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Published online: 02 Mar 2023.

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EMPIRICAL PAPER

Strength-based methods – a narrative review and comparative multilevel meta-analysis of positive interventions in clinical settings

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ABSTRACT

Objective In psychotherapy, strength-based methods (SBM) represent efforts to build on patients' strengths while addressing the deficits and challenges that led them to come to therapy. SBM are incorporated to some extent in all major psychotherapy approaches, but data on their unique contribution to psychotherapy efficacy is scarce.
Methods First, we conducted a systematic review and narrative synthesis of eight process-outcome psychotherapy studies that investigated in-session SBM and their relation to immediate outcomes. Second, we conducted a systematic review and multilevel comparative meta-analysis contrasting strength-based bona fide psychotherapy vs. other bona fide psychotherapy at post-treatment (57 effect sizes nested in 9 trials).
Results Despite their methodological variability, the pattern of results in the process-outcome studies was generally positive, such that SBM were linked with more favorable immediate, session-level patient outcomes. The comparative meta-analysis found an overall weighted average effect size of $g = 0.17$ (95% CIs [0.03, 0.31], $p < .01$) indicating a small but significant effect in favor of strength-based bona fide psychotherapies. There was non-significant heterogeneity among the effect sizes ($Q(56) = 69.1$, $p = .11$; $I^2 = 19\%$, CI [16%, 22%]).
Conclusion Our findings suggest that SBMs may not be a trivial by-product of treatment progress and may provide a unique contribution to psychotherapy outcomes. Thus, we recommend integration of SBM to clinical training and practice across treatment models.

Keywords: strength-based psychotherapy; resource activation; positive interventions; positive affect; resilience; capitalization; multilevel meta-analysis

Clinical or methodological significance of this article: Strength-based methods highlight the importance of balancing responsiveness and capitalization on patients' strengths while also addressing their weaknesses in therapy. Our systematic review suggests that strength-based methods contribute to positive in-session processes and treatment outcomes. The comparative meta-analysis indicates that strength-based methods may increase treatment efficacy of bona fide psychotherapy. Thus, strength-based methods should be incorporated in clinical trainings and practice across treatment modalities.

In their pioneering work, Cronbach and Snow (1977) claimed that some treatments are more effective for particular individuals depending on their preexisting capabilities. In the context of educational sciences, the authors suggested optimal learning occurs in at least two different ways: compensating the individual's deficits (e.g., support lessons for learners with poor grades) or capitalizing on the individual's behaviors and capabilities ("strengths") (e.g., choice of a profession related to personal skills and interests).

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In psychotherapy, a skillful balance between using patient capitalization and compensation strategies within a collaborative therapeutic relationship has long been suggested to contribute to optimal treatment outcomes (e.g., Cheavens et al., 2012; Cronbach & Snow, 1977; Gelso & Woodhouse, 2003). In addition, strategies to capitalize on the therapist's abilities can also be used to increase the therapist's effectiveness (Constantino et al., 2021). For therapists, a first step in patient capitalization is to systematically assess patients' existing strengths and form hypotheses about how these strengths can be addressed in therapy. During therapy, the therapist can identify and emphasize the patient's strengths and use them as a catalyst for change.

Whereas mental health is often seen as a unidimensional dichotomy or continuum of psychological suffering (e.g., depression yes/no; mild, moderate, severe major depressive episode; 0–100 global assessment of functioning), a bi-dimensional conceptualization considers psychological strengths in addition to problems and suffering (e.g., Cacioppo et al., 2012). In the present systematic review, we use a working definition of mental health as actively and intentionally engaging fully in life as a mainly independent quality that is not exclusively due to the absence of suffering or a mental disorder. An example of a patient strength is resilience, that is, the capacity to cope adaptively with adversity with minimal psychological suffering (e.g., Bonanno, 2021; Lee et al., 2013). Other examples of human strength include well-being (e.g., Jebb et al., 2020; Tay & Diener, 2011), self-efficacy (Scholz et al., 2002), human agency (Bandura, 2006), meaning of life (e.g., Hill, 2018), resources (Hobfoll, 1989) or happiness (Helliwell et al., 2021).

Definitions and Clinical Description

In psychotherapy, strength-based methods (SBM) represent efforts to balance between enhancing patients' strengths, while addressing their deficits and challenges. The term *strength-based methods* (also called *positive interventions, resilience-based or resource-oriented*) refers to therapist behaviors designed to acknowledge, validate, and foster the client's strengths, capabilities, and motivational readiness for psychotherapy change. SBM are based on the premise that working with patient strengths is key to psychotherapeutic change. The unpleasant, unsatisfying, and maladaptive parts of behavior are integrated into a fuller picture of mental health by also including the pleasant, satisfying, and functional parts of behavior.

Strength-based psychotherapy refers to multiple treatment approaches. These include positive psychotherapy (Conoley & Scheel, 2018; Parks & Schueller, 2014; Rashid & Seligman, 2019), strength-based and/or resilience-focused cognitive–behavioral therapy (e.g., Cheavens et al., 2012; Padesky & Mooney, 2012; Willutzki et al., 2004), and psychotherapy integration (e.g., Flückiger et al., 2010, 2013; Grawe, 1997; Gelso & Woodhouse, 2003; Scheel et al., 2013).

SBM is incorporated to some extent in all major psychotherapy orientations. In cognitive–behavioral therapy (CBT), specific SBMs are designed to increase positive affect (Craske et al., 2019) or engagement in pleasurable activities (Solomonov et al., 2020); psychodynamic therapy promotes insight, meaning making (Wachtel, 2011), and thriving in relationships (Tolpin, 2002). SBM are identified as a basic component of counseling psychology and humanistic psychotherapy (e.g., Gelso & Woodhouse, 2003; Satir et al., 1991; Scheel et al., 2013). Resource activation as a therapeutic factor represents a collaborative process that (re)activates skills, behaviors, and motivation for further change in patients and the psychosocial environment to achieve treatment goals.

All SBM capitalize on patient strengths, but they vary in their specific clinical context. Below, we provide an overview of different ways in which SBM are conceptualized in psychotherapy practice:

- *Therapist responsiveness to the patient self-directed strength AND/OR therapist strength-based instructions.* SBM exist in transaction (at least a dyadic construct), that is, patients proactively contribute to their therapy (e.g., Bohart, 2007; Macdonald & Muran, 2020; Ryan & Deci, 2008). Some psychotherapies emphasize the therapist's strength-based responsiveness to patients' self-directed abilities and motivational readiness (Flückiger et al., 2021), whereas others highlight the therapist's strength-based instructions and patient reactions to those instructions (Suhr et al., 2017). It is difficult to separate these two strength-based aspects in individual sessions, as patients, as part of their patient role, often are guided by therapists to emphasize positively valued aspects during sessions.

- *Disorder-specific AND/OR general strength-based methods.* While several clinician's guides propose disorder-specific SBM (such as positive psychotherapy for psychosis; Riches et al., 2016), others highlight more generic SBM that include focusing more broadly on wellbeing and personal engagement (e.g., strength-based CBT to build on resilience; Padesky & Mooney, 2012).

- *Trait AND/OR state strengths.* Some SBM build on individual traits (e.g., character strengths;

Niemiec, 2018) whereas others focus on the situational strengths in a particular therapeutic action or moment (Gonçalves et al., 2014).

- *Capitalizing on preexisting strengths AND/OR building new strengths.* Some SBM enhance preexisting abilities (e.g., proposing actions that correspond with the patients' preexisting skills; Cheavens et al., 2012). Other methods highlight the development of new skills (e.g., building pleasure; Rashid & Seligman, 2019).

- *Building patients' individual strengths AND/OR building social and community strengths.* SBM are based on multiple levels of social networks. Some aim to build on the patients' individual strengths (e.g., fostering own gratitude practice, Emmons & Stern, 2013), some on interpersonal relationships, and still others on community or environmental strengths (e.g., fostering social support; Hirani et al., 2018; Li et al., 2021).

- *SBM in the therapy room AND/OR outside of the therapy room.* Strength-based methods can be focused on in-session (micro-) skills (e.g., Flückiger et al., 2009) but also outside of the therapy room via strength-based homework and augmented online tools (e.g., De Vries et al., 2020; Scheel et al., 2004).

Overall, SBM are based on a common premise that the general positive quality of SBM contributes to treatment progress, while also maintaining a clear focus on the patients' difficulties (Yulish et al., 2017).

Assessments

Assessment of Strength-Based Therapist and Patient Behaviors

There are several video-rating systems to measure therapists' in-session use of SBM. These include overall rating of the positivity/resource activation at the end of sessions (von Consbruch et al., 2013), a moment-to-moment coding system where innovative moments of the patient change process are assessed (Gonçalves et al., 2011), and resource-oriented micro-process analysis (ROMA-T/P, e.g., Flückiger et al., 2009), where strength-based therapist and patient behaviors are assessed separately during 1-minute segments.

As an example, the ROMA-Therapist version assesses the following strength-based categories (Flückiger & Grosse Holtforth, 2008b): (i) immediate reinforcement of specific strengths, (ii) emphasis on patients' self-directed change, (iii) expression of confidence for improvement, (iv) focus of personal skills, (v) emphasis on positive emotions, (vi) focus on interpersonal skills and social support, (vii) focus on physical health, (viii) emphasis on positive therapeutic process and relationship, (ix) focus on

treatment goals, (x) emphasis on solutions to problems, (xi) emphasis on self-directed choice, (xii) pick up a positive patients' metaphors, (xiii) exploring exceptions, and (xiv) normalizing and reframing a targeted problem. An overall minute-by-minute rating of the quality of strength-based methods is evaluated from -2 (e.g., therapist ignores positive aspects mentioned by the patient for at least several minutes) to $+2$ (e.g., therapist explores in detail strengths for more than several minutes) and as a further category $+3$ (e.g., too excessive positivity, therapist appears overly enthusiastic or disingenuous). Corresponding with the therapist categories, ROMA-Patient rating system assesses the strength-based categories of the patient on a minute-to-minute level.

ROMA-T/P does not differentiate who initiates the strength-based therapeutic focus; it is assumed that both therapist and patient contribute to strength-based therapeutic talks and the sum of the therapist's SBM may help to keep a strength-based focus across several minutes. For example, a therapist may ask an open question and the patient may respond in a manner where the therapist starts to explore and reflect positive aspects more precisely. What matters is that therapist and patient successively include and appreciate strength-based aspects in the sessions.

Strength-Based Assessments Post-Session, Between Sessions, and Treatment Progress

The definition, repeated assessment and monitoring of strength-based concepts is a SBM itself; for example, the repeated assessment of strengths increases patient awareness for strength. There are post-session reports where strength-based in-session experiences are assessed from the patient and therapist perspectives (e.g., Flückiger et al., 2010; Mander et al., 2015). Patients' positive experiences of well-being may also be assessed outside of the therapy room, for example, using inter-session diaries or ecological momentary assessments/interventions (e.g., De Vries et al., 2020; Suhr et al., 2017; Vîslă et al., 2021).

Patient strength may be optimally assessed in a broad battery of measures that evaluates various domains of functioning including physical and mental health, such as psychological and social well-being, positive affectivity, self-esteem, self-efficacy, and social support (e.g., Probst et al., 2022; Schürmann-Vengels et al., 2022). Further, the items and answer formats of *clinical questionnaires* can be systematically discussed in terms of patients' strength, abilities, skills, needs and

motivation (e.g., item of the Beck Depression Inventory: "I have as much energy as ever.".

Many have also suggested using individualized assessments of progress toward mutually developed and well-defined treatment goals (e.g., criterion-oriented outcomes such as Goal Attainment Scaling, Kiresuk & Sherman, 1968, or Target Complaints, Battle et al., 1966). A strength-based formulation of treatment goals would cover both maladaptive domains that should be targeted (e.g., fewer symptoms, fewer interpersonal problems) as well as positive behaviors and functioning that should be enhanced (e.g., Grosse Holtforth & Grawe, 2002). Finally, reviewing satisfaction with the therapist and therapy (e.g., Seligman, 1995; Wampold & Flückiger, 2023) is a critical SBM to validate patient-centered outcomes.

Previous Meta-Analyses

Table I summarizes prior meta-analyses on treatment outcomes of strength-based psychotherapies, with the majority comparing strength-based psychotherapies with control conditions on distal (not disorder-specific) outcomes. The majority of these contrasts indicated small to medium effects in favor of the positive/strength-based approaches. However, all meta-analyses investigated the efficacy of SBM vis-à-vis control conditions that were not designed to be fully therapeutic (i.e., that were not bona fide psychotherapy; Wampold & Imel, 2015). Thus, prior studies do not provide information on whether SBM increase or decrease the efficacy of preexisting bona fide psychotherapy. To the best of our knowledge, this is the first comparative meta-analysis that investigates the potential added contribution of SBM to bona fide psychotherapy outcomes.

Research Review

The goal of this systematic review and meta-analysis was two-fold. First, we reviewed the research evidence on strength-based process-outcome studies. We conducted a narrative review of studies that assess in-session SBM (comparable to the above-mentioned ROMA-rating) under bona fide psychotherapy conditions and its contribution to immediate outcomes. Second, we conducted a comparative meta-analysis of trials that contrasted strength-based psychotherapies vs. other bona fide psychotherapies. Most of these trials contrasted SBM with more problem-focused methods within the same orientation, sometimes even using the same treatment manual/approach, but contrasting different degrees of implementing SBM during sessions.

Inclusion Criteria

The inclusion criteria include: (a) the study author(s) referred to the individual psychotherapy as "strengths based" or "solution focused" or "resource oriented" or "resilience based;" (b) patients had a current mental health diagnosis; (c) treatments were bona fide psychotherapy, and (d) comparable amount of treatment, supervision and training sessions across the conditions. Studies were excluded if: (a) the trials focused on children (< 13 years) or couples or family therapy; (b) the study design focused on prevention, after-care or at-risk programs; (c) the trials were preliminary pilot studies with less than 10 patients per group or with less than 3 therapists. When multiple treatments were available in the same study, we selected only those that met our criteria outlined above (e.g., medication conditions were excluded). For the process-outcome studies, we included studies that directly assessed SBM at the in-session level (e.g., using ratings of video-/audio recordings). We excluded studies that assessed strength-based session experiences only as overall ratings at post-session (e.g., using post-session reports).

The following criteria were used for bona fide psychotherapy (Wampold et al., 1997; Wampold & Imel, 2015): psychotherapists with at least a master's degree delivered the treatment, patients met diagnostic criteria, and two of the following four criteria were satisfied: (a) treatments were generally recognized as legitimate treatment, such as CBT or psychodynamic therapy and therapists were not proscribed from well-accepted therapeutic actions, such as psychoeducation, being empathic, providing a treatment rationale; (b) description of treatment contained a reference to a psychological mechanism (e.g., operant conditioning); (c) a treatment manual/guide was used; and (d) treatment contained an active component that appeared in the psychological literature.

Search Strategy

For the systematic review and comparative meta-analysis, we located comparative trials of strength-based approaches under bona fide psychotherapy conditions, and we inspected the above-mentioned prior comparative meta-analyses on positive psychotherapy (Carter et al., 2016 ($s = 8$); Chakhssi et al., 2018 ($s = 30$); Munder et al., 2019 ($s = 10$); White et al., 2019 ($s = 51/39$); Zheng et al., 2016 ($s = 6$); Hoppen & Morina, 2021 ($s = 20$)). Furthermore, to broaden the scope, we searched (via EBSCO) the PsycINFO, ERIC, MEDLINE, and PSYNDEX databases with the keywords

Table I. Prior meta-analyses of strength-based treatments.

Authors	k	N	Targeted mental health suffering	Treatment	Comparison	Primary Outcome	Effects
Bolier et al. (2013)	39	6139	Psychosocial problems	PPI	NI, WL, TAU, PL	WB, DS	Effects after removing outliers (I^2 non-significant): *Increase in subjective WB: d = 0.26, 95%-CI [0.18, 0.33], Z = 6.43, p < .01* *Increase in psychological WB: d = 0.17, 95%-CI [0.09, 0.25], Z = 4.18, p < .01* *Decrease in DS: d = 0.18, 95%-CI [0.07, 0.28], Z = 3.33; p < .01*
Chakhssi et al. (2018)	30	1864	Mental and somatic disorders	PPI	AC, NI, WL	WB, DS	Effects after removing outliers and low-quality studies: *Increase in WB: g = 0.19, 95%-CI [0.02, 0.37], p < .03, I^2 = 40.9%* *Decrease in DS: g = 0.07, 95% CI [−0.19, 0.32], p = .60; I^2 = 66.1%*
Munder et al. (2019)	10	918	Mental disorders	RFT	WL, AC	PS, IF, QoL	*Superiority of RFT compared to TAU in 8 out of 11 comparisons:* g_{PPWC} = 0.349, 95%-CI [0.576, 0.122], p < .003, I^2 = 46.50% g_{POWC} = 0.190, 95%-CI [0.355, 0.025], p < .02; I^2 = 0.00%
Sin and Lyubomirsky (2009)	51	4266	Depressive symptoms	PPI	NT PL, TAU, NC	WB, DS	*Increase in WB: Z_r = 0.29 (range: −0.31, 0.84), p < 0.001, $\chi^2_{(48)}$ = 230.92* *Decrease in DS: Z_r = 0.31 (range: −0.28, 0.81), p < 0.001, $\chi^2_{(24)}$ = 146.32*
White et al. (2019)	51/ 39	4266/ 6139	Depressive symptoms, psychosocial problems	PPI	NT, WL, TAU, PL	WB, DS	Replications accounting for SSSB and omitting outliers: Sin and Lyubomirsky (2009): *Increase in WB*: r = .10, 95%-CI [-.01, .20] (Q (38) = 70.68, p < .001) *Decrease in DS*: r = -.03, 95%-CI [-.17, .11], (Q (19) = 26.82, p = .11) Bolier et al. (2013): *Increase of subjective WB*: r = .13, 95%-CI [0.00, 0.26] (Q(22) = 57.39, p < .001) *Increase in psychological WB*: r = .02, 95%-CI [-.09, 0.13] (Q(15) = 18.41, p = .24) *Decrease in DS*: r = .15, 95%-CI [.06, .24] (Q(11) = 11.51, p = .40)

Study	k	N	Disorder	Treatment	Control	Outcomes
Hoppen and Morina (2021)	20	1360	Mental and somatic disorders	PPI	WL, active treatment	WL: *Increase in positive outcomes: g = 0.72, 95%-CI [0.14, 1.31]* *Decrease in negative outcomes: g = 0.48, 95%-CI [0.18, 0.78]* Active treatment: *Increase in positive outcomes: g = 0.92, 95%-CI [0.11, 1.74]* *Decrease in negative outcomes: g = 0.94, 95%-CI [0.18, 1.70]*

Notes: k = number of studies included; N = patient sample size; MDD = Major Depression Disorder; AfD = Affective Disorders; PSD = Psychotic Spectrum Disorders; AnD = Anxiety Disorders; SD = Stress Disorders; DD = Dissociative disorders; PD = Personality Disorders; ADHD = Attention Deficit Hyperactivity Disorder Treatments: PPI = Positive Psychology Intervention; RFT = Resource-focused Treatment; AC = active control group; PC = passive control group; PL = placebo; NT = no treatment; NC = neutral control group; TAU = treatment as usual; WL = waitlist Outcomes: WB = well-being; DS = depressive symptoms; BMI = body-mass index; PS = primary symptoms; IF = interpersonal functioning; QoL = quality of life; d = Cohen's d; g = Hedges' g; Z_r = mean Fisher effect size; PPWC = pre-post with control; POWC = post-test only with control; OR = odds ratio; RR = risk ratio; SSSB = small study size bias; Q = Cochran's Q (residual heterogeneity).

«psychotherapy OR treatment» AND «strength based OR solution focused OR resource oriented OR resilience based» AND «RCT OR randomized control trial OR randomized controlled trial OR clinical trial» AND «disorder» in March, 2021. For the process-outcome studies, we examined the introduction and reference sections of included studies to detect further process-outcome studies. Furthermore, we checked the hits of a further systematic review with the keywords «resource activation OR Ressourcenaktivierung OR resource realization OR Ressourcenrealisierung» in April 2021.

Figure 1 flowchart provides an overview of the extraction procedure. From the 534 and 2,353 articles respectively (8 and 446 were duplicates), we identified eight process-outcome studies (representing 416 patients) and nine comparative trials (reporting 57 effect sizes at post assessment representing 804 patients with an average of 89 patients per study). The eight process-outcome studies and nine clinical trials are summarized in Tables II and III (for bona fide criteria and Risk of Bias 2 see https://osf.io/s7z2w/). Agreement between raters of bona fide criteria for strength-based treatments and contrasting treatments was 92%. Coding disagreements were discussed and resolved by reaching consensus. Effect size extractions and sample characteristics were coded, double-checked, and collaboratively discussed between the first and second author.

For the nine comparative trials, data included both peer-reviewed manuscripts (s = 8) and one dissertational thesis without peer-review (s = 1, i.e., Kosfelder, 2000), data collected from randomized controlled trials (s = 7) and from trials where patients were not randomized, but grouped using propensity score methods on the basis of previously collected data (s = 2; i.e., Flückiger & Grosse Holtforth, 2008a; Kosfelder, 2000). No trial with Positive Psychotherapy as a specific strength-based approach met the inclusion criteria (potential trials that did not meet the inclusion criteria: Andrewes et al., 2014 and Asgharipoor et al., 2012 treated 5 clients in the CBT control condition, Fava et al., 2005 and Chaves et al., 2017 considered less than 3 therapists; Uliaszek et al., 2016 investigated a subclinical student population; in Furchtlehner et al., 2020 group leaders were not psychotherapists).

Review of In-Session SBM and Their Relation to Immediate Outcomes

Studies on therapist in-session use of SBM, as assessed with video-based observer ratings, and their relation to outcomes are summarized in Table II. Video-ratings in all reviewed process-outcome
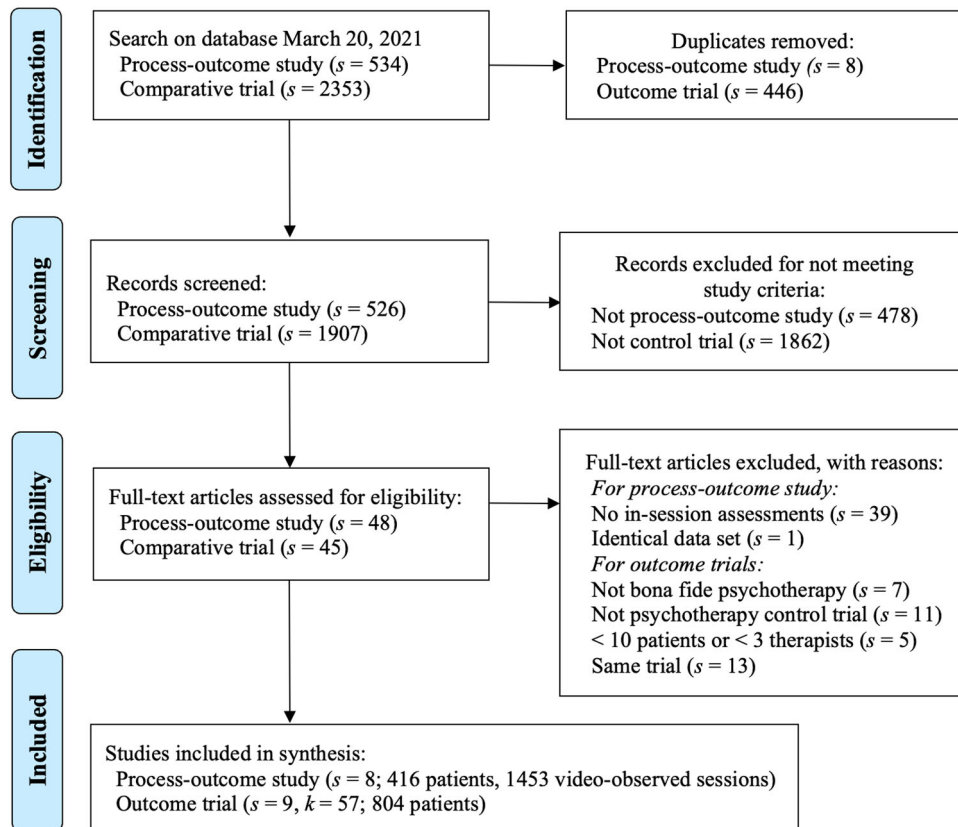
Figure 1. Flowchart of the included process-outcome studies and comparative trials (s = studies, k = effect sizes).

studies are primarily based on the theoretical framework initiated by Grawe (1997) in which SBM are operationalized as a general positivity factor (e.g., ROMA-P/T overall quality ratings). A representative example is provided by Smith and Grawe (2003, 2005), who used an advanced analytic methods of decision trees (a machine learning algorithm). The authors analyzed SBM in a sample of 613 sessions of 128 different patients to predict a composite score of session productivity evaluated at post-session (2829 strength-based ratings of 10-min sequences) in integrative CBT. The authors documented positive associations between strength-based therapist methods and immediate outcomes during the course of treatment. They concluded that when a proposed therapeutic procedure was tailored to the individual skills and strengths of the patient so that they became actively involved, the likelihood that the patient evaluated the session as productive was higher (60.8%) compared to methods where patients were unable to respond adequately (20.9%). However, even in these less-optimal sequences, a subsequent discussion about the patient's positive skills and abilities enhanced the likelihood of a session to be rated as productive

(51.1% of the 20.9%). This finding may suggest that SBMs are experienced by patients as helpful and therapeutic. Of course, the correlative nature of the study precludes a definite causal interpretation.

The reviewed studies in Table II varied in use of methods and samples (e.g., selection of particular sessions over a treatment course). Given their methodological heterogeneity, it is not surprising that the effects of SBM on the session level may be highly situational. Descriptively, an inspection of these studies reveal that therapists use SBM with multiple client populations, across theoretical orientations, and with a range of mental health conditions. Notably, despite their methodological variability, the general pattern of results was uniformly positive in that SBM was linked with more favorable immediate, session-level patient outcomes. SBM consistently emerged as a therapeutic factor that is related to treatment progress across sessions. At the same time, and somewhat unexpectedly, therapists' use of SBM was also evident in situations where treatment relapse was evident (Gassmann & Grawe, 2006; Schilling et al., 2021). In these situations, the therapeutic function of SBM may be less straightforward as in successful sessions.

Table II. Summary of strengths-based process-outcome studies investigating bona fide psychotherapy.

Authors	Sess.	N	Disorder	Inpatient/ Outpatient	Treatment	Process measure	Summary of immediate and delayed in-session effects
Flückiger et al. (2009)	96	36	Mixed / SAD	Outpatient	ICBT	ROMA-T; ROMA-P	Comparable quality of SBM across two strength-based approaches. Personal skills highest associated with the patient's post-session evaluations of mastery ($r = .44$), personal goals highest association with clarification/insights ($r = .49$). Quality of SBM ($r = .39$, $p < .01$) correlated with the extent of goal achievement (GAS-R) at session 10
Regli et al. (2000)	168	45	Mixed	Outpatient	ICBT	GCFA	Successful vs. less successful therapies: significant difference in quality of SBM during the first few therapy sessions (higher quality of SBM in successful therapies). Therapy with above-average alliance vs. below-average alliance: significantly higher quality of SBM in therapies with above-average alliance)
Kech (2008)	112	20	MDD	Inpatient	IPT	GCFA	Successful therapies: high emotional activation with simultaneous high quality of SBM ($r = .52$, $p < 0.001$). Opposite effect in unsuccessful therapies: high emotional activation but simultaneously low quality of SBM ($r = - .13$; $p = .30$)
Gassmann and Grawe (2006)	120	30	Mixed	Outpatient	ICBT	CMP	In successful therapy and therapy sessions: Quality of SBM positively associated to patient strength-based in-session talks ($r > .20$). In less successful therapies: high quality of SBM but low levels of patient strength-based talks at the end of sessions
Flückiger and Studer (2009)	108	48	Mixed	Outpatient	ICBT	ROMA-T; ROMA-P	Personal skills and personal goals predicted shift into deeper emotional stages during sessions. After a shift, patients usually reframed or normalized their behavior.
Flückiger et al. (2014)	20	20	GAD	Outpatient	ICBT	ROMA-P	Personal skills at the beginning of sessions followed a more problem-focused stage that was characterized by a higher level of negative emotional expressions during therapy
Schilling et al. (2021)	89	89	Mixed	Outpatient	ICBT	ROMA-T; ROMA-P	Sessions before a substantial *increase* of symptoms: personal goals and positive reinterpretations significantly mentioned earlier in the sessions ($p < .01$)
Smith and Grawe (2003, 2005)	740	128	Mixed	Outpatient	ICBT	GCFA	Association of quality of SBM and session outcome composite ($d = 0.85$). In-session process: In situation where the patient do not respond to the therapist's proposed method (20.92%), subsequent discussion about personal skills enhances the chance to turn into a productive session (51.1%).

Notes: N = patient sample size; ICBT = Integrative Cognitive Behavioral Therapy; IPT = Interpersonal Psychotherapy; MDD = Major Depression Disorder; GAD = Generalized Anxiety Disorder; SAD: Social Anxiety Disorder; SBM = Strength-based methods (therapist); ROMA-P/ ROMA-P, Resource-Oriented Microprocess Analysis (Patient-/ Therapist-Version); CMP = Consistency Theory Micro-Process Analysis; (Grawe, 1997, 2004), GCFA = General Change Factors (Grawe, 1999). Scores at study level: + = mainly positive associations with facilitative in-session effects, 0 = mixed or nondistinctive associations with facilitative in-session effects, – = mainly negative associations with facilitative in-session effects.

Table III. Comparative trials contrasting strength-based methods with bona fide psychotherapy.

Study	Patient population	Gender (% male)	Mean age (years)	Depression or anxiety comorbidities excluded	SUD excluded	Bona fide strengths-based psychotherapy	Bona fide comparison psychotherapy	N	Study-level effect size (g)
Boyer et al. (2015)	ADHD	74	14.5	yes	yes	Solution-focused Therapy + Motivational Interviewing	Manualized CBT (Plan My Life) + Motivational Interviewing	159	−0.07
Cheavens et al. (2012)	Major depression	41	37.0	no	yes	Modular CBT for depression: Two treatment modules were selected to reflect individual patients' strengths	Modular CBT for depression: Two treatment modules were selected to reflect individual patients' deficits	42	0.52
Flückiger et al. (2008a)	multidiagnostic (depression & anxiety)	45	35.4	no	yes	Custom tailored CBT: (a) Case formulation of patients' strengths, (b) use of resource-focused methods (e. g. positive reframing, planning pleasure, imaginative techniques) in addition to CBT as usual	Custom tailored CBT: (a) Case formulation without augmented focus on patients' strengths, (b) use of CBT as usual	40	0.39
Flückiger, Forrer et al., (2016)	GAD	25	43.9	no	no	Manualized CBT for GAD (MAW): (a) Case formulation of patients' strengths, (b) tailoring CBT to match patients' strengths	Manualized CBT for GAD (MAW): (a) Case formulation of patients' GAD symptoms and comorbidities, (b) tailoring CBT to match patients' GAD symptoms	57	0.22
Flückiger et al. (2021)	GAD	25	31.4	no	no	Manualized CBT for GAD (MAW): (a) Case formulation of patients' strengths, (b) tailoring CBT to patient's change behaviors	Manualized CBT for GAD (MAW): (a) Case formulation of patients' GAD symptoms and comorbidities, (b) tailoring CBT to match patients' GAD symptoms	80	0.08
Knekt et al. (2008, 2013, 2015)	multidiagnostic (depression & anxiety)	32	24.4	no	yes	Solution-focused Therapy	Short-time psychodynamic therapy	198	0.06
Kosfelder (2000)	Anxiety disorder	34	31.0	no	yes	Custom tailored CBT: CBT + Solution-focused methods (focus on previous solution attempts, early change, compliments)	Custom tailored CBT: use of CBT as usual	75	−0.04

| Teismann et al. (2011) | Major depression | 33 | 46.0 | no | yes | Manualized CBT for depression: (a) Solution-focused methods (focus on previous solution attempts, early change, compliments),
(b) strengths-oriented modification of CBT techniques (e.g., finding functional cognitions without elaborating dysfunctional cognitions) | Manualized CBT for depression: use of CBT as usual | 70 | 0.07 |
| Willutzki et al. (2004) | SAD | 58 | 38.2 | yes | yes | Manualized CBT for SAD: (a) Solution-focused methods (focus on previous solution attempts, early change, compliments),
(b) strengths-oriented modification of CBT techniques (finding functional cognitions without elaborating dysfunctional cognitions) | Manualized CBT for SAD: use of CBT as usual | 83 | 0.42 |

Notes: effect sizes in favor to SBM, ADHD = Attention deficit hyperactivity disorder, GAD = Generalized anxiety disorder, SAD = Social anxiety disorder, SUD = Substance use disorder, CBT = Cognitive behavioral therapy, MAW = Mastery your Anxiety and Worry, NN = Nearest Neighbor method, RS = Retrospective Sample.

## Comparison of Strength-Based Psychotherapies to Other Bona Fide Psychotherapies

For the comparative multi-level meta-analysis, we used random-effects restricted maximum-likelihood estimator. This analysis is based on the assumption that studies in this meta-analysis were randomly sampled from a population of studies. Effect sizes were generated using the R statistical software "compute.es" package (Del Re, 2013), and the multi-level meta-analytic models and meta-analytic diagnostics (i.e., tests for outliers) used the R "metafor" package (Viechtbauer, 2010; for the forest plot: Fernández-Castilla et al., 2020).

To account for multiple outcomes per study (i.e., within-study effect sizes nested in a trial), we conducted multi-level meta-analytic models with 3 levels, where sampling variance of the extracted effect sizes at Level 1 were nested in k measures at Level 2 and s studies at Level 3 (e.g., Assink & Wibbelink, 2016; Raudenbush & Bryk, 2002). The use of multi-level models in meta-analytic research enables integration of multiple outcomes and accounts for their interdependency as correlations between outcomes are rarely reported in primary studies and therefore difficult to obtain. In addition, the three-level approach allows examining outcome variance within studies (i.e., within-study heterogeneity) as well as between studies (i.e., between-study heterogeneity).

For the specific treatment contrasts, overall heterogeneity was assessed with the Q and I^2 statistics (Higgins & Thompson, 2002). I^2 is calculated as the percentage of variability due to true differences among effect sizes. We also tested whether within-study heterogeneity (i.e., various measures nested in a study) explained a significant proportion of the overall heterogeneity by comparing the full model with a reduced model, where the within-study variance was fixed as zero (Assink & Wibbelink, 2016).

We estimated power based on Jackson and Turner's (2017) recommendation using "meta-power" package in R (Griffin, 2021). Given a small effect of d of 0.10, an average group size across studies of $n = 80$ patients, and some heterogeneity of $I^2 = 20\%$, the power for meta-analytic random effects models was 0.86 for 57 effect sizes. That indicated that there was sufficient power to detect treatment differences.

The overall weighted effect size contrasting strength-based psychotherapies vs. bona fide psychotherapies based on 57 effect sizes nested in 9 trials was $g = 0.166$ (95% CIs [0.027, 0.305], $p < .01$) in favor of strength-based psychotherapies. The omnibus effect size was computed while accounting for the sample size of each study, as well as within-study dependence between outcome measures. The forest plot (Figure 2) depicts the 57 effect sizes nested in 9 studies. There was non-significant heterogeneity among the effect sizes ($Q(56) =$
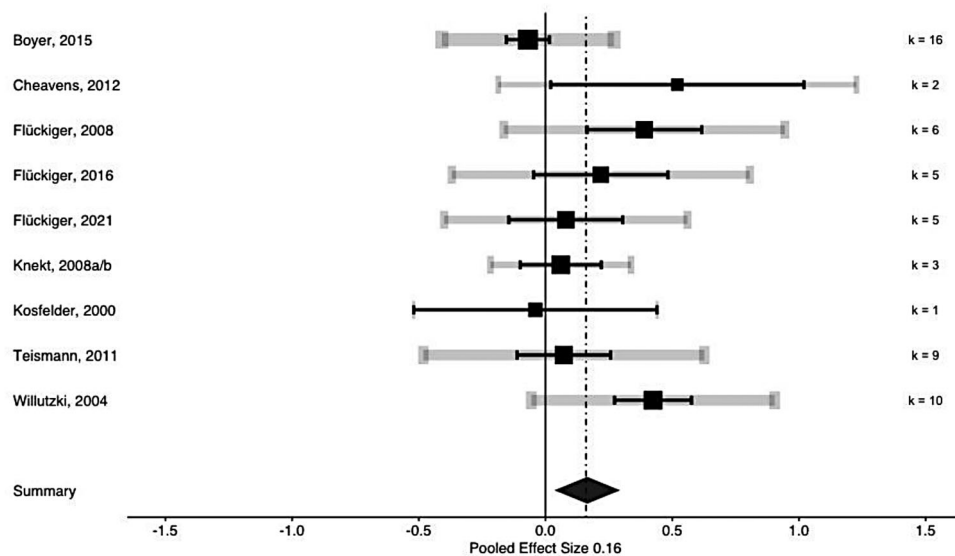
Note. Grey bars indicate variability at measurement level, black bars represent

variability at study level

Figure 2 Forest plot - Relative efficacy in favor of strength-based methods vis à vis bona fide psychotherapy ($s = 9$ studies, $k = 57$ effect sizes, 804 patients).

69.1, $p = .11$; $I^2 = 19\%$, CI [16, 22]). A small portion of heterogeneity was primarily impacted by between-study variance (sigma^2 $_{level\ 3}$ = .03), whereas within-study variance across particular outcome measures was marginal (sigma^2 $_{level\ 2}$ = .00). That is, the small heterogeneity observed in this meta-analysis was primarily based on the various study contexts and relatively independent from the particular outcome measure used within studies.

The funnel plot (Figure 3) is a diagram that plots the standard error on the Y-axis and the effect size on the X axis. Due to the relatively small proportion of within-study heterogeneity, we provided the study-level estimates for illustrative purposes ($s = 9$). In the presence of bias, the plot would show a higher concentration of studies on one side of the mean than the other. There was no indication of publication bias in our sample (asymmetry, $p > .48$; trim and fill missing studies: 0). As well, we computed how many unpublished non-significant studies it would take to reduce the overall effects size to $g = 0$. In this dataset, this failsafe value was greater than 11 additional non significant studies.

Moderators of meta-analysis. We analyzed disorder-specific outcomes as a potential moderator in the meta-analysis (1: targeted disorder-specific outcome measure, 0: general outcome). We considered that the disorder-specific measures (e.g., Beck Depression Inventory in depressed patients) might differ from overall distress measures (e.g., Symptom Check List-90, Working Ability Index). As a trend, targeted disorder-specific outcomes ($g = 0.178$ (95% CIs [0.025, 0.332], $p < .05$, $k = 28$)) revealed marginally higher effect sizes in strength-based conditions than general outcomes ($g = 0.155$

Figure 3 Funnel plot of the 9 comparative trials.

(95% CIs [0.003, 0.306], $p < .05$; $k = 29$; moderator: $F(2/55) = 2.95$, $p < .06$)).

To summarize, our meta-analysis of comparative trials indicated an additional small but significant benefit of SBM in comparison to other bona fide psychotherapies with a less systematized focus on SBM. Based on 57 effect sizes nested in 9 trials, the effect size on distal, end-of-treatment outcomes was 0.166 in favor of strength-based psychotherapies. In all these trials, SBM were used as augmentation strategies within bona fide psychotherapies. The results of the comparative trials indicate that SBMs may not be a trivial by-product of treatment progress and may provide a unique contribution to psychotherapy outcomes.

Limitations of the Research

This article is based on a systematic synthesis of the research. While we used gold-standard methods to identify any available research on SBM in psychotherapy, no systematic review or meta-analysis is truly exhaustive. To address the complexity in the comparative meta-analysis, we selected only comparative trials with treatment contrasts where the comparison groups were conducted under minimal standards of (bona fide) *psychotherapy*.

Limitations of our review of process-outcome studies include a relatively small number of studies that met our criteria of direct SBM assessments. Further, most of the reviewed process-outcome studies used correlational designs and could not rule out alternative explanations for their findings (e.g., confound of SBM with other therapist or treatment variables such as general treatment progress). There is little knowledge about the potential short-time impact of strength-based micro methods using analog experiments (see Murphy et al., 2022; Strauman et al., 2015 for exceptions). Finally, from a methodological perspective, there is a lack of qualitative process studies (see Scheel et al., 2013, for an exception).

With respect to the comparative meta-analysis, although most studies have used both disorder-specific and general outcomes, we were not able to investigate particular strength-based outcomes such as treatment satisfaction (Seligman, 1995) or individual goal attainment (Kiresuk & Sherman, 1968), as they were not collected in the studies. Furthermore, potential serious adverse effects generally were not systematically assessed (e.g., Klatte et al., 2022, for exceptions see Flückiger et al., 2016, 2021). Thus, there is a need for research on a broader range of strength-based as well as disorder-specific outcomes including long-term follow-up.
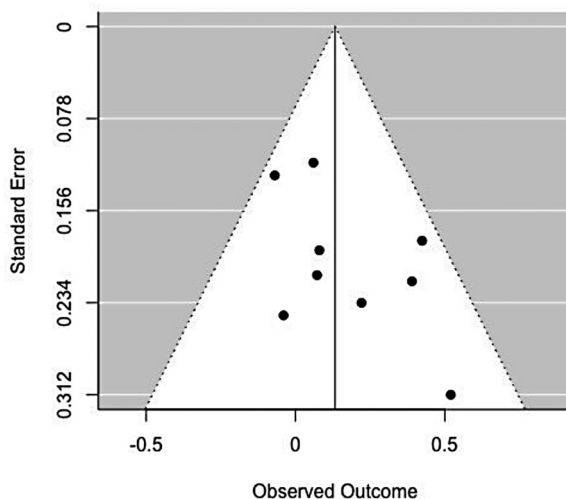
The reviewed studies primarily were conducted in Europe and there is need for comparative trials under bona fide conditions outside of Europe (see Cheavens et al., 2012, for an exception, also see Hendriks et al., 2018).

Training Implications

SBM are rarely emphasized explicitly in clinical training (Jankowski et al., 2020). One possible reason is that they are often perceived as a professional competence of developing positive attitudes toward patients, rather than specific skills that can be taught (e.g., Gelso & Woodhouse, 2003; Scheel et al., 2013). However, training programs can incorporate an explicit focus on SBM, through the use of structured assessments (e.g., ROMA-T) as well as technical skills and therapeutic strategies to promote strength building. Many psychotherapy approaches emphasize SBM, including positive psychotherapy (e.g., Conoley & Scheel, 2018; Parks & Schueller, 2014; Rashid & Seligman, 2019), strength-based cognitive–behavioral therapy (Cheavens et al., 2012; Padesky & Mooney, 2012), and resource activation (Flückiger et al., 2010; Willutzki & Teismann, 2013). Based on these models, we offer the following pantheoretical training recommendations:

- Include education regarding the risk of a bias toward negative information in clinical populations (Smith et al., 2006).
- Address in clinical training SBMs with both long-term perspectives (e.g., matching treatments to patients' preexisting capabilities and motivational readiness) and short-term perspectives (detection of strengths during sessions, applying methods that foster wellbeing and positive qualities).
- Consider discussions on the situation-specific nature of strengths, as certain qualities can be adaptive and healthy in certain situations but maladaptive in others.
- Teach strength-based (micro-)skills by means of deliberate practice and using video-based feedback.
- Train students to monitor and balance their emphasis on distress and problems with their focus on client strengths. Psychotherapeutic methods should integrate both problem-focused and strength-based perspectives.
- Encourage trainees to be responsive to patients' expressions of their own strengths, while leaving space to discuss their distress when needed.
- The principles of the strength-based approach are relevant not only for therapy, but equally for creating optimal learning conditions in training and supervision. Strength-based approaches are best exemplified in the interaction with and supervision of trainees.

Therapeutic Practices

Our systematic review of strength-based in-session studies and meta-analysis of comparative trials suggests that SBM can increase psychotherapy effects. The meta-analytic evidence presented in this article indicates that strength-based psychotherapies prove as efficacious, and sometimes slightly more efficacious, than other bona fide psychotherapies. Based on this research evidence, we recommend that practitioners:

- Consider incorporating SBM throughout the treatment phases.
- Integrate the assessment of strengths into the clinical interview and standardized assessment and discuss weaknesses and strengths explicitly with the patient.
- Integrate weaknesses and strengths in case formulation to derive a more balanced and comprehensive understanding of patients' narrative and needs.
- Be aware that the assessment of positive constructs might identify problematic aspects of functioning (e.g., low self-esteem, hope, gratitude, kindness).
- Collaborate with patients in defining and amplifying their strengths. Therapists and patients may disagree on the value or meaning of certain strengths and their role in patients' functioning. A culturally sensitive approach is crucial here.
- Consider obtaining an outside perspective from a significant other on the patients' strengths; it can sometimes provide beneficial information of which the patient is unaware.
- Use SBM to improve and broaden therapy success in terms of the WHO mental health definition (e.g., symptom reduction, wellbeing, social integration).
- Create wording or therapist slang that communicates inclusiveness and positive regard (e.g., "You just said *highlight moment*. What does this mean to you?", "This voice of your *silly old man*, does it have something wise to say or is it just silly?").
- Monitor and validate positive change across the whole psychosocial functioning during therapy.
- Identify and discuss with the patient functional aspects in behaviors that may easily dismissed as dysfunctional (by either you or the patient).

- Identify preexisting problem-solving strategies to facilitate behavioral change and use them to build new skills.
- Incorporate patient strengths into homework assignments (e.g., observation of positive moments or experiences during a week, planning enjoyment) and in fostering activities outside of the therapy room (e.g., recreation, physical movement, social support).
- Note that sometimes emphasizing strengths may be mistuned with the patient's experience. For example, a therapist who is overwhelmed by the patient's despair may try to "cheer them up" and "focus on the positive." This could cause the patient to feel invalidated and alone if their distress is not address properly.

Acknowledgement

Disclosure Statement

No potential conflict of interest was reported by the author(s).

Funding

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