Psychotherapy

ISSN: 0033-3204

2023, Vol. 60, No. 3, 355–369
https://doi.org/10.1037/pst0000477

A Systematic Research Review of Collaborative Assessment Methods

Filippo Aschieri[1], Arnold A. P. van Emmerik[2], Carlijn J. M. Wibbelink[2], and Jan H. Kamphuis[2]
[1] European Center for Therapeutic Assessment, Università Cattolica del Sacro Cuore
[2] Department of Psychology, University of Amsterdam

Collaborative assessment methods (CAMs) involve working with clients during all phases of the assessment process, from goal definition to interpretation of the testing results to the recommendations and conclusions. In this article, we define CAMs, provide clinical examples, and then meta-analyze the published literature to assess their effectiveness on distal treatment outcomes. Our meta-analytic results indicate that CAMs have positive effects on three outcome domains: a moderate effect on treatment processes, a small-to-moderate effect on personal growth, and a small effect on symptom reduction. There is little research evidence on the immediate, in-session effects of CAMs. We include diversity considerations, training implications. and therapeutic practices grounded in this research evidence.

Clinical Impact Statement

Question: We sought to review the evidence for the effectiveness of collaborative assessment methods (CAMs), which involve working with clients during all phases of the assessment process, from the definition of the goals for the assessment to the interpretation of the testing results and to the identification of conclusions and recommendations. ***Findings:*** Our review shows that in as few as 2.7 sessions on average, assessors using CAMs have a positive impact on the treatment process, clients' symptoms, and clients' self-growth. ***Meaning:*** Collaborating throughout the assessment helps clients develop a different view of themselves, especially one that is more accurate, compassionate, and useful. The respect, collaboration, and empathic understanding of clients may be the primary mechanism of CAMs effectiveness. ***Next Steps:*** Research on the immediate effects of CAMs components is needed.

Keywords: collaborative assessment, psychological assessment, psychotherapy, psychotherapy outcome

Collaborative assessment methods (CAMs) refer to working with clients during all phases and aspects of psychological assessment and testing. CAMs range from clients' involvement in formulating the goals of the testing, to expanding the understanding of their results, to articulating new ways of understanding their presenting problems based on a shared understanding of their testing results. CAMs research includes studies on the "bare bones" of assessment (e.g., testing and some form of test feedback with therapeutic intent) as well as studies that examine the efficacy of a full model of assessment based on CAMs.

Definitions and Clinical Description

Applications of CAMs include both structured and semistructured models. Probably best known and researched are Therapeutic Assessment (TA; Fantini et al., 2022; Finn, 2007), Collaborative Assessment (CA; Aschieri & Vetere, 2020), and Collaborative Assessment and Management of Suicidality (Comtois et al., 2011; Jobes, 2012). CAMs in Therapeutic Assessment are framed within a model of change that integrates emotion-focused methods (Fosha, 2004), an interpersonal approach to the client's identity (Aschieri, 2012, 2016), and a psychodynamic (Kamphuis & Finn, 2019) and neurobiological understanding (Finn, 2012) of how therapists and clients coregulate their emotions during sessions and how this translates to changes in a client's life. CAMs in Collaborative Assessment include more broadly all applications of collaborative principles and methods in the use of testing.

CAMs in Collaborative Assessment and Management of Suicidality have a much more specific and explicit focus: they are designed to engage clients at risk for suicide to identify and to understand and resolve the "drivers" of suicidal ideation as continually assessed by

This article was published Online First March 27, 2023.
Filippo Aschieri https://orcid.org/0000-0002-1164-5926
This article is adapted, by special permission of Oxford University Press, from a chapter by the same authors in C. E. Hill & J. C. Norcross (Eds.), (2023), *Psychotherapy skills and methods that work*. The interorganizational Task Force on Psychotherapy Methods and Skills was cosponsored by the APA Division of Psychotherapy/Society for the Advancement of Psychotherapy.

Filippo Aschieri played a lead role in conceptualization and writing of original draft and an equal role in data curation, formal analysis, investigation, methodology, project administration, validation, and writing of review and editing. Arnold A. P. van Emmerik played a lead role in writing of review and editing; a supporting role in formal analysis; and an equal role in conceptualization, data curation, investigation, methodology, project administration, validation, and writing of original draft. Carlijn J. M. Wibbelink played a lead role in formal analysis and software; a supporting role in investigation, writing of original draft, and writing of review and editing; and an equal role in data curation and methodology. Jan H. Kamphuis played a lead role in project administration and validation and an equal role in conceptualization, data curation, formal analysis, investigation, methodology, writing of original draft, and writing of review and editing.

Correspondence concerning this article should be addressed to Filippo Aschieri, European Center for Therapeutic Assessment, Università Cattolica del Sacro Cuore, Via Nirone 15, 20123 Milano, Italy. Email: filippo.aschieri@unicatt.it

the Suicide Status Form (SSF; Jobes et al., 1997). Hence, CAMs as seen in Therapeutic Assessment, Collaborative Assessment, and Collaborative Assessment and Management of Suicidality differ from the traditional information-gathering model of assessment (Finn & Tonsager, 1997), which is more descriptive and prescriptive and is typically unilaterally managed by the assessor.

This article, and the focus of our meta-analytic review, is limited to Collaborative Assessment and Therapeutic Assessment, as these methods typically involve a limited number of sessions (typically 2–5). Collaborative Assessment and Management of Suicidality, on the other hand, as described in several protocols, may take up to 16 weeks of intensive working through. We deem this longer treatment outside the scope of the present article. The interested reader is referred to a recent meta-analysis on Collaborative Assessment and Management of Suicidality (Swift et al., 2021).

CAMs are rooted in humanistic and phenomenological psychology principles (Fischer, 2000). Key elements of the method are to collaborate with clients and to emphasize the understanding of how their psychological features interplay with their "lively flux" of experiences (p. 4), with the goal of "not just to describe or classify the person's present state but to identify viable options to problematic comportment" (p. 5). Moreover, CAMs are consistent with a social constructionist approach to therapy in acknowledging the clients as the expert on their own lives (Anderson & Goolishian, 1992). Systemic thinking is also integral to CAMs as the testing aims to understand how clients' problems are adaptations to less than optimal contexts of living (Fantini et al., 2013).

The main methods are (a) involving clients in setting their goals for the assessment, (b) engaging clients in discussing how their experiences during the testing phase and the contents of their test responses reflect their real-life dilemmas, and (c) jointly understanding how test results and experiences relate to their goals for the assessment and their next steps in life. When clinicians help clients to formulate their goals in terms of questions they have about themselves, or about their lives, and about what they wish to learn from the testing, they aim to stimulate the clients' exploratory system and regulate their attachment system. In fact, attachment researchers have explained how the attachment system and the exploration system (i.e., the inborn system that guides novelty seeking and learning) are reciprocally activated (Mikulincer & Shaver, 2007). Engaging clients in interpreting their testing results can be seen as a social constructivist process to building new knowledge and understanding as a result of the joint efforts of clients (who participate as experts in their lives) and clinicians (who participate as experts in psychological theories and tests). Providing clients with comprehensive feedback on their assessment results can be seen as an example of narrative therapy.

Clinicians using CAMs seek to advance the treatment utility of psychological assessment (Kamphuis et al., 2021). Collaborative assessors aim to provide a secure attachment environment by means of collaborative communication, emotional attunement, and repair of disruptions, while engaging clients in becoming curious about themselves and their presenting problems. Collaborative assessors emphasize empathy and stimulate curiosity and openness. Clinicians using CAMs attempt to build epistemic trust (Fonagy & Allison, 2014; Kamphuis & Finn, 2019)—an individual's willingness to consider new knowledge coming from others as reliable and relevant and therefore worth integrating into their lives.

In line with the spirit of collaborative assessment, clinicians monitor clients' reactions during the testing and solicit their views about the course of the testing process. They involve clients in the assessment and enlist them in developing the focus of the assessment in the form of individualized assessment questions. Identifying personal and specific goals for the assessment typically serves to lower anxiety in clients and, conversely, to increase motivation to participate in the sessions.

During the testing phase, collaborative assessors explain the purpose of each test vis-à-vis the client's assessment questions and jointly explore the meaning of the test findings in the context of those questions. Assessors offer emotional and cognitive support to clients while they process new understandings obtained through the collaborative discussion of their results. Such increased understanding can be accompanied by positive emotions (due to a better understanding of unclear issues; Aschieri & Smith, 2012) as well as negative emotions (due to an increased awareness of the problems; Durosini et al., 2017). Fischer (1985/1994) also emphasized using testing sessions to help clients try out and practice "new behaviors" that "branch off" from their usual ways of being. In this way, clients and assessors identify viable next steps that will help them meet their life goals after the assessment is completed.

At the end of the assessment, assessors provide collaborative feedback to support clients in better understanding the origins of their presenting problems. Feedback typically involves connecting test findings to the goals for the assessment and discussing implications for clients' lives. The immediate outcomes of understanding clients' problems through the lenses of the test results may include more self-compassion, increased coherence of self-understanding, and less shame about problem behaviors.

The utility of CAMs has been documented in a wide diversity of clients. These include different genders age groups (children, Tharinger et al., 2008; adolescents, Smith et al., 2010; older adults, Durosini et al., 2017), cultural identities (Fantini, 2016; Finn, 2007), and nationalities (e.g., United States, Finn & Tonsager, 1992; Dutch, De Saeger et al., 2014; Italian, Aschieri & Smith, 2012). CAMs have also been employed in a variety of clinical settings, including inpatient (Aschieri & Vetere, 2020), outpatient (Finn, 2007; Finn, 2011), and correctional facilities (Chudzik, 2016).

CAMs are challenging in settings in which the reasons for the assessment are extrinsic to the clients, such as in forensic and mandatory assessments. While some of these methods (e.g., discussing the informed consent, discussing emotional reactions to testing, providing feedback about the assessment results) are recently advocated by some authors to be used also in these contexts (Evans, 2012; Fischer, 1985/1994; Goldenson et al., 2022), other methods are more problematic. For example, routinely engaging clients in interpreting their testing results could be seen as unreliable as patients may deliberately manipulate these interpretations.

Assessment

Assessment of CAMs

Unfortunately, no standardized measures have been developed to systematically assess the presence of CAMs or its components. Such

measures are much needed, however, to better assess the immediate outcomes of CAMs and its components. Future research could, for example, operationalize CAMs methods based on Therapeutic Assessment manuals for adult clients (Fantini et al., 2022) and for families with children (Tharinger et al., 2008, 2022) and subsequently have trained observers rate the presence and quality of CAMs and its components.

Outcome Assessment

Following Durosini and Aschieri (2021), the measures used to index the immediate and distal outcomes of CAMs can be grouped into three domains: treatment process, symptom reduction, and personal growth.

Treatment process scales include all measures that refer to therapeutic alliance, such as the alliance scale of the Client Satisfaction Questionnaire–8 (Attkisson & Zwick, 1982) or the Treatment Satisfaction Questionnaire (Pegg et al., 2001). The Assessment Questionnaire (AQ; Finn et al., 1995) includes three scales related to client satisfaction with the assessment process: positive mirroring (12 items, e.g., "The assessment captured the 'real' me"), positive relationship with the assessor (12 items, e.g., "The assessor was interested in what I had to say"), and (lack of) negative feelings for the assessment (11 items, e.g., "The assessment made me feel that my life is nothing but problems").

Symptoms have been measured by scales such as the Symptom Checklist–90–Revised (Derogatis, 1983) and the Demoralization scale of the Minnesota Multiphasic Personality Inventory–2–Restructured Form (MMPI-2-RF; Tellegen & Ben-Porath, 2008/2011). These measures are widely used and well-validated and typically assess distal outcome.

The AQ (Finn et al., 1995) also includes one scale related to client personal growth: new self-awareness (13 items, e.g., "I gained a new understanding of myself"). The new self-awareness scale of the AQ has been used in empirical research on personal growth, and the Self-Esteem Questionnaire has also served this purpose (Cheek & Buss, 1981). The four scales of the AQ constitute a higher order factor, namely how positive the assessment experience was for clients. Reliability was satisfactory (α coefficients in three groups of college students, inpatients and outpatients were between .79 and .93), and test–retest coefficients varied between .75 and .84. The AQ total score and its scales were not correlated to measures of social desirability, suggesting that its outcomes are not strongly influenced by positive response bias.

Clinical Examples

We report excerpts from the video-recorded assessment of "Ain," a 28-year-old Caucasian cisgender male identifying as heterosexual assessed in Italy. Ain sought assessment following the breakup with his girlfriend, Meghan. Ain and Meghan are pseudonyms. Ain signed the informed consent to use his data in an anonymized and disguised way.

The first session started with a warm welcome by the clinician (F) and then focused on collaboratively defining Ain's (A) goals for his assessment.

F: *So, what goals and questions do you have for this assessment?*

A: *I don't know really … I just think that after I broke up with Meghan I keep feeling there was something wrong with me.*

F: *I see, that must be painful.*

A: *Yes, and I blame myself because it's also my fault that she broke up with me.*

F: *Mmm, can you say more?*

A: *You know, I feel somehow bad about this … and it's hard to talk about it.*

F: *Uhm, is there any shame about what you are thinking about?*

A: *Yes! I feel shame because it's not easy to admit that you have a sexual problem … I have this problem with ejaculation, and lately with Meghan it became almost impossible to make love … since I could not hold back for more than a few seconds!*

F: *Oh yes, and in our culture this problem is really loaded with shame, while, actually, it's a pretty common problem for many male clients I have spoken to.*

The assessor immediately tries to enlist the client as an active participant in the assessment. The assessor asks the client to set the goals for the process and works with him to make them more specific. In addition, emotional support, counteracting shame, and mirroring help clients to deepen and focus their goals.

F: *So, when did this problem with premature ejaculation begin?*

A: *Hard to say. I always felt a bit clumsy in intimacy with my partners, but it got worse when I decided to leave home and move in with Meghan. Before then our sex life was much better, we had fewer occasions to meet, but they were much more exciting.*

Initial clients' goals are fine-tuned through circular questioning (Brown, 1997). This questioning helps transform clients' presenting problems (e.g., "I suffer from premature ejaculation and I need psychological therapy") into contextualized, specific questions about themselves and their relationships with the world (e.g., "Why did I develop this problem since I left home to live with Meghan?").

In the central part of the assessment, the clinician typically administers psychological testing. The choice of tests reflects the clients' goals for the assessment. Clients are actively engaged in "building connections" between their test responses, their real-life experiences, and their assessment goals (Fantini et al., 2022). For example, clients can discuss and deepen their answers to specific self-report items or by associating images, thoughts, and emotions to their responses to projective or narrative tests. The assessor uses open-ended questions to explore items from self-report questionnaires and follows up on clients' answers to connect their observations to their assessment questions and real-life experiences. This process usually occurs directly after the completion of a test, to capture the immediate emotional reactions and thoughts of clients during the testing session.

In the case of Ain, his MMPI-2-RF results included—among critical items—"My sex life is satisfactory (False)" and elevations on the internalizing psychopathology scales, which pointed to anxiety and depressive symptomatology.

The assessor started expanding Ain's experience related to the item about Ain's sex life:

F: *So, you replied false to "My sex life is satisfactory." Could you tell me more about it?*

A: *Yes, actually I realize that the more I felt pressured to maintain an adult relationship, the more I felt my sex life was unsatisfactory.*

F: *That must be confusing. And do you have a sense of how this relates to your mood?*

A: *I never thought about it. Maybe I am more worried than otherwise?*

F: *This seems to be true from your test results. As you see, these dots indicate your scores on the test. Each dot corresponds to a feature of your psychological functioning. The higher the scores are, the more likely the corresponding psychological features are relevant for you. Is that clear?*

A: *Yes. What do these elevations mean?*

F: *These suggest that you have been harboring a lot of anxiety. Does that fit with your experience?*

A: *Oh yes! Every time Meghan and I were about to make love I felt so much anxiety! and that makes things worse!*

F: *Of course, how difficult it must have been to approach sex in such an emotional state!*

A: *Indeed … .*

F: *And let me try to connect this with the sexual problem: is it possible that this anxiety when you are faced with the sexual problem turns into some type of demoralization or hopelessness?*

A: *It does. That's exactly how I feel, I have started to think about myself like a failure [Ain cries].*

F: *I am sorry to hear that. How does it feel to talk about these things with me now?*

A: *It's painful, really, but it's also the first time I feel I can open up, and I don't feel judged. When I was a child, in my family, whenever I had a problem I felt I had to simply move on as soon as I could, otherwise, my mother would have scolded me.*

F: *Really? Can you tell me more about that?*

A: *Yes, since my father passed away, when I was 4 or 5, my mother raised me as a single mother. I have so much gratitude for her for doing it. She made it so I never lacked for anything [Ain keeps describing the sacrifices his mother made to allow him to study and have a nice life].*

F: *And I wonder if you tried to make things easier for her by keeping your problems to yourself.*

A: *Yes, also because she never liked to comfort me when I was sad, she told me, "Come on! Do not allow this problem to get you down" … she was probably telling me what she was telling herself after my father passed away.*

F: *That makes sense. But these scores suggest that over the years, you piled up so many negative emotions that you could not process with your mother, and now, these negative emotions can create a vicious cycle with your sex life: the more you feel unsatisfied about your sex life, the more you feel down and blue. And, on the other hand, the more you harbor anxiety and hopelessness, the harder it is for you to enjoy intimacy with Meghan.*

After scoring the tests, assessors offer their expertise about the meaning of a particular test score, and clients bring their expertise in how that test variable shows up in their lives. For example, Ain's Rorschach was administered and scored according to the Rorschach Performance Assessment System (Meyer et al., 2011), and it revealed an elevation in one area: Oral–Dependent Language (ODL%; indicative of clients "implicitly motivated by dependent needs, related to an underlying dependent trait or a state"; Mihura & Meyer, 2018, p. 7). After the assessor globally explained how the Rorschach is scored, he engaged Ain in discussing the interpretation of ODL%.

F: *Now, I would like to tell you about this variable, called Oral–Dependent language, which is coded whenever you use terms and images that suggest themes of nurturance, needing support or help, oral activity, food, and eating, or birth and fragility …*

A: *(interrupts the assessor) Oh, I remember, all the "mouths" and the food that I saw in the cards!*

F: *Yes, believe it or not (smiles) there is a lot of research that connects this variable to people who feel they need more support, more nurturance from their environment, and may not receive it. I wonder if this might be true also for you?*

A: *Well, it depends, I am a very independent person. (Ain describes his profession and how independent he is in that role) … but as we said last time talking about my mother, I realized that during much of my growing up the only person who supported me was my mother.*

F: *Yes, I remember that too. And I wonder to what extent you felt that Meghan was available for you … emotionally.*

A: *Good question! Initially, it was good because we talked a lot about things, our lives, our problems … then she lost her mother, and since then I started to take care of her a lot, particularly early on after we moved in together.*

F: *Interesting, so it seems that starting to live together made you closer physically, but at the same time, you felt you lost the relationship with your mother and started to feel that Meghan was less available for you emotionally. Am I right?*

The assessor and Ain continued to discuss the role of the lack of support that Ain experienced from Meghan in relation to the sexual problem, connecting it to the extent to which he felt alone in the couple and his depression.

At the end of the assessment, CAMs are used to discuss and summarize the assessment findings to provide clients with a clear,

accurate, coherent, and compassionate understanding of their initial questions for the assessment. For example,

> Initially you asked me, "Why did I develop this problem since I left home to live with Meghan?" Results from the testing showed that you harbor a lot of painful feelings, which you tried to avoid either by "pushing through" life, and by enjoying the relationship with your mother. Initially, you experienced Meghan as a good partner also because you felt you could rely on her for emotional comfort and support. However, with the decision to live together you realized you missed the emotional support you had from your mother, and at the same time you felt that Meghan could not tolerate talking about your problems after the loss of her own mother. So, when you had physical intimacy with Meghan, the negative emotions that you were able to ignore and keep at bay in your everyday life were stirred up, and manifested themselves in the form of the sexual problem. Hence, you found yourself in a vicious cycle of depression, that created problems in your relationship, that increased depression, that in turn made it very hard to have a fulfilling sex life; does this fit with your experience?

In the final summary and discussion session that is intended to answer the client's questions, test results and shared observations are integrated into a case formulation that aims to provide a comprehensive and coherent account—which is still open to change, especially if resulting from the client's input—of his or her struggles and resources (Eells, 2022). In the feedback phase, clinicians using CAMs seek to actively enlist clients to agree, modify, or disagree with the interpretation and integration of their assessment findings. Therapeutic Assessment also includes a careful decision about which parts of the assessment results are important to be shared with the clients and how such sharing should proceed (Finn, 1996). Depending on the clients' availability and capacity to integrate new and potentially unsettling information, assessors gradually present a more complete story that constitutes the answer to clients' initial questions.

In the case of Ain, after the assessment ended, he decided to keep working on the long-term effects of his father's loss in further psychotherapy with the same assessor. This is a frequent outcome when clients feel the need for more work, and assessors can provide the treatment that the assessment indicated would useful for clients.

Previous Reviews

Two meta-analyses on CAMs have been published that partly but not completely overlap with the present research review. Poston and Hanson (2010) and Hanson and Poston (2011) summarized the effect of providing clients with individualized feedback on their testing. In their 2010 article, the authors analyzed effect sizes from 17 studies including a total of 1,496 participants. The effects of providing individualized feedback resulted in better outcomes (d = 0.42) than control conditions (such as no feedback or delayed feedback).

Durosini and Aschieri (2021) subsequently performed a meta-analysis that examined exclusively the efficacy of well-defined Therapeutic Assessment with adult clients from clinical settings and included nine studies with a total of 491 participants. The results revealed statistically significant effects of Therapeutic Assessment as compared to active control groups on measures of treatment process (g = .46), clients' symptoms (g = .34), and clients' self-enhancement (g = .37). Of note, these effects were obtained in only two or three Therapeutic Assessment sessions. Moreover, moderator analyses showed that the presence of supervision and longer and more complete Therapeutic Assessment did not substantially impact these outcomes. The authors concluded that the most important aspect of Therapeutic Assessment may be its use of respect, collaboration, and empathic understanding of clients, and not so much the exact way in which the assessment is implemented.

Research Review

Like Poston and Hanson's (2010) meta-analytic review, we reviewed studies on Therapeutic Assessment and Collaborative Assessment but extended the search to 2021 and included only studies that involve adult clients in clinical settings (leaving out analogue studies and studies conducted in educational or workplace settings). Our study differs from the Durosini and Aschieri's (2021) review by also including studies on Collaborative Assessment. We include a meta-analytic review and a qualitative review, each separately addressing both the distal and immediate outcomes of CAMs to the extent that these are available in the literature.

Search Strategy and Inclusion Criteria

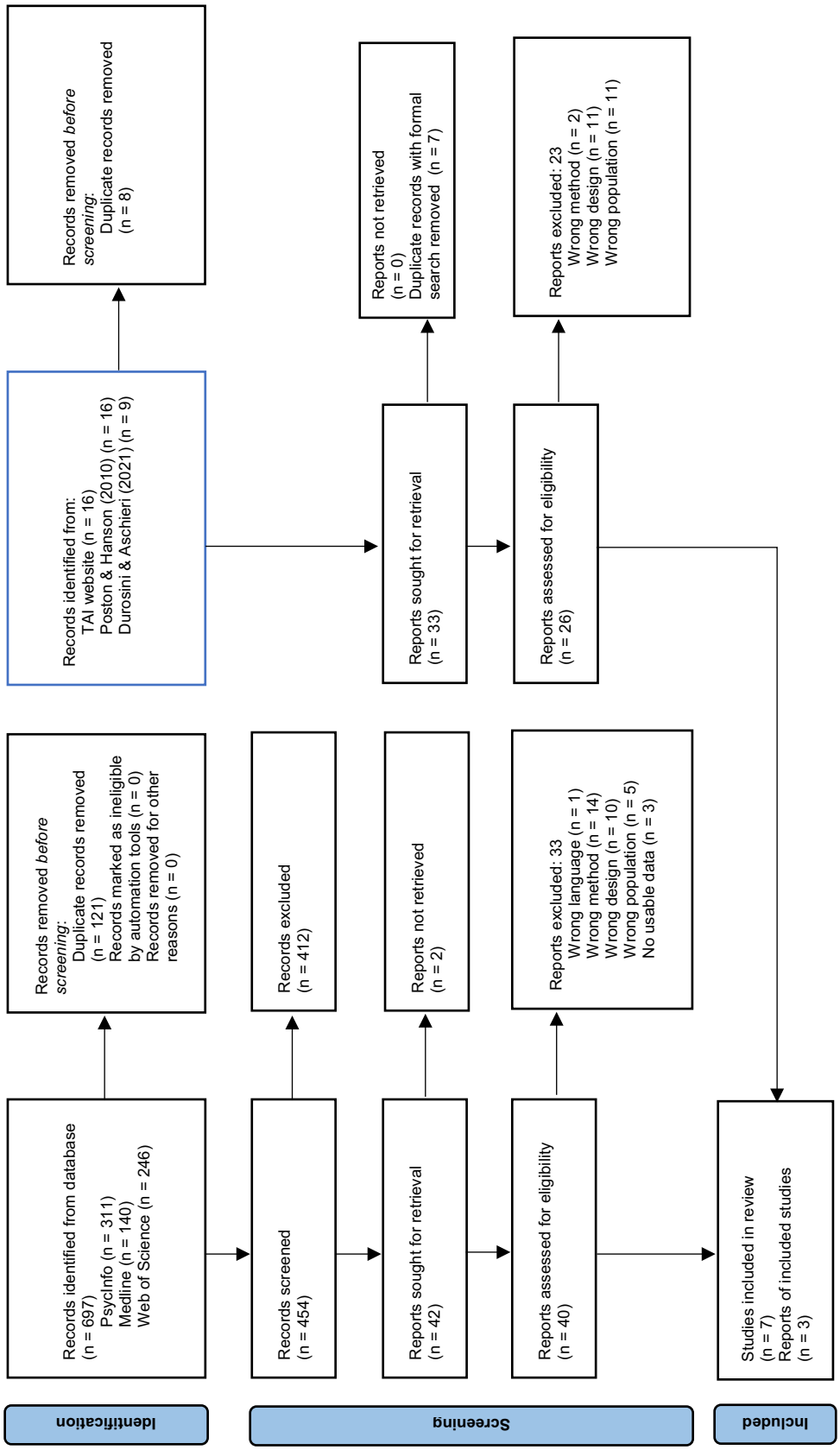
Assessment utility, therapeutic assessment, collaborative assessment, test feedback, assessment feedback, and *test interpretation* were entered as search terms in title or abstract in the PsycINFO, Web of Science, and Pubmed databases in May 2021. This electronic search was limited to studies including adults and to publications in languages that at least two authors understood (English, French, Dutch, Italian). We also conducted an informal search using suggestions by selected scholars from Therapeutic Assessment Institute faculty (k = 16 entries), and studies included in the previous meta-analyses from Poston and Hanson (2010, 16 entries) and Durosini and Aschieri (2021, 9 entries).

To be included in the meta-analytic review, studies were required to have (a) evaluated CAMs with adult clients. Articles involving children and adolescents (e.g., Tharinger et al., 2009) were excluded from the meta-analytic review; (b) evaluated a form of psychological CAMs. For example, articles on therapeutic assessment in somatic (e.g., Bouche et al., 2020) and neuropsychological (Gruters et al., 2021) settings were excluded; (c) been published in a peer-reviewed journal. Dissertations, conference presentations, and book chapters were excluded because it was difficult to retrieve them and determine their eligibility; (d) utilized a between-group design suitable for calculating one or more Cohen's d effect sizes. Studies without a control or comparison group were excluded from the meta-analytic review; (e) measured some aspect of therapeutic benefit or outcome in a clinical sample. For example, studies conducted with healthy students were excluded from the meta-analytic review (e.g., Luzzo & Day, 1999); (f) utilized authentic test data (i.e., based on actual test interpretation, not precanned Barnum-type statements).

Since studies excluded from the meta-analysis could have included something about immediate in-session outcomes that would illuminate the process, we reexamined all studies that were excluded from the meta-analytic review for this possibility, the result of which is now described in the Qualitative Research Review section below.

Figure 1 summarizes the screening and inclusion process of the meta-analytic review. After removing duplicates, we first screened

Figure 1
Flowchart of Study Identification, Screening, and Inclusion



Note. See the online article for the color version of this figure.

records by reading the respective titles and abstracts. Two authors (Filippo Aschieri and Arnold A. P. van Emmerik) independently screened all records using Rayyan software (Ouzzani et al., 2016), yielding a 96% agreement (Cohen's $k = .70$, substantial agreement). All records considered by at least one of the two raters as potentially relevant for the meta-analysis were included in the subsequent full-text screening. The 42 records assessed for full-text screening from the formal literature search, and the 33 entries collected through the informal search included seven overlapping articles. After excluding double entries and irretrievable articles, we ended up with a total of 66 articles for full-text screening.

Two of three authors (Arnold A. P. van Emmerik, Jan H. Kamphuis, and Filippo Aschieri) independently assessed these 66 full-text articles for eligibility, yielding an overall 84% agreement (Cohen's $k = .56$, moderate agreement). The nine disagreements were resolved by discussion among the raters. Thirty-three articles from the formal search and 23 articles from the informal search did not meet one or more of the eligibility criteria and were excluded, resulting in the initial inclusion of 10 articles. Post hoc discussions led to the further exclusion of one study which investigated a method that was not collaborative (Wild et al., 2007) and to the inclusion of one additional study that met all the inclusion criteria (Pegg et al., 2005).

The final set of included studies thus consisted of 10 records that were used to extract effect sizes (Table 1). The quality of the included studies was evaluated using the same criteria used by Durosini and Aschieri (2021), and these ratings are summarized in Table 2.

Statistical Analyses

A standardized mean difference (Cohen's d) was calculated to quantify the effect of CAMs compared to a control or comparison condition. We focused on between-group differences on all available outcome points. Cohen's d was calculated by using means and standard deviations or by transforming a test statistic (t value) or effect size (partial η^2). For one study, two effect sizes were coded as zero as the effects were described as nonsignificant without any statistical information. A positive Cohen's d indicated a more positive treatment process, fewer symptoms, or more personal growth in CAMs compared to the control condition.

Most studies reported on more than one effect, and therefore, we applied a three-level random-effects model to account for the dependency between effect sizes (Assink & Wibbelink, 2016; Cheung, 2014; Van den Noortgate et al., 2013). A three-level random-effects model takes three sources of variance into account: sampling variance (Level 1), variance between effect sizes from the same study (Level 2), and variance between studies (Level 3). The overall effect for each outcome type (i.e., treatment process, symptom reduction, and personal growth) was estimated in separate intercept-only models. Next, one-tailed log-likelihood ratio tests were conducted to determine whether significant variation was present at Level 2 or Level 3. In case there was evidence for heterogeneity in effect sizes, moderator analyses were conducted by extending the model with the potential moderators (i.e., age, gender, ethnicity, sample type, number of sessions, method type, control condition, quality of the study, and time between the method application and assessment). Before conducting the analyses, we checked for outliers ($Z < -3.29$ or $Z > 3.29$; Tabachnick & Fidell, 2013). No outliers were identified. Further, categorical moderator variables were converted to dummy variables, and continuous variables were centered.

After the overall effects were estimated and moderator analyses were conducted, we tested for possible publication bias by using the trim-and-fill procedure (Duval & Tweedie, 2000a, 2000b). For each outcome type, the symmetry of a funnel plot (a scatter plot of the distribution of each effect size on the x-axis against the standard error) was examined. An asymmetric funnel plot, manifested in missing effect sizes on the left side of the plot, indicates possible publication bias. In the case of an asymmetric funnel plot, "missing" effect sizes are imputed to restore the symmetry, and an adjusted overall effect size is estimated.

The analyses were performed in R (Version 4.0.5; R Core Team, 2015), using the "rma.mv" function of the "metaphor" package (Viechtbauer, 2010) and based on guidelines formulated by Assink and Wibbelink (2016). To estimate model parameters, the restricted maximum likelihood procedure was used. In addition, the Knapp and Hartung (2003) adjustment was applied to control for Type I error rates. In all analyses, a p value of $<.05$ was considered statistically significant.

The 10 studies included in the meta-analytic review reported 70 effect sizes and a total sample size of 444 patients (7 studies, 27 effect sizes, $n = 320$ for treatment process; 7 studies, 32 effect sizes, $n = 332$ for symptoms; and 5 studies, 11 effect sizes, $n = 264$ for personal growth), of whom 221 participated in the CAMs and 223 participated in a control or comparison group (the included studies did not systematically report the number of therapists involved).

Outcomes of CAMs

Table 3 presents the results for the overall *distal* effect of CAMs on treatment process, symptom reduction, and personal growth. First, a significant medium effect was found for treatment process ($d = 0.59$, $p = .021$), indicating that CAMs were related to a more positive treatment process (assessed by client-reported postsession measures) compared to the control condition. Second, a significant small effect was found for symptoms ($d = 0.19$, $p = .036$), suggesting that CAMs were related to reduced symptoms compared to the control condition. Finally, a significant small-to-medium effect was found for personal growth ($d = 0.42$, $p = .017$), suggesting that it enhanced personal growth compared to the control condition.

The three-level meta-analytic approach allowed assessing heterogeneity between effect sizes from the same study (i.e., Level 2 variance), as well as heterogeneity between studies (i.e., Level 3 variance). For symptoms and personal growth, no significant variation was found on either level (see Table 3). For treatment process, no significant variation was found on the second level, while significant variation was found on the third level, $\chi^2(1) = 21.70$, $p < .001$. Consequently, moderator analyses were conducted only on treatment process to examine whether characteristics related to the patient, method, and study could explain the variation between effect sizes.

Table 4 presents the results of these moderator analyses. Only method type moderated the effect of CAMs on treatment process, $F(1, 25) = 24.32$, $p < .001$. The effect size for Therapeutic

Table 1
Description of Studies Included in the Analyses

Study	Sample	*N* (active/control)	Method (no. of sessions)	Control (no. of sessions)	Study quality
Blonigen et al. (2015)	Inpatients in a residential substance use disorder treatment program	26 (17/9)	Individualized assessment questions; individualized collaborative feedback (3)	Collection of background information; self-report testing; 1-month follow-up (2)	4/7
De Saeger et al. (2014)	Inpatients and outpatients in a specialized personality disorders clinic	74 (37/37)	Assessment session; individualized collaborative feedback (4)	Contrasting demoralization and promoting hope by providing psychoeducation on the dynamics of maladaptive behaviors; discussion of the main problem; examination of dilemma of change; reaching a shared reappraisal of the problems; future goal setting (4)	7/7
Essig and Kelly (2013)	Outpatients seeking career counseling in a university counseling center	23 (11/12)	Individualized collaborative feedback (2)	Completion of a career counseling self-report test; gathering information about career indecision; standardized feedback according to the test manual (2)	3/7
Miller et al. (2013)	Outpatients with chronic pain seeking counseling with their partners in a university laboratory	47 couples (24/23)	Provision of individualized collaborative assessment and feedback on couples' communication processes around pain (2)	Collection of information on the couple's relationship and pain coping strategies; psychoeducation on chronic pain; 1-month follow-up (2)	5/7
Miller et al. (1993)	Drinkers applying for a checkup to find out if their alcohol use is harming them	42 (14/14; 14)	Two-hour testing session including a range of biomedical, neuropsychological, and alcohol consumption measures; individualized feedback using client-centered feedback style (2); wait-list (0)	Two-hour testing session including a range of biomedical, neuropsychological, and alcohol consumption measures; individualized feedback using directive feedback style (2)	4/7
Finn and Tonsager (1992)	Outpatients seeking treatment for various disorders in a university-based service	60 (32/28)	Individualized collaborative feedback (3)	Discussion of client's concerns and reactions to the study; 2-week follow-up (3)	5/7
Hilsenroth et al. (2002)	Outpatients seeking treatment at two university-based community clinics	68 (34/34)	Performance-based tests; individualized collaborative feedback (4)	Semistructured clinical interview; self-report testing; administration of performance-based or cognitive tests (3)	6/7
Morey et al. (2010)	Outpatients with borderline personality disorder and suicidal ideation seeking treatment in a university clinic	16 (8/8)	Individualized collaborative feedback incorporated into first two sessions of manual-assisted cognitive behavior therapy (2)	First two sessions of manual-assisted cognitive behavior therapy as usual (2)	4/7
Newman and Greenway (1997)	Outpatient students in a university counseling service	60 (30/30)	Collection of individualized questions and testing; individualized collaborative feedback (2)	Semistructured interview about client's presenting problems; collection of individualized questions and testing; delayed individualized collaborative feedback (3)	4/7
Pegg et al. (2005)	Active and veteran military personnel admitted to a traumatic brain injury unit	28 (14/14)	Personalized information-provision sessions discussing neuropsychological evaluation and treatment progress, superimposed on care as usual (3)	General information sessions designed as an attention-placebo condition, superimposed on care as usual (3)	3/7

Table 2
Quality Assessment of Studies Included in the Analyses

Study	Detailed description of intervention	Clinicians received training in intervention	Supervision of clinicians providing intervention	Sufficient statistical power to find significant effects of the intervention (≥50 persons in the comparison between intervention and control groups)	Intention-to-treat analyses	Randomization performed by independent (third) party	Assessors were blinded to study condition (for self-reported outcomes, it was assumed that this criterion was met)
Blonigen et al. (2015)	Yes	Yes	No	No	No	Yes	Yes
De Saeger et al. (2014)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Essig and Kelly (2013)	Yes	Yes	No	No	No	No	Yes
Miller et al. (2013)	Yes	Yes	No	No	Yes	Yes	Yes
Miller et al. (1993)	Yes	Yes	No	No	Yes	No	Yes
Finn and Tonsager (1992)	Yes	Yes	Yes	Yes	No	No	Yes
Hilsenroth et al. (2002)	Yes	Yes	Yes	Yes	Yes	No	Yes
Morey et al. (2010)	Yes	No	Yes	No	Yes	No	Yes
Newman and Greenway (1997)	Yes	No	No	Yes	Yes	No	Yes
Pegg et al., (2005)	Yes	No	No	No	Yes	No	Yes

Table 3
Overall Effect of Collaborative Assessment Methods on Symptoms, Treatment Process, and Personal Growth Outcomes

Outcome	Number of independent studies	Number of effect sizes	Cohen's *d*	95% CI	*p* value	% variance Level 1[a]	Variance Level 2[b]	% variance Level 2[b]	Variance Level 3[c]	% variance Level 3[c]
Treatment process	7	27	0.591 (0.239)	[0.098, 1.083]	.021*	19.15	0.000	0.000	0.358***	80.85
Symptoms	7	32	0.186 (0.085)	[0.013, 0.360]	.036*	84.74	0.000	0.000	0.021	15.26
Personal growth	5	11	0.422 (0.148)	[0.092, 0.752]	.017*	56.78	0.000	0.000	0.066	43.22

Note. CI = confidence interval.
[a] Sampling variance. [b] Variance between the effect sizes from the same study. [c] Variance between studies.
* $p < .05$. *** $p < .001$.

Table 4
Results of the Moderator Analyses for Treatment Process Outcomes

Moderator variables	Number of independent studies	Number of effect sizes	Intercept/mean d [95% CI]	β_1 [95% CI]	F ($df1$, $df2$)	p value
Patient characteristics						
Age	7	27	0.605 [0.059, 1.151]*	0.011 [−0.050, 0.073]	0.146 (1, 25)	.706
Gender (% male)	7	27	0.608 [0.155, 1.062]*	0.011 [−0.006, 0.028]	1.746 (1, 25)	.198
Ethnicity (% Caucasian)	4	16	0.791 [0.032, 1.549]*	−0.025 [−0.062, 0.011]	2.203 (1, 14)	.160
Sample type						
Outpatient (RC)	4	12	0.270 [−0.285, 0.825]		2.361 (2, 24)	.116
Inpatient	2	9	1.274 [0.496, 2.052]**	1.004 [0.048, 1.959]*		
Mixed	1	6	0.533 [−0.497, 1.563]	0.263 [−0.907, 1.433]		
Method						
Number of sessions	7	27	0.611 [0.049, 1.173]*	0.132 [−0.746, 1.010]	0.096 (1, 25)	.759
Method type					24.324 (1, 25)	<.001***
Collaborative Assessment (RC)	1	5	1.890 [1.317, 2.463]***			
Therapeutic Assessment	6	22	0.428 [0.219, 0.638]***	−1.462 [−2.072, −0.851]***		
Study characteristics						
Quality rating	7	27	0.563 [0.024, 1.101]*	−0.088 [−0.464, 0.288]	0.232 (1, 25)	.634
Time until assessment	7	27	0.503 [−0.027, 1.033]+	0.014 [−0.016, 0.045]	0.952 (1, 25)	.339

Note. Control condition (active vs. nonactive) could not be included as a moderator as no studies with a nonactive control condition included outcomes related to the treatment process. β_1 = estimated regression coefficient; CI = confidence interval; df = degrees of freedom; RC = reference category.
+ $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Assessment was significantly smaller than the effect size for Collaborative Assessment ($\Delta d = -1.46$), although both effect sizes were significant ($d = 1.89$, $p < .001$ vs. $d = 0.43$, $p < .001$). Other variables (i.e., age, gender, ethnicity, sample type, number of sessions, quality of the study, and time between CAMs and assessment) did not moderate the effect of CAMs on treatment process.

We examined the possible publication bias for each outcome. Ideally, unpublished materials would have been included in our search; however, it was difficult to retrieve them. The risk of a biased estimate of the overall effect would decrease when unpublished materials are included in a meta-analysis. Therefore, testing for potential publication bias is especially important when only published studies are included. The trim-and-fill procedure is based on the assumption that publication bias produces asymmetric funnel plots with missing effect sizes in the (bottom) left-hand corner. These effects are missing (i.e., not published and, therefore, not included in the meta-analysis) because they were small, nonsignificant or perhaps reversed effects (Duval & Tweedie, 2000b). By using the trim-and-fill procedure, the degree of asymmetry of the funnel plot is examined and, in case of an asymmetric funnel plot, missing effect sizes are estimated. Figure 2 shows that no missing effect sizes were estimated, suggesting the absence of publication bias. Unfortunately, the studies included in the meta-analytic review only reported distal outcomes and did not provide data on *immediate* outcomes of CAMs.

In summary, based on the current meta-analytic review, CAMs, consisting of on average 2.7 sessions (range from 1 to 4 sessions), exert significant positive distal effects on treatment process, patient symptoms, and personal growth compared to a control condition. Method type moderated the distal effects on treatment process outcomes, with smaller effects for Therapeutic Assessment than for Collaborative Assessment. Of note, only two studies examined Collaborative Assessment, whereas eight studies evaluated Therapeutic Assessment, suggesting that the effect size estimate for Collaborative Assessment may lack precision. In addition, it is possible that the different effect sizes of these methods are better explained by differences between the study populations or other study characteristics than by differences between the methods.

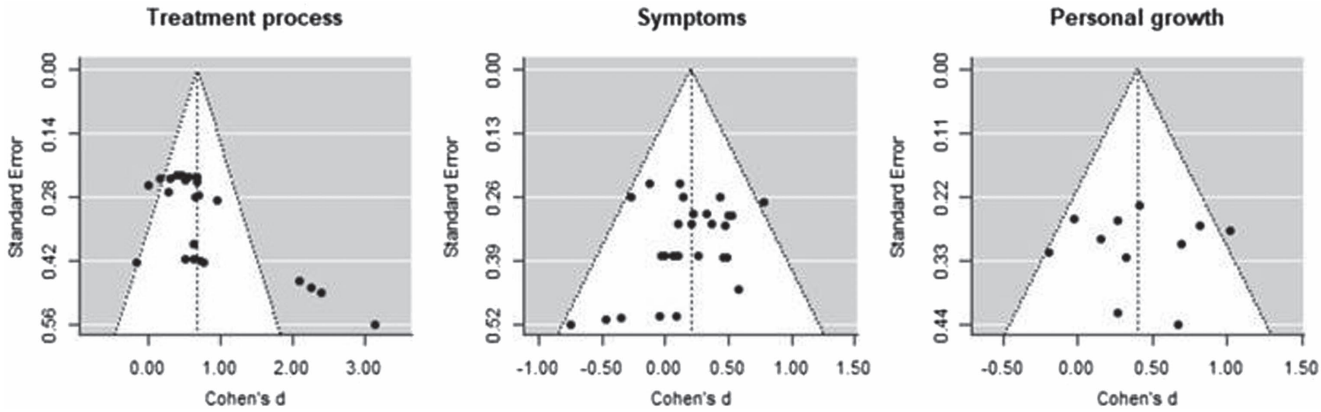
Qualitative Research Review

As noted above, studies that did not meet the inclusion criteria of our meta-analytic research review were reexamined for their relevance to a qualitative research review of the distal and immediate outcomes of CAMs. Table 5 summarizes six studies that reported distal and/or immediate outcomes of CAMs but were excluded from the meta-analytic review. This qualitative research review also includes a study that aggregated multiple daily repeated-measures single-case studies of CAMs (Smith et al., 2015). Overall, all six cases had a positive outcome, and none of the clients involved showed negative effects from the interventions.

As can be seen in Table 5, CAMs were associated with positive effects on a diverse range of *distal* outcomes, which reflect the diversity of the clients' presenting problems and assessment goals. The effect sizes of CAMs in the single-case studies described in Table 5 were comparable to an aggregated analysis of nine single-case studies of Therapeutic Assessment as a consultation during ongoing treatment (Smith et al., 2015). This aggregate analysis suggested a moderate effect of CAMs in reducing symptomatic

Figure 2

Funnel Plots for Treatment Process, Symptoms, and Personal Growth Outcomes



distress ($d = -.50$) between the baseline phase and the combined intervention and follow-up phases.

Our reexamination of the studies that were excluded from the meta-analytic review did not identify studies that reported on the *immediate* outcomes of specific CAMs components. Three studies (Aschieri & Smith, 2012; Durosini et al., 2017; Fantini & Smith, 2018), however, reported on the trajectory of change that was observed in the clients (see Table 5). While this at best only roughly approximates the concept of immediate outcomes and points to the need for future studies of such outcomes of CAMs (see Limitations of the Research section), it gives us an initial glimpse of how outcomes may be associated with specific CAMs components.

Two types of change trajectories can be identified. First, Aschieri and Smith (2012) reported a continuous and linear improvement of the client's problems starting after the first session (the definition of assessment goals in the form of individualized questions) and ending in the final session (the final collaborative discussion of the assessment experience and test results), suggesting an incremental effect of successive CAMs components. Second, Durosini et al. (2017) and Fantini and Smith (2018) reported an inverted U shape trajectory, in which the client's problems seem to increase during initial CAMs components, to subsequently improve as further CAMs components follow.

The presence of a linear decrease in clients' distress is also suggested by the aggregated analysis of Smith et al. (2015) discussed above. The trajectory of change across participants suggested that Therapeutic Assessment decreased symptoms and distress from baseline onwards and that the rate of change slowed with time during the follow-up period.

In sum, while the few available repeated-measures single-case studies of CAMs need to be interpreted cautiously, their qualitative review seems to underscore the positive distal effects of CAMs that were observed in the meta-analytic review. Perhaps, most importantly, they point to a clear and urgent need for studies of the immediate outcomes of specific CAMs components.

Limitations of the Research

Controlled outcome research on CAMs remains relatively scarce and is almost exclusively focused on direct distal outcomes. Of note, only 10 studies and 70 effect sizes were included in this meta-analysis, which warrants some caution in interpreting the results. Hence, more research is needed in this field.

Studies are needed that also investigate the indirect effects of assessment, that is, benefits that may occur from superior treatment selection and treatment planning that were derived from the assessment findings and feedback (Kamphuis et al., 2021). Another priority for future research is to test putative theoretical mechanisms that explain the treatment utility of CAMs, while controlling for the assessors' expectations about the effect of these methods.

Research is also missing on the specific methods used in CAMs and—more specifically—in Therapeutic Assessment. Future studies should focus on the immediate effect of CAM components with adult clients, such as gathering assessment questions, extended inquiry of test responses, or providing them with written letters containing the results of their individualized assessment. To do such research, it will be important to develop standardized and psychometrically sound measures that assess the quality of the delivery of CAMs and its components.

Finally, there is still a lack of empirical research on the effect of CAMs with diverse populations. Available literature illustrate that assessors using CAMs provide culturally tailored conceptualizations that may avoid the risk of stereotypical, erroneous, incomplete, or potentially damaging understandings of clients (Clauss-Ehlers et al., 2019; Finn, 2007; Finn, 2011; Guerrero et al., 2011; Haydel et al., 2011; Martin, 2018; Mercer, 2011).

Training Implications

Clinicians interested in using CAMs can acquire two distinct sets of skills. First, CAMs rely on a firm knowledge of psychological testing (knowing how to administer and interpret tests). Second, it requires clinical skills and relational sensitivity, to make test interpretation useful and tailored to clients' needs.

Fantini et al. (2022) have detailed the main steps in learning Therapeutic Assessment. Tests are generally taught in undergraduate programs. Further training on tests can be found through test publishers and conferences of professional organizations, such as the Society for Personality Assessment (https://www.personality.org) and the International Society of the Rorschach and Projective Methods (https://www.internationalrorschachsociety.com).

Table 5
Summary of Repeated-Measures Single-Case Studies

Study	Description of the client	CAMs components	Main distal outcomes	Trajectory of change
Aschieri and Smith (2012)	A 21-year-old female with academic problems, low self-esteem, and loneliness.	A formal Therapeutic Assessment that included the definition of assessment goals in the form of individualized questions, collaborative discussion of the assessment experience and results of the MMPI-2, RIM, and EMP.	Comparing preintervention and intervention, the results showed a statistically significant decrease of a composite measure of daily self-reported anxiety, loneliness, love for self and others, and degree to which the client was hard on herself ($r = -.55$).	A statistically significant improvement of symptoms over time that began with the first session of the Therapeutic Assessment ($r = .58$).
Smith and George (2012)	A 52-year-old female cancer survivor (Stage IV melanoma) with anxiety, depressive symptoms, and emotional volatility, who complained about losing the emotional sturdiness she had felt before the cancer.	A formal Therapeutic Assessment that partially overlapped with long-term psychotherapy. CAMs included definition of assessment goals in the form of individualized questions, collaborative discussion of the assessment experience and results of the EMP, AAP, and a personalized set of personalized sentence stems to be completed by the client.	Comparing preintervention and intervention, the results showed a statistically significant decrease of a composite measure of daily self-reported tearfulness, self-efficacy, level of inactivity, and illness fear/anxiety ($r = -.61$).	Not reported
Tarocchiet al. (2013)	A 37-year-old woman diagnosed with complex posttraumatic stress disorder, who felt desperate, fatigued, powerless, and like a failure. The client experienced a very disruptive and traumatizing family, and abusive couple relationships.	A formal Therapeutic Assessment that included the definition of assessment goals in the form of individualized questions, collaborative discussion of the assessment experience and results of the AAP and RIM.	Comparing preintervention and intervention, the results showed a statistically significant decrease of a composite measure of daily self-reported loneliness, despair, and anxiety ($r = -.64$).	Not reported
Durosini, et al. (2017)	A 52-year-old man diagnosed with persistent complicated bereavement disorder, major depressive disorder, and posttraumatic stress disorder. Psychological problems emerged after the death of both parents, after which he withdrew from his family and numbed his feelings.	A formal Therapeutic Assessment that included the definition of assessment goals in the form of individualized questions, collaborative discussion of the assessment experience and results of the MMPI-2-RF, EMP, and storytelling to nonstandardized images.	Comparing the intervention and the follow-up, results showed a statistically significant decrease of a composite measure of daily self-reported loneliness, suffering, longing for deceased parents, emotional numbing, and sense of failure ($r = -.49$).	An inverted "U" shape trajectory, in which a transient period of worsening at the onset of the intervention was followed by a significant improvement ($r = .51$).
Fantini and Smith (2018)	A 22-year-old female university student who suffered from angry outbursts, lack of motivation, feeling distant from others, and being detached from her emotions. The client had witnessed a family secret, which eventually led to the separation of her parents.	A formal Therapeutic Assessment that included the definition of assessment goals in the form of individualized questions, collaborative discussion of the assessment experience and results of the MMPI-2-RF, RIM, and EMP.	A composite measure of daily self-reported anxiety and fear of losing someone significantly increased after the discussion of the RIM ($r = .80$) and decreased after the last session of the assessment ($r = -.73$).	An inverted "U" shape trajectory, in which a transient period of worsening at the onset of the intervention was followed by a significant improvement ($r = .73$).
David et al. (2022)	A mid-20s client born biologically female, who identified as transmasculine nonbinary, and was assessed midway an ongoing therapy for depression and problematic relationships.	A formal Therapeutic Assessment that included the definition of assessment goals in the form of individualized questions, collaborative discussion of the experience and results of the AAP, MCMI-IV, CWS, BDI-II, BAI, EMP, and PFS.	The client reported stably high levels of satisfaction, alliance, presence during the course of the sessions, and high satisfaction and new understandings at the end.	Not reported

Note. CAMs = collaborative assessment methods; AAP = Adult Attachment Projective System (George & West, 2012); BAI = Beck Anxiety Inventory (Beck et al., 1993); BDI-II = Beck Depression Inventory–Second Edition (Beck et al., 1996); CWS = Crisi Wartegg System (Crisi & Palm, 2018); EMP = Early Memories Procedure (Bruhn, 1992a, 1992b); MCMI-IV = Millon Clinical Multiaxial Inventory–Fourth Edition (Millon et al., 2015); MMPI-2 = Minnesota Multiphasic Inventory—Second Edition (Butcher et al., 2001); MMPI-2-RF = Minnesota Multiphasic Inventory–2–Revised Form (Tellegen & Ben-Porath, 2008/2011); PFS = Picture Frustration Study (Rosenzweig, 1978); RIM = Rorschach Inkblot Method (Rorschach, 1921).

Clinical skills are often acquired in graduate and through postgraduate training. The University of Denver's Graduate School of Professional Psychology PsyD program offers an emphasis on CAMs, and in Italy, the Scuola di Specializzazione in Psicoterapia Integrata-Sanicare (School of Specialization in Integrated Psychotherapy-Sanicare), is teaching CAMs. More short-term training is routinely offered by the Therapeutic Assessment Institute (https://www.therapeuticassessment.com), the European Center for Therapeutic Assessment (Milano, Italy), the Asian Pacific Center for Therapeutic Assessment (Tokyo, Japan), and the Viersprong Institute for Studies on Personality Disorders (Bergen op Zoom, the Netherlands).

Therapeutic Practices

- Choose CAMs when conducting a psychological or psychosocial assessment as they exert, in an average of 2.7 sessions, positive effects on distal treatment processes and outcomes.
- Invite clients to articulate personal questions for their assessment and to tailor it toward their goals.
- Enlist patients in interpreting the assessment findings and provide collaborative feedback.
- Be aware that the respect, collaboration, and empathic understanding of clients may be the primary mechanism of CAMs effectiveness, not so much the exact way in which it is implemented.
- Use test results collaboratively to help clients develop a different view of themselves, especially one that is more accurate, compassionate, and useful.

References

References marked with an asterisk indicate studies included in the meta-analysis.

Anderson, H., & Goolishian, H. (1992). The client is the expert: A not-knowing approach to therapy. In S. McNamee & K. J. Gergen (Eds.), *Therapy as social construction* (pp. 25–39). Sage Publications.

Aschieri, F. (2012). Epistemological and ethical challenges in standardized testing and collaborative assessment. *Journal of Humanistic Psychology*, *52*(3), 350–368. https://doi.org/10.1177/0022167811422946

Aschieri, F. (2016). Shame as a cultural artifact: A call for self-awareness and reflexivity in personality assessment. *Journal of Personality Assessment*, *98*(6), 567–575. https://doi.org/10.1080/00223891.2016.1146289

Aschieri, F., & Smith, J. D. (2012). The effectiveness of therapeutic assessment with an adult client: A single-case study using a time-series design. *Journal of Personality Assessment*, *94*(1), 1–11. https://doi.org/10.1080/00223891.2011.627964

Aschieri, F., & Vetere, C. (2020). Using the Rorschach as a group intervention to promote the understanding of adolescents by staff members in inpatient residential programs. *Rorschachiana*, *41*(2), 120–143. https://doi.org/10.1027/1192-5604/a000127

Assink, M., & Wibbelink, C. J. M. (2016). Fitting three-level meta-analytic models in R: A step-by-step tutorial. *The Quantitative Methods for Psychology*, *12*(3), 154–174. https://doi.org/10.20982/tqmp.12.3.p154

Attkisson, C. C., & Zwick, R. (1982). The client satisfaction questionnaire. Psychometric properties and correlations with service utilization and psychotherapy outcome. *Evaluation and Program Planning*, *5*(3), 233–237. https://doi.org/10.1016/0149-7189(82)90074-X

Beck, A. T., Epstein, N., Brown, G., & Steer, R. (1993). Beck anxiety inventory. *Journal of Consulting and Clinical Psychology*.

Beck, A. T., Steer, R. A., & Brown, G. K. (1996). *Beck depression inventory (BDI-II)* (Vol. 10, No. 3). Pearson.

*Blonigen, D. M., Timko, C., Jacob, T., & Moos, R. H. (2015). Patient-centered feedback on the results of personality testing increases early engagement in residential substance use disorder treatment: A pilot randomized controlled trial. *Addiction Science & Clinical Practice*, *10*(1), Article 9. https://doi.org/10.1186/s13722-015-0030-9

Bouche, C., Gomes David, M., Salleron, J., Rauch, P., Leufflen, L., Buhler, J., & Marchal, F. (2020). Evaluation of pre-therapeutic assessment in endometrial cancer staging. *Diagnostics*, *10*(12), Article 1045. https://doi.org/10.3390/diagnostics10121045

Brown, J. (1997). Circular questioning: An introductory guide. *Australian and New Zealand Journal of Family Therapy*, *18*(2), 109–114. https://doi.org/10.1002/j.1467-8438.1997.tb00276.x

Bruhn, A. R. (1992a). The early memories procedure: A projective test of autobiographical memory, Part 1. *Journal of Personality Assessment*, *58*(1), 1–15. https://doi.org/10.1207/s15327752jpa5801_1

Bruhn, A. R. (1992b). The early memories procedure: A projective test of autobiographical memory, part 2. *Journal of Personality Assessment*, *58*(2), 326–346. https://doi.org/10.1207/s15327752jpa5802_11

Butcher, J., Graham, J., Tellegen, A., Dahlstrom, W., & Kaemmer, B. (2001). *Minnesota Multiphasic Personality Inventory–2 (MMPI-2): Manual for administration, scoring, and interpretation* (Rev. ed.). University of Minnesota Press.

Cheek, J. M., & Buss, A. H. (1981). Shyness and sociability. *Journal of Personality and Social Psychology*, *41*(2), 330–339. https://doi.org/10.1037/0022-3514.41.2.330

Cheung, M. W. L. (2014). Modeling dependent effect sizes with three-level meta-analyses: A structural equation modeling approach. *Psychological Methods*, *19*(2), 211–229. https://doi.org/10.1037/a0032968

Chudzik, L. (2016). Therapeutic Assessment of a violent criminal offender: Managing the cultural narrative of evil. *Journal of Personality Assessment*, *98*(6), 585–589. https://doi.org/10.1080/00223891.2016.1215321

Clauss-Ehlers, C. S., Chiriboga, D. A., Hunter, S. J., Roysircar, G., & Tummala-Narra, P. (2019). APA Multicultural Guidelines executive summary: Ecological approach to context, identity, and intersectionality. *American Psychologist*, *74*(2), 232–244. https://doi.org/10.1037/amp0000382

Comtois, K. A., Jobes, D. A., O'Connor, S., Atkins, D. C., Janis, K., Chessen, C., Landes, S. J., Holen, A., & Yuodelis-Flores, C. (2011). Collaborative assessment and management of suicidality (CAMS): Feasibility trial for next-day appointment services. *Depression and Anxiety*, *28*(11), 963–972. https://doi.org/10.1002/da.20895

Crisi, A., & Palm, J. A. (2018). *The Crisi Wartegg System (CWS): Manual for administration, scoring, and interpretation*. Routledge. https://doi.org/10.4324/9781315123929

David, R. M., Carroll, A. J., & Smith, J. D. (2022). Virtual delivery of therapeutic assessment: An empirical case study. *Journal of Personality Assessment*, *104*(3), 417–427. https://doi.org/10.1080/00223891.2021.1929262

*De Saeger, H., Kamphuis, J. H., Finn, S. E., Smith, J. D., Verheul, R., van Busschbach, J. J., Feenstra, D. J., & Horn, E. K. (2014). Therapeutic assessment promotes treatment readiness but does not affect symptom change in patients with personality disorders: Findings from a randomized clinical trial. *Psychological Assessment*, *26*(2), 474–483. https://doi.org/10.1037/a0035667

Derogatis, L. R. (1983). *Scl-90-R: Administration. Scoring and procedure manual-II for the R (revised) version, Tawson*. Clinical Psychometric Research.

Durosini, I., & Aschieri, F. (2021). Therapeutic assessment efficacy: A meta-analysis. *Psychological Assessment*, *33*(10), 962–972. https://doi.org/10.1037/pas0001038

Durosini, I., Tarocchi, A., & Aschieri, F. (2017). Therapeutic assessment with a client with persistent complex bereavement disorder: A single-case

time-series design. *Clinical Case Studies*, *16*(4), 295–312. https://doi.org/10.1177/1534650117693942

Duval, S., & Tweedie, R. (2000a). A nonparametric 'trim and fill' method of accounting for publication bias in meta-analysis. *Journal of the American Statistical Association*, *95*(449), 89–99. https://doi.org/10.1080/01621459.2000.10473905

Duval, S., & Tweedie, R. (2000b). Trim and fill: A simple funnel-plot-based method of testing and adjusting for publication bias in meta-analysis. *Biometrics*, *56*(2), 455–463. https://doi.org/10.1111/j.0006-341X.2000.00455.x

Eells, T. D. (Ed.). (2022). *Handbook of psychotherapy case formulation*. Guilford Press.

*Essig, G. N., & Kelly, K. R. (2013). Comparison of the effectiveness of two assessment feedback models in reducing career indecision. *Journal of Career Assessment*, *21*(4), 519–536. https://doi.org/10.1177/1069072712475283

Evans, F. B. (2012). Therapeutic assessment alternative to custody evaluations: An adolescent whose parents could not stop fighting. In S. E. Finn, C. T. Fischer, & L. Handler (Eds.), *Collaborative/therapeutic assessment: A casebook and guide* (pp. 357–378). Wiley.

Fantini, F. (2016). Family traditions, cultural values, and the clinician's countertransference: Therapeutic Assessment of a young Sicilian woman. *Journal of Personality Assessment*, *98*(6), 576–584. https://doi.org/10.1080/00223891.2016.1178128

Fantini, F., Aschieri, F., & Bertrando, P. (2013). "Is our daughter crazy or bad?": A case study of Therapeutic Assessment with children. *Contemporary Family Therapy*, *35*(4), 731–744. https://doi.org/10.1007/s10591-013-9265-3

Fantini, F., Aschieri, F., David, R. M., Martin, H., & Finn, S. E. (2022). *Therapeutic assessment with adults: Using psychological testing to help clients change*. Routledge. https://doi.org/10.4324/9780429202797

Fantini, F., & Smith, J. D. (2018). Using R-PAS in the therapeutic assessment of a university student with emotional disconnection. In J. Mihura & G. J. Meyer (Eds.), *Using the Rorschach Performance Assessment System (R-PAS)* (pp. 138–157). Guilford Press.

Finn, S. E. (1996). *Manual for using the MMPI-2 as a therapeutic intervention*. University of Minnesota Press.

Finn, S. E. (2007). *In our clients' shoes: Theory and techniques of therapeutic assessment*. Lawrence Erlbaum.

Finn, S. E. (2011). Therapeutic assessment "on the front lines": Comment on articles from WestCoast children's clinic. *Journal of Personality Assessment*, *93*(1), 23–25. https://doi.org/10.1080/00223891.2011.529007

Finn, S. E. (2012). Implications of recent research in neurobiology for psychological assessment. *Journal of Personality Assessment*, *94*(5), 440–449. https://doi.org/10.1080/00223891.2012.700665

Finn, S. E., Schroeder, D. G., & Tonsager, M. E. (1995). *The Assessment Questionnaire-2 (AQ-2): A measure of clients' experiences with psychological assessment* [Unpublished manuscript]. Center for Therapeutic Assessment

Finn, S. E., & Tonsager, M. E. (1992). Therapeutic effects of providing MMPI-2 test feedback to college students awaiting psychotherapy. *Psychological Assessment*, *4*(3), 278–287. https://doi.org/10.1037/1040-3590.4.3.278

Finn, S. E., & Tonsager, M. E. (1997). Information-gathering and therapeutic models of assessment: Complementary paradigms. *Psychological Assessment*, *9*(4), 374–385. https://doi.org/10.1037/1040-3590.9.4.374

Fischer, C. (1994). *Individualizing psychological assessment*. Routledge. (Originally published 1985).

Fischer, C. T. (2000). Collaborative, individualized assessment. *Journal of Personality Assessment*, *74*(1), 2–14. https://doi.org/10.1207/S15327752JPA740102

Fonagy, P., & Allison, E. (2014). The role of mentalizing and epistemic trust in the therapeutic relationship. *Psychotherapy: Theory, Research, & Practice*, *51*(3), 372–380. https://doi.org/10.1037/a0036505

Fosha, D. (2004). 'Nothing that feels bad is ever the last step:' the role of positive emotions in experiential work with difficult emotional experiences. *Clinical Psychology & Psychotherapy*, *11*(1), 30–43. https://doi.org/10.1002/cpp.390

George, C., & West, M. (2012). *The adult attachment projective picture system*. Guilford.

Goldenson, J., Brodsky, S. L., & Perlin, M. L. (2022). Trauma-informed forensic mental health assessment: Practical implications, ethical tensions, and alignment with therapeutic jurisprudence principles. *Psychology, Public Policy, and Law*, *28*(2), 226–239. https://doi.org/10.1037/law0000339

Gruters, A. A. A., Christie, H. L., Ramakers, I. H. G. B., Verhey, F. R. J., Kessels, R. P. C., & de Vugt, M. E. (2021). Neuropsychological assessment and diagnostic disclosure at a memory clinic: A qualitative study of the experiences of patients and their family members. *The Clinical Neuropsychologist*, *35*(8), 1398–1414. https://doi.org/10.1080/13854046.2020.1749936

Guerrero, B., Lipkind, J., & Rosenberg, A. (2011). Why did she put nail polish in my drink? Applying the Therapeutic Assessment model with an African American foster child in a community mental health setting. *Journal of Personality Assessment*, *93*(1), 7–15. https://doi.org/10.1080/00223891.2011.529002

Hanson, W. E., & Poston, J. M. (2011). Building confidence in psychological assessment as a therapeutic intervention: An empirically based reply to Lilienfeld, Garb, and Wood (2011). *Psychological Assessment*, *23*(4), 1056–1062. https://doi.org/10.1037/a0025656

Haydel, M. E., Mercer, B. L., & Rosenblatt, E. (2011). Training assessors in Therapeutic Assessment. *Journal of Personality Assessment*, *93*(1), 16–22. https://doi.org/10.1080/00223891.2011.529004

Hill, C. E., & Norcross, J. C. (Eds.). (2023). *Psychotherapy skills and methods that work*. Oxford University Press.

*Hilsenroth, M. J., Ackerman, S. J., Clemence, A. J., Strassle, C. G., & Handler, L. (2002). Effects of structured clinician training on patient and therapist perspectives of alliance early in psychotherapy. *Psychotherapy: Theory, Research, & Practice*, *39*(4), 309–323. https://doi.org/10.1037/0033-3204.39.4.309

Jobes, D. A. (2012). The Collaborative Assessment and Management of Suicidality (CAMS): An evolving evidence-based clinical approach to suicidal risk. *Suicide & Life-Threatening Behavior*, *42*(6), 640–653. https://doi.org/10.1111/j.1943-278X.2012.00119.x

Jobes, D. A., Jacoby, A. M., Cimbolic, P., & Hustead, L. A. T. (1997). Assessment and treatment of suicidal clients in a university counseling center. *Journal of Counseling Psychology*, *44*(4), 368–377. https://doi.org/10.1037/0022-0167.44.4.368

Kamphuis, J. H., & Finn, S. E. (2019). Therapeutic assessment in personality disorders: Toward the restoration of epistemic trust. *Journal of Personality Assessment*, *101*(6), 662–674. https://doi.org/10.1080/00223891.2018.1476360

Kamphuis, J. H., Noordhof, A., & Hopwood, C. J. (2021). When and how assessment matters: An update on the treatment utility of clinical assessment. *Psychological Assessment*, *33*(2), 122–132. https://doi.org/10.1037/pas0000966

Knapp, G., & Hartung, J. (2003). Improved tests for a random effects meta-regression with a single covariate. *Statistics in Medicine*, *22*(17), 2693–2710. https://doi.org/10.1002/sim.1482

Luzzo, D. A., & Day, M. A. (1999). Effects of Strong Interest Inventory feedback on career decision-making self-efficacy and social cognitive career beliefs. *Journal of Career Assessment*, *7*(1), 1–17. https://doi.org/10.1177/106907279900700101

Martin, H. (2018). Collaborative/Therapeutic Assessment and diversity: The complexity of being human. In S. R. Smith & R. Krishnamurthy (Eds.), *Diversity-sensitive personality assessment* (pp. 278–293). Routledge. https://doi.org/10.4324/9780203551578-15

Mercer, B. L. (2011). Psychological assessment of children in a community mental health clinic. *Journal of Personality Assessment*, *93*(1), 1–6. https://doi.org/10.1080/00223891.2011.528741

Meyer, G. J., Viglione, D. J., Mihura, J. L., Erard, R. E., & Erdberg, P. (2011). *Rorschach performance assessment system: Administration, coding, interpretation, and technical manual*. Rorschach Performance Assessment System.

Mihura, J. L., & Meyer, G. J. (2018). Introduction to R-PAS. In J. L. Mihura & G. J. Meyer (Eds.), *Using the Rorschach Performance Assessment System® (R-PAS®)* (pp. 3–22). Guilford Press.

Mikulincer, M., & Shaver, P. R. (2007). Boosting attachment security to promote mental health, prosocial values, and inter-group tolerance. *Psychological Inquiry*, *18*(3), 139–156. https://doi.org/10.1080/10478400701512646

*Miller, L. R., Cano, A., & Wurm, L. H. (2013). A motivational therapeutic assessment improves pain, mood, and relationship satisfaction in couples with chronic pain. *The Journal of Pain*, *14*(5), 525–537. https://doi.org/10.1016/j.jpain.2013.01.006

*Miller, W. R., Benefield, R. G., & Tonigan, J. S. (1993). Enhancing motivation for change in problem drinking: A controlled comparison of two therapist styles. *Journal of Consulting and Clinical Psychology*, *61*(3), 455–461. https://doi.org/10.1037/0022-006X.61.3.455

Millon, T., Grossman, S., & Millon, C. (2015). *Millon clinical multiaxial inventory-IV (MCMI-IV)*. Pearson Assessments.

*Morey, L. C., Lowmaster, S. E., & Hopwood, C. J. (2010). A pilot study of manual-assisted cognitive therapy with a therapeutic assessment augmentation for borderline personality disorder. *Psychiatry Research*, *178*(3), 531–535. https://doi.org/10.1016/j.psychres.2010.04.055

*Newman, M. L., & Greenway, P. (1997). Therapeutic effects of providing MMPI-2 test feedback to clients at a university counseling service: A collaborative approach. *Psychological Assessment*, *9*(2), 122–131. https://doi.org/10.1037/1040-3590.9.2.122

Ouzzani, M., Hammady, H., Fedorowicz, Z., & Elmagarmid, A. (2016). Rayyan-a web and mobile app for systematic reviews. *Systematic Reviews*, *5*(1), Article 210. https://doi.org/10.1186/s13643-016-0384-4

*Pegg, P. O., Jr., Auerbach, S. M., Seel, R. T., Buenaver, L. F., Kiesler, D. J., & Plybon, L. E. (2005). The Impact of Patient-Centered Information on Patients' Treatment Satisfaction and Outcomes in Traumatic Brain Injury Rehabilitation. *Rehabilitation Psychology*, *50*(4), 366–374. https://doi.org/10.1037/0090-5550.50.4.366

Pegg, P. O., Seel, R. T., & Auerbach, S. M. (2001). *Treatment Satisfaction Questionnaire*. Virginia Commonwealth University.

Poston, J. M., & Hanson, W. E. (2010). Meta-analysis of psychological assessment as a therapeutic intervention. *Psychological Assessment*, *22*(2), 203–212. https://doi.org/10.1037/a0018679

R Core Team. (2015). *R: A language and environment for statistical computing*. R Foundation for Statistical Computing. http://www.R-project.org/

Rorschach, H. (1921). *Psychodiagnostik: Methodik und ergebnisse eines warhrnehmungsdiagnostischen Experiments (deutenlassen von zufallsformen)* (Vol. 2). E. Bircher.

Rosenzweig, S. (1978). *The Rosenzweig picture-frustration (PF) study: Basic manual*. Psychological Assessment Resources.

Smith, J. D., Eichler, W. C., Norman, K. R., & Smith, S. R. (2015). The effectiveness of collaborative/therapeutic assessment for psychotherapy consultation: A pragmatic replicated single-case study. *Journal of Personality Assessment*, *97*(3), 261–270. https://doi.org/10.1080/00223891.2014.955917

Smith, J. D., & George, C. (2012). Therapeutic assessment case study: Treatment of a woman diagnosed with metastatic cancer and attachment trauma. *Journal of Personality Assessment*, *94*(4), 331–344. https://doi.org/10.1080/00223891.2012.656860

Smith, J. D., Handler, L., & Nash, M. R. (2010). Therapeutic assessment for preadolescent boys with oppositional defiant disorder: A replicated single-case time-series design. *Psychological Assessment*, *22*(3), 593–602. https://doi.org/10.1037/a0019697

Swift, J. K., Trusty, W. T., & Penix, E. A. (2021). The effectiveness of the Collaborative Assessment and Management of Suicidality (CAMS) compared to alternative treatment conditions: A meta-analysis. *Suicide & Life-Threatening Behavior*, *51*(5), 882–896. https://doi.org/10.1111/sltb.12765

Tabachnick, B. G., & Fidell, L. S. (2013). *Using multivariate statistics* (6th ed.). Allyn & Bacon.

Tarocchi, A., Aschieri, F., Fantini, F., & Smith, J. D. (2013). Therapeutic assessment of complex trauma: A single-case time-series study. *Clinical Case Studies*, *12*(3), 228–245. https://doi.org/10.1177/1534650113479442

Tellegen, A., & Ben-Porath, Y. S. (2011). *Minnesota Multiphasic Personality Inventory–2 Restructured Form: Technical manual*. University of Minnesota Press. (Original work published 2008)

Tharinger, D. J., Finn, S. E., Austin, C. A., Gentry, L. B., Bailey, K. E., Parton, V. T., & Fisher, M. E. (2008). Family sessions in psychological assessment with children: Goals, techniques, and clinical utility. *Journal of Personality Assessment*, *90*(6), 547–558. https://doi.org/10.1080/00223890802388400

Tharinger, D. J., Finn, S. E., Gentry, L., Hamilton, A., Fowler, J., Matson, M., Krumholz, L., & Walkowiak, J. (2009). Therapeutic Assessment with children: A pilot study of treatment acceptability and outcome. *Journal of Personality Assessment*, *91*(3), 238–244. https://doi.org/10.1080/00223890902794275

Tharinger, D. T, Rudin, D. I., Frackowiak, M., & Finn, S. E. (2022). *Therapeutic Assessment with children: Enhancing parental empathy through psychological assessment*. Routledge.

Van den Noortgate, W., López-López, J. A., Marín-Martínez, F., & Sánchez-Meca, J. (2013). Three-level meta-analysis of dependent effect sizes. *Behavior Research Methods*, *45*(2), 576–594.

Viechtbauer, W. (2010). Conducting meta-analyses in R with the metafor package. *Journal of Statistical Software*, *36*(3), 1–48. https://doi.org/10.18637/jss.v036.i03

Wild, T. C., Cunningham, J. A., & Roberts, A. B. (2007). Controlled study of brief personalized assessment-feedback for drinkers interested in self-help. *Addiction*, *102*(2), 241–250. https://doi.org/10.1111/j.1360-0443.2006.01682.x

Received January 11, 2023
Revision received January 28, 2023
Accepted February 4, 2023 ■