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Targeting Psychological Pain After a Suicide Attempt: Scoping Review and Intervention Protocol

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Abstract

Background/Objectives: Psychological pain—also termed psychache or mental pain—has been suggested to constitute a relevant factor in the emergence of suicidal behaviour. Despite conceptual advances, empirical research on interventions specifically designed to alleviate psychological pain in individuals who have attempted suicide remains scarce. The present scoping review maps existing psychological and pharmacological interventions targeting psychological pain, identifies their core components, delineates gaps for future research, and proposes a therapeutic intervention protocol. **Methods**: Literature was searched through PubMed, PsycInfo, and ClinicalTrials.gov (until October 2025) using combinations of the terms suicide, psychache, psychological pain, intervention, treatment, therapy, pharmacological treatment, and psychotherapy. Both randomised controlled trials, non-randomised controlled trials, and systematic reviews were included. **Results**: Evidence

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indicates that few interventions explicitly target psychological pain. Most suicide-specific therapies indirectly address components of psychological pain—such as unbearable affect, loss of meaning, and social disconnection. Narrative-based, emotion regulation, and acceptance-based therapies appear promising. Emerging pharmacological approaches may relieve mental pain, however, further evidence is required. **Conclusion**: Integrating psychological pain as a therapeutic focus—through narrative, tolerance-building, and relational strategies—may enhance post-attempt interventions. Future trials should systematically measure psychological pain and test its role as a mediator of suicidal outcomes.

Keywords: suicide; suicidal behaviour; psychache; psychological pain; therapeutic interventions; clinical outcomes

1. Introduction

The interest in psychological pain in mental health research and intervention is growing due to its transdiagnostic characteristics [1,2]. Psychological pain —also called "psychache", "mental pain", or "emotional pain"— is defined as an internal disturbance encompassing beliefs, thoughts, emotions, and behaviours intrinsic to the experience of suffering [3]. Key characteristics of psychological pain include unpleasant feelings, disintegration of self, permanence and unsustainability [4,5], and also subjectivity in the way this pain is felt [6]. Psychological pain is directly related to suicidology. Shneidman [6,7] conceptualised psychache as an intolerable and perturbing mental state characterised by overwhelming negative emotions—such as guilt, loneliness, and fear. From this perspective, suicide represents an attempt to cease awareness of unbearable psychological pain, a notion encapsulated in Shneidman's axiom, "without psychache, there is no suicide" [8]. This axiom subsequently influenced contemporary theoretical models, including the Three-Step Theory [9] where suicidal ideation appears when psychological pain and hopelessness are present together.

So, experiencing intolerable levels of psychological pain has been associated with increased suicide risk [10], and psychache has been identified as a risk factor for suicide in both clinical and nonclinical populations [11]. Psychache is involved in all stages of suicidology; a previous meta-analysis showed that higher levels of psychological pain are associated with higher odds of current or lifetime suicidal ideation or suicide attempt independently of depression [12]. Indeed, patients with high psychological pain at inclusion have more possibilities to have a suicidal event (suicide, suicide attempt, or hospitalisation for suicide) 1-year later [13]. Given its relevance to suicide, psychological pain has become an important clinical outcome for intervention, as well as a therapeutic target in suicide prevention [1].

From a clinical perspective, several therapeutic approaches—such as Cognitive Behavioural Therapy (CBT), Dialectical Behaviour Therapy (DBT), Acceptance and Commitment Therapy (ACT), and other interventions focused on emotional regulation and cognitive restructuring—have shown effectiveness in reducing suicidal ideation [14–16]. Notwithstanding this, the available evidence for psychological pain remains limited and fragmented, making it difficult to consolidate specific and standardised protocols for addressing psychache. In the pharmacological field, psychache is also neglected; treatment guidelines focus on the importance of optimising treatment of the psychiatric conditions known to be associated with suicide risk. It is recommended to use an enhanced medication management strategy that includes maintaining a supportive, non-judgemental therapeutic relationship; flexibility; collaboration; consideration of combining medications with evidence-based non-pharmacological strategies; and ongoing safety planning [17].

Despite this evidence and its potential utility for clinical risk detection and its role as a potential therapeutic target, routine assessment of psychological pain has not yet been integrated into standard clinical practice [18,19]. The present scoping review synthesises empirical findings on interventions —psychological and pharmacological— designed to alleviate psychological pain among individuals

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experiencing suicidality or post-attempt crises. The objectives are: (1) To review and synthesise existing evidence on psychological pain and its key dimensions; (2) To analyse the most effective intervention components for treating psychological pain; (3) To explore psychological and pharmacological approaches, highlighting their differences, strengths, and limitations; and (4) To draft a therapeutic protocol evidence-based that takes into account psychological pain.

2. Materials and Methods

A literature search was conducted using PubMed and PsycInfo databases. ClinicalTrials.gov were searched for grey literature and unpublished records. The search included English- and Spanish-language articles published until October 2025 and used combinations of the following MeSH keywords: suicide; psychache; psychological pain; mental pain; social pain; emotional pain; emotional suffering; psychic pain; intervention; treatment; therapy; pharmacological treatment; pharmacotherapy; psychotherapy (Appendix A).

Inclusion criteria were studies that addressed adult patients in psychiatric or emergency settings with suicide attempts and psychological pain. Eligible evidence included randomised controlled trials, non-randomised controlled trials, and systematic reviews. Exclusion criteria were studies with pediatric-only populations; and non-English or Spanish publications. Titles and abstracts were screened independently by two reviewers; full texts were assessed, and final inclusion decisions were reached by consensus, with disagreements adjudicated by a third reviewer. As the available literature on psychological pain and suicidal behaviour interventions is heterogeneous in terms of designs, populations and outcomes —ranging from observational studies to clinical trials— it was not possible to conduct a quantitative synthesis. Therefore, a narrative synthesis was chosen as an appropriate methodological approach to comprehensively integrate existing evidence, identify common patterns and highlight relevant knowledge gaps. There was no pre-registered protocol.

The literature was selected for inclusion based on its relevance to the following areas: conceptualisation of suicide attempts and psychological pain in different populations, clinical manifestations and correlates associated with psychological pain, diagnostic frameworks used for its assessment, available psychological and pharmacological interventions, and strategies aimed at suicide prevention and the treatment of psychological pain.

3. Results

3.1. Results of Narrative Synthesis

3.1.1. Conceptual Insights on Psychological Pain as a Bridge to Suicidal Tendencies

Several research links the conceptual background of psychological pain with suicidality. Berardelli et al. [20] demonstrated that interpersonal needs, mental pain, and hopelessness are interlinked among psychiatric inpatients with suicidal ideation, with mental pain mediating the relationship between perceived burdensomeness and suicidality. Similarly, Ballard et al. [21] found that psychological pain and hopelessness prospectively predicted suicidal thoughts, underscoring the dynamic interplay between emotional suffering and cognitive despair, as specified in the Three-Step Theory of Suicide. Adding further support to the central role of psychological pain, Campos et al. [22] showed that psychache mediated the association between the frequency of psychological symptoms and suicidal ideation, and partially mediated the relationship between symptom intensity and suicidal ideation in a community sample. Expanding on this evidence with a more detailed analytical approach, Li et al. [23] applied network analysis to unravel the dimensional links between psychological distress, meaning in life, and suicidal ideation. Their findings revealed that psychological distress was strongly related to hopelessness and sleep-related disorders, suggesting pathways through which unbearable emotional distress can escalate to suicidal ideation. Conversely, the presence of meaning in life emerged as a key protective bridge node, showing negative associations with psychological pain, hopelessness, and pessimism, and highlighting meaning-

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seeking processes as central buffers against suicide risk. Overall, these findings reinforce Shneidman's [24] formulation positioning psychache as a core mechanism in suicidality, suggesting that mental pain not only co-occurs with distress but also actively explains how general psychological suffering translates into suicidal thinking.

Regarding suicide behaviours, in depressed patients with suicide attempts, Alacreu-Crespo et al. [25], demonstrate that melancholic symptoms of depression (i.e., sadness, guilt, lack of initiative, and loss of appetite) and physical pain are the variables with greater predictive value of the psychological pain construct. Pompili et al. [26,27] in a cohort of psychiatric patients, demonstrated the link of psychological pain with suicide attempt and suicide intent, showing that patients with more severe psychiatric disorders —specially depression— are more vulnerable to suicide behaviour when psychological pain appeared. Moreover, they found that psychological pain mediates the relationship between childhood trauma and suicide attempt [26]. Finally, Calati et al. [28] using a network perspective, showed that the most proximal nodes to suicide attempts are psychological pain and acquired capability for suicide.

Especially interesting is the connection of psychological pain with cognition and brain functioning in the prediction of suicide attempt or ideation. Cáceda et al. [29] showed a connection between choice impulsivity and high psychological pain with suicide attempts and ideation. Similarly, Alacreu-Crespo et al. [30], demonstrated that people with high psychological pain who perform better decision-making are less likely to attempt suicide. Additionally, Jollant et al. [31] found that psychological pain was significantly correlated with inhibitory control, as well as with other cognitive measures such as verbal fluency and decision-making, suggesting that core cognitive impairments linked to suicide risk are closely intertwined with the experience of mental pain. Brain activity studies during social exclusion procedures point to the insula, anterior cingulate cortex [32], and the orbitofrontal cortex [33] as the brain areas linking suicidality with psychological pain. Therefore, these results suggest that the psychological pain experienced by suicidal patients has implications in areas of the brain related to emotional interpretation and pain sensations (insula and cingulate), as well as in areas involved in executive control. All of these previous studies show the implications of psychological pain on the processes involved in the transition from ideation to action.

3.2. Psychological Interventions Targeting Mental Pain

3.2.1. Third-Generation Therapies: Acceptance and Commitment Therapy (ACT) and Mindfulness-Based Cognitive Therapy (MBCT)

Ducasse et al. [34] conducted a randomised controlled trial (RCT) comparing ACT with relaxation training among patients with suicidal behaviours. ACT produced significant reductions in psychological pain (ACT β [SE] = –0.54 [0.09]; relaxation β [SE] = –0.04 [0.09]; p = .001) at post-treatment, as well as in other suicide-related outcomes. ACT's focus on experiential acceptance and values-driven behaviours appears uniquely suited to transforming the relationship patients have with their internal suffering. Subsequent studies by Ducasse et al. [35], showed that mindfulness-based gratitude diaries significantly decreased, immediately but transiently, psychological pain (t = 6.65, p < .001) and suicidal ideation (t = 4.34, p < .001) among inpatients. Moreover, Bindu & Vargas [36] developed and tested a mindfulness-based cognitive restructuring (MBCT) programme among adolescents. Using a randomised controlled design, they demonstrated that the intervention led to substantial reductions in psychological distress, hopelessness, and suicidal ideation compared to a control group (p < .001). The effect size was large, and improvements in the dimensions of emotional pain and cognitive hopelessness suggested that combining mindfulness skills with cognitive restructuring can help young people reframe distressing thoughts, tolerate internal discomfort, and foster future-oriented thinking.

3.2.2. Cognitive Behavioural Therapy for Suicide Prevention (CBT-SP)

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Bryan [37] described CBT-SP as a structured intervention incorporating skills training, cognitive restructuring, and relapse prevention. Although not designed exclusively for psychological pain, CBT-SP indirectly alleviates it through increased distress tolerance and cognitive flexibility. Case-based studies [38] suggest CBT imagery interventions targeting suicidality can reframe the emotional meaning of psychological pain, fostering greater self-efficacy.

3.2.3. Interpersonal and Relational Approaches

The PROTECT framework [39] introduced a relational-safety-based model for suicide prevention emphasising interpersonal connection and empathic communication. Chammas et al. [40] evaluated suicide prevention measures in inpatient psychiatric settings and found that strengthening relational engagement and monitoring emotional pain improved safety outcomes. These findings align with the Interpersonal Theory of Suicide [41], suggesting that targeting perceived burdensomeness and thwarted belongingness alleviates emotional pain.

3.2.4. Brief Contact and Crisis-Focused Interventions

O'Connor et al. [42] and Stanley & Brown [43] tested brief psychological-based interventions for individuals following suicide attempts. These interventions aimed to provide structured emotional support, crisis planning, and connection reinforcement. While reductions in reattempts were modest, qualitative analyses suggest that empathic contact reduces "emotional loneliness" and acute distress—core features of psychological pain. Also, crisis hotline studies [44] evidenced immediate reductions in psychological pain ($F = 181.4$, $p < .001$), suicidal ideation ($F = 130.8$, $p < .001$), and hopelessness ($F = 112.8$, $p < .001$).

3.2.5. Psychological Pain Theory–Based Cognitive Therapy

Zou et al. [45] piloted Psychological Pain Theory–Based Cognitive Therapy in patients with major depressive disorder and suicidal ideation. The intervention, delivered over eight weeks, led to reductions in psychological pain ($F = 3.36$, $p < 0.05$, $\eta p^2 = 0.20$). depression ($F = 3.71$, $p < 0.05$, $\eta p^2 = 0.21$), and suicidal ideation ($F = 5.08$, $p < 0.05$, $\eta p^2 = 0.27$). Notably, only patients receiving the intervention maintained low suicidal ideation at four-week follow-up, whereas control participants receiving usual psychological care showed a rebound in suicidal thoughts.

3.3. Ongoing and Unpublished Trials on Psychological Interventions for Suicide Prevention

Several ongoing or recently completed trials aim to investigate interventions targeting suicidal ideation, suicidal behaviours, and associated mental distress, although results are not yet published. The 'Pain Perception in Suicidal Vulnerability' study (NCT02915679) investigates physical and social pain sensitivity in depressed individuals with and without a history of suicide attempts. Using social exclusion task (Cyberball), the study aims to identify potential trait-level vulnerabilities related to suicidal behaviour. The 'ASSIP vs. ACT' trial (NCT07132099) compares the Attempted Suicide Short Intervention Program (ASSIP) with Acceptance and Commitment Therapy (ACT) and Treatment As Usual (TAU) in adults with recent suicide attempts. Primary outcomes include suicidal ideation and mental pain, measured pre- and post-intervention and at one-month follow-up, providing comparative evidence on brief psychotherapeutic approaches. Finally, the 'Group CBT for Psychological Sub-health' trial (NCT05913349) evaluates a brief, structured CBT group intervention for individuals experiencing psychological distress. The study incorporates wearable devices and mobile apps to collect behavioural and physiological data, aiming to explore mechanisms of treatment response and scalability of digital-supported interventions.

3.4. Pharmacological Approaches

Pharmacological treatments specifically targeting psychological pain remain limited. Nobile et al. [46] explored the role of opioids in social pain and suicidality, finding preliminary evidence that

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low-dose buprenorphine may attenuate affective distress by modulating the endogenous opioid system. Conejero et al. [47] noted that ketamine's rapid reduction in suicidal ideation might partially derive from its impact on psychological pain. Complementing this, Ballard et al. [48] examined clinical indicators of the suicide crisis and the response to ketamine in a cohort of high-risk individuals. Their findings showed that suicidal ideation, depression, hopelessness, and psychological pain were heightened during acute suicidal states and decreased after ketamine infusion, suggesting ketamine's potential utility in rapidly alleviating core emotional drivers of suicidal crises. Importantly, traumatic stress symptoms also improved, underscoring the multifactorial nature of acute suicidality and highlighting the value of targeting psychological pain alongside traditional mood symptoms.

3.5. Systematic Reviews and Meta-Analyses of Interventions in Psychological Pain

Courtet & Saiz [49], in 'Let's Move Towards Precision Suicidology', advocated for personalised interventions integrating psychometric, biological, and experiential markers, including measures of psychological pain, to tailor suicide prevention strategies. D'Anci et al. [50] systematically reviewed treatments for suicide prevention, reporting that cognitive-behavioural and mindfulness-based interventions showed the most consistent efficacy. Holm et al. [51] emphasised the importance of addressing emotional loneliness and psychological pain among older adults as key preventive measures. Cheng et al. [52] performed a bibliometric analysis of psychache research, noting exponential growth in studies since 2010, reflecting rising clinical recognition of mental pain as an intervention target. Moreover, Morales & Barros [53] conducted a qualitative review identifying core psychological states and traits associated with suicidal mental pain. Their findings highlight transient states such as hopelessness, loneliness, and unbearable psychological suffering, as well as relatively stable traits including alexithymia, emotional dysregulation, and interpersonal difficulties. The authors emphasise that both domains—states and traits—are clinically relevant and modifiable through psychotherapeutic intervention, underscoring the centrality of mental pain in suicide risk and the need for targeted interventions aimed at broadening emotional and behavioural coping repertoires.

3.6. Core Therapeutic Components

Based on the reviewed evidence, several core therapeutic components emerge as central to interventions aimed at reducing psychological pain within suicide prevention frameworks.

1. Emotional Regulation and Acceptance – Teaching skills to identify, understand, and manage intense emotional experiences that constitute psychological pain [54], while helping individuals develop different relationships with psychological pain through acceptance-based approaches.
2. Cognitive Restructuring – Addressing distorted thinking patterns that amplify psychological pain, including catastrophic thinking, hopelessness, and negative self-evaluation [55].
3. Social Connectedness – Restoring a sense of belonging and interpersonal security.
4. Meaning Reconstruction – Enhancing purpose and coherence amid suffering.
5. Problem-Solving Skills – Enhancing ability to generate alternative solutions to problems contributing to psychological pain and suicidal thoughts.
6. Safety Planning and Relapse Prevention – Structured tools for crisis management.

3.7. Gaps and Priorities in Research on Psychological Pain and Suicide

Research on interventions targeting psychological pain in suicidal individuals faces notable methodological challenges, including heterogeneous measurement tools, limited standardisation, and uncertainty regarding optimal timing (acute vs. post-acute). Mechanism-focused analyses — particularly pre- and post-intervention assessments of psychological pain— are essential for clarifying treatment effects, yet ethical and feasibility constraints complicate study design in high-risk populations. Implementation factors such as minimal-contact formats, follow-up procedures,

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and remote delivery may improve both safety and adherence. Group-based and digital interventions grounded in CBT or ACT appear especially promising for ensuring accessibility after discharge.

Despite strong theoretical support, few clinical interventions directly address psychological pain. Most target related symptoms or focus on behavioural prevention, and only a small number of RCTs evaluate psychological pain as an outcome or mediator. This underscores the need to systematise existing psychological strategies into dedicated, standardised protocols specifically designed to mitigate psychache in suicide prevention.

3.8. Therapeutic Proposal and Protocol

PSICOdolor: An Online Group Intervention Targeting Psychological Pain in Suicide Prevention

3.8.1. Design

The 'PSICOdolor' intervention was designed within the 'SURVIVE 2 Project', a multi-site-cohort study with nested randomised-controlled clinical trials. The main objective of the SURVIVE 2 is to expand on a previous cohort study (N = 3.600) to investigate suicidal behaviour in Spain and to test the efficacy of secondary prevention strategies. Patients belonging to the SURVIVE 2 study cohort who had made a previous suicide attempt and were experiencing psychache will be invited to participate in the RCT comparing the Online Group Intervention Targeting Psychological Pain (PSICOdolor) + TAU vs. TAU.

3.8.2. Participants

3.8.2.1. Eligibility Criteria

Inclusion criteria: 1) ≥ 18 years of age, 2) having attempted suicide within the previous 15 days, 3) presenting a significant score (≥ 31) on the psychological factor 'mental pain' assessed by the Psychache Scale [56,57], 4) digital literacy (i.e., capacity to participate in an online intervention using a desktop computer or laptop), 5) agreement to participate in the study and sign the informed consent. Exclusion criteria: 1) lifetime diagnosis of schizophrenia, schizoaffective, bipolar, or psychotic disorder.

3.8.2.2. Calculation of Sampling Power

A total of 160 individuals from the SURVIVE 2 cohort will be included. Calculations with GPower 3.1 (for α = 0.05; 1-β = 0.80; d = 0.5; difference between two independent groups) indicates that the sample should consist of 64 participants in each treatment arm, thus a total of 128 participants. A sample of 80 participants (per treatment arm) is determined, considering a drop-out rate of 25%.

3.8.2.3. Recruitment

Participants will be recruited at emergency departments of public, general, and university hospitals in Catalonia (Hospital Clínic de Barcelona; Consorci Corporació Sanitària Parc Taulí; Hospital del Mar); Madrid (Hospital Clínico San Carlos; Hospital Universitario La Paz; Fundación Jiménez Díaz; Hospital Universitario Gregorio Marañón; Universidad Complutense de Madrid); Basque Country (Hospital Universitario Araba-Santiago); and Asturias (Hospital Universitario Central de Asturias–Universidad de Oviedo).

3.8.3. Study Procedures

The participants will be assessed using a battery of clinical interviews and participant-reported outcomes at 5 time-points: baseline (V0-within 15 days of the suicide attempt), month 3 (V1-conducted remotely), month 6 (V2), month 9 (V3-conducted remotely), and month 12 (V4-last visit). In addition, participants will be assessed for the dimension of psychological pain before and after the

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intervention programme. All the assessments will be performed through an electronic, patient-reported outcomes system (MeMind).

3.8.4. Outcome Measures

The primary outcome will be subsequent suicide attempts (and/or suicide mortality) captured across 12-month follow-up. The time elapsed between the index suicide attempt and the recurrence will also be considered. The following variables will be collected: 1) sociodemographic data, 2) mental health diagnosis, 3) medical history and current treatments, 4) Psychache Scale [56,57]; 5) depressive symptoms (Patient Health Questionnaire-9; PHQ-9) [58], 6) anxiety symptoms (Generalized Anxiety Disorder Scale; GAD-7) [59], 7) Health Questionnaire (EUROQOL-5D) [60], , 8) Visual Analog Scale to measure Psychological and Physical Pain (PPP-VAS) [61,62], 9) Columbia Suicide Severity Rating Scale (C-SSRS) [63].

3.8.5. Description of the Intervention According to TIDieR [64]

The psychological intervention based on Cognitive Behavioural Therapy (CBT) and Acceptance and Commitment Therapy (ACT) consists of a total of 10 sessions: an initial individual session and nine weekly group sessions, each lasting one hour, delivered online. The content includes psychoeducation on psychological pain, depression, hopelessness, and negative internal emotional experiences; cognitive restructuring (CR) of maladaptive thoughts and unpleasant emotions; specific work on hopelessness and feelings of not belonging; adaptive coping strategies; training in emotional regulation skills; and relapse prevention [65–69].

The intervention is structured into progressive thematic modules (Table 1). The first sessions (Modules 0 and 1) introduce the treatment and explore the concept of psychological pain. Modules 2 to 4 then focus on emotional awareness, emotional self-regulation, self-esteem and communication skills. Modules 5 and 6 address awareness of thoughts, with special attention to cognitive biases, and learning more adaptive alternative thoughts. Subsequently, Modules 7 and 8 delve deeper into mental health awareness, coping, and crisis resolution. Finally, Module 9 is dedicated to relapse prevention and reflection on achievements. Throughout the programme participants work on detecting warning signs, developing a safety plan, and promoting the therapeutic alliance, as well as being assigned homework tasks before and after each session. Intervention strategies and resources are administered by trained psychologists.

Table 1. Structure of the intervention for psychological pain in suicide prevention.

No.	Component	Themes	Content
0	Individual session	Introduction to treatment. Concept of psychological pain (I)	Presentation of treatment rationale and programme overview. Group rules. Calendar. Explanation of online platform. Establishment of Safety Plan. **Homework:** review Safety Plan, bring doubts/corrections next session.
1	Group session	Introduction to treatment. Concept of psychological pain (II)	Participant introductions. Homework review. Psychoeducation: nature of emotions. Definition of psychological pain. Emotional regulation: diaphragmatic breathing. **Homework:** practice diaphragmatic breathing.
2	Group session	Awareness of feelings. Emotional regulation (I)	Homework review. Concept and importance of emotional regulation. Emotional regulation skills: changing body chemistry to reduce intense emotions. Relaxation strategies. **Homework:** practice Progressive Muscle Relaxation.

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3	Group session	Awareness of feelings. Emotional regulation (II)	Homework review. Psychological pain and disconnection from self, future, and world. Emotional regulation skills: awareness and anchoring in the present. Mindfulness exercises. **Homework:** practice Mindfulness and emotional awareness.
4	Group session	Awareness of feelings. Self-esteem and communication strategies	Homework review. Psychoeducation on self-concept and self-esteem. Psychoeducation on communication styles. Training in assertive communication. **Homework:** practice assertive communication.
5	Group session	Awareness of thoughts (I). Alternative thoughts	Homework review. Introduction to ABC model. Cognitive restructuring of maladaptive thoughts. **Homework:** thought record.
6	Group session	Awareness of thoughts (II). Cognitive biases	Homework review. Identification of cognitive biases. Cognitive flexibility training. Questioning validity and usefulness of thoughts. Generating adaptive alternatives. **Homework:** identify distortions and practice cognitive strategies.
7	Group session	Awareness of mental health (I)	Homework review. Psychoeducation on mental health in the context of unpleasant emotional experiences and distress (depression, hopelessness, and thwarted belongingness) [70]. Behavioural activation. **Homework:** design behavioural activation plan.
8	Group session	Awareness of mental health (II)	Homework review. Crisis management and resolution. Problem-solving training. **Homework:** practice problem-solving and emotional regulation plan.
9	Group session	Recognising achievements and looking to the future. Relapse prevention	Homework review. Recapitulation of skills. Evaluation of progress. Discussion of benefits. Anticipating difficulties. Final closure and encouragement to continue practice.
Transversal elements: recognition of warning signs and development of Safety Plan; promotion of therapeutic alliance; structured homework tasks before and after each session.			

3.8.6. Control Condition

Therapy as usual (TAU) is an heterogeneous combination of strategies which includes visits to specialised mental health services or pharmacotherapy. Routine procedures applied at each participating centre are considered TAU, including non-specific interventions for suicide prevention. All participants receive TAU regardless of their assignment to the specific intervention.

3.8.7. Ethics

The study is conducted in accordance with the Declaration of Helsinki, and the protocol has been reviewed and approved by ethical committees (ECs) at each participating site with respect to compliance with applicable research and human subjects' regulations. Consent will be obtained independently for participation in the cohort study and optional procedures (i.e., RCTs).

3.8.8. Dissemination Plans

Study results will be written for publication following completion of study data collection and data analyses.

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3.8.9. Protocol Version

V1.0 Dated 10 December 2025.

4. Discussion

The present scoping review underscores psychological pain as a central yet underutilised construct in suicide prevention, consistently identified across theoretical and empirical literature as a proximal mechanism driving suicidal ideation. Although this scoping review integrates diverse psychological, pharmacological, and theoretical evidence to inform a structured, manualised intervention, limitations include heterogeneity across studies, the absence of formal risk-of-bias assessment, and preliminary pharmacological findings requiring replication. Existing interventions—such as CBT, ACT, MBCT, brief contact approaches, and interpersonal therapies—may reduce psychological pain indirectly through improvements in emotion regulation, cognitive flexibility, and relational connectedness, but few treatments target psychache explicitly. The evidence reviewed suggests the need for interventions that move beyond symptom-oriented or behavioural strategies by addressing the specific mechanisms underlying psychological pain, including overwhelming affective distress, maladaptive cognitions (e.g., perceived burdensomeness), experiential avoidance, and disconnection from self, others, and meaning. In response to these gaps, the 'PSICOdolor' protocol integrates CBT and ACT principles in an online group format specifically designed to reduce psychological pain following a suicide attempt, combining emotional regulation, cognitive restructuring, interpersonal and meaning-oriented strategies, and safety planning.

While psychological interventions work primarily through cognitive, emotional, and relational mechanisms—fostering tolerance, coherence, and connectedness, pharmacological interventions may provide symptomatic relief of affective pain, enabling engagement in psychotherapy. The evidence suggests that the future may lie in integrative models, combining fast-acting agents (e.g., ketamine, buprenorphine) with structured psychotherapeutic work on meaning and tolerability. Future research should systematically examine psychological pain as an outcome and mediator in clinical trials, compare interventions explicitly focused on psychache with broader symptom-based approaches, and clarify optimal intervention timing, especially in digital or remote formats that may enhance post-discharge continuity of care. The proposed intervention protocol, while theory-driven and evidence-informed, awaits empirical validation through the nested RCT. Overall, targeting psychological pain directly may strengthen suicide prevention efforts, enhancing recovery trajectories and reducing relapse risk following a suicide attempt.

5. Conclusions

Psychological pain represents a core mechanism underlying suicidal behaviour and a clinically meaningful target for intervention, yet it remains under-assessed and insufficiently addressed in routine care. The present scoping review identifies key therapeutic components capable of reducing psychological pain and synthesises them into a structured, online psychological-based group intervention tailored for individuals after a suicide attempt. The 'PSICOdolor' protocol responds to critical gaps by directly targeting psychache within a multi-site RCT design. Integrating psychological pain into standard assessment and treatment frameworks may enhance the precision and effectiveness of suicide prevention strategies. Future research validating this protocol will be crucial for advancing psychological pain–focused interventions as a central pillar of post-attempt care.

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M.L.B, M.T.B.B., M.A.B., M.D.M., M.E., A.G.C., A.G.P., I.G., L.J.T.., A.P.T., A.P.P., N.R., P.A.S., E.S.S., A.T.L., The SURVIVE Consortium, A.A., A.I.C. and V.P.S.; supervision, A.A. and A.I.C.; project administration, A.I.C.; funding acquisition, A.I.C. All authors have read and agreed to the published version of the manuscript.

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Informed Consent Statement: Informed consent will be obtained from all subjects involved in the study. Written informed consent will be obtained from the patient(s) to publish this paper.

Data Availability Statement: Publicly archived datasets that were analysed or generated during the study will be included.

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Abbreviations

The following abbreviations are used in this manuscript:

CBT	Cognitive Behavioural Therapy
DBT	Dialectical Behaviour Therapy
ACT	Acceptance and Commitment Therapy
MBCT	Mindfulness-Based Cognitive Therapy
RCT	Randomised controlled trial
CBT-SP	Cognitive Behavioural Therapy for Suicide Prevention
ASSIP	Attempted Suicide Short Intervention Program
TAU	Treatment As Usual
CR	Cognitive Restructuring
PHQ-9	Patient Health Questionnaire-9
GAD-7	Generalized Anxiety Disorder Scale
EUROQOL-5D	Health Questionnaire
PPP-VAS	Visual Analog Scale to measure Psychological and Physical Pain
C-SSRS	Columbia Suicide Severity Rating Scale

Appendix A

Search Strategy

PubMed

(suicide[MeSH Terms]) AND (psychache [Title/Abstract] OR "psychological pain"[Title/Abstract] OR "mental pain"[Title/Abstract] OR "social pain"[Title/Abstract] OR "emotional pain"[Title/Abstract] OR "emotional suffering"[Title/Abstract] OR "psychic pain"[Title/Abstract]) AND (intervention[Title/Abstract] OR treatment[Title/Abstract] OR therapy[Title/Abstract] OR "pharmacological treatment"[Title/Abstract] OR pharmacotherapy[Title/Abstract] OR psychotherapy[MeSH Terms])

Filters: Full text, English, Spanish

PsycInfo

(tiab(suicide)) AND (tiab(psychache) OR tiab("psychological pain") OR tiab("mental pain") OR tiab("social pain") OR tiab("emotional pain") OR tiab("emotional suffering") OR tiab("psychic pain"))

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AND (tiab(intervention) OR tiab(treatment) OR tiab(therapy) OR tiab("pharmacological treatment") OR tiab(pharmacotherapy) OR tiab(psychotherapy))

Filters: Document type > Journal. Language > English, Spanish.

Clinicaltrial.gov

(suicide) AND (psychache OR "psychological pain" OR "mental pain" OR "social pain" OR "emotional pain" OR "emotional suffering" OR "psychic pain") AND (intervention OR treatment OR therapy OR "pharmacological treatment" OR pharmacotherapy OR psychotherapy)

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