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Beyond Symptom Reduction: Process and Outcome in Psychotherapy Across Diagnostic Categories

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Abstract

Psychotherapy research has historically relied on symptom reduction as the primary indicator of treatment success. However, empirical evidence shows that psychotherapeutic outcomes are shaped by complex factors, such as therapeutic mechanisms, therapeutic relationships, and disorder-specific features, which may not be adequately captured by symptom-based measurements alone. This review examines four main categories: anxiety disorders, depressive disorders, obsessive-compulsive disorder, and personality disorders, and the psychotherapy processes and outcomes for these diagnostic categories. First, a conceptual framework that distinguishes the psychotherapy process from outcome is presented, highlighting methodological challenges in measuring outcome. Then, for each disorder, empirical evidence is examined, focusing on factors such as treatment approach, mechanisms of change, durability of outcomes, and barriers to applying the research to real-world settings. Among the four categories reviewed, the proposed mechanisms and symptom outcomes of anxiety disorders are the most closely matched, though process–outcome links in all four categories remain largely untested. Outcomes vary considerably, and depressive disorders carry a high risk of recurrence. Obsessive-compulsive disorder shows robust efficacy and limited real-world dissemination, and personality disorders demonstrate the need for long-term process-focused change and innovation in traditional research designs. Finally, this review highlights the science–practice gap and the potential of transdiagnostic mechanisms in improving psychotherapeutic research and clinical practice. Collectively, the findings highlight the need for outcome models beyond symptom reduction that better reflect the processes through which psychotherapy produces meaningful and sustained change.

Keywords: *Psychotherapy Outcomes; Therapeutic Alliance; Anxiety Disorders; Depressive Disorders; Obsessive-Compulsive Disorder (OCD); Personality Disorders*

Introduction

Psychotherapy refers to a group of treatments aimed at identifying and changing behaviors, thoughts, and emotions that cause distress in an individual's personal life (Cook et al., 2017). From an evidence-based treatment perspective, “evidence” typically comes from carefully conducted studies determining whether therapy works better than no treatment or another type of treatment. However, these studies are conducted under highly controlled, ideal research conditions, leading to questions about how well the research environment can be translated to routine clinical settings (Kazdin, 2004).

One of the major challenges in psychotherapy is separating what changes during the treatment from how that change happens. Treatment outcomes refer to measurable signs of improvement that can be captured by symptom scales and summarized either as standardized mean differences for continuous measures or as binary indicators such as treatment response (Cuijpers et al., 2024). Therapeutic processes, by contrast, refer to the in-session and relational variables—such as alliance, expectancy, and adherence—through which change is proposed to occur (Elliott, 2010). Response denotes a predefined threshold of symptom reduction from pre- to post-treatment (Cuijpers et al., 2024). On the other hand, the psychotherapy process requires facilitating factors that enable change. These factors include the relationship between the therapist and the client, and the specific techniques used to support the healing process.

According to Kazdin (2004), regardless of whether the change is large or small, statistical change does not always translate into clinically meaningful improvement in daily life. Furthermore, broader perspectives, such as functioning and quality of life, are not adequately incorporated into the management of evidence-based treatments. This review focuses on anxiety disorders, depressive disorders, obsessive-compulsive disorder, and personality disorders because these disorders show differences in chronicity, symptom structure, and treatment characteristics. Understanding how well the goals set in the process align with the achieved outcomes is beneficial. The aim is to examine how the process and outcome of psychotherapy are characterized, measured, and researched for these four disorders, mapping where process-outcome links have been tested, where they are merely inferred, and where they are absent.

Across the four categories, direct process–outcome evidence is limited. Viewed together, this mapping shows that process–outcome links have been directly tested mainly in anxiety disorders, partially in depression and OCD, and largely inferred in personality disorders. Alliance findings come from mixed-diagnosis samples (Flückiger et al., 2018), the depression evidence rests on one early-response study (Singla et al., 2019), the OCD evidence on one study of belief change (Wilhelm et al., 2015), and the personality disorder evidence relies on longitudinal observation of interpersonal change rather than direct experimental testing of mechanisms (Bateman & Fonagy, 2009). Process–outcome research is therefore still concentrated in a few areas rather than spread evenly across disorders.

Methodology

This review uses a narrative approach to examine psychotherapy processes and outcomes across anxiety, depressive, obsessive-compulsive, and personality disorders. Empirical studies were identified through searches of PubMed and Google Scholar in November 2025, using combinations of the keywords "psychotherapy process," "therapeutic alliance," "mechanism of change," and "treatment outcome" paired with each of the four disorder categories. No date-range limit was applied. Citation tracking of retrieved reviews supplemented the searches, and peer-reviewed studies were chosen, prioritizing meta-analyses and longitudinal studies that were linked to the disorders mentioned above and psychotherapy processes such as alliance and mechanisms of change to understand outcomes like symptom reduction and functional improvement. Instead of covering all studies, articles meeting explicit criteria — relevance to at least one of the four diagnostic categories, and direct examination of a psychotherapy process or outcome — were chosen. Studies were included if they explicitly measured a process variable (alliance, expectancy, or adherence) alongside an outcome measure, were peer-reviewed, and involved one of the four target disorders. This approach was selected because variation in research designs and definitions is informative for understanding how disorder-specific factors affect therapeutic change and recovery.

Literature Review

Conceptual Foundations of Psychotherapy Process and Outcome

The psychotherapy process can be observed from session to session. It describes how changes in therapy help people change. Therefore, this process consists of observable and measurable factors that influence improvement (Elliott, 2010). The therapeutic alliance is one of the most important factors because it involves the quality of the relationship between the client and the therapist and the strength of the bond. Moreover, researchers primarily measure it through a standardized questionnaire completed by the client (Flückiger et al., 2018).

Extensive reviews show that stronger therapeutic bonds predict better outcomes. Based on 295 independent studies involving more than 30,000 patients, the correlation is approximately $r = .28$. However, this correlation result may vary depending on how the connection is defined (Flückiger et al., 2018). This correlation shows a weaker result when treatment is discontinued, approximately r = .18, and a higher result with broader outcome measures, r = .30. This means that the data in the recovery process differ depending on what researchers choose to define and measure as improvement (Flückiger et al., 2018).

Another critical factor affecting therapy is the therapist's influence. This is one of the critical factors that affects both the relationship between the therapist and the patient during the session and the differences in the results that affect the outcomes of the therapy (Del Re et al., 2012). According to research, when the study design of therapy studies is aimed at identifying these differences, therapist-level differences become more understandable. For example, in designs where each therapist treats only one patient, the alliance-outcome correlation reaches approximately r = .40, but this estimate is inflated by therapist effects and shrinks in designs where each therapist treats many patients (Del Re et al., 2012). The inflated estimate reflects therapist-level confounding rather than a pure alliance effect. The alliance-outcome relationship cannot be understood in a single, simple way, as it is shaped by the therapist's skills alongside the patient's characteristics and momentary changes (Del Re et al., 2012). Beyond the alliance, common factors across different therapy models account for a substantial share of the variance in patient outcomes (Wampold, 2015). However, recent reviews indicate that no common or specific factor has yet met the criteria for an empirically validated mechanism of change, and it remains unknown whether therapies work through common or specific factors (Cuijpers et al., 2019).

Patient expectations and other situational factors also influence change in psychotherapy, as these factors play an active role in the treatment process. Research suggests that stable characteristics affect both the alliance and expectations in addition to factors that change over time (Zilcha-Mano et al., 2019). Therefore, it is essential to measure these throughout the sessions. Furthermore, these factors are linked to brain systems involved in reward, threat, and emotion regulation, suggesting that expectations and alliances play a significant role in treatment outcome (Zilcha-Mano et al., 2019).

Psychotherapy outcomes are the measures that researchers use to determine whether treatment is effective. New therapy methods should measure improvement in functioning, relationships, well-being, and how long the improvements last (Boswell et al., 2023). Measurement-based care, feedback, and regular assessments provide a broader perspective on ongoing treatments, improving them, and leading to higher treatment adherence and continued patient improvement (Boswell et al., 2023). Therefore, the process of change should be addressed before and after the outcome, avoiding focusing solely on the outcome itself (Elliott, 2010).

Because each disorder has its own processes and outcomes, treatment standards should differ accordingly. Process-based approaches focus on monitoring specific changes in the treatment process, as simply focusing on the patient's diagnosis is not sufficient (Ong et al., 2022). Similarly, relationship-focused studies show that many aspects of the therapeutic relationship are linked to the outcome, and that tailoring treatment specifically to the patient is crucial for their recovery (Norcross & Lambert, 2018). To strengthen psychotherapy research, it is necessary to address therapeutic alliances, client expectations, therapist-related factors, and targeted change mechanisms more broadly.

Psychotherapy Processes and Outcomes in Anxiety Disorders

Anxiety disorders involve persistent and excessive fear or anxiety, reinforced by avoidance and safety behaviors. One of the most significant factors complicating anxiety treatment is the tendency to quickly perceive something as a threat, leading to avoidance behaviors that prevent long-term improvement and learning that would correct the behavior (Kaczkurkin & Foa, 2015). In generalized anxiety disorder, symptoms such as uncontrollable worry, restlessness, fatigue, difficulty concentrating, irritability, muscle tension, and sleep disturbances make this disorder a heavier burden than circumscribed fears (Newman et al., 2022).

Placebo-controlled randomized trials show that cognitive behavioral therapy (CBT) provides benefits beyond non-specific treatment effects in anxiety disorders. Meta-analyses of 41 studies involving 2843 participants showed moderate treatment effects on diagnostic-specific symptoms in the post-treatment period ($g = 0.56$). Compared to placebo, patients receiving CBT were more likely to achieve treatment response (OR = 2.97, 95% CI [2.05, 4.29]), and showed improvements in generalized anxiety ($g = 0.38$), depression ($g = 0.31$), and quality of life ($g = 0.30$). These secondary effects were smaller than the effect on disorder-specific symptoms, but remained positive (Carpenter et al., 2018). Subgroup analyses showed larger treatment effects for OCD ($g = 1.33$) and generalized anxiety disorder ($g = 1.01$) than for panic disorder and social anxiety (Carpenter et al., 2018). Follow-up data from 22 studies, with an average follow-up period of approximately 5.55 months, showed that the effects did not vary much for diagnostic-specific symptoms ($g = 0.47$), broad anxiety ($g = 0.42$), and depression ($g = 0.29$) (Carpenter et al., 2018). Broader syntheses across meta-analyses also indicate that CBT produces robust effects for panic disorder and social anxiety disorder (Hofmann et al., 2012).

Treatment effectiveness varies by exposure method. For example, improvement in panic disorder stems from the individual directly confronting the bodily sensations they fear, while social anxiety treatment involves repeatedly entering the social situations they avoid, thereby reducing the negative expectations and anxiety associated with those situations (Kaczkurkin & Foa, 2015). In generalized anxiety disorder, the anxiety experienced stems from verbal worry about future threats. However, targeting verbal worry has been less researched compared to exposure methods used for other anxiety disorders, and the results may vary with the method and treatment used (Kaczkurkin & Foa, 2015; Newman et al., 2022).

Anxiety disorders often involve deficits in fear extinction and inhibitory learning. In clinical practice, this process is achieved by showing the patient that what they fear will not actually happen, thus reducing their fear. The inhibitory learning model reduces fear by teaching newer and safer associations on top of the fearful response. This approach plans to maximize treatment outcomes by using cues to increase expectation violation, incorporating as many stimuli and contexts as possible, reducing safety behaviors, and generalizing the learned outcomes as much as possible (Craske et al., 2014).

Another limitation is the dropout since CBT showed a higher rate than the placebo group (OR = 1.35), and treatment adherence significantly affected results (Carpenter et al., 2018). In a nine-module, guided, internet-based CBT study with 575 participants, higher treatment self-efficacy predicted greater symptom reduction (Schønning & Nordgreen, 2021). While the completion rate of internet-based CBT ranges from 16% to 50%, limited access, insufficient therapist support, and ethical concerns about privacy and confidentiality are significant factors leading to treatment failure in the real world (Onyeka et al., 2024). While the therapeutic alliance predicts outcome across disorders generally (Flückiger et al., 2018), disorder-specific process-outcome links in anxiety remain largely inferred from efficacy data rather than tested directly.

Table 1. Psychotherapy Processes, Interventions, and Outcome Findings in Anxiety Disorders

Process/ Mechanism	Typical Intervention	Primary Outcome Measure	Evidence Summary
Therapeutic alliance	Standard face-to-face CBT	Global outcome indices (pooled across measures)	Small-to-moderate correlation with outcomes (approximately r = .28, Flückiger et al., 2018), though therapist nesting may inflate this estimate (Del Re et al., 2012)
Expectancy violation	Exposure-based CBT	Disorder-specific symptom scales (e.g., GAD-7, PDSS).	Overall CBT effect retained at approximately 5.5-month follow-up; expectancy violation not tested directly
Treatment adherence	Guided internet-delivered CBT	Session completion, dropout rates	Higher dropout for CBT than placebo (OR = 1.35); adherence affects outcome.

Treatment Response, Recurrence, and Long-Term Outcomes in Depressive Disorders

Depression is a disorder that negatively affects an individual's emotions, thoughts, and behaviors, leading to low mood and anhedonia. According to studies in the field of depression, the episodes are recurrent, often chronic, and therefore require multiple and diverse therapeutic approaches. Furthermore, recurrences occur after treatment (DeRubeis et al., 2020). Depression often persists and recurs rather than resolving over time for many patients. Recent reviews emphasize that this ongoing recovery, rather than being considered a complete remission, focuses more on addressing aspects of daily life such as anhedonia and rumination (McIntyre et al., 2023).

While psychotherapy interventions show a positive impact on recovery, the short duration of treatment is often insufficient for sustained and lasting recovery. In a large-scale randomized trial conducted in Dutch mental health clinics, 341 individuals diagnosed with DSM-IV major depressive disorder received either 16 sessions of cognitive behavioral therapy (behavioral activation and cognitive restructuring) over 22 weeks, or short-term psychodynamic supportive psychotherapy focused on supportive and insight-facilitating work around current relationships, internalized past relationships, and intrapersonal patterns. Response rates were 38.7% for CBT and 36.9% for psychodynamic therapy (intention-to-treat analysis), while remission rates were 24.3% for CBT and 21.3% for psychodynamic therapy. Moreover, there was little difference between the treatments in terms of the durability of remission after treatment (Driessen et al., 2013). The authors interpret this process as indicating that short-term psychotherapy often provides inadequate care in comprehensive care settings, leading to incomplete recovery and an increased risk of recurrence in the future (Driessen et al., 2013).

Given the limits of short-term treatment, early changes become especially informative about long-term outcomes. In the Healthy Activity Program, a brief behavioral activation intervention was implemented in primary care, and therapists monitored each session using the PHQ-9, tracking each symptom from session to session (Singla et al., 2019). Patients who showed a 50% symptom reduction within three sessions had significantly lower depression scores at both three months (5.29 for early responders vs. 10.75 for non-responders) and 12 months (6.56 vs. 11.02) compared to those who did not respond early (Singla et al., 2019).

Long-term studies underscore the importance of sustaining treatment effects over time. For example, in a phase two randomized trial of adults treated for chronic or recurrent depression during acute treatment, antidepressant medication use, with or without CBT, showed a significant reduction in recurrence rates over three years compared to medication withdrawal (DeRubeis et al., 2020). Recurrence rates were 48.5% among patients who maintained antidepressant medication alone versus 74.8% after medication withdrawal. Among patients who received combination therapy, recurrence was 48.5% with continued combination treatment versus 76.7% after withdrawal. Even with continued treatment, roughly half of recovered patients experienced recurrence within three years (DeRubeis et al., 2020). The investigators assessed outcomes longitudinally, with repeated LIFE interviews, and these interviews continued over consecutive weeks, checking against DSM-IV depression criteria (DeRubeis et al., 2020).

The variability of outcomes becomes even more evident when considering treatment-resistant depression (TRD). Diagnostic criteria often classify TRD as a failure to respond to at least two adequate antidepressant trials, with prevalence rates exceeding thirty percent and rising even higher in more severe cases (McIntyre et al., 2023). However, these definitions often fail to include data on unsuccessful trials of standardized psychotherapy and rely primarily on clinician-rated symptom scales. This limits the ability to directly measure the effects of psychotherapy on depression in these studies (McIntyre et al., 2023). In this lay-delivered primary care trial in India, early behavioral engagement and rapid symptom reduction predicted long-term remission, suggesting that the timing of change may be as informative as the final outcome, though whether this generalizes to specialist outpatient settings remains untested (Singla et al., 2019).

Table 2. Treatment Outcomes in Depressive Disorders: Response, Remission, Recurrence, and Resistance

Process/ Mechanism	Typical Intervention	Primary Outcome Measure	Typical Finding
Symptom improvement	Short-term CBT/ Psychodynamic	Response & remission rates	Response rates 38.7% (CBT) vs. 36.9% (STPP) in Driessen et al. (2013)
Early response prediction	Behavioral activation	PHQ-9 symptom reduction	Early behavioral engagement predicts long-term remission in a lay-delivered trial (Singla et al., 2019)
Recurrence prevention	Continued medication ± CBT	Recurrence rates (3 years)	Continued medication lowers recurrence from ~75% to ~48% (DeRubeis et al., 2020)
Treatment resistance	Multiple antidepressant trials	TRD prevalence	Limited evidence for pharmacological augmentation in TRD; outcomes rely on clinician-rated scales (McIntyre et al., 2023)
Persistent symptoms	Ongoing psychotherapy	Anhedonia, rumination scores	Residual symptoms predict future episodes; conventional endpoints may not capture functional recovery

Exposure and Response Prevention: Psychotherapy Outcomes in Obsessive-Compulsive Disorder

Obsessive-compulsive disorder (OCD) is characterized by symptoms consisting of obsessions, such as intrusive, distressing thoughts, images, or urges, and compulsions, which are often routines developed to counteract avoidance and distress. In psychotherapy research, symptom change over time is frequently tracked using clinician-rated severity measures, with scales such as the Yale-Brown Obsessive-Compulsive Scale (Y-BOCS) being among the most prominent. Clinical characterization also influences treatment planning and response, demonstrating how heterogeneous the symptom presentation and comorbidity are (Fineberg et al., 2020). As in the other disorders reviewed, the OCD literature mainly focuses on symptom severity as the primary outcome, typically measured with the Y-BOCS, with reporting varying by study design and population (Fineberg et al., 2020; Skapinakis et al., 2016). Exposure and response prevention (ERP), often implemented with cognitive behavioral therapy, is a widely used psychosocial treatment method.

ERP involves repeated exposure to the triggers of obsessions while the compulsive response is prevented, progressively reducing avoidance (Hezel & Simpson, 2019). According to adult OCD studies using Y-BOCS severity as the primary outcome, behavioral therapy produced greater symptom reduction than drug placebo. For example, the mean difference was -14.48 Y-BOCS points (95% credible interval: -18.61 to -10.23), while in the cognitive therapy group, the mean difference was -13.36 Y-BOCS points (95% credible interval: -18.40 to -8.21). Unlike the standardized effect size reported for anxiety disorders, these estimates are raw Y-BOCS point differences against drug placebo and are not directly comparable. Furthermore, the same analyses indicate a major limitation regarding generalizability. Most psychotherapy trials explicitly allowed participants to continue using stable antidepressant doses, thus

limiting clear conclusions about the effects of psychotherapy beyond the specific treatment methods and comparison conditions examined (Skapinakis et al., 2016). Looking at these effectiveness results, a position statement indicates that exposure and response prevention (ERP) and CBT with selective serotonin reuptake inhibitors (SSRIs) are the primary treatment methods used. However, it also notes that a significant number of patients do not respond well to these treatments or continue to experience persistent symptoms (Fineberg et al., 2020).

This process of change, described in the research, is closely linked to treatment methods. However, modern approaches emphasize managing fear and learning to navigate these difficult situations rather than simply avoiding them. Process research further clarifies that changes in maladaptive beliefs regarding perfectionism and responsibility were associated with subsequent symptom reduction, suggesting that cognitive shifts may contribute to the efficacy of exposure-based interventions (Wilhelm et al., 2015).

Although ERP is effective, it is not widely used as a primary treatment method. In randomized controlled ERP studies, the treatment discontinuation rate was 15.4%, and in most studies, the treatment discontinuation rate was not consistently reported (Ong et al., 2016). The influence of the environment and the therapist is the factor that affects whether ERP is applied correctly or not. In studies of pediatric OCD, clinicians may hesitate to apply ERP to taboo or hoarding obsessions, which contributes to underutilization of the treatment. ERP use is low for taboo or covert obsessions because these symptoms are invisible to observers and difficult to identify, and patients are often reluctant to disclose them (Keleher et al., 2020). The same study found that therapists who held negative beliefs about ERP used it less often. Difficulties in accessing therapy worsen this problem. Although self-guided internet-based CBT is an option for dissemination, it predicted better outcomes for patients with higher treatment expectancy, whereas higher baseline depression severity predicted poorer outcomes (Wootton et al., 2024). In summary, although ERP is a well-established treatment, it is rarely applied in real-world settings, largely because patients avoid confronting their obsessions and clinicians hesitate to use the technique. Moreover, these barriers make it difficult to generate strong evidence for ERP and to disseminate it.

Long-Term Psychotherapy Processes in Personality Disorders

Personality disorders, especially borderline personality disorder (BPD), are characterized by frequent emotional fluctuations, impulsive behaviors, and difficulties in social relationships, rather than short-term symptoms. Unlike episodic disorders, personality disorders involve maladaptive behavioral patterns that manifest in different situations, leading to difficulties in forming relationships and problems with self-perception and emotional regulation. Therefore, treatment models focused on reducing short-term symptoms will be insufficient; long-term effects are needed. Methods that promote positive progress in interpersonal relationships and self-understanding are necessary.

This approach is also supported by the results of extensive psychotherapy studies. In a study of Mentalization-Based Treatment with outpatients, Bateman and Fonagy (2009) tracked suicide attempts, self-harm, hospitalization, and social functioning over 18 months and found substantial improvement in both MBT and structured clinical management, with MBT showing greater reductions in suicide attempts and self-harm. Schema-focused therapy has also shown more durable personality change than transference-focused psychotherapy. In a three-year study comparing Transference-Focused Psychotherapy with schema-focused therapy, results showed a higher rate of improvement and a lower dropout rate in schema-focused therapy, although therapist expertise differed between conditions, the

reported effect sizes remained substantial. This suggests that character change, or personality change, is a slow and gradual process (Giesen-Bloo et al., 2006).

Dialectical behavior therapy (DBT) offers a different approach by teaching skills such as emotional regulation. In a study on women with BPD and substance abuse, DBT showed greater reductions in drug use than treatment-as-usual, better retention, and improved social and global adjustment at follow-up (Linehan et al., 1999). However, extensive reviews show methodological problems. A Cochrane review revealed high variability in treatment methods, outcome measurements, and follow-up periods, while many studies lacked long-term data on the characteristic interpersonal features of BPD (Stoffers et al., 2012).

Updated reviews also indicate a limited scope of results and that lasting effects are not adequately reported (Storebø et al., 2020). Meta-analyses have shown that treatment effects are smaller in more rigorously controlled studies and that these effects diminish over time. Cristea et al. (2017) reported that when risk of bias and study-team involvement in treatment were accounted for, psychotherapy superiority over controls dissipated for BPD, which undermines confidence in the positive trials cited earlier. This includes Giesen-Bloo et al. (2006): its large schema therapy advantage was reported by the research team that developed the treatment, precisely the allegiance pattern Cristea identified as inflating effects. Taken together, the BPD evidence supports psychotherapy over no treatment, but the superiority of any specific approach remains uncertain given the influence of study methodology.

Long-term evaluations are also complex because patients may receive other treatments during follow-up. This makes it challenging to directly attribute post-treatment improvements to the initial treatment. A machine-learning prediction study found that additional treatment received during follow-up confounded outcome attribution in patients with BPD and PTSD (Blaß et al., 2025). Unlike acute disorders, process evidence here emphasizes that improvements in interpersonal functioning and emotional regulation often precede symptom stability, underscoring the necessity of long-term therapeutic engagement for durable change (Bateman & Fonagy, 2009; Stoffers et al., 2012).

Integrating Process and Outcome: Transdiagnostic and Practice-Based Approaches

In disorder-specific treatment research, integration of science and practice depends on whether treatments produce meaningful outcomes and whether those outcomes illuminate the processes of change (Teachman et al., 2012; Hofmann & Hayes, 2019). However, process–outcome alignment is different in each disorder category in this evidence base.

For adult anxiety disorders, alignment is done mainly by cross-diagnostic outcome equivalence instead of a diagnostic-specific mechanism. In a study that included panic disorder, generalized anxiety disorder, obsessive compulsive disorder, and social anxiety disorder, a randomized noninferiority trial compared the unified protocol with diagnosis-specific CBT of up to 16 sessions with clinician-rated severity assessments at post-treatment and a six-month follow-up after the sessions (Barlow et al., 2017). The unified protocol procedures reduced the main diagnostic severity to a matching degree for different types of symptoms. Moreover, it showed that focusing on standard and emotional processes could show a similar result to disorder-specific treatment guidelines in outpatients with comorbid conditions (Barlow et al., 2017).

Although post-traumatic stress disorder (PTSD) falls outside the four disorders reviewed here, this example illustrates that mechanistic evidence of this kind exists in psychiatry, while remaining largely absent within the four categories reviewed: CBT for treating PTSD shows that mechanistic changes

happen before the symptoms improve, so it is important to focus on transdiagnostic processes like emotion regulation and cognitive reappraisal (Gallagher, 2017). This finding differs from the outcome-equivalence approach used in treating mixed anxiety disorders (Barlow et al., 2017). However, there are limitations to noninferiority studies since comparative research shows that outcome differences disappear when methodological factors are controlled, and equivalence studies cannot specify which mechanisms should be specifically targeted or monitored (Mulder et al., 2017).

Mechanism-focused models address this by shifting clinical decision-making from protocol selection to treatment based on modifiable processes. Research on transdiagnostic CBT has examined its skills components alongside general factors such as the therapist–patient relationship, distinguishing these components from the disorders being treated. Evidence indicates that patients who have a strong alliance with their therapist show greater symptom reduction, whereas patients who suppress their emotions also show less improvement (Southward et al., 2024). Process-based therapy achieves this by personalizing the intervention with a mediation-focused approach (Hofmann & Hayes, 2019).

Measurement-based care could be a valuable approach for identifying which parts of the therapy work by adding regular, systematic assessment to daily psychotherapy (Boswell et al., 2023). Research showed that routinely measuring patient progress and providing feedback to therapists improves therapy outcomes. Importantly, in some cases, the therapist uses this information to adjust therapy instead of simple monitoring (Boswell et al., 2015). These findings suggest that monitoring both process and outcome in real-life settings generates practice-based evidence that complements clinical trials (Boswell, 2020).

Longitudinal data in precision mental health settings provide a customized treatment for each patient (Deisenhofer et al., 2024). Studies that focus on actual practice collect data from therapists' real-life decisions rather than from a strictly followed protocol, which makes the widespread dissemination and implementation of these methods possible in care settings. Formal monitoring systems have also been found helpful in identifying problems early, decreasing the risk of treatment failure, which is necessary for effective therapy (Lambert, 2010).

These practical limitations demonstrate that the gap between research and practice needs to be addressed. For routine outcome follow-ups to work efficiently, working therapists in evidence-based practice and a standard, systematic feedback loop between research and care delivery are necessary (Teachman et al., 2012). A further limitation is that study selection was based on conceptual relevance rather than a systematic protocol, so this review cannot claim comprehensive coverage of the literature, and the mapping of process–outcome evidence presented here should be read as a characterization of patterns rather than a census.

Discussion

This review examined how psychotherapy processes and outcomes are measured, identified, and linked to disorders such as anxiety, depression, obsessive-compulsive disorder, and personality disorders to determine if the empirical evidence reflects clinical realities and what aspects need improvement. Generally, symptom reduction is the primary outcome to be measured. However, the literature consistently shows that there are varying periods and processes aimed at creating change, and the variety of outcomes can be significant. These outcomes vary depending on the disorder's characteristics and how it is studied. Measurement-based care is an important remedy in this regard because it identifies when

treatment is not progressing as expected. Furthermore, this integration should be done by systematically monitoring both processes and outcomes of psychotherapy (Boswell et al., 2023). A recent meta-analysis confirms that routine outcome monitoring significantly improves treatment outcomes across diverse settings (Rognstad et al., 2023).

In anxiety disorders, the mechanisms proposed in treatment models map most directly onto the symptom measures used. Exposure-based interventions reduce fear through inhibitory learning, and outcomes are generally measured by disorder-specific symptom scales and short-term follow-ups (Carpenter et al., 2018; Craske et al., 2014). However, the high dropout rates in digital interventions suggest that symptom reduction alone is not sufficient to demonstrate treatment success (Carpenter et al., 2018; Schønning & Nordgreen, 2021).

In depressive disorders, the convergence between short-term symptoms and long-term improvement is weaker. Although there is an average improvement, the remission rate remains limited, and recurrence risk is high (Driessen et al., 2013; DeRubeis et al., 2020). Process-oriented findings show that early symptom improvements during therapy provide more clinically significant information than the final symptom course alone (Singla et al., 2019).

In obsessive-compulsive disorder, even though response prevention and exposure were successful in reducing the severity, challenges such as patient avoidance and difficulties in dissemination have made transferring research to real-world applications difficult (Skapinakis et al., 2016; Ong et al., 2016). However, in personality disorders, successful change requires more time and greater interpersonal functioning and emotional regulation, which makes traditional symptom-based assessment insufficient for understanding the characteristics of the process (Bateman & Fonagy, 2009; Stoffers et al., 2012).

Therefore, instead of relying on diagnosis alone, research increasingly depends on monitoring treatment progress through variables such as alliance and expectancy. Future research should determine whether psychotherapy is most effective when outcomes align with targeted processes, and whether persistence and functionality are required for successful treatment

Table 3. Cross-Cutting Themes in Psychotherapy Research: Process–Outcome Alignment, Measurement, and Translation to Practice

Clinical Dimension	Current Evidence	Implications
Process-outcome alignment	Stronger for anxiety, weaker for disorders like depression and personality disorders that have more variables	Supports routine process monitoring (alliance, expectancy) across disorders.
Measurement range	Symptom scales are a significant focus, while measures of functionality, quality of life, and resilience are less emphasized.	Use multimodal outcome batteries (functioning, quality of life, long-term follow-up).
Translating to clinical practice	Robust efficacy for exposure-based treatments usually fails to reach routine practice	Invest in clinician training and scalable digital delivery to close the research–practice gap
Transdiagnostic mechanisms	Emotion regulation, avoidance, and alliance can be seen across diagnoses	Develop and test interventions that focus on the shared mechanisms to improve scalability

Future Research

Future psychotherapy research will benefit from a design that links process changes to outcomes over time for greater clinical significance. Repeated assessments throughout the treatment period are necessary to detect the temporal sequence between process variables and outcome changes, as relying solely on post-treatment outcomes is insufficient for clinically accurate data.

Outcome definitions should be broadened to capture more than just symptom reduction, to successfully capture perspectives such as quality of life and the trajectory of recovery after therapy. Research on chronic and recurrent conditions should prioritize emphasizing the real-world recovery process rather than the acute treatment window.

Another critical aspect is to implement focused research on therapist training, treatment adherence, adaptability, and system barriers, as these can explain why intervention methods fail to reach people effectively. Integrating process and outcome monitoring methods into routine care settings can provide a healthy feedback loop between research and practice.

Finally, transdiagnostic models utilizing standard mechanisms such as emotion regulation, avoidance, and interpersonal functioning hold promise for the future. Future studies should test whether this approach provides benefits across a variety of disorders and whether these methods can be developed and improved without compromising clinical specifics.

Conclusion

This review highlights that psychotherapy outcomes cannot be adequately understood through symptom reduction alone. Across anxiety disorders, depressive disorders, obsessive-compulsive disorder, and personality disorders, the relationship between therapeutic processes and outcomes appears to differ by disorder, reflecting each disorder's chronicity, symptom structure, and treatment

needs. Some conditions require rapid symptom change through well-characterized mechanisms, while others need broader and longer-term outcome models to provide the most effective treatment.

The evidence revealed in this literature review shows how important an integrated process-outcome perspective is in evaluating psychotherapy. This clarifies why some treatments succeed in research but not in routine practice, and why conventional endpoints cannot capture whether treatment gains persist. To improve the science and practice of psychotherapy, future research designs must observe and test how and when changes occur, including after treatment ends, and bridge the gap between empirical and clinical perspectives.

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