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Emotion-Centered Problem-Solving Therapy: A Narrative Review

Terapia de Solução de Problemas Centrada nas Emoções: Uma Revisão Narrativa

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ABSTRACT

Introduction: Emotion-Centered Problem-Solving Therapy (EC-PST) is a cognitive-behavioral intervention that integrates emotional regulation with systematic problem-solving to foster adaptive coping and resilience. Grounded in behavioral analysis and the Social Problem-Solving framework, EC-PST addresses public and private behaviors, physiological states, and environmental contingencies, reframing psychological distress as solvable problems rather than mere symptom clusters. This narrative review synthesizes the theoretical foundations, clinical structure, and empirical evidence related to EC-PST, with emphasis on how emotion regulation, problem orientation, and structured behavioral planning are integrated into clinical practice. **Development:** EC-PST operationalizes its principles through four flexible toolkits: problem-solving planning, reducing cognitive overload, enhancing motivation, and overcoming emotional dysregulation. It promotes adaptive problem orientation and effective behavioral strategies, with interventions tailored to client needs. Empirical evidence, including systematic reviews, meta-analyses, and clinical studies on problem-solving-based interventions, suggests their usefulness across conditions such as late-life depression, post-stroke adjustment, suicidal behavior prevention, and symptoms of depression and anxiety. Despite the evidence, its use remains limited in some regions, including Brazil, highlighting the need for increased dissemination and professional training. **Conclusion:** EC-PST is a transdiagnostic approach that bridges symptom reduction with long-term functional adaptation, equipping clients with transferable skills for sustained well-being. Its integration into routine psychological care can enhance resilience and autonomy by reframing distress as a series of solvable challenges.

Descriptors: Cognitive Behavioral Therapy; Emotional Regulation; Adaptation Psychological; Mental Health; Psychotherapy; Stress Psychological.

RESUMO

Introdução: A Terapia de Solução de Problemas Centrada nas Emoções (EC-PST) é uma intervenção cognitivo-comportamental que integra regulação emocional com solução de problemas sistemática para promover enfrentamento adaptativo e resiliência. Fundamentada na análise do comportamento e no modelo de Solução de Problemas Sociais, a EC-PST aborda comportamentos públicos e privados, estados fisiológicos e contingências ambientais, reformulando o sofrimento psicológico como problemas passíveis de resolução, e não apenas como conjuntos de sintomas. Esta revisão narrativa sintetiza os fundamentos teóricos, a estrutura clínica e as evidências empíricas relacionadas à EC-PST, com ênfase em como a regulação emocional, a orientação para a resolução de problemas e o planejamento comportamental estruturado são integrados à prática clínica. **Desenvolvimento:** A EC-PST operacionaliza seus princípios por meio de quatro conjuntos de ferramentas flexíveis: planejamento da solução de problemas, redução da sobrecarga cognitiva, aumento da motivação e superação da desregulação emocional. Ela promove uma orientação adaptativa frente aos problemas e estratégias comportamentais eficazes, com intervenções ajustadas às necessidades do cliente. Evidências empíricas, incluindo revisões sistemáticas, meta-análises e estudos clínicos sobre intervenções baseadas na resolução de problemas, sugerem sua utilidade em diversas condições, como depressão na terceira idade, adaptação pós-AVC, prevenção de comportamento suicida e sintomas de depressão e ansiedade. Apesar das evidências, seu uso ainda é limitado em algumas regiões, incluindo o Brasil, o que destaca a necessidade de maior disseminação e capacitação profissional. **Conclusão:** A EC-PST é uma abordagem transdiagnóstica que conecta a redução de sintomas à adaptação funcional de longo prazo, oferecendo aos clientes habilidades transferíveis para a manutenção do bem-estar. Sua integração aos cuidados psicológicos de rotina pode fortalecer a resiliência e a autonomia ao reformular o sofrimento como uma série de desafios solucionáveis.

Descritores: Terapia Cognitivo-Comportamental; Regulação Emocional; Adaptação Psicológica; Saúde Mental; Psicoterapia; Estresse Psicológico.

INTRODUCTION

The ability to solve problems effectively is a central requirement for human adaptation and psychological well-being. From a traditional clinical perspective, psychological symptoms are often approached primarily as expressions of underlying psychopathology, with the focus on symptom reduction. While this approach is essential, it can overlook an equally important dimension: the functional skills individuals

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Abbreviations
EC-PST: Emotion-Centered Problem-Solving Therapy
PST: Problem-Solving Therapy
SPS: Social Problem-Solving
SPSI-R: Social Problem-Solving Inventory–Revised
SSTA: Stop–Slow Down–Think–Act

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require to address the day-to-day challenges that sustain or exacerbate distress. Viewing psychological difficulties through the lens of problems to be solved shifts the clinical emphasis toward identifying, teaching, and reinforcing adaptive coping strategies that can be generalized beyond the therapeutic context[1,2].

Emotion-Centered Problem-Solving Therapy (EC-PST) is a cognitive-behavioral intervention specifically designed to foster this perspective. By integrating emotional regulation skills with systematic problem-solving strategies, EC-PST reframes clinical work as the joint identification of obstacles and the development of effective, sustainable solutions[3,4]. This orientation positions the client not merely as a recipient of treatment, but as an active problem-solver capable of influencing both external circumstances and internal states. The model emphasizes the dynamic interaction between external environmental contingencies, internal physiological states, and both public (observable) and private (covert) behaviors[5]. This broader functional perspective allows therapists to address how physiological arousal, emotional responses, and cognitive processes can either hinder or facilitate problem resolution.

Originally developed from Social Problem-Solving Therapy (PST) in the 1970s[6], EC-PST incorporates contemporary findings from behavioral science, neuroscience, and clinical psychology. EC-PST is a transdiagnostic and clinically actionable approach that bridges symptom reduction with long-term functional adaptation[7–11]. Despite this, EC-PST remains underexplored in Brazil, where clinical training and publications on the approach are scarce. Although problem-solving-based interventions have accumulated empirical support across different clinical conditions, the specific clinical logic of EC-PST remains insufficiently disseminated, particularly in contexts where psychotherapy training is still organized mainly around symptom-focused or diagnosis-specific protocols. A narrative synthesis is therefore useful to clarify how behavioral principles, social problem-solving theory, emotion regulation strategies, and empirical findings can be integrated into a coherent clinical framework.

This narrative review aims to describe the theoretical foundations of EC-PST, present its clinical structure, and critically integrate empirical evidence from EC-PST and broader problem-solving-based interventions, with emphasis on their implications for clinical practice and cultural dissemination in Brazil.

METHOD

This study is a narrative review conducted to synthesize and summarize the theoretical foundations, clinical structure, and empirical evidence regarding EC-PST. Narrative reviews allow for a broad, integrative analysis of a given topic, combining findings from theoretical works, empirical studies, and applied clinical literature without the restrictive inclusion and exclusion criteria of systematic reviews[1,2]. This approach is particularly suited for emerging or underexplored topics, where literature is heterogeneous and research spans multiple designs and populations[3].

Search Strategy and Sources

The review was informed by a comprehensive, non-systematic search of scientific literature in databases including PubMed, PsycINFO, Scopus, and Web of Science. The search was conducted to identify theoretical, clinical, and empirical publications directly relevant to EC-PST, PST, social problem-solving, and emotion regulation in clinical contexts. Because the objective was integrative rather than exhaustive, studies were selected according to conceptual relevance, methodological contribution, and clinical applicability to the EC-PST framework.

Additional sources were identified through manual searches of reference lists in relevant articles and books. Keywords used in various combinations included: "Emotion-Centered Problem-Solving Therapy", "Problem-Solving Therapy", "Social Problem Solving", "emotional regulation", and "cognitive-behavioral therapy". No time restriction was applied to capture both foundational and recent publications. Publications were included when they: (a) described theoretical models of problem-solving therapy or social problem-solving; (b) presented clinical manuals, guidelines, or structured intervention protocols; (c) evaluated the efficacy, feasibility, or implementation of problem-solving-based interventions; or (d) synthesized empirical findings through systematic reviews, meta-analyses, or narrative reviews. Publications were excluded when they addressed problem-solving only as a general cognitive construct without clinical application, did not provide sufficient methodological or theoretical detail, or were unrelated to psychological intervention, mental health, or behavioral adaptation. Only literature published in English, Portuguese, or Spanish was considered, as these are the languages most relevant to the target audience of this review.

Data Extraction and Synthesis

Selected sources were reviewed in full, and relevant information was extracted concerning: (a) conceptual foundations of EC-PST, (b) its clinical structure and operational components, and (c) evidence of efficacy in different populations and formats. The synthesis followed a narrative and thematic approach. First, foundational publications were used to define the conceptual basis of EC-PST. Second, clinical manuals and applied texts were examined to describe the therapeutic structure and toolkits. Third, empirical studies, systematic reviews, and meta-analyses were analyzed to identify outcomes, target populations, delivery formats, and clinical implications. Finally, these three domains were integrated to clarify how theory, clinical procedures, and evidence converge within the EC-PST model.

Theoretical Framework

The theoretical framework of EC-PST is clinically relevant because each conceptual component corresponds to a specific therapeutic target: behavioral analysis clarifies the function of coping responses, social problem-solving theory identifies maladaptive problem orientation and problem-solving styles, and emotion regulation principles explain how physiological and affective states may facilitate or impair goal-directed action. EC-PST is grounded in the principles of cognitive-behavioral therapy and incorporates concepts from behavioral analysis, particularly the functional interaction between environmental contingencies, physiological states, and private events[1,2]. Behavior is understood to encompass both public responses—observable by others—and private responses—thoughts, feelings, and sensations accessible only to the individual3. These occur in constant interaction with external contingencies (antecedents and consequences from outside the body) and internal conditions (physiological states that can function as antecedents and consequences), both of which can influence the probability of a given behavior[4,5].

In this framework, physiology is considered part of the environment, an "internal context" capable of altering behavioral likelihood. For instance, physical discomfort or heightened physiological arousal can reduce the efficiency of problem-solving actions, whereas positive physiological states can facilitate adaptive responses[6]. This

perspective expands the traditional three-term contingency model to include dynamic bidirectional influences between private events, public behaviors, and physiological conditions[7]. Clinically, this means that EC-PST does not treat thoughts, emotions, and physiological arousal as isolated symptoms, but as functional elements that may either compete with or support effective problem-solving. Rumination, avoidance, impulsive action, and emotional suppression can therefore be analyzed as coping responses maintained by short-term relief, even when they reduce long-term access to reinforcement and problem resolution.

The EC-PST conceptualizes ineffective coping as a maladaptive allocation of behavioral resources, time, and effort spent on responses (public or private) that fail to address the external challenge, such as rumination, avoidance, or impulsive reactions[1,8]. Over time, such patterns can maintain or exacerbate emotional distress, limit access to reinforcing outcomes, and perpetuate maladjustment. Within this behavioral-functional perspective, the Social Problem-Solving (SPS) framework specifies the repertoires that EC-PST seeks to assess and modify. SPS defines real-life problems as situations that require adaptive responses to prevent or mitigate negative consequences when solutions are not immediately obvious[9].

SPS theory identifies two partially independent dimensions: problem orientation, which refers to the beliefs, appraisals, and emotional responses individuals have toward problems; and problem-solving style, which refers to the cognitive-behavioral strategies used to define problems, generate alternatives, make decisions, implement solutions, and evaluate outcomes[10,11]. Positive orientation and rational style are associated with persistence and adaptive outcomes, while negative orientation, impulsive, or avoidant styles are linked to poorer adjustment[12]. These two SPS dimensions provide a direct bridge between theory and clinical practice. Toolkit 1 primarily targets rational problem-solving style by teaching structured steps for defining problems, generating alternatives, making decisions, and monitoring outcomes. Toolkit 2 addresses cognitive overload that may disrupt these steps under stress. Toolkit 3 targets negative problem orientation, hopelessness, and reduced motivation by helping clients evaluate the consequences of action and inaction. Toolkit 4 addresses emotional and physiological dysregulation that can narrow behavioral repertoires and increase avoidance or impulsive responding.

EC-PST also draws on the diathesis–stress model to explain why similar life problems may produce different levels of distress and impairment across individuals. From this perspective, genetic vulnerabilities, early adversity, accumulated stressors, and neurobiological factors may influence emotional reactivity, cognitive flexibility, and persistence during problem-solving[13]. This model recognizes that genetic predispositions, early life stressors, and neurobiological factors can interact with current stressors to shape emotional reactivity and coping capacity. Chronic exposure to stress without effective coping strategies can lead to heightened emotional sensitivity ("stress sensitization"), increasing susceptibility to psychopathology[14–15]. This assumption has direct clinical implications: clients with higher stress sensitivity may require greater emphasis on emotional regulation, slowing down impulsive responses, reducing cognitive overload, and practicing problem-solving steps repeatedly before they can use them effectively in real-life situations.

In summary, EC-PST combines behavioral-analytic principles, problem-solving theory, and emotion regulation strategies into a transdiagnostic intervention that targets both cognitive-behavioral skills and the modulation of physiological states. In summary, EC-PST integrates behavioral analysis, SPS theory, and emotion regulation into a transdiagnostic framework in which psychological distress is conceptualized as the product of modifiable interactions among environmental demands, private events, physiological states, and coping repertoires. This framework prepares the rationale for the clinical toolkits described below and for the empirical evidence supporting problem-solving-based interventions across different populations and delivery formats.

Clinical Structure of EC-PST

EC-PST operationalizes its theoretical principles through a structured, skills-based intervention aimed at modifying both problem orientation and the behavioral strategies used to resolve real-life problems. Its clinical structure is organized around barriers that commonly interfere with adaptive coping: difficulty defining problems and planning solutions, cognitive overload under stress, low motivation or hopelessness, and emotional or physiological dysregulation. Thus, the four toolkits should not be understood as isolated techniques, but as coordinated clinical modules that target specific obstacles to effective problem-solving.

The initial assessment typically includes clinical interviews and standardized measures such as the Social Problem-Solving Inventory – Revised (SPSI-R)[3]. The SPSI-R assesses positive and negative problem orientation, as well as rational, impulsive, and avoidant problem-solving styles. This information guides treatment planning and provides baseline data for monitoring progress. In this sense, assessment is not merely descriptive; it functions as a clinical decision-making process. Difficulties in rational problem-solving may indicate the need for greater emphasis on Toolkit 1; cognitive disorganization may suggest the use of Toolkit 2; negative problem orientation and hopelessness may require Toolkit 3; and emotional dysregulation or impulsive responding may indicate the relevance of Toolkit 4. Thus, EC-PST aims to (a) promote adaptive attitudes toward problems, such as optimism, persistence, and acceptance of problems as a normal part of life, and (b) foster the systematic implementation of effective problem-solving behaviors and emotion regulation skills1,4. For that purpose, the practical application of EC-PST is organized into four Toolkits, which can be taught in sequence or introduced flexibly depending on the client's readiness and presenting difficulties[5,6].

Toolkit 1, Problem-Solving Planning, trains clients to define the problem clearly, separate facts from assumptions, set realistic goals, generate alternative solutions, evaluate potential consequences, select a feasible option, and implement and monitor the chosen plan. This systematic sequence is intended to reduce impulsive responding and increase the likelihood of selecting effective and context-sensitive solutions. Empirically, this component is consistent with findings from meta-analytic evidence showing that PST is associated with reductions in depressive symptoms among older adults with major depressive disorder. For example, Shang et al.8 included ten randomized controlled trials with 892 participants and found significantly lower depression scores after PST compared with control conditions.

Toolkit 2, Reducing Cognitive Overload, addresses the detrimental effects of excessive information processing under stress. Techniques include externalizing thoughts through writing, diagrams, or recordings; visualizing possible solutions; and breaking complex problems into smaller, manageable steps. This toolkit is particularly relevant when emotional distress is accompanied by cognitive rigidity, executive difficulties, or reduced working-memory capacity. Although the literature has not yet isolated this toolkit as an independent

mechanism of change, recent research protocols and reviews8 have emphasized the importance of examining PST in late-life depression with cognitive impairment, a population in which simplifying demands and supporting stepwise decision-making may be clinically necessary.

Toolkit 3, Enhancing Motivation and Reducing Hopelessness, uses cost–benefit analysis to help clients compare the consequences of action and inaction. This process may strengthen motivation to persist with the chosen plan, identify barriers to implementation, and modify goals when the initial plan is unrealistic or insufficiently reinforcing. This toolkit is clinically relevant because negative problem orientation, hopelessness, and passivity are frequently involved in depressive and suicidal processes. In a systematic review and meta-analysis, Darvishi et al.[10] found that higher problem-solving skills were inversely associated with suicidal ideation and suicide attempts, suggesting that strengthening problem-solving repertoires may function as one protective factor among others.

Toolkit 4, Overcoming Emotional Dysregulation, targets physiological and emotional states that interfere with effective problem-solving. The Stop–Slow Down–Think–Act (SSTA) sequence trains clients to pause, reduce arousal through strategies such as breathing or mindfulness, cognitively process the situation, and then act using the structured problem-solving steps from Toolkit 1. From a behavioral perspective, this toolkit is designed to create conditions under which adaptive responses become more probable than avoidance, rumination, or impulsive action. This clinical target is consistent with evidence linking problem-solving deficits, impulsive or avoidant styles, and suicidal behaviors. Darvishi et al.[10] reported that problem-solving skills were inversely related to suicidal ideation, suicide attempts, and suicide death, indicating that interventions targeting problem-solving and emotional regulation may be particularly relevant for high-distress populations.

Taken together, the four toolkits translate the EC-PST framework into clinical decision-making. Toolkit 1 addresses deficits in rational problem-solving style; Toolkit 2 reduces cognitive barriers that interfere with planning; Toolkit 3 targets motivational and hopelessness-related barriers; and Toolkit 4 addresses emotional and physiological dysregulation that narrows behavioral repertoires. Therefore, the clinical structure of EC-PST is consistent with the empirical literature showing that problem-solving-based interventions may be useful across depressive symptoms, suicidal behavior prevention, post-stroke adjustment, and other health-related contexts, while also clarifying which therapeutic targets should be emphasized for each client[2,4]. Table 1 summarizes the relationship between the EC-PST toolkits, their clinical targets, and the empirical rationale derived from problem-solving-based intervention research.

Therapy sessions focus on teaching these skills, modeling their use, providing feedback, and encouraging in vivo and between-session practice. Toward the end of treatment, clients are guided to anticipate future stressors and develop proactive problem-solving plans to reduce the likelihood of relapse or recurrence of maladaptive coping patterns. This emphasis on repeated practice is central because EC-PST aims not only to reduce current distress, but also to establish transferable repertoires that can be applied to future problems.

Empirical Evidence and Clinical Implications

The empirical basis for EC-PST should be interpreted within the broader literature on Problem-Solving Therapy (PST) and problem-solving-based interventions. Although EC-PST has specific emphasis on emotional and physiological regulation, its clinical structure derives from the same problem-solving tradition evaluated in multiple randomized trials, systematic reviews, and meta-analyses. Therefore, evidence from PST is relevant to EC-PST insofar as both approaches target problem orientation, structured decision-making, coping flexibility, and the reduction of maladaptive responses such as avoidance, rumination, passivity, and impulsive action.

A substantial portion of the empirical literature on PST has focused on depressive symptoms, particularly among older adults. Shang et al.8 conducted an updated systematic review and meta-analysis of randomized controlled trials evaluating PST for major depressive disorder in older adults. The review included ten studies with 892 participants and found significantly lower depression scores in the PST group compared with control conditions (SMD = −1.06; 95% CI: −1.52 to −0.61; $p < 0.05$), although heterogeneity was high ($I^2 = 88.4\%$). These findings suggest that structured problem-solving procedures may be clinically useful for depressive presentations in older populations, especially when depression is maintained by unresolved life problems, reduced behavioral activation, and ineffective coping strategies.

These findings are particularly relevant to Toolkit 1 and Toolkit 3. Toolkit 1 directly targets the rational problem-solving style by teaching clients to define problems, generate alternatives, and evaluate consequences. Toolkit 3 addresses motivational barriers, hopelessness, and passivity, which are common in depressive presentations and may interfere with the implementation of solutions.

Cognitive impairment is clinically important for EC-PST because problem-solving requires attention, working memory, cognitive flexibility, and the ability to organize sequential actions. Huang et al.[9]proposed a systematic review and meta-analysis protocol to evaluate the effectiveness and acceptability of PST for late-life depression with potential cognitive impairment. Although this publication should not be interpreted as outcome evidence, it is conceptually relevant because it identifies a population in which problem-solving procedures may require adaptation to cognitive limitations. This rationale is directly related to Toolkit 2, Reducing Cognitive Overload. When clients experience executive difficulties, cognitive rigidity, or excessive information processing under stress,

Table 1. Clinical targets and empirical rationale of the Emotion-Centered Problem-Solving Therapy toolkits.

Toolkit	Clinical target	Main barrier addressed	Empirical rationale
Toolkit 1: Problem-Solving Planning	Rational problem-solving style	Poor problem definition, impulsive decisions, ineffective planning	Meta-analytic findings indicate that PST is associated with reduced depressive symptoms in older adults with major depressive disorder.[8]
Toolkit 2: Reducing Cognitive Overload	Cognitive organization under stress	Excessive information processing, cognitive rigidity, executive difficulties	Protocols and reviews on PST in late-life depression with cognitive impairment support the clinical relevance of adapting problem-solving procedures for cognitively vulnerable populations.[9]
Toolkit 3: Enhancing Motivation and Reducing Hopelessness	Problem orientation and persistence	Hopelessness, passivity, avoidance, low motivation	Meta-analytic evidence links stronger problem-solving skills with lower suicidal ideation and suicide attempts.[10]
Toolkit 4: Overcoming Emotional Dysregulation	Physiological and emotional regulation	Arousal, impulsivity, avoidance, rumination	Evidence linking problem-solving deficits and suicidal behaviors supports the relevance of interventions that combine problem-solving with regulation of emotional responding.[10]

Abbreviations: EC-PST, Emotion-Centered Problem-Solving Therapy; PST, Problem-Solving Therapy.

externalizing information, breaking problems into smaller steps, and using visual or written aids may increase the probability that problem-solving steps will be implemented effectively.

Problem-solving skills have also been examined in relation to suicidal behaviors. Darvishi et al.[10] conducted a systematic review and meta-analysis including 29 studies and 974,542 participants. Observational findings indicated that higher problem-solving skills were inversely associated with suicidal ideation (OR = 0.64; 95% CI: 0.50–0.82), suicide attempts (OR = 0.75; 95% CI: 0.63–0.89), and suicide death (OR = 0.02; 95% CI: 0.01–0.03). In randomized clinical trials, PST was associated with reduced suicide risk (OR = 0.51; 95% CI: 0.29–0.87), although other results were not statistically significant and heterogeneity should be considered when interpreting the findings.

These results are clinically relevant to Toolkit 3 and Toolkit 4. Toolkit 3 targets negative problem orientation, hopelessness, and reduced motivation by helping clients compare the consequences of action and inaction. Toolkit 4 targets emotional and physiological dysregulation, which may narrow behavioral repertoires and increase the likelihood of impulsive or avoidant responding. From this perspective, EC-PST may be especially useful when suicidal ideation or high emotional distress is associated with perceived insolubility of problems, passivity, or rapid escape-oriented responses.

Evidence from health-related contexts further supports the clinical relevance of problem-solving-based interventions. Le et al.[3]conducted a systematic review of PST for patients after stroke, including randomized controlled trials indexed up to March 2024. The review found that PST may improve mental health, quality of life, and mortality among stroke patients, although four randomized trials did not show effects on patient functioning and the quality of evidence ranged from very low to high. These findings suggest that PST may be more consistently associated with emotional and coping-related outcomes than with functional outcomes measured in a narrow rehabilitation sense. For EC-PST, this distinction is clinically important. The intervention should not be presented only as a symptom-reduction technique, but as a method for improving coping, problem definition, decision-making, and emotional regulation in the presence of complex health-related stressors. This is consistent with the model's emphasis on teaching transferable repertoires that can be applied to recurrent or chronic problems.

The adaptability of problem-solving-based interventions has also been examined in different delivery formats. Digital, self-guided, and monitored interventions have been tested for patients with symptoms of depression or anxiety while waiting for routine psychiatric care, suggesting the feasibility of delivering problem-solving procedures beyond traditional weekly psychotherapy formats. Similarly, modified PST protocols have been evaluated among older adults in nursing homes, with findings suggesting reductions in depressive symptoms and improvements in coping and self-efficacy after the intervention[11,14,15]. These findings are relevant to the dissemination of EC-PST because they suggest that problem-solving procedures can be adapted to different service settings, professional roles, and patient needs. This is particularly important for Brazil, where structured training in EC-PST remains limited and where scalable interventions may be useful in primary care, outpatient mental health, and community-based services.

Taken together, the empirical literature supports the clinical relevance of problem-solving-based interventions, while also indicating the need for cautious interpretation. The strongest evidence concerns PST for depressive symptoms, particularly in older adults, and the association between problem-solving skills and suicidal behaviors. Evidence in post-stroke and health-related contexts suggests potential benefits for mental health and quality of life, although effects on functioning are less consistent. Within the EC-PST framework, these findings support the clinical rationale for targeting problem orientation, structured planning, cognitive overload, motivation, hopelessness, and emotional dysregulation. However, further studies are needed to evaluate EC-PST as a distinct intervention, test mechanisms of change, and examine culturally adapted protocols in Brazilian clinical settings.

CONCLUSION

The reviewed literature shows that EC-PST provides a parsimonious transdiagnostic framework that integrates problem orientation, structured action planning, and emotion/physiological regulation to promote goal-directed behavior in the context of distress. Thus, EC-PST represents a teachable and clinically actionable approach that can be integrated into routine psychological care. Future research should expand EC-PST-specific trials, culturally adapt protocols, and evaluate implementation in Brazilian health services, including primary care and outpatient mental health.

REFERENCES

1. Nezu AM, Nezu CM, D'Zurilla TJ. Problem-solving therapy: a treatment manual. New York: Springer Publishing Company; 2013.
2. D'Zurilla TJ, Nezu AM. Problem-solving therapy: A positive approach to clinical intervention. 3. ed. New York: Springer; 2007.
3. Le HT, Honma K, Annaka H, Sun S, Nomura T. Effectiveness of Problem-Solving Therapy in improving patient mental health, function, quality of life, and mortality post-stroke: a systematic review. Behav Sci. 2024;14(6):446. doi:10.3390/bs14060446
4. Nezu AM, Nezu CM. Emotion-centered problem-solving therapy. In: Dobson KS, editor. Handbook of cognitive behavioral therapy: overview and approaches. Washington: American Psychological Association; 2021. p. 465-91.
5. Meindl JN, Ivy JW. A neurobiological-behavioral approach to predicting and influencing private events. Perspect Behav Sci. 2023;46(3-4):409-429. doi:10.1007/s40614-023-00390-1
6. Skinner BF. Science and human behavior. New York: Free Press; 1953.
7. D'Zurilla TJ, Goldfried MR. Problem solving and behavior modification. J Abnorm Psychol. 1971;78(1):107-126. doi:10.1037/h0031360
8. Shang P, Cao X, You S, Feng X, Li N, Jia Y. Problem-solving therapy for major depressive disorders in older adults: an updated systematic review and meta-analysis of randomized controlled trials. Aging Clin Exp Res. 2021;33(6):1465-75. doi:10.1007/s40520-020-01672-3
9. Huang C, Fang Y, Yan F, Wang T, Cai D, Zhang Z, et al. Efficacy of problem-solving therapy in treating late-life depression with potential cognitive impairment: a systematic review and meta-analysis protocol. BMJ Open. 2024;14(10):e084130. doi:10.1136/bmjopen-2024-084130
10. Darvishi N, Farhadi M, Azmi-Naei B, Poorolajal J. The role of problem-solving skills in the prevention of suicidal behaviors: a systematic review and meta-analysis. PLoS One. 2023;18(10):e0293620. doi:10.1371/journal.pone.0293620
11. Hentati A, Forsell E, Ljótsson B, Lindefors N, Kraepelien M. A self-guided and monitored digital problem-solving intervention for patients with symptoms of depression or anxiety on the waiting list for treatment in routine psychiatric care: feasibility study. BJPsych Open. 2022;8(2):e43. doi:10.1192/bjo.2022.14
12. Beaudreau SA, Lutz J, Wetherell JL, Nezu AM, Nezu CM, O'Hara R, et al. Beyond maintaining safety: examining the benefit of emotion-centered problem solving therapy added to safety planning for reducing late life suicide risk. Contemp Clin Trials. 2023;128:107147. doi:10.1016/j.cct.2023.107147
13. Nezu CM, Palmatier AD, Nezu AM. Problem-solving therapy for caregivers. In: Chang EC, D'Zurilla TJ, Sanna LJ, editors. Social problem solving: theory, research, and training. Washington: American Psychological Association; 2004. p. 223-38. doi:10.1037/10805-013
14. Wu X, Li J, Zhang C, Zhou X, Dong X, Cao H, Duan Y, Wang S, Liu M, Zhang Q, Xie J. The effects of modified problem-solving therapy on depression, coping, and self-efficacy in elderly nursing home residents. Front Psychol. 2023;13:1030104. doi:10.3389/fpsyg.2022.1030104
15. Beaudreau SA, Karel MJ, Funderburk JS, Nezu AM, Nezu CM, Aspnes A, et al. Problem-solving training for Veterans in home based primary care: an evaluation of intervention effectiveness. Int Psychogeriatr. 2022;34(2):165-76. doi:10.1017/S104161022000397X