



A Systematic Review on Intervention for Managing Embitterment

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Abstract

Embitterment and its clinical counterpart, Posttraumatic Embitterment Disorder (PTED) are important psychological reactions to perceived injustice, humiliation and moral injury that has not been sufficiently met by the conventional treatments of trauma or mood disorders. This is a systematic literature review of the intervention based quantitative and qualitative studies on embitterment. The number of empirical studies was 13 based on the randomized controlled trials, quasi-experimental designs, and longitudinal interventions. The results have shown that wisdom-based cognitive behavioral therapy, mindfulness-based interventions, expressive writing therapy, acceptance and commitment therapy (ACT), dialectical behavior therapy (DBT), logotherapy, narrative therapy, and digital mental fitness programs have a significant effect in reducing levels of embitterment and enhancing emotional regulation and coping skills. In general, the results are consistent with the effectiveness therapeutic interventions that combine cognitive restructuring, meaning making, acceptance, and emotional regulation.

Keywords: Embitterment, Wisdom-Based Therapy, Logotherapy, Expressive Writing Therapy, Narrative Therapy

Introduction

Embitterment is an emotional attitude that develops with a lasting sense of having been exposed to an unjust, humiliating, or moral violation. It's not an enraged or irritable episode, but rather an ongoing mental condition characterized by feelings of irritation, bitterness, persistence of ruminations, and occasionally, revenge fantasies. This, of course, would heavily impair cognitive function, interpersonal relations, and life satisfaction. Though it's preceded by unpleasant life experiences, even with well-adjusted people, it could turn into a recurring condition if they're unable to address it on a cognitive or emotional level (Linden and Rotter, 2018). Embitterment (especially chronic and pathological form, referred to as Posttraumatic Embitterment Disorder (PTED)) is becoming a widely recognized psychological response to feelings of injustice, humiliation, betrayal, and betrayal of trust, independent of trauma and adjustment disorders (Linden and Arnold, 2021; De Sousa, 2020). According to epidemiological studies, a substantial number of the general population is moderate to high embittered after stressful life events, and their responses are linked to compromised daily functioning, poorer well-being, and distress, which explains the necessity of the new intervention (Linden et al., 2023). The fundamental treatment issue with embitterment is its cognitive-emotional characteristics constant rumination about perceived injustice, helplessness, and the inability to cease negative self-referential beliefs, that is less

responsive to traditional therapies without specific adjustments (De Sousa, 2020; Yoo et al., 2021).

The strongest, officially recognized type of embitterment is Posttraumatic Embitterment Disorder, or PTED. PTED is seen as an issue related to stress, an approach condition, which appears as a direct consequence of a specific traumatic unpleasant life event, such as something deemed grossly unjust, for example, something viewed as extremely humiliating. PTED is characterized by bitterness, feelings of injustice, specific memories of the event, difficulties controlling one's emotions, and significant interference of functioning, persisting for at least three months (Linden, 2023). Crucially, there is also the fact that embitterment is a spectrum from normal emotional responses to pathological states, and it is not reducible to existing concepts of PTSD, depression, or the anxiety disorders. This points to the need for distinct concepts and management strategies for embitterment per se (Linden & Rotter, 2018). Embitterment occurs in a continuum of serious psychological consequences, including intrusive thoughts, irritability, anger outbursts, mood swings, social withdrawal, and a predisposition to aggressive thoughts. When chronic, embitterment can impact one's performance at work, in relationships, and in general coping abilities, reducing one's immunity to states of depression, anxiety, and decisions that are not in one's best interests. Unfortunately, embitterment in clinical settings is commonly overlooked, and this can lead to misinterpretation or treatment strategies that do not fully resolve the issue (Javaid, 2025, Khan et al., 2025). Conceptually, embitterment is the result of impaired modes of reasoning in relation to justice, fairness, and control. When life circumstances challenge the fundamental assumptions that an individual holds regarding justice, predictability, or self-esteem, it is easy to feel a profound sense of hopelessness, anger, and rumination that prevents emotional healing (Linden, 2021). Such patterns of emotional experiences indicate that embitterment is best conceptualized as a cognitive-affective syndrome, wherein perceptions of injustice, threats to core beliefs, and constant ruminative thinking are powerful determinants (Linden & Rotter, 2018; Linden et al., 2007). Studies have traditionally described the phenomenon of embitterment by PTED, emphasizing the distinguishing nature of this condition in comparison to trauma and mood disorders. Several treatment approaches have been proposed and examined, such as wisdom therapy, Cognitive Therapy, and meaning-oriented approaches such as logotherapy, and expressive writing therapy (Linden, 2008; Linden et al., 2011; Duşunceli and Koç, 2020; Javaid and Mahmood, 2023a). Each has one characteristic in common, inasmuch as they all aim to change fixed, focus-for-injustice thoughts, induce acceptance, re- instill meaning, and increase emotion regulation, rather than merely addressing trauma. Although the early findings appear promising, the greatest weakness for the majority of the studies is their small sample size, pilot nature, or shorter follow-up periods. This has led to a number of questions being raised regarding the longevity of the efficacy of such programs and their applications (Linden et al., 2011). However, despite the increasing acknowledgment of the importance of embitterment as a significant phenomenon, there is still a significant gap in the systematic review of intervention studies. This is because intervention studies on this topic are highly diverse in terms of the nature of the intervention, the preferred form of therapy, and the outcome measures. Furthermore, embitterment research is limited in low- and middle-income countries, including Pakistan (Javaid and Mahmood, 2023b). The socioeconomic challenges of political instability, unemployment, social injustice, and natural disasters make people more susceptible to bitterness. Cultural issues - collectivist attitudes, strong family ties, and the stigma of mental health treatment - may contribute to embitterment while at the same time discouraging treatment-seeking behavior. Even in the face of such a risk profile, there is a lack of locally developed intervention concepts and research, which is an important gap in our knowledge.

Rationale for Study

If the bitterness persists, appearing in the form of Posttraumatic Embitterment Disorder, this can impact a person's mental health conditions because this situation becomes a significant psychological issue requiring proper attention and support because it relates to depression, anxiety, withdrawal, poor coping skills, and impaired judgment. However, what we have, and which looks promising, is cognitive behavior therapy and wisdom therapy, but there are not enough trials and participants for it to definitely work. As for treatment, we, the practitioners, are lacking good, definite evidence in order for us to effectively treat this suffering (Linden et al., 2011; Linden, 2008). Socioeconomic forces, political instability, rising levels of inequality, unemployment, and natural disasters in Pakistan contribute to growing issues pertaining to mental health (WHO, 2021). Individuals can become bitter in the aftermath of traumatic incidents, loss of employment, social inequalities stemming from corruption and biases, and homeland conflict. Adding to this problem, the presence of close family bonds and collectivist traditions coupled with the cultural taboo on psychological well-being might increase bitterness and deter others from help-seeking (Naeem et al. 2012). Notwithstanding the presence of these risk factors for embitterment, surprisingly little research exists on mitigating techniques for dealing with this condition.

Objectives

- To Explore the therapeutic methods applied for treating embitterment.
- To Observe the strength of evidence regarding the effectiveness of these interventions.
- To Observe how the various therapies address the key components of embitterment.

Method

Study design

Qualitative research design employed in this research and method is Systematic Literature Review (SLR) to identify, interpret, and integrate the available empirical literature on embitterment and specifically in relation to preventive and therapeutic strategies. By employing a systematic literature review method, researchers can have an organized and methodical way of searching the literature to find relevant studies and minimize bias while searching or selecting studies. Systematic literature reviews help in creating a macro-level understanding of what is already known in the literature and where there is a gap in the literature.

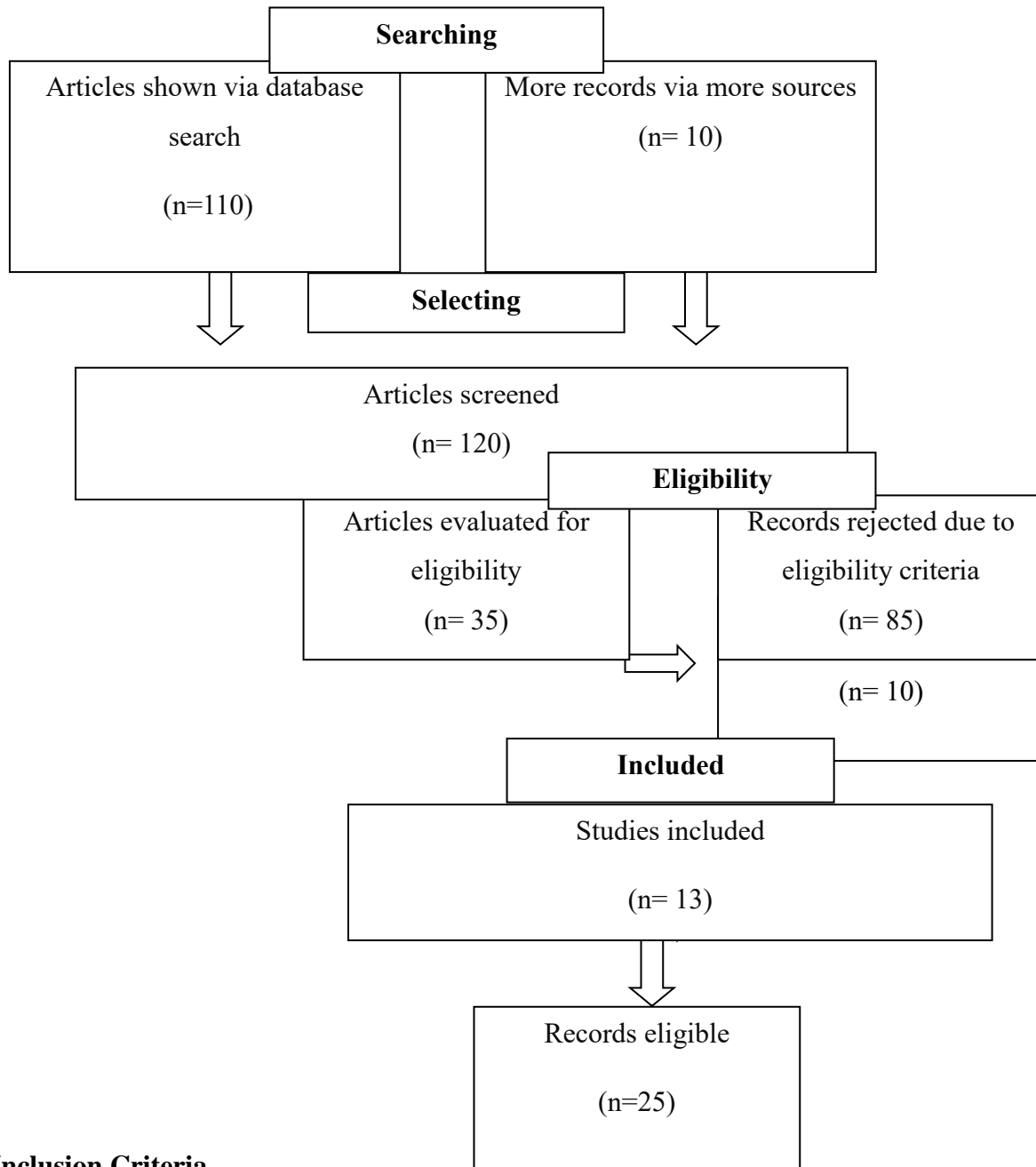
Databases Searched

In our quest to identify peer-reviewed literature on embitterment and its management, we conducted an in-depth scan of all available electronic databases. The databases we scanned include Google Scholar, Scopus, Psych INFO, PUBMED, and other relevant repositories, which index a multitude of literature on psychology, psychiatry, and health.

Search Strategy

We created a systematic search strategy through the combination of keywords and the Boolean search system to ensure that all relevant studies were identified. The keywords were entered in different combinations through the use of the AND and OR operators. The keywords consisted of embitterment, posttraumatic embitterment disorder (PTED), chronic bitterness, injustice-related stress, wisdom therapy, cognitive behavioral therapy and embitterment, meaning-centered therapy and embitterment, logotherapy and embitterment, and lastly, expressive writing and embitterment. We also screened the reference lists for relevant studies in the identified articles.

Figure 1: PRISMA Flowchart



Inclusion Criteria

The papers included in this review were those which fulfilled these criteria:

- Studies Included quantitative, experimental and Pilot trial
- Embitterment it was a primary or major focus.
- Examined treatment, management, or prevention of embitterment.
- Papers Published in English.

Exclusion Criteria

Those studies that were excluded from the review were based on the following criteria:

- Theoretical papers, editorials, commentaries, or reviews without original data.
- Single case reports that did not provide sufficient methodological detail.
- Dissertations, abstracts for conferences, or unpublished works.
- Articles not published in English.

Findings

Studies Characteristics Included Studies

The studies that were included in the study consisted of 15 intervention-based research studies on embitterment, Posttraumatic Embitterment Disorder (PTED), rumination, emotional control, anger, and other psychological constructs. The majority of the studies utilized quantitative designs, such as randomized controlled trial (RCT), quasi-experimental designs, pilot clinical trials, and longitudinal intervention studies (Linden et al., 2011; Linden and Baumann, 2017; Dusunceli and Koç, 2020; Javaid and Mahmood, 2023; Shi et al., 2025). The studies had been carried out geographically in very different cultural areas such as Germany, Turkey, Pakistan, South Korea, China, Iran, Singapore, Israel, Sweden, and the United States, which implies the increasing popularity of the interventions to address embitterment and emotional dysregulation (Linden et al., 2011; Yoo et al., 2021; Puah et al., 2024).

Interventions and Therapeutic Approaches

Several studies focused on interventions specifically targeting PTED and embitterment, which have shown significant improvements in symptom reduction and emotional regulation. CBT Based on Wisdom Psychology carried out a randomized controlled trial (RCT) on 34 PTED patients using Wisdom-CBT, which was evaluated using the PTED Scale (Linden, 2009) and SCL-90. The results indicated a significant reduction in embitterment and psychopathology; hence, this approach that includes cognitive restructuring, perspective-taking, and hedonic flexibility seems to be an efficient treatment for PTED (Linden et al., 2011). Wisdom Psychotherapy In a controlled clinical trial conducted by Linden & Baumann (2017) among 60 patients with PTED, positive results were found in emotional regulation and reduced bitterness, as measured by the PTED Scale and the WHO-5 well-being index. Perspective-taking, acceptance, and building empathetic understanding were emphasized in this form of therapy, considering the cognitive-emotional integration role in the reduction of embitterment. Dusunceli and Koç (2020) implemented a Logotherapy-Oriented Group Counseling meaning-centered group therapy for 45 patients with PTSD. Using the PTED Scale and Meaning in Life Questionnaire (Steger et al., 2006), the study found significant improvement in the reduction of PTED symptoms and improvement in coping strategies, which proved the efficacy of meaning-centered therapy in traumatized individuals with PTED (Dusunceli & Koç, 2020). Expressive Writing Therapy a structured expressive writing therapy was implemented to 60 university students. Using the PTED Scale and Emotional Regulation Questionnaire (Gross & John, 2003), significant reduction of PTED symptoms and improvement in emotional regulation were found, which proved that Expressive Writing Therapy helps traumatized individuals cope with perceived injustice cognitively (Javaid & Mahmood, 2023). Mindfulness-Based Cognitive Therapy a study on mindfulness-based techniques among 52 adults with high embitterment. With the PTED Scale and Rumination Scale (Nolen-Hoeksema, 1991), results indicated embitterment and rumination reduction, underscoring the importance of mindfulness in increasing acceptance and attention control of negative thoughts (Yoo et al., 2021). Narrative therapy to rebuild the meaning in 45 survivors of trauma. Outcomes were evaluated using the PTED Scale and PTSD Checklist, indicating that the level of bitterness and emotional distress got lower, and narrative approaches are helpful to restore the feeling of justice and meaning after the trauma (Currier et al., 2019).

ACT (Acceptance & Commitment therapy) Hoesh and Brown (2023) recently held a pilot trial of 38 patients. With the help of the PTED Scale and Emotional Regulation Scale, the results showed better acceptance and less bitterness which prove that psychological flexibility is a decisive process in minimizing entrenched resentment (Hoesh & Brown, 2023). Wisdom-Based Group Psychotherapy: Linden et al. (2025) conducted group psychotherapy

with 70 patients with PTED. With the use of the updated PTED Scale (2022 version), the participants showed marked symptom reduction over control, thus supporting the importance of empathy and perspective-taking as core mechanisms of therapy (Linden et al., 2025).

Studies included interventions targeting rumination, impulsivity, and emotional regulation, which are often comorbid with embitterment or anger. Dialectical Behavior Therapy (DBT) was conducted with 36 participants with trichotillomania. Utilizing the Rumination Scale (Nolen-Hoeksema, 1991), Emotion Regulation Scale (Williams et al., 1997), and Barratt Impulsivity Scale (Barratt, 1990), the study demonstrated marked impulsivity, rumination, and self-criticism reduction, thus supporting DBT's ability to improve emotion regulation skills (Karimi Imam Vardikhan et al., 2022). Mindfulness Training carried out an RCT with 196 university participants using the MAAS (Brown & Ryan, 2003), RRS (Nolen-Hoeksema, 1991), and DASS-21. Mindfulness interventions resulted in a significant decrease in rumination and negative emotions, which was sustained at 3-month follow-up, indicating both immediate and long-term effects of mindfulness training (Shi et al., 2025). Other studies were dedicated to anger, aggression and cognitive reactivity, interventions with CBT or ACT strategies. ACT also resulted in less aggressive behaviors than controls using the Aggression Questionnaire (Buss and Perry, 1992) which offers evidence on the use of ACT in behavioral control and emotional flexibility. Online CBT of Problematic Anger Larsson et al. (2025) used online CBT interventions with adults with anger issues that relied on the STAXI (Spielberger et al., 1988). The results indicated considerable anger and cognitive reactivity decrease and proved the possibility and efficacy of remote CBT-based interventions on anger management (Larsson et al., 2025).

Quantitative Outcomes

The numerical results of all the studies indicated a significant decrease in embitterment, rumination, and anger along with emotional distress after intervention. Compared to control or standard CBT conditions, wisdom-based CBT and wisdom psychotherapy yielded big reductions in the PTED symptoms and general psychopathology (Linden et al., 2011; Linden and Baumann, 2017). Other statistically significant improvements in the embitterment and emotional regulation scores were also observed with the help of logotherapy-oriented group counseling and expressive writing interventions (Dusunceli and Koç, 2020; Javaid and Mahmood, 2023). Mindfulness-based and ACT-based interventions also showed a decrease in rumination, resentment, and negative affect, some of them showing that gains are maintained at follow-up (Yoo et al., 2021; Horesh and Brown, 2023; Shi et al., 2025). All in all, the intervention efficacy was moderate to strong in core symptoms reduction of embitterment and emotional dysregulation.

Behavioral Outcomes

Other than facilitation of symptom reduction, interventions were linked with significant behavioral shifts, such as enhancement of coping behaviour, greater psychological flexibility, and decreased maladaptive behaviours, including impulsivity and aggression. Participants of ACT and DBT interventions were more capable of emotion regulation, avoidance, and their ability to withstand distress in interpersonal circumstances (Karimi Imam Vardikhan et al., 2022; Zarling et al., 2000s). Narrative and logotherapy-based treatments were associated with more positive meaning-making and adaptive responses to stressful life events that result in a better social functioning and less withdrawal (Currier et al., 2019; Dusunceli and Koç, 2020). These behavioral effects indicate that therapeutic benefits were extended to daily functions and interpersonal adaptation other than being confined to internal affective conditions.

Observational Findings

The qualitative and observational data also showed significant changes in cognitive and emotional responses of participants to injustice and trauma. People had reported greater sense of emotional awareness, less preoccupation with perceived injustices and more perspective taking and forgiveness after wisdom-grounded and mindfulness-based therapies (Linden et al., 2012; Yoo et al., 2021). It was found that such methods as expressive writing and narrative interventions could encourage emotional disclosure and consistent life narratives in order to make participants re-explain the negative experiences in more adaptive and less embittered forms (Javaid et al., 2023; Currier et al., 2019). Taken as a whole, these observational results confirm the quantitative results, as they show the modifications in subjective experience, insight, and emotional meaning-making processes as the foundation of long-term recovery of embitterment.

Table 1: Characteristics of Included Studies

Title	Authors & Year	Country	Population & sample	Research design	Measures/Scales	Targeted Construct	Intervention used	Therapy or technique	Findings
Wisdom Based Group Psychotherapy for PTED	Linden et al., 2025	Germany	70 PTED patients	Quantitative	PTED Scale (Linden, 2029),	Chronic embitterment	Wisdom based Group Psychotherapy	Empathy, perspective taking acceptance	Significant symptom reduction compared to control
Efficacy of Expressive Writing in Reducing Embitterment	Javaid & Mahmood, 2023	Pakistan	60 University Students	Experimental/ Quantitative	Embitterment Scale for Students (Javaid & Mahmood, 2023), Negative Life event Scale (Buri, 2018)	To Examine the Efficacy of Expressive Writing in Reducing Embitterment	Expressive Writing Therapy	Structured writing to process emotions	Significantly reduced embitterment.
Logotherapy Oriented Group Counseling on PTED	Dusunceli & Koc,2020	Turkey	22 University Students	Experimental	PTED Scale (Linden, 2009),	Examine the effect of Logotherapy Oriented Group Counseling on PTED	Logotherapy-Informed Group Counseling	Finding meaning, responsibility, and acceptance	Logotherapy-Informed Group Counseling has effect on reducing PTED.
Treatment of PTED with CBT Based on Wisdom Psychology on Hedonia Strategies	Linden et al., 2011	Germany	82 PTED Patients	Experimental study	The Symptom Checklist 90 revised (Derogatis, 1992).	Embitterment, rumination, psychopathology	CBT with Wisdom Therapy	Strategies of hedonia, flexibility, and perspective-taking.	There were fewer symptoms of PTED, anger, and rumination.

Wisdom Psychotherapy In PTED	Linden & Baumann, 2017	Germany	60 PTED Patients	Quantitative	PTED Scale (Linden, 2029), Who -5	Emotional regulation, embitterment	Wisdom Psychotherapy	Perspective taking, acceptance, empathy training	Improved emotional regulation and reduced bitterness
Treatment of PTED with CBT Based on Wisdom Psychology (Pilot)	Linden et al., 2012	Germany	27 Patients	(Pilot Clinical trial) Experimental study	PTED Scale (Linden, 2029), Rumination response scale (Hoeksema & Morrow, 1991)	rumination, anger, resentment	CBT with Wisdom Therapy	Strategies of hedonia, flexibility, and perspective-taking.	There were fewer symptoms of PTED, anger, and rumination.
Mindfulness based Techniques for rumination & Cognitive reappraisal	Yoo et al., 2021	South Korea	52 Adults with high embitterment	Experimental/ Quantitative	PTED Scale (Linden, 2029), Rumination scale (Hoeksema & Morrow, 1991)	Rumination, embitterment	Mindfulness Based Cognitive Therapy	Mindfulness & acceptances	Reduced rumination and embitterment
Narrative Therapy for Trauma Related Embitterment	Currier et al., 2019	USA	45 Trauma survivors	Quasi experimental / Quantitative	PTED Scale (Linden, 2029), PTSD Checklist	Trauma related bitterness	Narrative Therapy	Meaning reconstruction	Decreased bitterness and emotional distress
ACT Entrenched Resentment in PTED	Horesh & Brown 2023	Israel	38 PTED Patients	Pilot trial/ Quantitative	PTED Scale (Linden, 2029), Emotional Regulation Scale	Entrenched resentment, embitterment	ACT	Psychological flexibility	Improved acceptance and reduced bitterness
DBT for Impulsivity emotion regulation, rumination & self-criticism	Karimi Imam Vardikhan et al., 2024	Iran	36 Individuals with Trchotillomania	Quasi experimental/ Quantitative	Rumination Scale (Nolen Hoeksema, 1991), Emotion Regulation Scale (Williams et	Emotion, regulation, rumination, embitterment, impulsivity	DBT	Dialectical Behavior therapy	Significant reduction in impulsivity, improved emotion regulation,

					al.), Barratt Impulsivity Scale (Barratt, 1990)				decreased rumination &
Mindfulness Training to Reduce Rumination & Negative Emotions	Shi et al., 2025	China	196 University Students	Quantitative	MAAS (Brown & Ryan, 2003), RRS (Nolen Hoeksema, 1991), DASS-21	Rumination negative emotions	Mindfulness Training	Mindfulness group	Significant reductions in rumination and negative emotions, effects maintained at 3 month follow up
App Based Positive Quality Program (PQ)	Puah et al., 2024	Singapore	1 st year healthcare students	Longitudinal /Quantitative	Rumination, self-compassion scales	Rumination, stress, self-compassion	App based Positive Quality Program	Digital mental fitness program	Decreased perceived stress and rumination, increased self, compassion over 6 weeks

Discussion

The current systematic review sought to explore the therapeutic approaches employed in the treatment of embitterment, evaluate the level of evidence that supports these therapeutic approaches, and investigate how various therapies address the fundamental elements of embitterment. The results of the systematic review have shown that embitterment and its clinical expression, Posttraumatic Embitterment Disorder (PTED), can be effectively addressed by structured psychotherapeutic interventions that specifically target cognitive restructuring, emotional management, and meaning-making processes. In the various studies that were reviewed, it was found that therapeutic approaches such as Wisdom-Based Cognitive Behavioral Therapy (CBT), mindfulness-based therapies, Acceptance and Commitment Therapy (ACT), logotherapy, narrative therapy, and expressive writing have shown a consistent reduction in embitterment, rumination, and psychological distress (Linden et al., 2011; Dusunceli & Koç, 2020; Javaid & Mahmood, 2023; Yoo et al., 2021; Shi et al., 2025).

Among all interventions, wisdom-based CBT and wisdom psychotherapy were found to be the most empirically supported interventions. These interventions focus on perspective-taking, empathy, acceptance, and cognitive flexibility, which directly challenge the rigid beliefs of injustice and rumination that are typical of embitterment (Linden et al., 2011; Linden & Baumann, 2017; Linden et al., 2025). Participants in the wisdom-based CBT group demonstrated significantly greater improvements in PTED symptoms and general psychopathology than those in the standard CBT group, indicating that the incorporation of wisdom principles can improve the efficacy of therapy. This result is consistent with theoretical conceptualizations that embitterment is a consequence of impaired beliefs about fairness and control, which demand higher-order cognitive restructuring rather than symptom-targeting interventions (Linden & Rotter, 2018). Therefore, wisdom-based interventions appear to be most effective in dealing with the moral and existential aspects of embitterment. Cognitive behavior therapy (CBT) modified with wisdom psychology interventions is the most empirically endorsed form of intervention to use in PTED, which seeks to instill perspective-taking, self-distancing, tolerance of emotional distress, empathy with the other, a contextual interpretation of life events, and a meaning long-term orientation. In a pilot randomized controlled trial, PTED patients receiving wisdom-oriented CBT had significant decreases in overall psychopathology and were rated by therapists and patients to improve more than those without any additional hedonia (pleasure-focused) strategies (Linden et al., 2011; Linden et al., 2010). This is a conceptual approach to the concept of wisdom as a factor of resiliency that allows individuals to adaptively confront unsolvable and severe life issues and abandon the tendency of rigid attributions of injustice, thereby eliminating intellectual essence of embitterment (Linden et al., 2011; Linden and Baumann, 2010). More recent randomized trial on wisdom psychotherapy demonstrated that group-based interventions can boost wisdom skills, including emotional regulation, perspective shifting, acceptance, and fashions have reductions in embitterment and depressive symptoms, which implies that wisdom-based interventions can be effective supplements to conventional psychotherapy (Linden et al., 2025).

Meaning-centered therapies like logotherapy and narrative therapy showed significant therapeutic value in helping people re-interpret the meaning of unjust and humiliating experiences in life. Logotherapy-based group counseling helped alleviate symptoms of PTED and improve coping by promoting responsibility, meaning, and value-oriented living (Dusunceli & Koç, 2020). Narrative therapy also helped alleviate emotional suffering by allowing participants to re-author their trauma stories in a less bitter and more coherent fashion (Currier et al., 2019). Interventions in expressive writing were also beneficial in the

processing of emotions as participants were able to write about their experiences, hence enhancing emotional processing and reducing bitterness (Javaid & Mahmood, 2023). The findings suggest that not only is embitterment maintained by negative emotions but also by unresolved meaning conflicts, and therapies that involve reinterpretation and integration of life experiences are highly effective.

Mindfulness-based interventions and ACT have been found to reduce rumination, resentment, and negative emotions like the ones mentioned above through increased non-judgmental awareness and psychological flexibility (Yoo et al., 2021; Horesh & Brown, 2023; Shi et al., 2025). These interventions may be helpful in disengaging from the thoughts of injustice and reducing emotional reactions. Dialectical Behavior Therapy (DBT) has also been found to be effective in improving emotional regulation and impulsivity and self-criticism, as these are also linked to embitterment and anger-related disorders (Karimi Imam Vardikhan et al., 2022). The long-term effects of mindfulness-based interventions suggest that these interventions may be effective in changing coping styles rather than providing relief from the symptoms. Taken together, these findings emphasize the need to address emotion regulation and attentional control mechanisms in the treatment of embitterment. Trauma-focused therapies like Narrative Exposure Therapy (NET) and EMDR have also not been directly tested in embitterment populations, but are theorized to be relevant since they assist the patient in processing unresolved intrusive memories and depersonalizing emotions which are mechanisms that are overlapping with persistent embitterment reactions; they have solid evidence in treating PTSD and so may be useful adjunct or ingredients in interventions that target embitterment linked to traumatic injustice (Horesh & Brown, 2020; EMDR evidence reviews). As well, there is a literature on coping and rumination that proposes that maladaptive cognitive processes (e.g., the rumination on perceived injustice) can be overcome by means of cognitive restructuring to mediate decreases in embitterment and allow a feasible symptom reduction (Yoo et al., 2021). Greater psychotherapeutic aspects, such as therapeutic relationship, empathy, affirmation of the victimization, and gradual cognitive restructuring, also play a role in the treatment of embitterment, as highly embittered individuals are often uncooperative and may distrust the therapists due to their experience of perceived injustice (De Sousa, 2020). Forgiveness-based therapeutic strategies have been suggested by some researchers as potentially useful in embitterment since forgiveness procedures can help alleviate resentment and facilitate emotional depletion, although systematic empirical analysis in PTED samples has not been conducted and can be an area of future research (forgiveness therapy literature). Mindfulness and acceptance-based therapies are also recommended in order to minimize the ruminative thinking styles as well as encourage emotional control, which may indirectly help embittered people (mindfulness mechanisms theory).

Collectively, the above-referenced studies indicate that embitterment needs to be treated with multimodal and integrative therapeutic approaches. Although the strength of evidence for embitterment interventions is average due to the limitations in sample sizes and study durations, the consistency in positive findings for all interventions points to their potential for practical applications. The results are in line with the need to acknowledge embitterment as a distinct psychological construct that needs to be addressed through distinct interventions rather than those related to PTSD or depression paradigms (Linden & Rotter, 2018). The underrepresentation of low- and middle-income countries in the above-referenced studies also points to an important research gap in the context of Pakistan, as social injustice and trauma are rampant in the country. Future studies need to be designed to target large samples for the

development of standard interventions and to improve the empirical support for embitterment interventions.

Conclusion

From the systematic review of evidence presented above, it is clear that embitterment and PTED can be reduced effectively with the help of psychotherapy interventions. Wisdom-based CBT, mindfulness-based interventions, expressive writing therapy, ACT, DBT, logotherapy, and narrative therapy interventions have shown positive outcomes in the reduction of embitterment and PTED. Although the present evidence is promising, it is also clear that there is a need to bridge the cultural gap and improve the methodology of the interventions for the treatment of embitterment and PTED. The present evidence clearly indicates that there is a need for the development of interventions for the treatment of embitterment that can improve the psychological well-being and functional recovery of embittered persons.

Limitations

Although the results were positive, some limitations were noted from the studies reviewed. Firstly, most studies were based on small sample sizes, pilot studies, and short-term interventions. This may limit the generalization of the results. There was a lot of variability in intervention studies, outcome measures, and participants. Most studies were conducted in developed countries, whereas there was a lack of representation from developing countries like Pakistan, which are more prone to socioeconomic and political stress. There was a limitation in studies based on self-reporting, which may lead to biases. Lastly, there was a lack of standardized diagnostic criteria for embitterment disorders and PTED.

Future Recommendations

Future research needs to be aimed at conducting large-scale randomized controlled studies with representative samples to build the evidence base for embitterment interventions. Longitudinal studies also need to be conducted to assess the long-term maintenance of interventions. There is an urgent need to develop culturally tailored interventions, especially in low- and middle-income countries, as embitterment may be influenced by social injustice, unemployment, and group traumas. Comparing the effectiveness of wisdom-based CBT, mindfulness-based interventions, and meaning-based interventions may provide evidence for their comparative effectiveness. Qualitative research studies on the subjective experience of embitterment may also provide valuable information in the development of interventions to meet the needs.

Implications of study

The implications of the study's findings have significant ramifications for psychological research, mental health policy, and practice. In addition to the therapeutic approaches used to treat depression or PTSD, it is recommended that mental health care providers consider embitterment as a cognitive-affective syndrome. To treat injustice-related distress, integrative approaches like wisdom psychology, mindfulness, and meaning-centered therapy can be incorporated into regular therapy sessions. Recommendations for mental health policy based on the review include the implementation of embitterment therapy in community mental health services, especially in socially unstable regions. This study can contribute to the conceptualization of embitterment and the standardization of therapeutic procedures for psychological research.

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