ($n=21$) having a minimum of eleven years post-qualification experience⁹. As such, the non-replication of Campbell et al.'s (2024) finding of significant between-group differences in reflective statements may be attributable to variations in sample composition. It is also possible that significant differences in reflective statements are only present between trainees and highly experienced practitioners, as reported by Campbell et al. (2024). Whilst the non-significant interaction between group and knowledge type may reflect a genuine lack of effect, the relatively small sample of highly experienced practitioners in this study may have resulted in insufficient power to detect a significant interaction. If reflective functioning continues to develop ten years post-qualification, this may be when meta-competences are most evident in therapeutic practice. Future studies may consider using larger sample sizes and recruitment restrictions for years post-qualification experience (>10 years) to ascertain whether Campbell-Lee et al.'s findings can be replicated using the current study's method.

Second, this work collected minimal background information about participants, a decision driven by ethical principles only to collect what was adequate, relevant and necessary. This approach seemed appropriate as the research aim was not to achieve a representative sample but to gain insight into potential differences in reflective functioning. However, collecting minimal background data may have masked an unrepresentative sample. Recruitment occurred primarily via higher education institutions and social media. As such, qualified participants may not reflect typical working clinicians. In addition, the decision to not restrict participants to CBT therapists with British Association for Behavioural and Cognitive Psychotherapies accreditation or trainees on accredited training programmes as a minimum benchmark means that the sample may reflect a wide variety of CBT training and competence, which may have confounded results.

⁹ The mean for years of post-qualification experience in the Campbell-Lee et al. (2024) study could not be calculated as age was collected in categories.

Third, compromises were made in the semi-structured interview measure design between precision and simplicity. The questions used in this study may have impacted the reliability of responses. Questions around skill use were designed based on the hypothesis that experienced therapists prioritise in session by using fewer skills, so the binary response options to the question 'Did you attempt this skill?' appeared suitable then. However, for specific skills, such as interpersonal effectiveness, the binary response options may have led to a false choice which flattened responses. In addition, it may be that asking about skill importance prompted therapists to respond based more on the abstract importance of a skill rather than clinical judgement on what was important at that moment for their client. As this was an exploratory study, these issues provide insight into areas for refinement in future research. For example, given the high level of skills attempted and rated as important, prioritisation in session may be reflected in attending less to a skill rather than leaving it out or seeing it as unimportant for a client. As such, future work may benefit from merging the questions relating to skills attempted and skill importance into a single question with an analogue scale which asks therapists how much they focused on each skill during the session based on client need.

Fourth, the extent to which the validity of the coding schema and procedure was demonstrated in this work was limited. Similar to the studies attempting to measure meta-competences discussed in Boyle's (2025) review, subjectivity in response rating may have led to biases in coding. It cannot be ruled out that progression or drift in the candidate's application of the coding rules occurred over time. Independent second ratings were conducted to mitigate this issue. However, clinical judgment was required by both coders due to some statements plausibly fitting into more than one category, which may have impacted results. Both the candidate and the second rater trained at the same university; thus, it may be that any convergence is related to shared training experiences. Moreover, formal inter-rater reliability statistics were not calculated due to the methodological trade-off involved in asking the second rater to independently classify the extracted statements. Whilst this reduced contamination from the first rater, this procedure meant that the

total number of statements identified by each rater differed, which impeded direct calculation of κ . Whilst this was an exploratory study, future studies will benefit from calculation of inter-rater reliability to give a more robust indication of the reliability of the coding schema. This may be achieved by classifying the number of statements for all raters prior to independent rating of statement categories. Ongoing investigation and evaluation of the coding schema may support the understanding of its effectiveness. It may also be helpful to classify the depth of reflective statements, as Boyle (2025) found this was a key area of reflective functioning.

Reflection: Balancing Ethical and Methodological Considerations (310 words)

A key ethical issue in this work relates to methodological considerations, particularly around the coding schema and procedure. It was important to the candidate to demonstrate a commitment to safeguarding participant privacy, particularly as psychotherapy is a relatively small professional community where participants may be more easily recognised. Avoiding unnecessary over-collecting and over-sharing of participant data was a key consideration in planning this work. However, the candidate may not have found the right balance between ethical considerations and research needs. During coding with the supervisor, it became apparent that the candidate, having participated in the interviews and watched the recordings, had a deeper context to the content of the therapists' statements on the transcripts than the supervisor. This may have been meaningful signal or noise in the data, but due to the candidate guaranteeing participants that only they would view the recordings of the interviews, the second rater was prohibited from viewing them. As such, there wasn't a choice between coding supported by recordings or coding as-seen on the page; Transcripts had to be coded as-seen to ensure the candidate and the second rater were coding consistently. Fortunately, the candidate deemed that coding as seen on the page was most suitable for this exploratory work as it reduced subjectivity during coding. However, if coding supported by recordings had been considered most appropriate, the candidate would have had to follow up with participants to amend their consent. This would have represented an increased burden to

participants, which would have been undesirable. This experience has encouraged the candidate to consider the balance of data use, informed consent and research needs at all study planning stages, not just recruitment and data collection. This may allow any future imbalances to be captured, which may prevent potential under-collection of data or inability to use data for relevant research needs due to the failure to gain prior consent.

Future Research Directions

Further replication is recommended to clarify whether the differences in findings between this study and that of Campbell et al. (2024) are due to methodological factors or chance and to strengthen our understanding of reflective functioning in practice. Several key recommendations are proposed for future studies. First, it is recommended that larger samples are used to allow stratification of qualified therapists by experience level, as differences may be more evident between trainees and highly experienced practitioners. Next, future studies may benefit from refining the study measure. This may be achieved by incorporating a measure of which skills practitioners focus on in the session, as reflective functioning may be reflected not in the frequency of skills attempted and judged as important but in the skills attended to in the session. This slight change in wording may better capture reflective functioning. Similarly, it may be beneficial to explore the depth of reflective statements made by therapists, as reflective functioning may be captured in the qualitative depth rather than the quantity of reflections.

Clinical Implications

Whilst this study did not elicit reflective functioning differences between trainees and experienced therapists, it may support reflective functioning processes. Anecdotally, many therapists who participated in the study requested a copy of the measure for personal use as they had found it beneficial in supporting their reflections on their session. The process-focus of the measure may help therapists to reflect on how they delivered skills and why, an adjunct to self-assessment using proficiency-focused measures such as the CTS-R.

Furthermore, there is an assumption in clinical practice, whilst not previously studied, that qualified therapists attempt fewer skills related to therapist drift or meta-competent prioritisation. The results of this study do not support that assumption. Interestingly, the candidate observed that qualified therapists in this study, particularly highly experienced ones, were surprised at how many skills they had applied in the session they discussed. It may be that qualified therapists are more adherent than they recognise on immediate recall of a session. This interpretation fits with clinical literature, which suggests that experienced therapists have automated procedural skills (Bennett-Levy et al., 2009), meaning they may be unconsciously performing skills. The study measure may be a valuable tool to support them in bringing the skills used in a session to their active awareness and may in fact be a method that could be incorporated in SP/SR programmes.

Conclusions

This work explored differences between trainee and qualified CBT therapists in reflective functioning by examining their responses regarding a recent therapy session. The primary aim was to replicate the finding of Campbell et al. (2024) that experienced CBT therapists make more reflective statements than trainees. This work did not replicate this effect; No statistically significant between-group differences for knowledge type or interpersonal focus on therapist statements were observed. Qualified therapists made more statements overall. However, this result may be confounded by qualified therapists speaking more about their session, potentially due to higher confidence. No statistically significant differences were observed in other areas of reflective functioning, such as skill prioritisation. Given the exploratory nature of this study, further replication is required. Possible refinements to the study measure may further our understanding of the nuances of reflective functioning, e.g. measuring the qualitative depth of reflective statements. Furthermore, despite its limitations, the study measure appeared to support reflective processes and may be a valuable formative tool for trainee and experienced CBT therapists alike.

This work contributes to our broader understanding of reflective functioning in practice. Exploring these preliminary hypotheses has supported the development of more targeted hypotheses about the qualitative depth of reflective statements and therapists' attentional focus in session, which can be explored in future studies.

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Appendix A

Participant Flyer, Information and Consent

Figure A1.

Study Flyer

Newcastle University

Participants are entered into a draw for two £25 Amazon vouchers

RESEARCH VOLUNTEERS NEEDED

Are you a trainee or qualified therapist or psychologist in the UK who uses cognitive behavioural therapy? We want to hear from you!

About the research study

Our research team is interested in the skills used by CBT practitioners with different levels of clinical experience, from trainee to highly experienced practitioner.

What does taking part involve?

You will be asked to take part in a one-to-one research interview during which you will be asked to provide your views and reflect on your experience delivering a recent client session. Interviews will occur via Microsoft Teams and will last up to 60 minutes.

Why do we think this research is important?

Our team wants to further our collective knowledge of CBT. We believe that we can learn from how each of us go about applying CBT in our daily practice.

Find out more:

Information for Participants
or copy and paste
https://newcastle-my.sharepoint.com/:b/g/personal/c0075085_newcastle_ac_uk/EVh3A3evjopGpgNEYU8tYjIBJDJkmYeQRsyYDVyIT-Vseg

Get in touch:

Stephanie Boyle
Trainee Clinical Psychologist
s.boyle3@newcastle.ac.uk

Sign up:

Book a Research Interview
or copy and paste
<https://outlook.office.com/bookwithmelusor/6905828ae5a5433f82bed1c535b2eb8f@newcastle.ac.uk/meetingtype:c:UXkeL7wJU2aEV9imEjJxA2?anonymous&ep=mLinkFromTile>

Figure A2a.

Participant Information Sheet 1 of 4



Exploring cognitive behavioural therapy skill use amongst trainee and qualified practitioners

Information for Participants I

Invitation

You are being invited to take part in a research study. Before you decide whether you wish to take part it is important that you understand why the research is being done and what it will involve. Please read this information carefully and discuss it with others if you wish. Take time to decide whether you wish to take part. If you do decide to take part, you will be asked to provide verbal consent at the research interview. However, you are free to withdraw at any time, without giving a reason and without any penalty or loss of benefits.

What is the purpose of the research?

Skills in cognitive behavioural therapy (CBT) are well defined by widely used frameworks such as Roth and Piling's (2007) framework 'the competences required to deliver effective cognitive and behavioural therapy for people with depression and with anxiety disorders'. This framework was developed by focusing on evidence of what works in controlled clinical trials (Roth & Piling, 2007). However, the practice of CBT practitioners across the U.K. and Ireland is not taking place under the controlled conditions specified in clinical trials. The purpose of this research is to explore the skills that CBT practitioners with a wide variety of clinical experience are using in their everyday practice. The aim is to help us better understand CBT skill use.

What does taking part involve?

Taking part involves completion of a research interview which takes up to 60 minutes. Participants are asked to arrange a research interview via [booking an interview](#) on the primary researchers booking page. If there are no interview times which suit your needs, please contact the [primary researcher](#) directly. Study details are provided via online PDF. You are under no obligation to consent to participate. Once an interview time is arranged, the next step is to chose a therapy session to reflect on. Please choose a session which has occurred in the last 7 days if possible, or the last 14 days if necessary. Interviews will occur via Microsoft Teams and will be recorded. You will first be given an opportunity to ask questions before deciding whether you agree to proceed. Then, recording will begin. A copy of the interview schedule will be provided to you on screen and the primary researcher will go through it with you. Following the interview, you will then be debriefed. All participants will be entered into a prize draw for two £25 Amazon Vouchers which will take place on June 1st, 2025.

Version 4.2 20/11/24

Figure A2b.

Participant Information Sheet 2 of 4



Exploring cognitive behavioural therapy skill use amongst trainee and qualified practitioners

Information for Participants II

What information will be collected and who will have access to it?

Personal information will be collected including: age group, gender, qualification level, professional group, workplace type (community, inpatient mental health etc.). Interviews will be recorded via Microsoft Teams then deleted within 6 months. Only the primary researcher Stephanie Boyle will have access to the interviews. **No personally identifiable information will be collected about your client.** We are interested in your personal reflections only.

The primary researcher will be working towards a Doctorate in Clinical Psychology and will revisit the data for analysis once the data collection period is over. This will be when enough participants have been recruited or March 28th 2025, whichever is soonest. The de-identified data will then be shared with the research supervisors (Dr Stephen Barton & Peter Armstrong) to assist with analysis. All data will be analysed and presented quantitatively at the group level. The data will be stored on Newcastle University's shared file store service. This is backed up daily, with each back up retained for 90 days. The anonymised dataset will be held on the university service for ten years.

The primary researcher will use your name and contact details (email address) to contact you about the research study, for the purposes of withdrawal and in relation to the prize draw. Following the prize draw this information will be deleted. Individuals at Newcastle University may look at your anonymised research data to check the accuracy of the research study.

If you agree to take part in the research study, your anonymised data will become part of a dataset which can be accessed by other users running other research studies at Newcastle University and in other organisations. These organisations may be universities, or NHS organisations. Your information will only be used to conduct research.

Why have I been invited to take part?

You have been invited to take part as you are currently attending or have completed a postgraduate-level psychotherapy training course in the U.K. or Ireland which includes CBT. This may include but is not limited to a high intensity CBT course, a clinical psychology course or a psychotherapy course. To participate we ask that you are routinely practicing CBT at the time of recruitment as you will be asked to reflect on a recent CBT session you've had with a client in the 14 days prior to the research interview.

Version 4.2 20/11/24

Figure A2c.

Participant Information Sheet 3 of 4



Exploring cognitive behavioural therapy skill use amongst trainee and qualified practitioners

Information for Participants III

What are the possible benefits of taking part?

The primary benefit of taking part is contributing to a research stream which is looking at new ways of understanding skill use in CBT. The research team are looking understanding the skills used by practitioners with a range of clinical experience across a range of therapeutic settings. It is hoped that by exploring therapists work we can gain a deeper understanding of CBT skill use in real world settings.

What are the possible disadvantages or risks of taking part?

This is a low-risk research study. In the extremely unlikely event that the participant discloses unethical or unsafe practice, the primary researcher will need break confidentiality to discuss this with their supervisor Dr. Stephen Barton. If deemed necessary, further action will be taken following the guidance of local safeguarding policy and relevant professional conduct codes. Where possible, it would be ensured that the participant is actively involved in this process.

Who is the sponsor and data controller of this research?

Newcastle University is the sponsor for this study based in the United Kingdom. Newcastle University will be using information from you to undertake this study and will act as the data controller for this study. This means that Newcastle University is responsible for looking after your information and using it properly. The lawful basis for carrying out this study under GDPR is Task in the Public Interest, (Article 6,1e) as research is cited as part of the University's duties.

Your rights to access, change or move your information are limited, as Newcastle University need to manage your information in specific ways for the research to be reliable and accurate. If you withdraw from the study, Newcastle University will keep the information about you that has already been obtained. To safeguard your rights, the minimum personally identifiable information will be collected.

You can find out more about how Newcastle University uses your information at <https://www.ncl.ac.uk/data.protection/> and/or by contacting their Data Protection Officer at rec-man@newcastle.ac.uk

Version 4.2 20/11/24

Figure A2d.

Participant Information Sheet 4 of 4



Exploring cognitive behavioural therapy skill use amongst trainee and qualified practitioners

Information for Participants IV

Has this study received ethical approval?

This study received ethical approval from Newcastle University Research Ethics Committee on 06/10/24 (ref: 511000/2023).

Who should I contact for more information?

If you would like further information or have any questions, please contact the primary researcher Stephanie Boyle at any time at s.boyle3@newcastle.ac.uk.

Who should I contact to make a complaint?

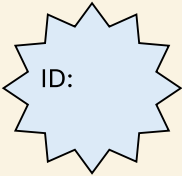
If you wish to file a complaint please contact the lead research supervisor Dr Stephen Barton stephen.barton@newcastle.ac.uk

If you wish to raise a complaint on how your personal data is handled, you can contact the Data Protection Officer who will investigate the matter: rec-man@newcastle.ac.uk . If you are not satisfied with their response you can complain to the Information Commissioner's Office (ICO): <https://ico.org.uk/>

Version 4.2 20/11/24

Figure A3.

Blank Electronic Consent Form




Exploring use of cognitive behavioural therapy skills amongst trainee and qualified therapists

Participant Consent

Thank you for your interest in taking part in this research study: *exploring use of cognitive behavioural therapy skills*. Please read the statements below after you have read the Information for Participants I-IV and listened to an explanation about the research study. You will be provided with your own copy of this document with your unique Participant ID which can be found at the top left-hand corner of this document.

Statements of Consent Please check the boxes to indicate your agreement.		
1	I confirm that I have read the information sheet dated 20/11/24 (version 4.2) for the above study, I have had the opportunity to consider the information, ask questions and I have had any questions answered satisfactorily.	☐
2	I consent to the research interview being recorded via Microsoft Teams. I understand that the recording will be viewed only by the primary researcher for the purposes of data extraction. It will be deleted two weeks following the interview.	☐
3	I agree to participate in this research study. I understand that participation is voluntary, and I am free to withdraw at any time by contacting the primary researcher Stephanie Boyle at s.boyle3@newcastle.ac.uk and quoting my participant ID. I understand that if I withdraw, any data that I have provided up to that point will be included.	☐

Version 4.2 20/11/24

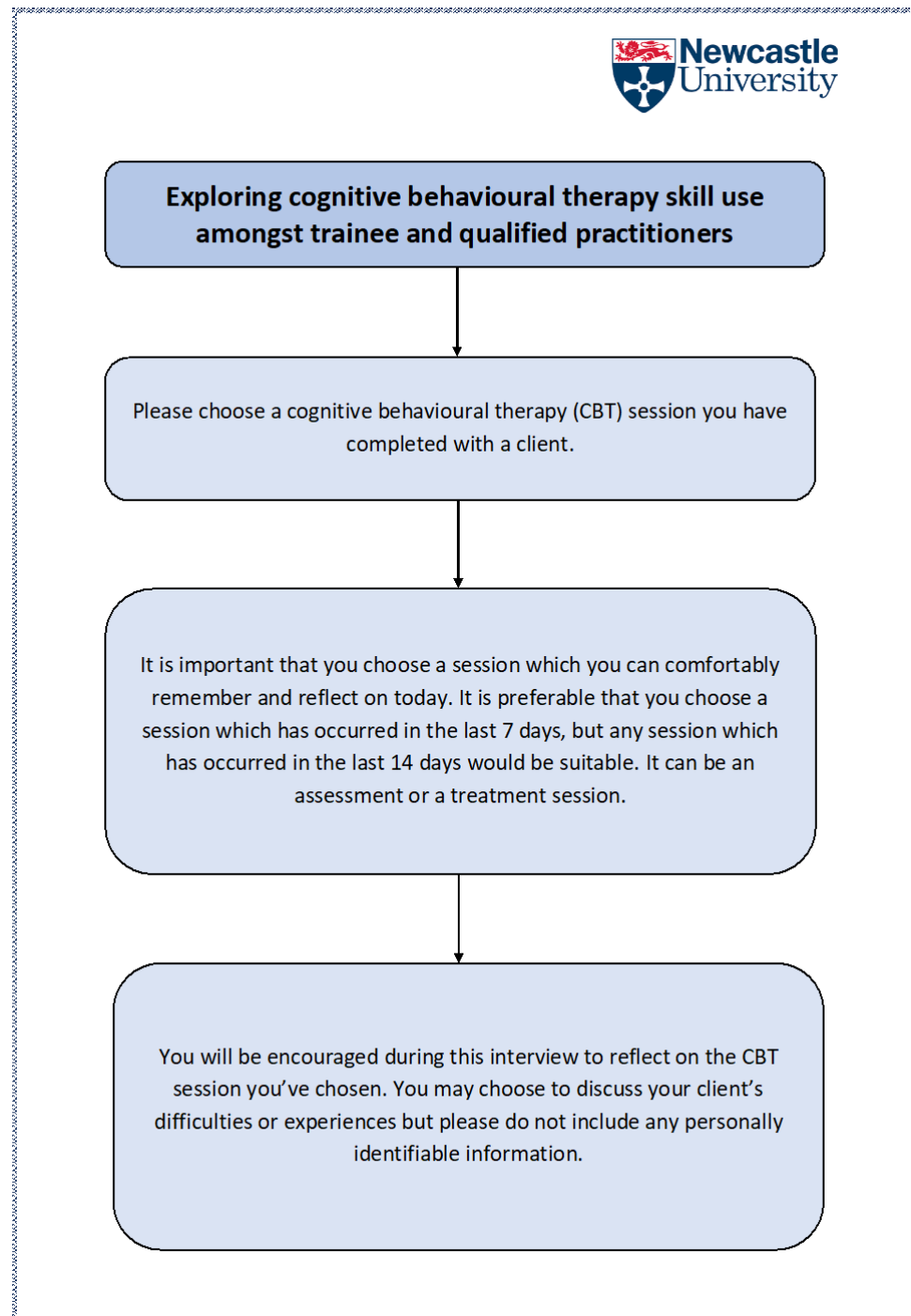
Appendix B**Interview Schedule (15 parts)****Figure B1a.***Interview Schedule Page 1 of 15: Instructions to Participant*

Figure B1b.*Interview Schedule Page 2 of 15: Practitioner Background*

Section 1: Practitioner Background	
Please describe your age: ☐ 18-24 ☐ 25-34 ☐ 35-44 ☐ 45-54 ☐ 55-64 ☐ 65 and over	Please describe your gender: ☐ Man ☐ Woman ☐ Non-binary ☐ Gender neutral ☐ I don't use gender labels ☐ Prefer not to say
Do you currently practice CBT in the UK or Ireland?	
Are you a trainee or a qualified CBT practitioner? If qualified, when did you qualify?	
☐ Trainee on a postgraduate course which includes CBT ☐ Practitioner with a postgraduate qualification which includes CBT	
Which service type best describes where you currently work?	
☐ Primary Care Service (e.g. Talking Therapies Service) ☐ Secondary Care Service (e.g. Community Treatment Team) ☐ Tertiary Care and Specialist CBT/Psychology Service ☐ Inpatient Mental Health Services ☐ Self-employed CBT Practitioner ☐ Other, please specify	
Do you have a core profession other than CBT? If so, when did you qualify?	

Figure B1c.*Interview Schedule Page 3 of 15: Session Information*

Section 2: Session Information					
How long ago was the session?					
Session number:					
Client's main presenting problem:					
Any secondary/comorbid problems:					
Across all your work with this client, have they been able to work collaboratively with you?					
Seldom 1 ☐	Sometimes 2 ☐	Fairly Often 3 ☐	Very Often 4 ☐	Always 5 ☐	
How suitable is the service provision for your client's current needs?					
Not at all suitable 1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	Highly suitable 6 ☐
How suitable are standard CBT methods for your client's presenting problem(s)?					
Not at all suitable 1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	Highly suitable 6 ☐

Figure B1d.

Interview Schedule Page 4 of 15: Agenda-Setting

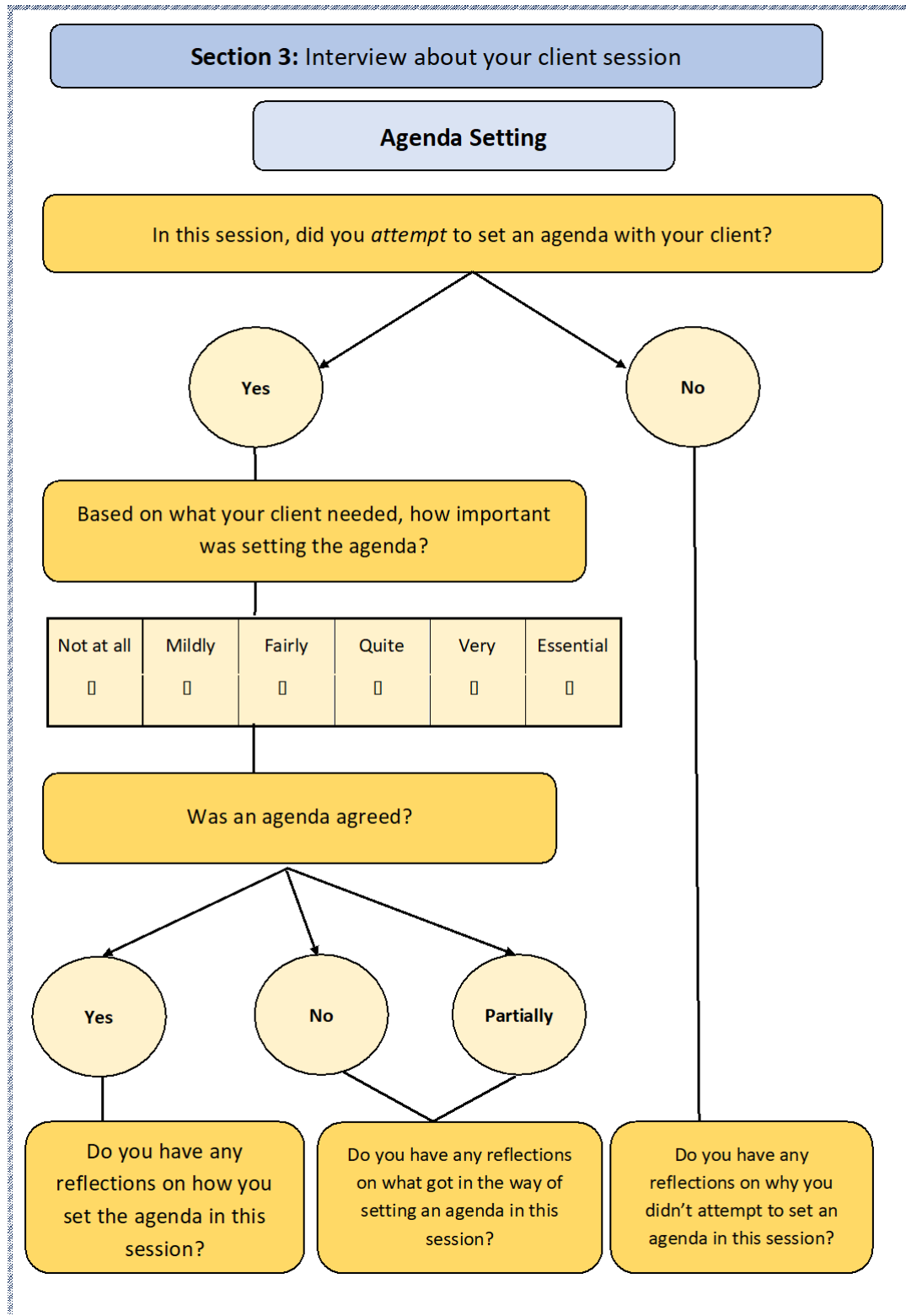


Figure B1e.

Interview Schedule Page 5 of 15: Feedback

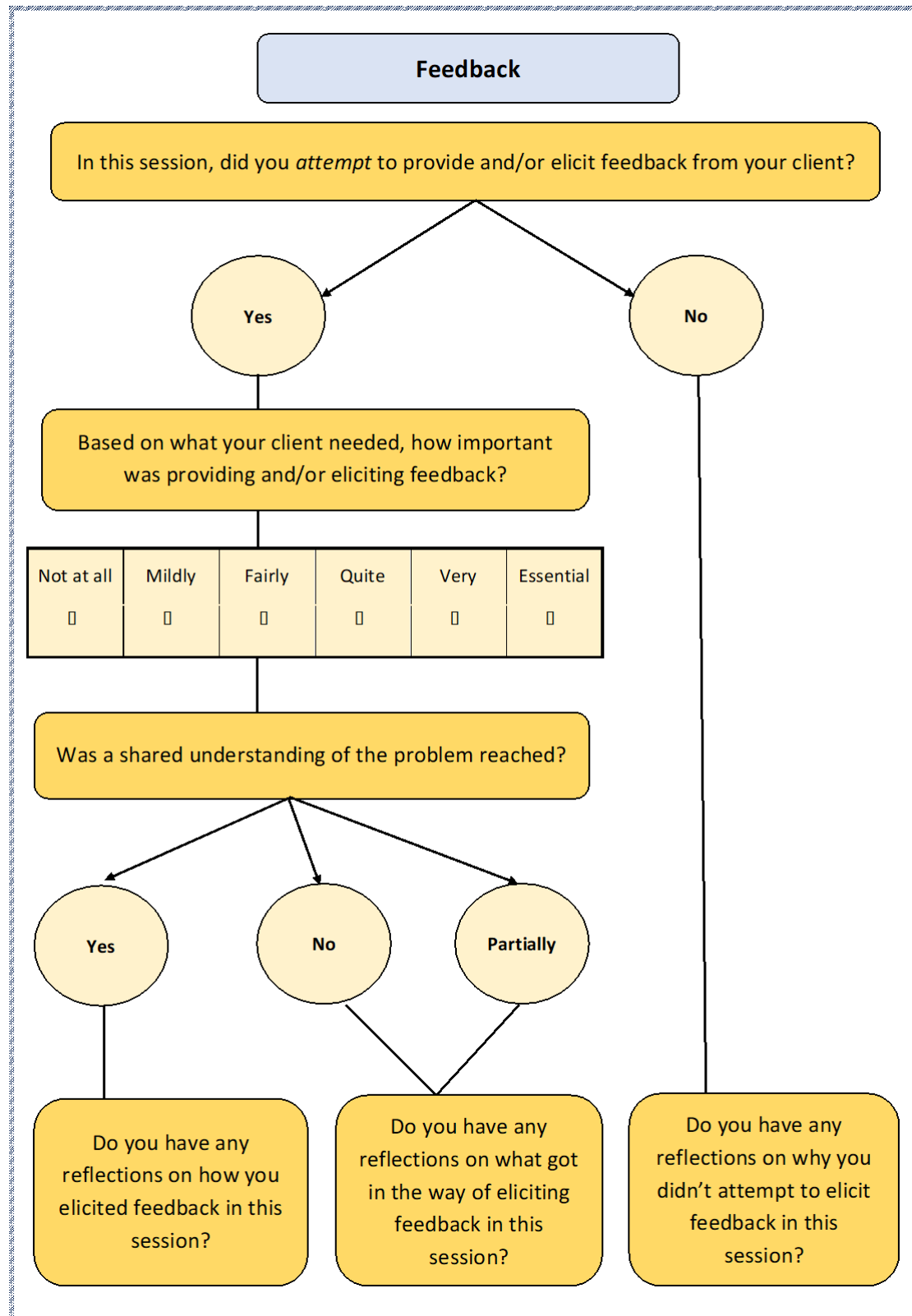


Figure B1f.

Interview Schedule Page 6 of 15: Collaboration

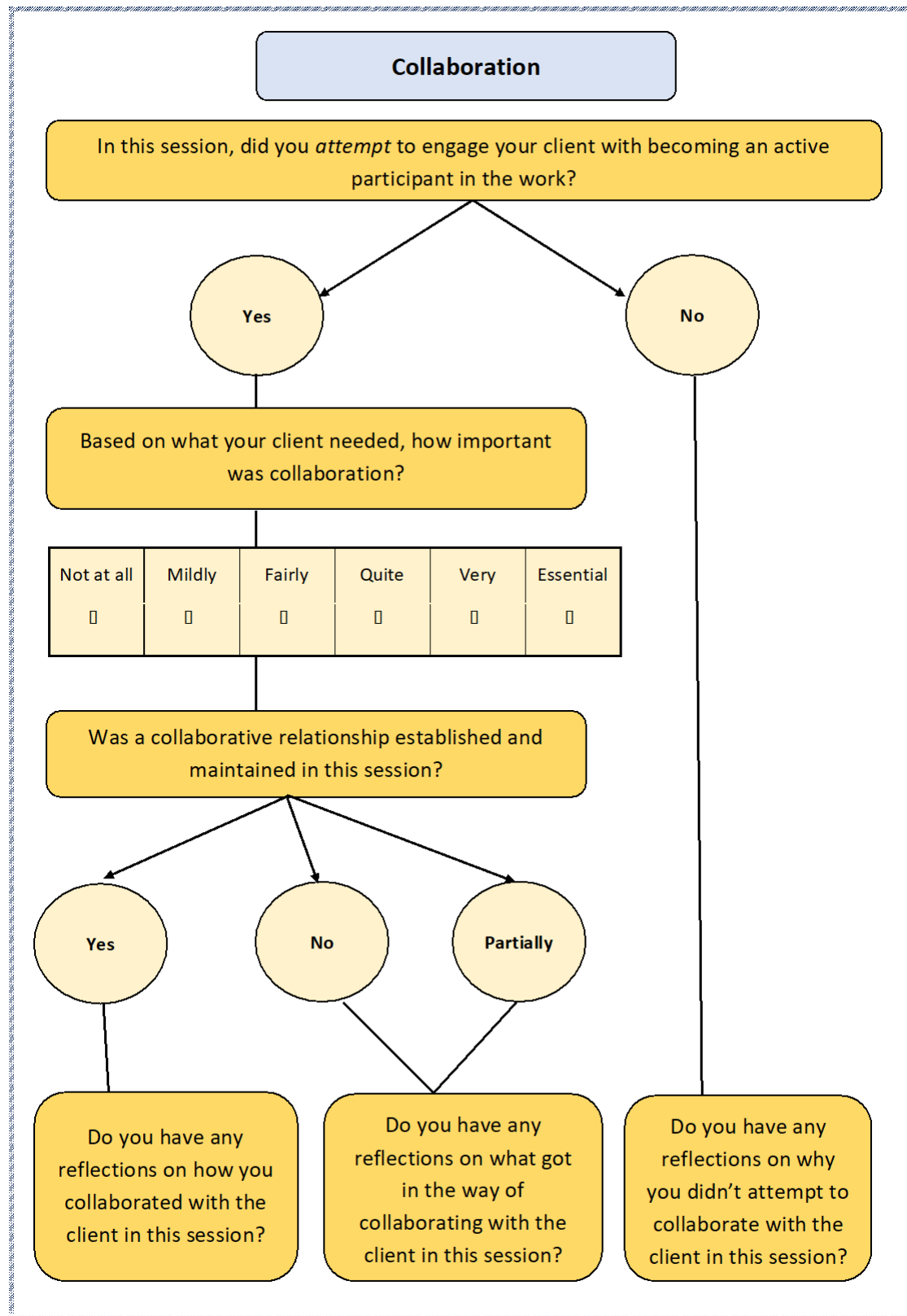


Figure B1g.

Interview Schedule Page 7 of 15: Pacing

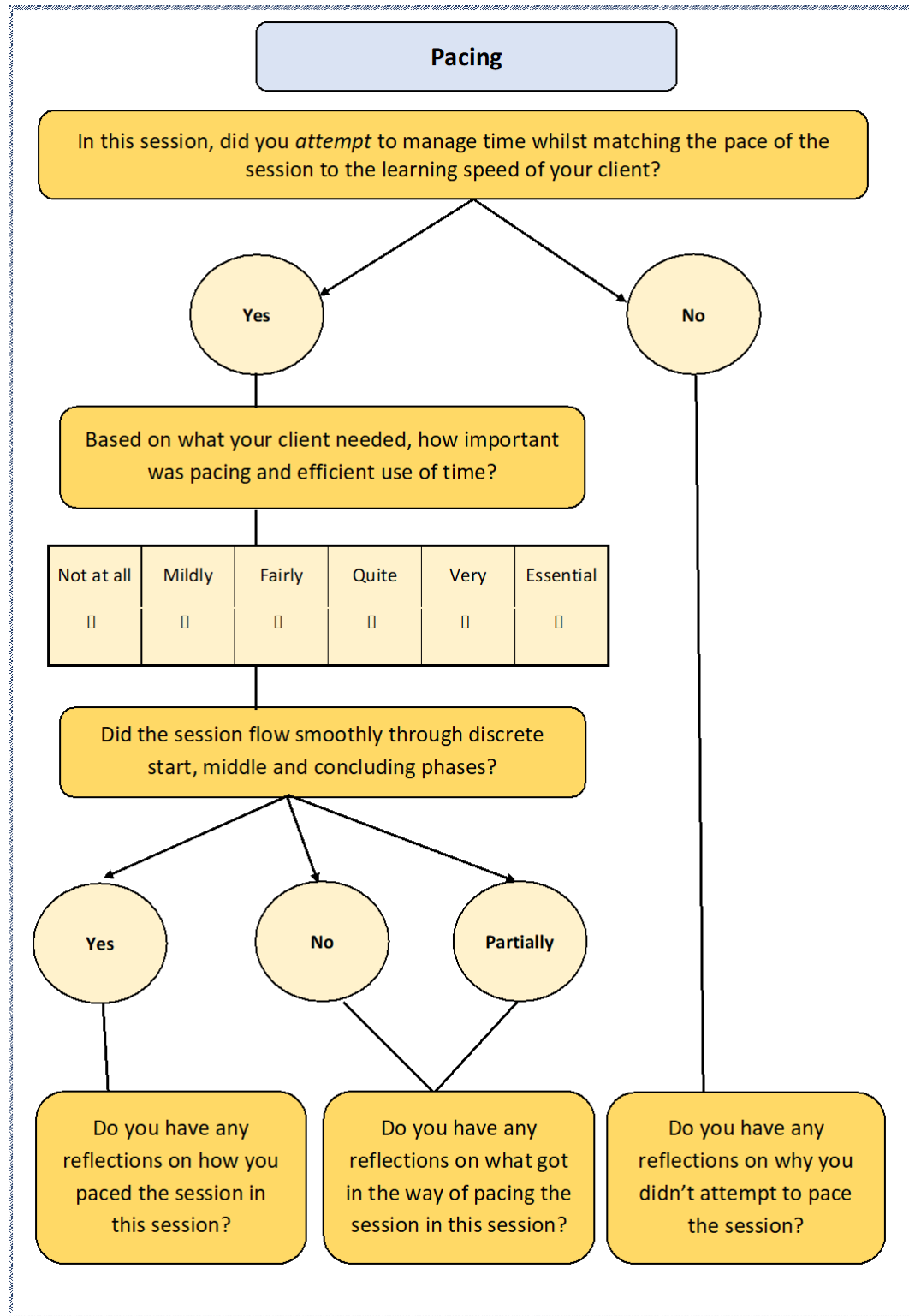


Figure B1h.

Interview Schedule Page 8 of 15: Interpersonal Effectiveness

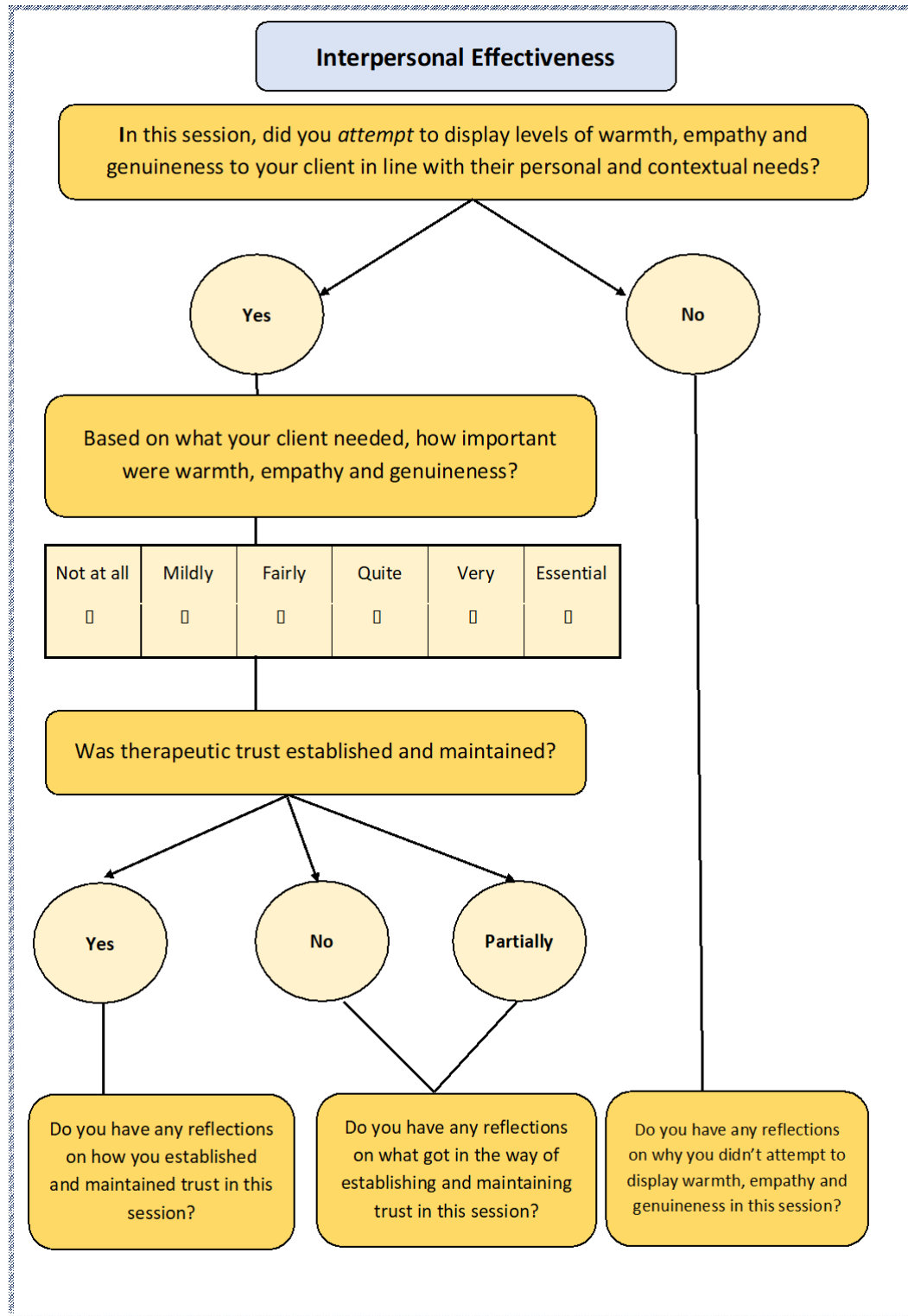


Figure B1i.

Interview Schedule Page 9 of 15: Eliciting Appropriate Emotional Expression

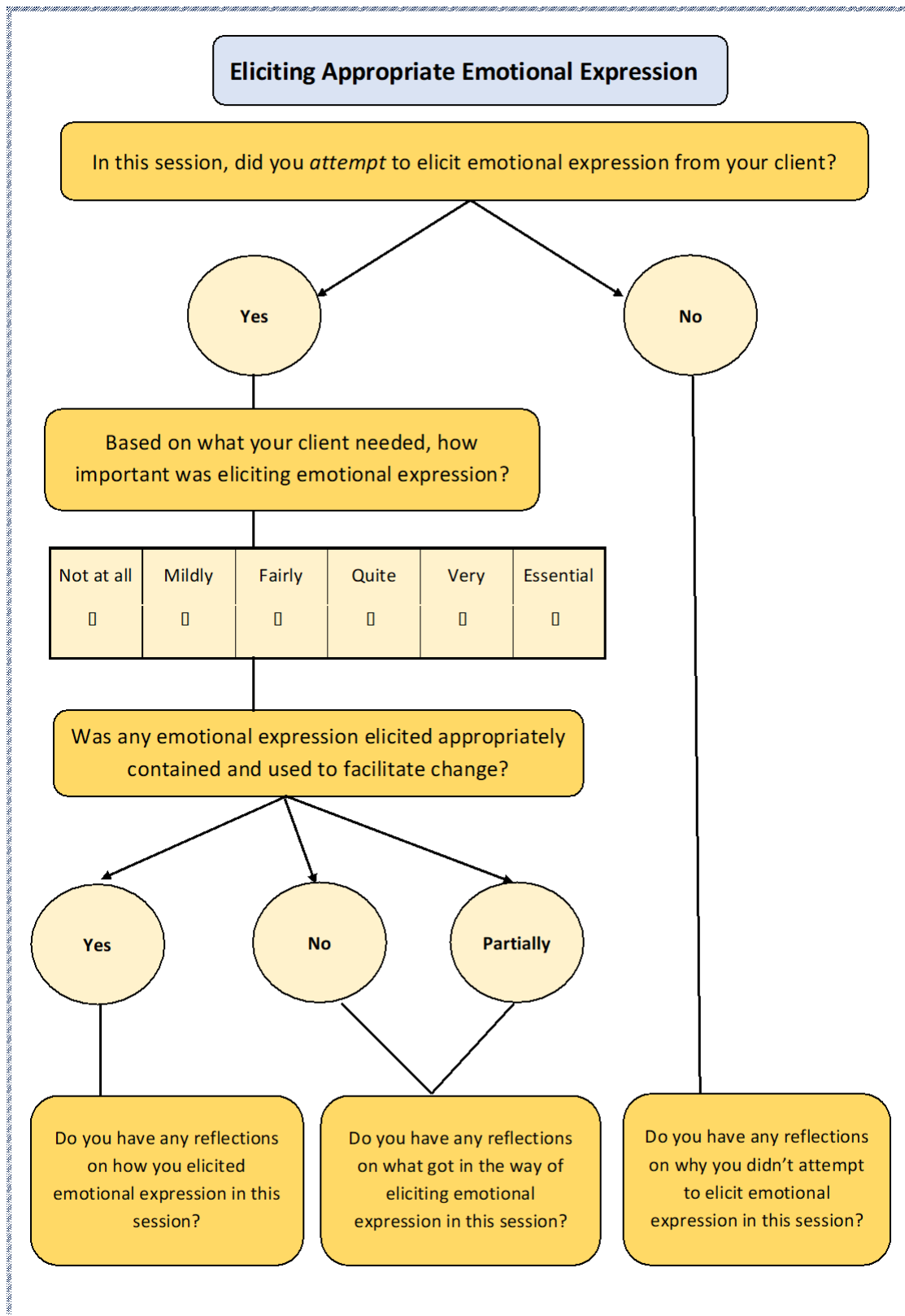


Figure B1j.

Interview Schedule Page 10 of 15: Eliciting Key Cognitions

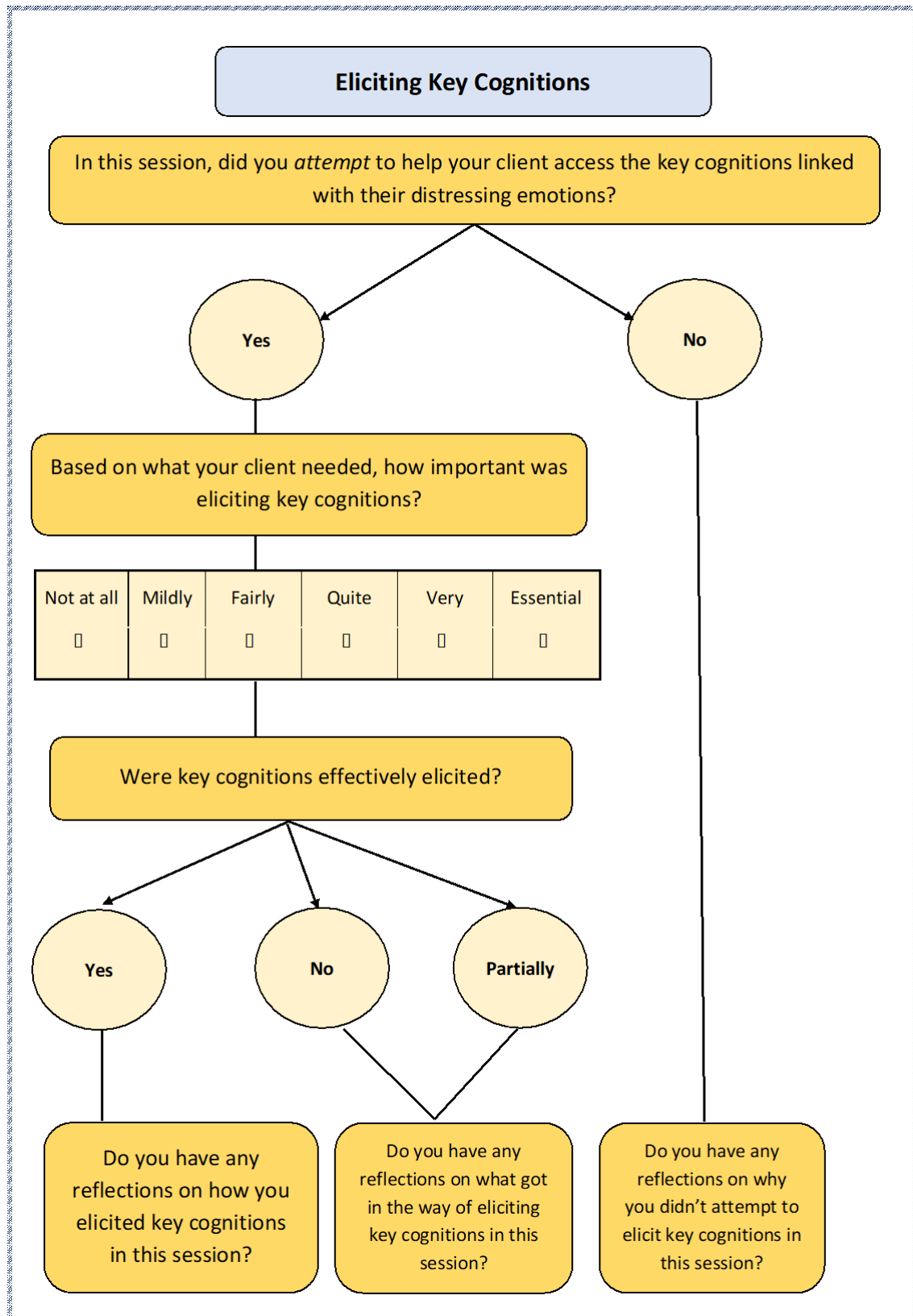


Figure B1k.

Interview Schedule Page 11 of 15: Eliciting Behaviours

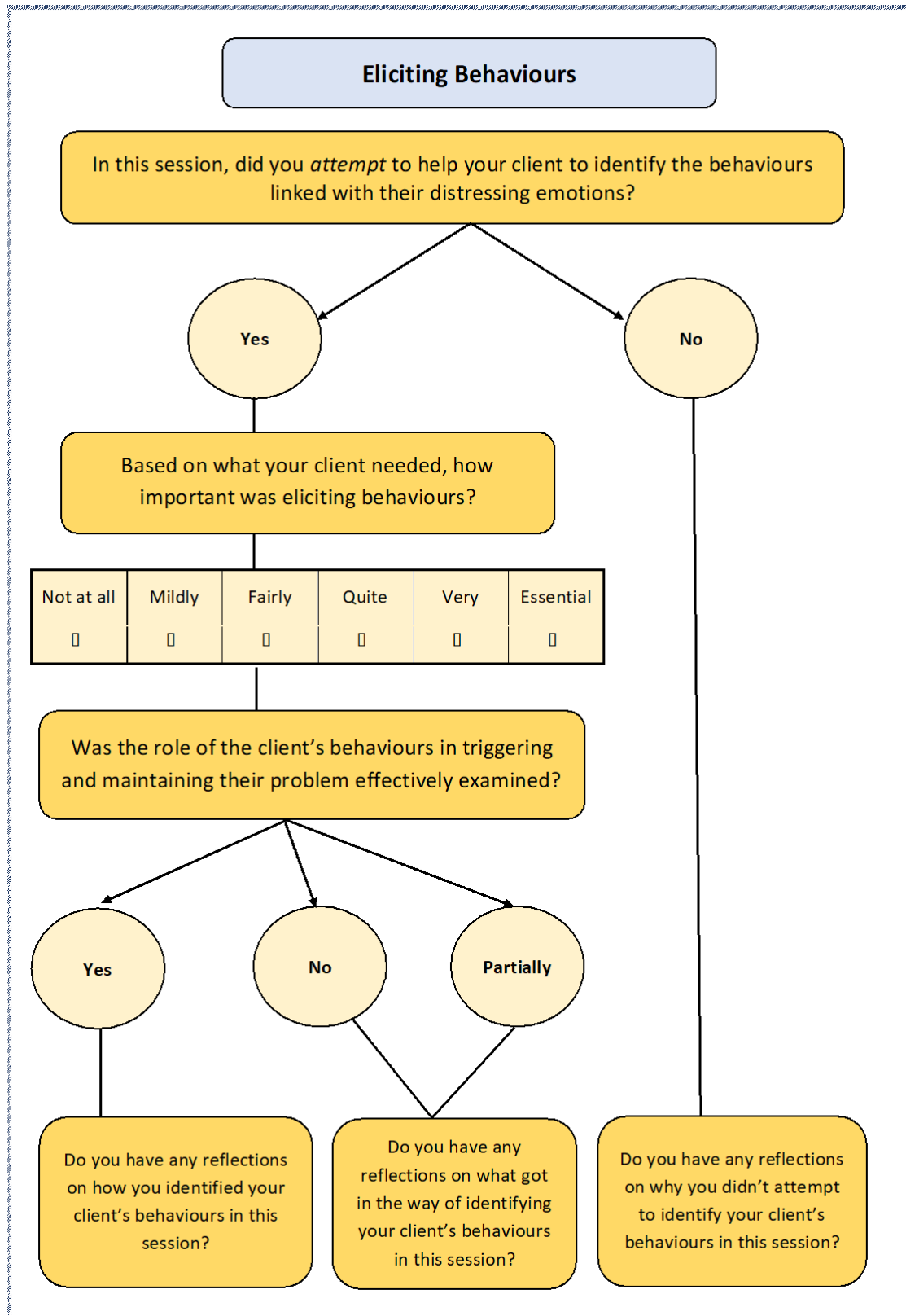


Figure B11.

Interview Schedule Page 12 of 15: Guided Discovery

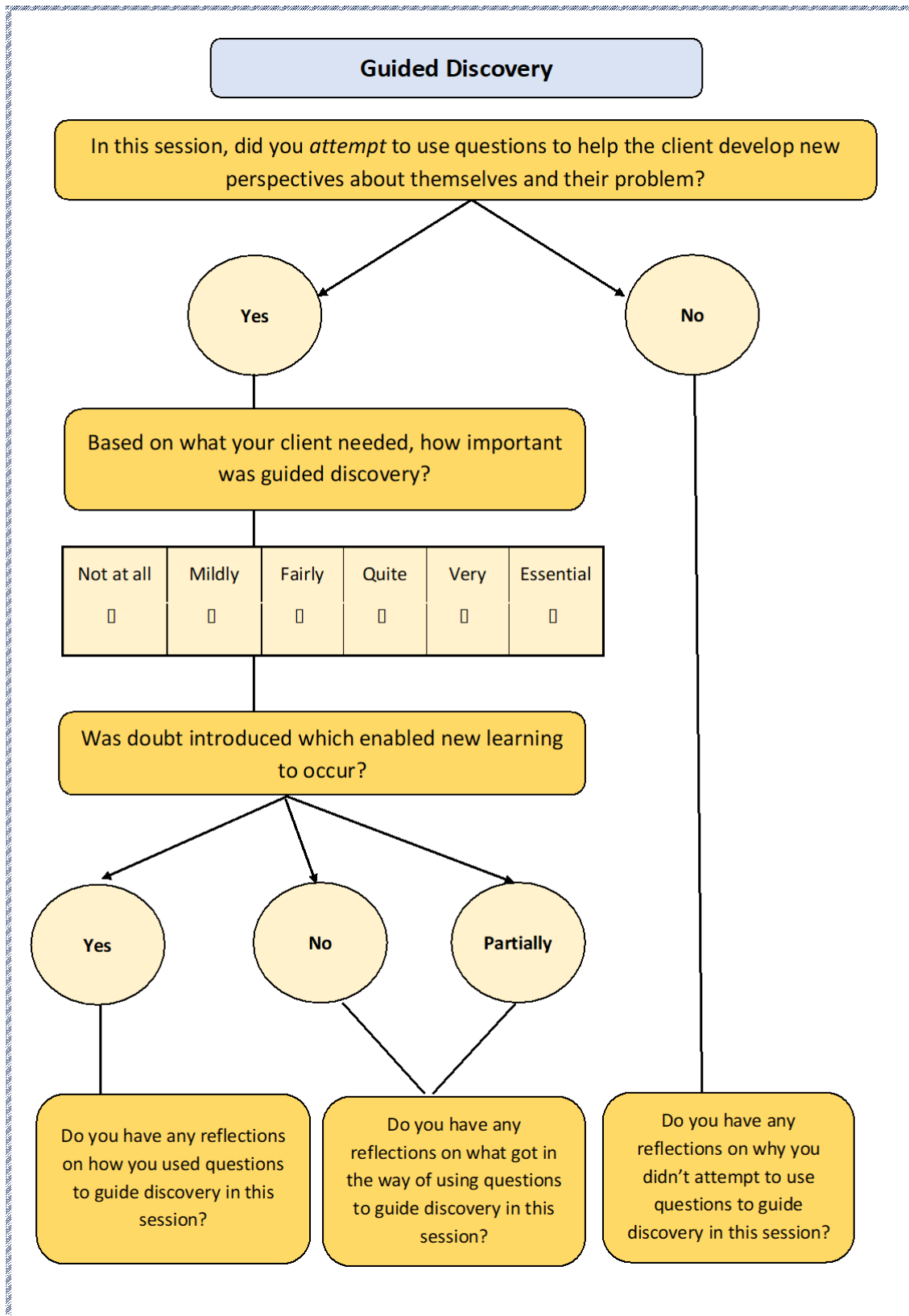


Figure B1m.

Interview Schedule Page 13 of 15: Conceptual Integration

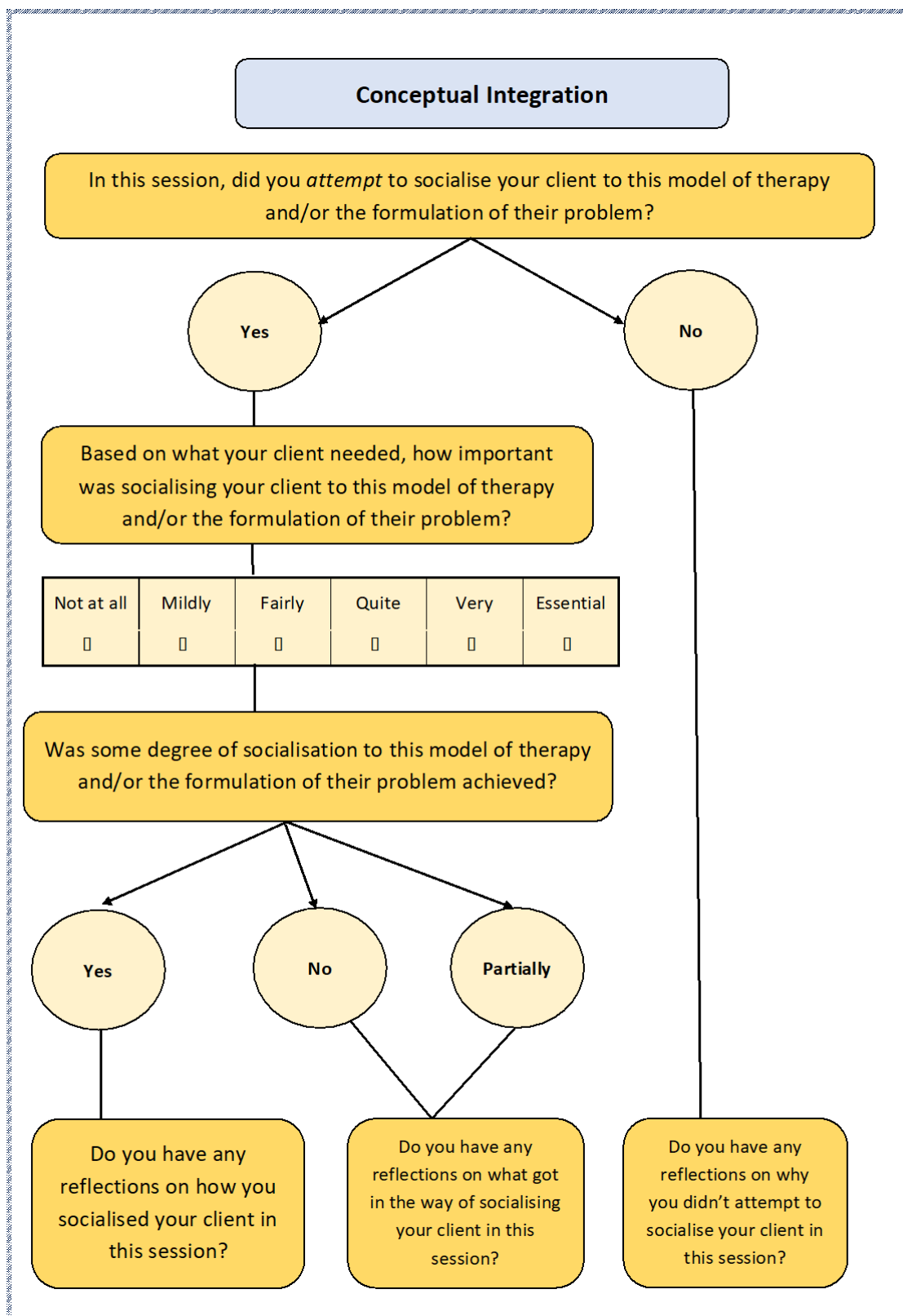


Figure B1n.

Interview Schedule Page 14 of 15: Application of Change Methods

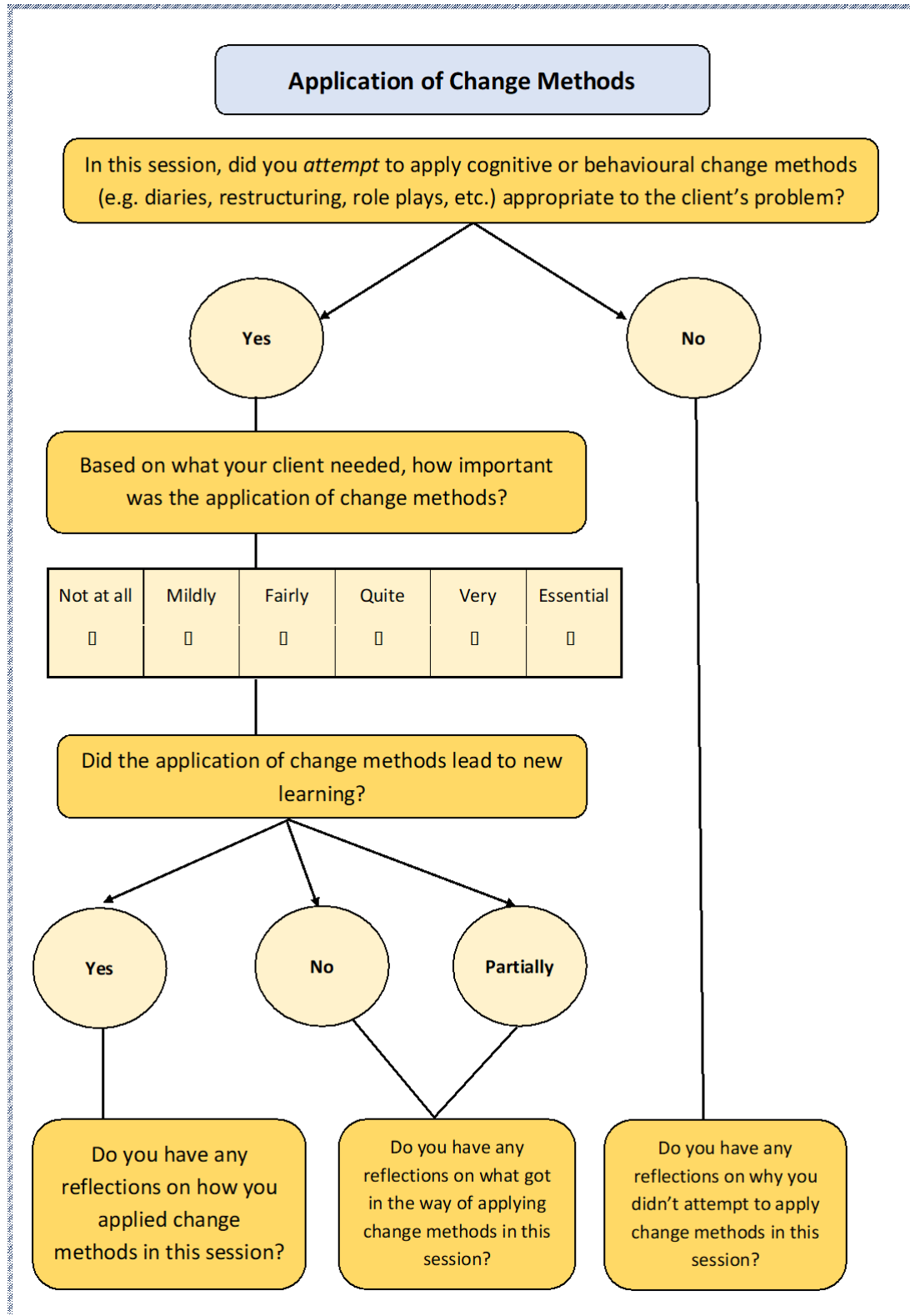
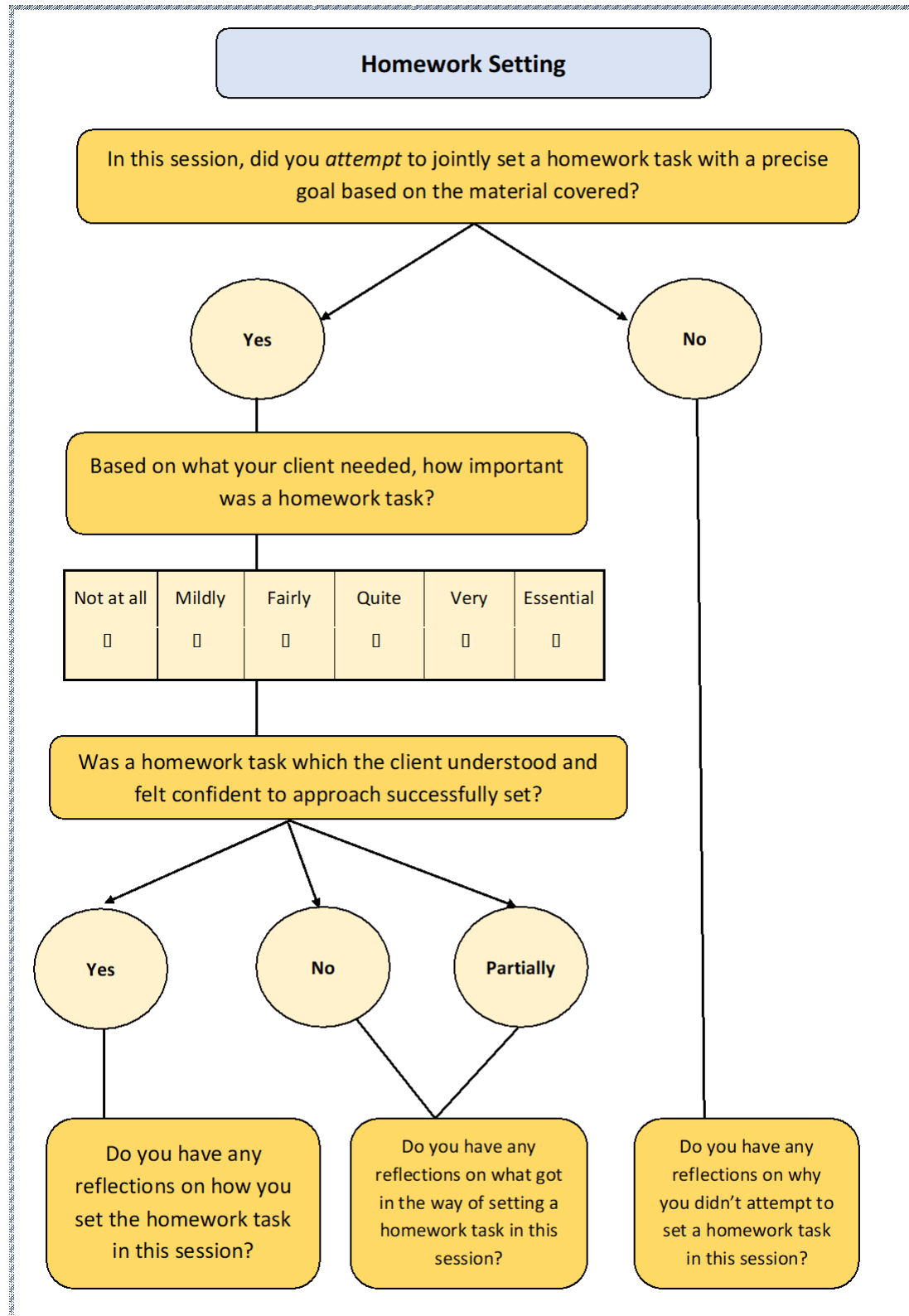


Figure B1o.

Interview Schedule Page 15 of 15: Homework-Setting



Appendix C

Second Rater Instructions (6 parts)

Figure C1a.

Second Rater Instructions Page 1 of 6

Exploring the cognitive behavioural therapy skills used amongst trainee and qualified practitioners

SECOND RATER INSTRUCTIONS

Background

This study aims to explore whether there is a difference between experienced and trainee therapists regarding the skills they have used in a single cognitive behavioural therapy (CBT) session with a client. This was explored by interviewing participants and asking them to reflect on their use of the twelve clinical skills from the Cognitive Therapy Scale – Revised (Blackburn et al., 2001) during that session. Participants were asked whether they attempted each skill, how important the use of that skill was for their client in that session, how successfully they applied the skill, and then encouraged to reflect on their application/non-application of the skill.

You are being asked to rate the reflective element of a sample of the participant transcripts ($n=5$). You will be asked to use this guidance to note the declarative, procedural and reflective knowledge relating to the client, therapist or the dyad. You will then be asked to record the total of each number of statements you notice. . This would hopefully give the study further robustness regarding inter-rater reliability.

Introduction to coding

There are twelve sections of text on each transcript, each relating to one of the twelve CBT skills. For each skill, therapists will have been asked either of three questions based on previous responses

- Do you have any reflections on how you applied this skill in this session?
- Do you have any reflections on what got in the way of you applying this skill in this session?
- Do you have any reflections on why you didn't attempt to apply this skill in this session?

A blank copy of the interview schedule will be provided to you for reference if needed. Coding is based on the declarative-procedural-reflective model of therapist skill development (DPR model; Bennett-Levy, 2006). There are nine types of knowledge

Figure C1b.*Second Rater Instructions Page 2 of 6*

development (DPR model; Bennett-Levy, 2006). There are nine types of knowledge which you will be asked to identify and assign to a category (Figure 1). You are being asked to code knowledge literally, i.e. as-seen on the page, without taking any implied meaning from statements. You may do this by hand or via computer, e.g. Microsoft Word, whichever works best for you.

Figure 1.

Nine types of therapist statement based on the DPR model (Bennett-Levy, 2006).

Declarative – Client <i>Description of the client</i>	Declarative - Therapist <i>Description of the therapist, including their knowledge of the model, themselves and their practice</i>	Declarative - Dyad <i>Description of the therapeutic process of both the client and therapist</i>
Procedural – Client <i>The client's actions</i>	Procedural – Therapist <i>The therapist's actions</i>	Procedural - Dyad <i>An action or active process undertaken by both the client and therapist</i>
Reflective - Client <i>A hypothesis or formulation which relates to the client only</i>	Reflective - Therapist <i>A hypothesis or formulation which relates to the therapist only</i>	Reflective - Dyad <i>A hypothesis or formulation which relates to the dyad</i>

Figure C1c.*Second Rater Instructions Page 3 of 6***Coding Examples****Example of coded text**

In these examples numbers and colours are being used to represent each of the nine types of knowledge you are being asked to code:

1. Declarative - client
2. Procedural - client
3. Reflective - client
4. Declarative - therapist
5. Procedural - therapist
6. Reflective - therapist
7. Declarative – dyad
8. Procedural – dyad
9. Reflective – dyad

Participant X. Reflections on Agenda-setting.

I think at this point the agenda setting was quite prescriptive, given that it was her first session with me (8). She didn't have any items to add and she was happy with what I'd added to the agenda (1). I think later in treatment I'd expect it perhaps to be a bit more collaborative (9). But at this point, I think it was appropriate for the stage of treatment she was at (1). I think that's it.

Participant X. Reflections on Feedback.

Just that it was that important because this lady's had PTSD for about 30 years and never shared it with anybody (3). The previous session I'd given her some information on PTSD (5), and she's come back and kind of said how kind of ground breaking it was really that she'd read this information (5). So I was getting feedback from her about what the important points were and what she was experiencing that she had never attributed really to PTSD before (8). So I think it was [cuts off]. It was absolutely vital for this woman to feel understood and that I understood her problem so that she felt safe to work with me. (9). But I was doing a lot of checking in (5), a lot of.. does this make sense?(5) Have I got this right?(5) Is there anything else I've missed?(5) And I think it was really really important that we did that (9). So yeah, that's about it. I think for that question.

Figure C1d.*Second Rater Instructions Page 4 of 6*

Total reflective statements for Agenda-setting and Feedback for Participant X.

Declarative-client (1) Total: 2	Declarative-therapist (4) Total: 0	Declarative-dyad (7) Total: 0
Procedural-client (2) Total: 1	Procedural-therapist (5) Total: 1	Procedural-dyad (8) Total: 2
Reflective client (3) Total: 1	Reflective-therapist (6) Total: 0	Reflective-dyad (9) Total: 3

Examples of each of the nine types of statementDeclarative - client*The client felt anxious**The client has dyslexia*Procedural – client*The client had done their homework**The client wrote down their thoughts**The client asked me had I seen a client like them before?*Reflective - client*Because the client has severe social anxiety, they find it difficult to look people in the eye**Because of the client's traumatic childhood, they find it difficult to trust people*Declarative – therapist*I find setting agendas difficult.**In my usual practice, I ask clients to keep a diary.**In this type of therapy, homework is important.*Procedural - therapist*I asked the client how they felt**What do you make of that?*

Figure C1e.*Second Rater Instructions Page 5 of 6*

I tried to guide discovery instead of telling them

I introduced some psychoeducation

Reflective - therapist

I find guided discovery difficult as a trainee because I'm new to it, I think I'm going to discuss it in my next supervision

I have always found pacing sessions difficult because I talk too much

Interpersonal effectiveness is important in CBT because without that foundation of a trusting relationship, clients won't feel safe enough to confront their fears

Declarative - both

The pace of this session was slow

We're at the socialisation phase

There wasn't a clear agenda

The therapeutic relationship was already built

Procedural - both

We drew out the formulation on the whiteboard

We talked about their understanding of anxiety

We agreed what the client would do for homework

Reflective – both

If I had rushed things, then they would have felt overwhelmed and they might not have come back

I think they trust me a lot more now, because they know I treat what they think as important

I think what made feedback hard for us was that we were doing the session over the phone

Because of the client's severe anxiety, therapy might be a slower process for us

Figure C1f.*Second Rater Instructions Page 6 of 6***Points to consider whilst coding knowledge statements into the nine categories**

- Statements should be assigned to one category only.
- References to clients generally, or previous clients, are therapist-related, unless they specifically relate it to the client in question.
- Reflective statements often begin with I think, I wonder, possibly, maybe, etc., but not always. They often tend to contain a subordinating conjunction, such as because, as, so, since, due to etc.
- Judgements, such as 'feedback went well' are not counted as any type of knowledge, unless they are encompassed as part of a reflective knowledge statement.
- It is okay to split a statement into parts and rate each part, especially if it is particularly long and the therapist is making multiple points.
- Each statement is coded, regardless of whether you have coded a statement on that same subject previously, i.e. repeats are not excluded.
- Both-related knowledge statements tend to contain we, or some version of the client/they and I in the same statement.
- Not all text will be knowledge which fits into one of the nine categories. Some words or sentences may not be relevant and should be left uncoded.
- When it is unclear whether a knowledge statement is client or therapist or both, assume it is both, e.g. ...and then negative automatic thoughts were discussed.
- When a statement trails off or cuts off, please code it if there is enough to discern whether it is a declarative, procedural or reflective knowledge statement.
- You are encouraged to use your clinical judgement throughout the coding process. Statements may fit into more than one category or sit on the boundary between categories. When unsure, please assign a statement to the knowledge category you think best fits.

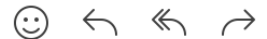
Appendix D

Ethical Approval

Copy of Electronic Ethical Approval for the Study Received from Newcastle University Research Policy

Intelligence and Ethics Team in October 2024

Ethics Form Completed for Project: exploring routine skill use in cognitive behavioural therapy (CBT) Stephanie Boyle



○ Policy & Information Team, Newcastl...

Sunday 6 October 2024 at 15:32

To: ✓ Stephanie Boyle (PGR)

⚠ External sender. Take care when opening links or attachments. Do not provide your login details.

Ref: 51100/2023

Thank you for submitting the ethical approval form for the project 'exploring routine skill use in cognitive behavioural therapy (CBT)' (Lead Investigator: Stephanie Boyle). Expected to run from 13/10/2024 to 01/12/2025.

Based on your answers, the University Ethics Committee grants its approval for you to start working on your project. Please be aware that if you make any significant changes to your proposal then you should complete this form again, as further review may be required. This confirmation may be used within a research portfolio as evidence of ethical approval. Please note: this confirmation will be the only correspondence you should expect to receive as evidence of ethical approval. There will be no other confirmation provided. You may now proceed with research. If you have any queries, please review the internal and external ethics FAQ pages before contacting res.policy@ncl.ac.uk.

Best wishes

Research Policy Intelligence and Ethics Team,

Research Strategy & Development

res.policy@ncl.ac.uk

Appendix E

Data Management Plan (4 parts)

Figure D1a.

Data Management Plan Page 1 of 4

Plan Overview

A Data Management Plan created using DMPonline

Title: An exploration of cognitive behavioural therapy skill use amongst trainees and qualified practitioners

Creator: Stephanie Boyle

Principal Investigator: Stephanie Isobel Boyle

Contributor: Stephen Barton, Peter Armstrong

Affiliation: Newcastle University

Funder: Newcastle University

Template: DCC Template

Project abstract:

An exploration of cognitive behavioral therapy skills: what are meta-competencies in routine practice?

Clinical literature indicates that CBT experts have clear concepts of the nature of meta-competencies in CBT (Roth & Piling, 2007; Whittington & Grey, 2014). However, there is no evidence-based standardised measure of meta-competencies in CBT that the research team is aware of to date. This work is part of a wider research effort to develop a CBT meta-competency scale. The primary aim of this work is to discover the nature of meta-competency in routine CBT practice. A research questionnaire has been developed which will be used in an interview format to guide therapists in reflecting on the CBT skills that they have used in a recent session. Participants will be trainee and accredited CBT practitioners working in any setting. The intent is to elicit the skills utilised in routine practice to reveal meta-competencies. This differences between trainee and accredited therapists in their reports of routine skill use will be explored. No information about clients will be collected. This is a single-phase study with a cross-sectional, correlational design. There will be both a between and within group focus on the trainee and accredited therapists group.

ID: 106291

Start date: 20-09-2022

End date: 01-12-2025

Last modified: 21-04-2025

Figure D1b.*Data Management Plan Page 2 of 4*

An exploration of cognitive behavioural therapy skill use amongst trainees and qualified practitioners

Data Collection

What data will you collect or create?

Electronic consent forms will be emailed by participants to the chief investigator. Study data will be collected via interview on Microsoft Teams. Interview transcripts will be downloaded and de-identified. There will be approximately 40 transcripts stored as Microsoft Word documents. Participant IDs and email addresses (to facilitate withdrawal if requested) will be stored separately from transcripts on a Microsoft Excel spreadsheet. Raw data will be transformed and inputted to SPSS v29 for data analysis. The dataset, interview responses, completed electronic consent forms and withdrawal information will be stored on the secure university server.

How will the data be collected or created?

Participating therapists will respond to advertisements for the study in print, via institution-wide email to high intensity CBT training programs and clinical psychology training programs, CNTW trust-wide email servers, via social network advertising or by word of mouth. Participating therapists will email the chief investigator who will link or email them with the therapist participant information sheet and therapist consent form and ask them to respond if they want to set up a time for interview. The interview will occur online will be recorded. Consent forms will be emailed to participants who will complete them and email them back to the chief investigator. Transcripts and consent forms will then be downloaded as Microsoft Word files. Transcripts will be de-identified and then manually inputted to an SPSS v29 file.

Documentation and Metadata

What documentation and metadata will accompany the data?

A study protocol will be held in the folder with the data, describing the methodology and contact details for the chief investigator. Another document will explain acronyms in the dataset (for example, full questionnaire names and references), units of measurement, and so on. Exportation of consent forms, information page, demographic information, and interview questions will be available.

Ethics and Legal Compliance

How will you manage any ethical issues?

Informed consent will be taken. Participants will be assigned a unique code with which they can contact the researcher if they wish to withdraw from the study after participating, which includes the consent process will inform participants of how their data may be used (e.g. written up in a journal), and that no participant will be identifiable in these instances. This study will be reviewed by Newcastle University's Research Ethics Committee, and will comply with the existing university guidance on data preservation, sharing, and storage.

Steps will be taken to protect participants identity. The minimum demographic information required will be taken. Only the chief investigator will undertake interviews and have access to original interview recordings and transcripts. Other members of the research team will only have access to de-identified transcripts. Interview recordings will be deleted within 6 months of the date of the interview.

How will you manage copyright and Intellectual Property Rights (IPR) issues?

The data will be owned by Newcastle University

Figure D1c.*Data Management Plan Page 3 of 4***Storage and Backup****How will the data be stored and backed up during the research?**

The data will be stored on Newcastle University's file store service, which has a limit of 500GB per project. It is not anticipated that the data for this project will exceed this limit. This is backed up daily, with each back up retained for 90 days.

How will you manage access and security?

Security for online data will be managed by Newcastle University's file store service.

Selection and Preservation**Which data are of long-term value and should be retained, shared, and/or preserved?**

Interview recordings will be destroyed within 6 months of the interview date. De-identified transcripts will be kept, as will the final SPSS dataset. The principal investigator will be working towards a doctoral degree for the next year, and will conceivably revisit the data for reanalysis during this time. The chief investigator will also require exclusive use for 12 months post-doctorate for further analysis of the data in preparation for publication. As such, a temporary embargo will be placed on the data for this timeframe.

What is the long-term preservation plan for the dataset?

As the student in question is not the recipient of a grant, preserving the data beyond the university's policy of ten years is not anticipated.

Data Sharing**How will you share the data?**

Newcastle university has a research data service, data.ncl, where data not attached to a specific funder. The data for this project will be uploaded to this service, which, like the university server, preserves data for ten years, but is accessible to other users with a policy of being Findable, Accessible, Interoperable and Re-useable.

Are any restrictions on data sharing required?

The chief investigator requires exclusive use of the data for the duration of the doctoral project and for 12 months post-doctorate.

Responsibilities and Resources**Who will be responsible for data management?**

The chief investigator is responsible for all data management.

Figure D1d.*Data Management Plan Page 4 of 4***What resources will you require to deliver your plan?**

No need for resources additional to the university's standard services are anticipated.

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Appendix F

Completion of Research Checklist

NEWCASTLE UNIVERSITY
DOCTORATE IN CLINICAL PSYCHOLOGY
Research Course: Sign off sheet for Research Projects



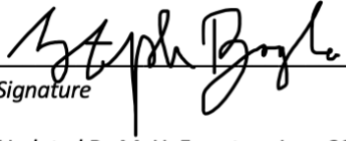
	Please tick if it does not apply	Please tick if completed. If not ticked, please provide an explanation	Trainee name: Stephanie Boyle Project title: Exploring Differences in Meta-Competence Between Trainee and Qualified Cognitive Behavioural Therapists: An Investigation of Therapy Session Reflections <i>Please add date for each action</i> <i>Please provide brief comment as necessary.</i>
In line with participant consent, raw and electronic data where consent has been subsequently withdrawn has been dealt with appropriately (e.g. removed) and communicated in writing to the supervisor with responsibility for data keeping.	☒	☐	Date completed: 9.9.25. Not applicable. Consent has not been subsequently withdrawn for any participants.
In line with participant consent, where permission to use data in future studies has been asked for and not been granted, this has been appropriately identified in data bases (e.g. properly labelled) and communicated in writing/document to the supervisor with responsibility for data keeping.	☒	☐	Date completed: 9.9.25. Permission to use data in future studies has not been denied by any participants.
In line with your approved data management plan/ethical approval, the informed consent forms and contact details are a) securely stored in a separate place from any other data, or b) securely destroyed, as the case may be.	☐ ☐	☐ ☒	Date completed: 9.9.25. Whilst the research was ongoing these were stored securely and separately from other data. Now the study is closed these have been destroyed as planned.
In line with your approved data management plan/ethical approval, IDs or codes linking personal data to other data have been securely destroyed.	☐	☒	Date completed: 9.9.25
In line with your approved data management plan/ethical approval, recruitment logs and other documents containing personally identifiable information have been securely destroyed.	☐	☒	Date completed: 9.9.25
In line with your approved data management plan/ethical/HRA/sponsors approval, the raw data (e.g. questionnaires, test sheets, data collection logs) have been a) pseudonymized, b) properly labelled and c) appropriate arrangements for their storage have been made; d) indications for date of destruction are clearly indicated	☐ ☐ ☐ ☐ ☒	☒ ☒ ☒ ☒ ☐	Date completed: 9.9.25



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Any concerns about participants, adverse effects, follow-up with participants due to distress, concerns raised by participants, disagreements/ incidents that could lead to participant complaint, etc., have been discussed with supervisors, suitably recorded in an appropriate manner, addressed (if required), and signalled (if necessary) to the appropriate ethics and governance frameworks, including the Course and the sponsors. Any correspondence about these matters has either been archived (and pseudonymised/anonymized if necessary) or destroyed as appropriate Please seek guidance about what is appropriate.	☒	☐	Date completed:
Participants have been debriefed as laid out in Ethics approval.	☐	☒	Date completed: 9.9.25.
Participants have received a lay summary of the results of the study if requested or originally announced.	☒		Date completed:
Gatekeepers and others facilitating access to participants have been thanked and, wherever relevant, sent a copy of the lay summary.	☒	☐	Date completed:
Participants and/or institutions, groups, organizations that have facilitated access have received the announced vouchers/course credits/reimbursements and/or the prize draw has been completed.	☐	☒	Date completed: 7.3.25. Lynne Davison from the administration team at the Doctorate in Clinical Psychology organised for the winners of the random prize draw for Amazon vouchers to receive those vouchers directly.
Contact details for gatekeepers have been provided to supervisors.	☒	☐	Date completed: No gatekeepers were utilised.
All study advertisements have been removed from websites or other postings.	☐	☒	Date completed: 9.9.25. Active recruitment postings (e.g. links to book an interview) have been removed. Inactive advertisements (historical social media posts) remain.

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All correspondence concerning the study (e-mails, .pdfs or image files, or paper documents that have been scanned) has been handed over to the supervisors in either/both hard media and/or as an electronically transferred zip file. This includes approvals (peer, ethics, funding agencies), extensions to approvals, amendments, registrations, letters of support or permission, etc.	☐	☒	Date completed: 09.09.25
All study materials in electronic form have been handed over to the supervisors in either/both hard media (CD/DVD; flash drive) and/or as an electronically transferred zip file. This includes: project proposals, ethics applications, requests for amendments, protocols, invitation/ recruitment materials, information sheets, consent forms, questionnaires, tasks and induction materials developed for the study including those on various platforms (e.g. E-Prime, Matlab, Qualtrics, apps, etc.), SOPs, debriefing materials, etc.	☒ ☐	☐ ☒	Date completed: 09.09.25
Final copies of the electronically saved raw data, transformed data, and syntax files been handed over to the supervisors in either/both hard media and/or as an electronically transferred zip file.	☒ ☐	☐ ☒	Date completed: 09.09.25
Final electronic copies of thesis as well as the project presentation power point have been sent to supervisors.	☐	☒	Date completed: 19.08.25
If appropriate, data has been archived (along with all meta-data) in NU's Data Repository.	☒	☐	Date completed:
Other: Please specify	☐	☐	Date completed:



Signature

Updated By M. H. Freeston, June 2021.

9.9.25
Date