

How Psychotherapy Creates Change: Learning, Emotion, Relationship, and Meaning

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Narrative Clinical Review

Abstract—Psychotherapy can produce meaningful change, but knowing that a treatment helps is not the same as knowing how it helps. This narrative clinical review examines evidence available through 28 February 2026 and develops an integrative account of psychotherapy change. The strongest current process literature identifies associations across relational, patient, therapist, and technical domains; it does not establish one universal active ingredient. Alliance, credibility, emotional experiencing, insight, psychological flexibility, cognitive and metacognitive change, behavioral practice, and between-session use each have support at different levels of causal confidence. Many studies measure a proposed mediator and outcome too infrequently or at overlapping times, so early symptom improvement can be mistaken for its cause. A more defensible model treats therapy as a coordinated learning system. A credible explanation directs attention; a collaborative relationship makes difficult work possible; specific tasks create new emotional, cognitive, interpersonal, or behavioral experience; reflection gives that experience usable meaning; and practice in varied settings supports retrieval beyond the consulting room. Different therapies arrange these elements differently. Mechanism-informed practice therefore uses formulation as a revisable causal hypothesis, states what should change first, measures process and outcome repeatedly, and changes course when the predicted sequence does not appear.

Index Terms—psychotherapy mechanisms, therapeutic process, therapeutic alliance, emotional change, learning, meaning-making

I. INTRODUCTION

A patient speaks differently about a feared memory, enters a place they had avoided, recognizes a familiar relational turn, or notices a thought without obeying it. Each change may look small inside a session and large in the life around it. Psychotherapy attempts to make such changes more

likely through conversation, attention, emotion, action, and repeated experience. The difficult scientific question is which part of that sequence actually carries the effect.

Treatment-outcome research can show that a package benefits patients without opening the package's causal pathway. Conversely, a process may correlate with improvement even when it did not produce the improvement. A strong alliance may enable difficult work, arise because early change has already begun, reflect patient and therapist characteristics, or do all three. A reduction in rumination can mediate symptom change statistically while leaving uncertain whether therapy changed rumination first, whether mood improvement reduced rumination, or whether an unmeasured process changed both.

The most plausible answer is unlikely to be one ingredient shared identically across every patient and therapy. Psychotherapy changes are coordinated and recursive. Explanation alters expectation; expectation affects engagement; the relationship shapes what can be attempted; a specific task creates experience; experience changes emotion or prediction; and what happens outside the session either strengthens or erodes the new pattern. This review examines the evidence for these links while keeping association, mediation, and mechanism distinct.

II. SCOPE AND REVIEW METHOD

The review used a 28 February 2026 cutoff, one calendar month before the nominal issue date. Searches covered psychotherapy process-outcome research, mediators, mechanisms, alliance, rupture, expectancy and credibility, behavioral learning, exposure, emotional processing and regulation, cognition, metacognition, psychological flexibility, insight, interpersonal change, narrative meaning, between-session practice, and measurement. Complete online-first records available by the cutoff were eligible.

Priority went to umbrella reviews, systematic reviews, meta-analyses, randomized mediation studies, and foundational methodological work. Process research is highly heterogeneous, so no attempt was made to combine effect

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sizes anew. Evidence was judged by whether the candidate changed during treatment, preceded outcome, showed a graded relationship, remained informative after plausible alternatives, demonstrated some specificity, and—where feasible—was experimentally manipulated (Kazdin, 2007).

Most evidence concerns adult individual psychotherapy, particularly depression and anxiety-related conditions. Selected adolescent, digital, systemic, and qualitative syntheses are included when they expose a methodological or conceptual issue that travels across settings. The review does not claim that a process estimate from one diagnosis, therapy, or developmental stage is universal. Its purpose is to give clinicians a causal vocabulary that is useful without becoming more certain than the research. Tables 1–3 and the boxed working sequence are author-developed syntheses, not validated instruments or formal treatment algorithms.

Recency was especially relevant because the 2026 umbrella review reorganized a dispersed process literature, but its publication did not convert the included correlations into experiments. Foundational papers remain necessary where they define causal criteria or a treatment's proposed learning model. Throughout, a recent synthesis is treated as a map of the evidence available to it, not as an independent trial layered on top of every study it already includes.

III. WHAT WOULD COUNT AS A MECHANISM?

A mechanism explains how an intervention produces an outcome. A mediator is a variable positioned statistically between treatment and outcome. The distinction matters because mediation can be demonstrated under assumptions that do not establish causation. If alliance and symptoms are measured only before and after treatment, either may have changed first. If both are self-reported at the same time, shared mood or response style can inflate their relationship. If the proposed mediator is merely another measure of the outcome, the pathway becomes circular.

Temporality is necessary but not sufficient. The proposed process should change before the relevant outcome, and preferably at a time scale suited to the theory. Specificity asks whether that process changes more under the intervention designed to target it and whether it predicts outcomes that the theory anticipates. Experimental manipulation is especially valuable: if deliberately increasing the process improves outcome, causal confidence rises. Dose-response, replication, and plausible biological or psychological coherence add weight, while consistent failure of predicted links weakens the account.

Mechanisms may also differ between and within people. A patient who understands a pattern may improve because that understanding permits a new action; another may act first and understand later. Group-level mediation can conceal these sequences. A variable that predicts better outcomes between patients may not explain why one patient improves from one week to the next. Mechanism research therefore needs repeated measures and models able to separate person-level differences from change within a person.

The time scale should match the proposed process. Expectancy may shift before treatment begins; alliance can change within a session; practice may alter behavior over days; relapse protection may emerge months later. Sampling all of them at intake and discharge places unlike processes on the same coarse clock. It also encourages a misleading search for the largest mediator rather than asking when each process is expected to matter and how one process may prepare the next.

Table 1. Evidence that strengthens or weakens a psychotherapy mechanism claim

Criterion	Stronger evidence	Weaker evidence	Clinical implication
Change	Treatment alters the candidate process	Process is measured only once	State what should move if the intervention engages its target
Temporality	Process change repeatedly precedes outcome change	Mediator and outcome share a pre-post interval	Measure the proposed first step before the expected consequence
Specificity	Targeted treatment changes the process more than a credible comparator	All therapies change the same broad self-report	Avoid naming a common correlate as a therapy-specific mechanism
Experimental leverage	Manipulating the process changes outcome	Natural correlation only	Treat correlational findings as hypotheses, not instructions
Gradient and replication	Larger process change predicts larger later benefit across studies	Single small study or post hoc subgroup	Use the claim cautiously until it survives new samples
Alternative explanations	Prior symptoms, expectancy, therapist, and measurement overlap are addressed	Direction and confounding remain open	Keep more than one causal account available

IV. A COORDINATED SYSTEM, NOT A SINGLE INGREDIENT

The January 2026 umbrella review of psychotherapy processes provides the broadest recent map. It combined 60 process-outcome meta-analyses, drawing 1,981 effects from 993 unique primary studies where study-level information was available. Relational, therapist, patient, and technical processes were all associated with outcome. Relational and therapist associations were larger on average than technical associations, but the literature was dominated by relational studies, effects were heterogeneous, and the underlying evidence was largely correlational (Gómez Penedo & Flückiger, 2026).

Those findings do not imply that relationship can replace method. Technical processes may be measured poorly, restricted in range when therapists follow a trial protocol, or important only when matched to a maintaining process. Relational variables can influence whether a technique is understood and attempted; a successful technique can strengthen credibility and alliance. Separating the two for

analysis is useful, but in treatment they continually alter one another.

In practice, these elements are interdependent. The therapist offers a formulation and a task; the patient evaluates whether they are credible, safe, and relevant, and that response influences what follows. The task may confirm or challenge an expectation. Reflection helps integrate the experience, and between-session events show whether the learning can be used without the therapist present.

Different therapies emphasize different points in this loop. Exposure foregrounds new learning in the presence of feared cues. Behavioral activation organizes action and contact with potential reward. Cognitive therapies examine predictions and appraisals. Psychodynamic therapies attend to recurrent meanings and relationship patterns. Interpersonal therapy targets current relational problems and social support. These are not interchangeable procedures, yet each relies on attention, participation, emotional tolerance, and some form of learning.

The loop is not necessarily smooth. A credible rationale can fail during the first difficult task; an exposure can produce new learning and a rupture at the same time; insight can briefly increase grief; environmental consequences can contradict what was rehearsed safely in session. Mechanisms can therefore have thresholds, costs, and feedback effects. A process that helps at one stage may hinder at another—for example, careful reflection can support meaning after experience but become avoidance when it repeatedly substitutes for action.

Change is also recursive. Sleeping slightly better can improve attention, which makes practice easier; one successful social approach can alter expectation, which makes another approach more likely. The reverse can form a deteriorating loop. These feedback effects mean that the original intervention may be several steps removed from the later outcome. They also explain why trajectories can accelerate after an initially small shift and why preserving an early gain may matter more than repeating the exact maneuver that began it.

A working sequence for mechanism-informed psychotherapy

- Specify the maintaining process in observable terms rather than naming only a diagnosis or therapy school.
- Agree on a credible task expected to engage that process and identify what should change first.
- Notice the patient's prediction, emotion, behavior, and meaning during the task—not only whether it was completed.
- Reflect on what was learned without insisting on the therapist's preferred explanation.
- Rehearse or test the learning in varied daily contexts where the old pattern normally appears.
- Measure process and outcome often enough to determine whether the predicted sequence occurred; revise when it did not.

V. CREDIBILITY, EXPECTATION, AND A REASON TO BEGIN

A therapy asks patients to invest time, trust, discomfort, and often action outside the session. They need a reason to believe that the work is relevant. Outcome expectation shows a small but replicated association with later benefit. A meta-analysis of 81 independent samples involving more than 12,000 patients found an average early expectation-outcome correlation of $r=.18$, with substantial heterogeneity (Constantino et al., 2018). The association is meaningful, but it does not show that optimism alone heals.

Credibility is more specific than generalized hope. It concerns whether the explanation and proposed tasks make sense. A recent systematic review found positive associations between perceived treatment credibility and outcome and a larger association for therapist credibility, while noting a small eligible literature and considerable heterogeneity (Kumpasoğlu et al., 2025). Credibility may promote attendance and effort; early improvement may also make therapist and treatment seem more credible. Direction remains partly unresolved.

Clinically, credibility should be earned rather than performed. The therapist explains why a task follows from the formulation, acknowledges uncertainty and burden, and invites disagreement. A patient may reasonably reject an explanation that overlooks racism, poverty, abuse, physical illness, or an incompatible cultural meaning. Revising the rationale can improve fit; persuading the patient to endorse a theory for the sake of alliance cannot.

Expectation has a useful edge when it becomes a prediction that can be tested. “If avoidance is maintaining panic, approaching this situation without the usual safety behavior should reveal something.” The test may support the formulation, complicate it, or fail. In each case the result carries more information than generic reassurance. Credibility then comes from a shared method of inquiry, not certainty claimed in advance.

VI. RELATIONSHIP, COLLABORATION, AND REPAIR

In the common tripartite account, alliance comprises a shared view of goals, agreement about the work, and an affective bond. A meta-analysis of 295 studies and more than 30,000 patients found a robust alliance-outcome association across face-to-face and internet psychotherapy (Flückiger et al., 2018). Therapist contribution appears relevant: a later multilevel meta-analysis found evidence that therapists influenced the strength of the alliance-outcome relationship even after several study characteristics were considered (Del Re et al., 2021).

Alliance is not warmth detached from work. Agreement on a goal without a credible task can become sympathetic waiting; a technically correct task without enough trust may never be attempted honestly. The relationship permits exposure to shame, uncertainty, grief, conflict, or feared experience while preserving the possibility of correction. It

also conveys information: hesitation, compliance, irritation, or withdrawal may show how the method is being received.

Ruptures make this visible. They can involve open disagreement, subtle withdrawal, missed meanings, pressure, or a breakdown in shared purpose. A meta-analysis found a moderate association between successful rupture resolution and outcome, while evidence that rupture-repair training itself improved outcome was less certain (Eubanks et al., 2018). Repair is therefore a promising process rather than a ritual guaranteed to help.

A repair begins by noticing what happened and making the therapist's contribution discussable. It may require apology, a change of pace, a clearer rationale, or a different goal. The point is not to restore harmony at any cost. Sometimes disagreement reveals that the treatment is wrong, the therapist cannot provide what is needed, or transfer is appropriate. A relationship is therapeutic partly because it can survive truthful revision.

Power is present even in collaborative treatment. The therapist controls time, records, access to some services, and much of the language by which the encounter is documented. A patient may agree because disagreement feels costly or familiar. Checking collaboration therefore requires more than asking whether the plan is acceptable. The clinician can invite criticism, notice rapid compliance, explain the limits of confidentiality and authority, and make refusal possible without withdrawing ordinary respect or care.

Responsiveness is the moment-to-moment adjustment that keeps a method fitted to the patient. Too little responsiveness becomes mechanical adherence; too much can dissolve the treatment's active task whenever discomfort appears. The therapist must distinguish a productive difficulty from confusion, coercion, overload, or a wrong formulation. Research often measures adherence and alliance more readily than this judgment. Clinically, responsiveness can be documented by naming what was changed, why, and which treatment principle was preserved.

VII. ATTENTION, OBSERVATION, AND THE SHAPE OF A PATTERN

Many therapies begin change by altering what can be noticed. A panic sensation previously treated as immediate danger becomes an event that can be observed in sequence. A recurring argument is seen not as proof of another person's character but as a pattern of cue, interpretation, protection, and response. A self-critical thought becomes language rather than command. Attention does not remove the problem, but it creates a point at which another response becomes possible.

Observation is selective and theory laden. A cognitive therapist may listen for appraisals, a psychodynamic therapist for recurrent relational expectations, and an emotion-focused therapist for shifts in experiencing. The risk is confirmation: once a pattern has been named, therapist and patient may notice supporting moments and overlook contradictory ones. A useful formulation therefore specifies what would

disconfirm it and remains open to more than one level of explanation.

Process research supports meaning construction and progressive psychological integration as recurring themes, while also finding the wider literature fragmented and robust replication scarce outside a limited set of variables (Krause, 2024). Qualitative synthesis of systemic and constructionist session discourse similarly identifies shifts toward relational, non-pathologizing, and forward-moving dialogue, with power inside the conversation remaining salient (Tseliou et al., 2020). Such studies illuminate how change is talked into view; they do not by themselves show that a particular conversational move causes symptom relief.

The clinical test of new observation is whether it changes timing and choice. Recognition after an episode can be useful, recognition during it more useful, and recognition before the familiar response most useful of all. The therapist can ask when the pattern became detectable, what cue was missed, and what small action became available. Insight that never changes a moment of choice may still matter, but its proposed causal role remains unproven.

VIII. BEHAVIORAL LEARNING AND ACTION

Action gives psychotherapy causal leverage. A prediction can be tested, an avoided cue approached, a routine changed, a request made, or a skill practiced under conditions that ordinarily evoke the problem. New information then competes with the old expectation. The experience must be processed carefully: completing an exercise while relying on the same safety behavior may teach that the safety behavior prevented catastrophe rather than that catastrophe was unlikely or tolerable.

Exposure illustrates both the strength and uncertainty of mechanism accounts. Inhibitory-learning models propose that exposure builds new associations that compete with, rather than erase, threat learning. Expectancy violation, removal of safety signals, variation, multiple contexts, and retrieval practice are intended to make the new learning more accessible (Craske et al., 2014, 2022). These ideas are clinically productive, but individual optimization strategies have uneven evidence, and habituation, belief change, self-efficacy, attention, and approach behavior may interact.

Behavioral activation begins from a different clinical problem: withdrawal and reduced contact with reinforcement. Increasing planned, values-consistent activity can precede improved mood and create opportunities unavailable during rumination or inactivity. Yet a systematic review of mediation studies found weak evidence for activation and environmental reward as established mechanisms, limited by small numbers, varied measures, and study quality (Janssen et al., 2021). An effective treatment can thus have a plausible mechanism that remains incompletely demonstrated.

The immediate target should be observable enough to learn from. "Be more active" is vague; arranging one morning walk with a friend tests prediction, initiation, mood, social contact,

and practical barriers. “Face the fear” is equally broad; a well-designed exposure identifies what is feared, what protective behavior will be altered, and what outcome would count as new learning. Specificity makes both treatment and causal inference better.

Behavioral evidence is not self-interpreting. If a feared conversation goes well, the patient may conclude that they were lucky, overprepared, or rescued by the therapist's wording. If it goes badly, they may learn that every feared prediction was correct when the actual result was narrower. Reviewing prediction, observation, and conclusion helps distinguish the event from the meaning attached to it. The aim is not compulsory positive thinking but a more accurate and usable learning record.

New learning also competes with older learning rather than simply deleting it. A patient can know that an elevator is usually safe and still retrieve danger when trapped, tired, or alone. This helps explain return of fear and context-dependent relapse without treating them as proof that nothing changed. Retrieval cues, varied practice, and deliberate rehearsal may strengthen access to the alternative response, but the laboratory vocabulary should remain a guide to testing rather than a claim that a clinical memory trace has been directly observed.

Table 2. Candidate change domains and the work they may organize

Domain	Therapeutic task	Proposed change	Current caution
Expectation and credibility	Develop a plausible rationale and testable prediction	Greater engagement and purposeful effort	Outcome association is small and partly bidirectional
Alliance and repair	Agree on goals/tasks; notice and address strain	Safer collaboration and better use of method	Robust association does not isolate causal direction
Exposure and behavioral experiment	Approach cues and alter safety responses	Prediction error, inhibitory learning, and increased approach	Mechanisms and optimal learning conditions remain contested
Behavioral activation	Schedule specific, meaningful action	More contact with reward and less avoidance	Mediation evidence for activation/reward remains weak
Emotional processing	Differentiate, tolerate, express, and transform emotion	More adaptive emotional perception and regulation	Temporality and within-person effects are often unclear
Cognitive, metacognitive, or flexibility work	Examine appraisal and alter relation to thought	Less rigid prediction, rumination, fusion, or avoidance	Construct overlap and treatment specificity require stronger tests

IX. EMOTIONAL CHANGE

Emotion is not merely an outcome that subsides after cognition or behavior changes. It can carry threat, need, memory, value, and readiness for action. Therapy may help a patient distinguish fear from shame, grief from helplessness, anger from danger, or bodily activation from catastrophe. Greater differentiation can make an emotion more tolerable and the response to it less automatic.

A systematic review and meta-analysis of 121 studies identified several emotional processes associated with outcome, most notably fear habituation across sessions in exposure treatment, experiencing in psychotherapy for depression, and emotion regulation in anxiety-focused psychotherapies. The authors also described recurring methodological problems: unrepresentative process samples, uncertain temporal order, conflation of within- and between-client effects, and limited separation of therapist and patient contributions (Sønderland et al., 2024).

A separate meta-analysis of randomized trials found moderate improvement in emotion regulation after several psychological treatments for emotional disorders, with some follow-up support and substantial heterogeneity (Antuña-Cambor et al., 2024). Showing that therapy changes regulation is an important first step. To establish regulation as the mechanism, change in regulation should precede and account for later outcome under designs that distinguish it from general symptom improvement.

Emotional work can also be mistimed. High arousal is not evidence that useful processing occurred; low arousal is not evidence of avoidance. The relevant question is what the patient was able to perceive, tolerate, express, and learn. When dissociation, acute risk, intoxication, psychosis, mania, coercion, or medical instability is present, pacing and safety may take priority over emotional intensity. Mechanism language should never be used to justify flooding.

Regulation does not mean suppressing all intense feeling. Depending on the problem, progress may involve approaching grief, allowing anger to inform a boundary, reducing escalation, or recovering more quickly after activation. A measure that treats lower intensity as universally better can miss this distinction. The proposed mechanism should specify whether the target is awareness, differentiation, acceptance, modulation, expression, recovery, or action in the presence of emotion.

Language and culture shape those distinctions. Emotional restraint may represent fear in one context, dignity or safety in another; direct expression may be liberating, dangerous, or socially costly. A therapist who assumes that one style is inherently healthier can mistake conformity for change. The mechanism should be described functionally: what does the emotional response make possible or prevent in this person's relationships and circumstances? Cultural humility is part of causal accuracy, not an optional addition to technique.

X. COGNITIVE, METACOGNITIVE, AND FLEXIBILITY PROCESSES

Cognitive change can mean several things: a belief becomes less convincing, an alternative explanation becomes available, attention shifts, a thinking habit is interrupted, or the person acquires a skill for responding to future thoughts. These changes may arise through discussion, behavioral evidence, emotional experience, or the relationship. Finding cognitive change after more than one therapy therefore does not make

cognition irrelevant; it raises the question of whether the pathway is common, specific, or differently produced.

Digital intervention research offers a useful standardized test bed. A systematic review of 26 randomized mediation studies in internet- and mobile-based depression interventions found cognitive variables the largest group of examined and significant mediators, followed by mindfulness, acceptance, and behavioral activation. Most studies still did not establish temporal precedence strongly enough for causal conclusions (Domhardt et al., 2021). Standardized content reduces some therapist variation but does not solve measurement timing or shared-method bias.

Metacognitive approaches target beliefs about thinking and the processes that keep attention locked on threat, worry, or rumination. A 2025 systematic review concluded that metacognitive beliefs are a promising transdiagnostic mechanism candidate but that most studies lacked repeated treatment-phase measurements and other design features needed for firm causal inference (Pukstad et al., 2025). The conclusion is appropriately provisional: a coherent theory and consistent association are not yet definitive mechanism evidence.

Psychological flexibility describes the capacity to remain in contact with present experience while acting in line with values. A meta-analytic review of acceptance and commitment therapy found that flexibility and inflexibility domains changed and were linked with reduced distress, while recommending multidimensional measurement, repeated assessment, broader outcomes, and effectiveness studies (Macri & Rogge, 2024). Mindfulness mediation reviews similarly identify mindfulness, rumination, worry, and emotional reactivity as candidates but note methodological limitations (Gu et al., 2015). These constructs may overlap; their names should not be mistaken for cleanly separated causal systems.

Treatment specificity is a demanding test. Cognitive change can follow behavioral, psychodynamic, interpersonal, pharmacological, or spontaneous improvement, while emotional and interpersonal change can follow cognitive therapy. A process may be necessary without being unique, or one of several routes to the same outcome. The clinically useful question is often not whether a therapy owns a process, but whether its procedures engage that process reliably enough for the patient and whether a competing account predicts the sequence better.

XI. INSIGHT, MEANING, AND NARRATIVE

Some change is experienced as understanding: the patient sees how a present fear, protective strategy, relationship expectation, and earlier experience fit together. A meta-analysis found a moderate association between insight and psychotherapy outcome across modalities (Jennissen, Huber, et al., 2018). The finding supports clinical interest in self-understanding, but the included definitions and methods varied, and improvement may make coherent understanding easier as well as the reverse.

Research comparing cognitive and dynamic therapies illustrates the problem of specific and common pathways. In a pooled sample, changes in self-understanding, compensatory skills, and views of self were associated with symptom change across treatments, while self-understanding showed some specificity to dynamic psychotherapy and process changes predicted later course (Gibbons et al., 2009). The study suggests that therapies can engage both shared and distinctive processes; it does not reduce either approach to a single mediator.

Meaning gives experience a place in a life. A frightening bodily sensation can become evidence of danger, a conditioned alarm, an expression of conflict, or several of these at once. Therapy can loosen an interpretation that has become total and develop a more workable account. Narrative and dialogical reviews emphasize co-created meaning and the cultural and relational context in which stories are told. A coherent story, however, is not necessarily accurate, benign, or complete. Therapy is not a forensic method for establishing historical fact.

The practical test is what the meaning permits. Does it reduce shame without removing responsibility? Does it make a boundary, experiment, grief, or request possible? Does it preserve uncertainty where memory is uncertain? Insight becomes more plausible as a mechanism when it precedes and organizes new response, not when it remains an elegant explanation that only the therapist can use.

XII. INTERPERSONAL CHANGE IN AND BEYOND THE SESSION

Psychological difficulties often have an interpersonal ecology. Depression can reduce contact and increase conflict; trauma can alter trust; social anxiety shapes self-presentation; chronic shame affects how help is received. Therapy may change symptoms partly by changing what happens between people. Interpersonal therapy, for example, proposes that resolving a current interpersonal problem can reduce stress, improve support and skills, and facilitate emotional processing, while acknowledging that these pathways require stronger direct tests (Lipsitz & Markowitz, 2013).

The consulting room can become a sample of the wider pattern, but it is not a perfect miniature. A patient may comply with the therapist and resist elsewhere, distrust authority in one context but not another, or behave differently because therapy is paid, confidential, and time limited. Interpretations about transference or relational pattern should therefore be offered as hypotheses and checked against the patient's experience rather than presented as privileged truth.

Nonverbal coordination has been proposed as one relational pathway. A recent meta-analysis found no significant overall association between nonverbal synchrony and alliance or outcome, with differing signals across vocal, physiological, and movement measures (Jennissen, Ditzen, et al., 2025). The null overall result is informative. A process can be intuitively compelling and measurable without behaving as a single construct or serving as a reliable target.

Interpersonal learning becomes clinically persuasive when a communication pattern observed in therapy can also be recognized outside it—for example, when a patient notices the timing, wording, or withdrawal that precedes difficulty with a partner, colleague, or friend and attempts a different response. That attempt may expose a real environmental limit: not every relationship becomes safe because communication improves. Therapy should distinguish a modifiable interaction from abuse, coercion, discrimination, or material conditions that require protection and external change.

XIII. BETWEEN-SESSION USE AND GENERALIZATION

Most lives change between sessions. Homework, experiments, observation, practice, and ordinary events determine whether a new response remains tied to the therapist's room. A meta-analysis found positive associations between the quantity and quality of CBT homework compliance and outcome, while the evidence base was small for quality and largely correlational (Kazantzis et al., 2016). People who are improving may complete more practice; therapists may assign and review it differently when treatment is going well.

The word compliance can obscure collaboration. A useful between-session task follows from a shared question, is feasible in the patient's context, and produces information even when it is not completed. Failure may reveal fear, executive difficulty, an unrealistic plan, disagreement, poverty, caregiving burden, or a rupture. Treating all noncompletion as resistance protects the theory at the patient's expense.

Generalization requires retrieval. Learning created in one emotional state, relationship, or room may not be available elsewhere. Exposure models therefore use varied cues and contexts; other therapies rehearse language, reminders, implementation intentions, or anticipated obstacles. The relevant design question is where the old pattern usually returns. Practice should approach that context gradually enough to be safe and specifically enough to test whether the new response is available.

Therapy ends, but the contexts that evoke distress continue to change. A mechanism account should include how the person will recognize the process, renew practice, and seek help if the new response weakens. This need not imply permanent self-monitoring. It means converting session-dependent learning into a portable repertoire rather than assuming that insight or performance under ideal conditions will generalize by itself.

Ending is itself a retrieval context. The reduced frequency of contact can evoke loss, autonomy, abandonment, pride, or doubt and may reproduce the pattern treatment addressed. Discussing the ending early allows these responses to become data rather than surprises. Reviewing concrete episodes of change, likely future triggers, and the patient's own language for the process can consolidate learning without claiming

finality. A planned return to care, if needed, is compatible with genuine therapeutic gain.

XIV. MEASURING CHANGE WITHOUT MISTAKING THE MEASURE

Mechanism research often samples too slowly. Pre- and post-treatment scores cannot establish whether the mediator moved before the outcome, while session-level measures may still miss changes that occur within a conversation or in daily life. Intensive repeated assessment, ecological momentary methods, and time-lagged models can improve resolution. They also increase burden and create analytic choices that require preregistration, adequate sample size, and replication.

Measures can overlap conceptually. A scale of experiential avoidance may correlate with distress partly because both ask about difficulty with unwanted thoughts and feelings. Alliance ratings can contain judgments about progress. Insight ratings can reward a theory-congruent account. Strong correlations under these conditions may reflect item content as well as causal process. Multi-method assessment—behavior, observer coding, daily sampling, and patient report—can help, though each method brings its own perspective.

Feedback is useful when it changes action. A meta-analysis found small average benefits from progress feedback and small reductions in dropout, especially when cases were not on track (de Jong et al., 2021). Process measures could serve a similar role if they are tied to a decision. A low credibility rating invites clarification; an unchanged avoidance pattern questions the task; high alliance with no outcome change asks whether collaboration has become detached from an effective target.

The measure should remain subordinate to the phenomenon. A score can suggest that emotional regulation improved, but the clinician still needs to know what the patient did during the last episode. A chart can show alliance strain, but a conversation establishes what felt unsafe or irrelevant. Quantification is most useful when it returns attention to concrete experience rather than replacing it.

Table 3. Common failures in mechanism reasoning

Failure	Why it misleads	Better question	Clinical safeguard
Post hoc mediation	A changed variable is named after the outcome is known	Was the pathway specified and timed in advance?	State the predicted sequence before testing it
Correlation becomes instruction	Association does not show that increasing the variable helps	Has the process been manipulated or temporally tested?	Do not intensify a process solely because it correlates with outcome
Theory-confirming measure	Construct and outcome share wording or allegiance	Would another method detect the same change?	Use behavior, patient report, and observation where feasible
One mechanism for everyone	Group averages conceal different within-person sequences	Which process changed first for this patient?	Treat formulation as a revisable individual hypothesis
Technique—relationship split	Each changes how the other is delivered and received	What work did the relationship make possible?	Assess both method engagement and collaboration

Failure	Why it misleads	Better question	Clinical safeguard
Failure blamed on the patient	The theory is protected from disconfirmation	What result would show that the formulation or treatment is wrong?	Set review points and genuine alternatives

XV. FROM MECHANISM EVIDENCE TO CLINICAL FORMULATION

A formulation is most useful when it predicts a sequence. If panic is maintained by catastrophic interpretation and safety behavior, changing those responses should precede improved mobility. If withdrawal is maintaining depression, planned action should increase contact or mastery before mood reliably improves. If a relational expectation organizes repeated ruptures, recognizing and testing it should alter interaction before broader symptoms change. The prediction makes the formulation accountable.

Formulations should contain alternatives. Lack of progress may indicate inadequate engagement with the target, but it may also reveal bipolar disorder, substance effects, neurodevelopmental differences, trauma, medical illness, medication adverse effects, coercion, poverty, or a goal the intervention does not address. Mechanism language can become blaming when every failure is redescribed as insufficient willingness, flexibility, insight, or alliance. A causal hypothesis must be allowed to be wrong.

The therapist can make the logic shareable in plain language: “We think this loop is keeping the problem going; this task should change this part first; we will look for that change over the next few sessions; if it does not appear, we will reconsider.” Such transparency supports consent and gives the patient grounds to disagree. It also keeps supervision focused on observable work rather than retrospective explanation.

Mechanism-informed practice is therefore empirical in a modest sense. It uses the best general evidence, makes an individual prediction, observes the result, and revises. It does not require reducing a person to a flowchart. The formulation remains nested inside biography, culture, relationship, physical health, and present circumstances—levels of explanation that may constrain or transform what any psychological task can accomplish.

This approach also changes supervision. Instead of asking only whether the therapist followed the model, supervision can ask what process was targeted, what the patient predicted, what occurred, what changed next, and what alternative explanation fits. Fidelity still matters when a treatment depends on specific procedures. It becomes one source of information among several rather than proof that the correct mechanism was engaged or that the patient should have improved.

The same discipline helps when treatment succeeds. A favorable outcome can encourage the therapist to credit the preferred theory, although change may have begun before the proposed mechanism moved or may have depended on

circumstances outside treatment. Reviewing successful cases against the predicted sequence is as important as reviewing failures. Otherwise every recovery confirms the model and every nonresponse is attributed to implementation, leaving the theory impossible to test.

XVI. CONCLUSION

Psychotherapy appears to produce change through interacting relational and task-specific processes rather than through a single common ingredient. Relevant processes include expectation, collaboration, specific therapeutic tasks, emotional and cognitive learning, meaning-making, interpersonal experience, and use outside sessions. Therapies organize these processes differently, and patients may improve through different sequences.

The process literature is informative but not yet a catalogue of proven active ingredients. Alliance, emotional change, insight, flexibility, credibility, and other variables are associated with outcome; some satisfy more causal criteria than others. The 2026 umbrella review broadens the map while reminding us that much of it is correlational and heterogeneous. A precise account should say “associated with,” “mediated,” or “experimentally supported” according to the design, rather than using “mechanism” as a compliment.

The clinical gain from mechanism thinking is accountability. Formulate a maintaining process, choose a task expected to engage it, identify what should change first, observe whether that sequence occurs, and help the learning travel into daily life. When the prediction fails, change the explanation or the treatment. Psychotherapy works through a relationship capable of conducting this inquiry and through methods concrete enough to be tested within it.

XVII. CONFLICTS OF INTEREST AND DISCLOSURES

Conflicts of interest—The author developed and writes about Communication-Focused Therapy (CFT). Where CFT is discussed, it is presented as a formulation perspective and not as a substitute for established assessment, evidence-based treatment, or independent replication. No other conflict of interest was reported.

Funding—No specific funding was reported for this article.

Author contributions—Christian Jonathan Haverkamp is the sole named author and is responsible for the conception, literature review, manuscript preparation, and approval of the final draft.

Patient material—No identifiable patient material is presented. Any brief examples are generic composites created to illustrate clinical reasoning and are not case reports.

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