

Comparison of the Effectiveness of Cognitive Behavioral Therapy and Intensive Solution-Focused Therapy on Resilience in Adolescents with Nonsuicidal Self-Injury

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ABSTRACT

Objective: This study aimed to compare the effectiveness of cognitive behavioral therapy (CBT) and intensive solution-focused therapy (ISFT) in improving resilience among adolescents engaging in nonsuicidal self-injury (NSSI).

Methods and Materials: This applied experimental study employed a pretest–posttest design with a three-month follow-up. The statistical population consisted of female students aged 12–18 years with a history of nonsuicidal self-injury who were referred to school counselors in Neyshabur, Iran, in 2024. Participants were recruited through convenience sampling and randomly assigned to either the CBT or ISFT group. The final sample comprised 44 adolescents, with 22 participants in each intervention group. Resilience was assessed using the Adolescent Resilience Scale developed by Oshio et al. (2002). The CBT intervention consisted of eight 90-minute sessions, whereas the intensive solution-focused intervention consisted of six 90-minute sessions, implemented over six to eight weeks. Data were collected at pretest, posttest, and three-month follow-up and analyzed using repeated-measures analysis of variance.

Findings: Repeated-measures analysis of variance revealed a significant main effect of time on resilience ($p < .001$), indicating significant changes in resilience scores across the pretest, posttest, and follow-up assessments. However, neither the main effect of group nor the time $\times$ group interaction was statistically significant, demonstrating that the pattern of change in resilience did not differ significantly between the CBT and ISFT groups. Both interventions significantly increased resilience from pretest to posttest; however, the improvements were not fully maintained at the three-month follow-up ($p < .05$). Furthermore, no significant difference was found between CBT and ISFT in their overall effectiveness in enhancing resilience.

Conclusion: Both cognitive behavioral therapy and intensive solution-focused therapy appear effective in improving resilience among adolescents with nonsuicidal self-injury, with neither intervention demonstrating superior effectiveness. Nevertheless, the attenuation of treatment gains at follow-up suggests that booster sessions or maintenance-oriented interventions may be necessary to sustain improvements over time.

Keywords: Resilience; Cognitive Behavioral Therapy; Intensive Solution-Focused Therapy; Nonsuicidal Self-Injury; Adolescents

1. Introduction

Nonsuicidal self-injury (NSSI) is an important mental health concern during adolescence and is characterized by the deliberate and direct destruction of one's own body tissue without an explicit intention to die. Although NSSI is conceptually differentiated from suicidal behavior by the absence of suicidal intent, it is clinically significant because it frequently occurs in the context of considerable emotional distress, interpersonal difficulties, depressive symptoms, and other psychological problems (Brown & Plener, 2017; Hooley et al., 2020). Adolescence is a particularly vulnerable developmental period for the emergence of self-injurious behavior because rapid biological, cognitive, emotional, and social changes may increase sensitivity to stress while adaptive emotion-regulation and coping capacities are still developing. NSSI may consequently function as a maladaptive strategy for reducing overwhelming negative affect, expressing distress, managing interpersonal conflict, or regaining a temporary sense of control in situations perceived as intolerable (Plener et al., 2018). The clinical importance of this phenomenon is reinforced by evidence that self-injury is not uncommon among children and adolescents internationally, with substantial prevalence estimates reported across different populations and methodological contexts (Lim et al., 2019). Accordingly, identifying psychological factors that can protect adolescents from persistent self-injurious patterns and developing interventions capable of strengthening those protective resources constitute important priorities for prevention and treatment.

The distinction between nonsuicidal and suicidal self-injury should not lead to an underestimation of the risks associated with NSSI. Although adolescents engaging in NSSI do not necessarily intend to end their lives during the act itself, self-injurious thoughts and behaviors are meaningfully associated with suicidal thoughts and subsequent suicidal behaviors (Robinson et al., 2021). Research examining heterogeneous groups of adolescent self-injurers has further demonstrated clinically important differences among individuals without suicidal ideation, those experiencing suicidal ideation, and those with a history of suicide attempts, underscoring the importance of careful risk assessment when working with this population (Stewart et al., 2017). Thus, NSSI may be understood not simply as an isolated behavioral symptom but as an indicator of broader difficulties in psychological adaptation, emotional regulation, coping, and interpersonal functioning. These

considerations are especially relevant when NSSI co-occurs with depressive symptoms, because persistent negative affect, diminished hope, self-critical thinking, and impaired problem-solving can reduce an adolescent's capacity to respond adaptively to developmental and environmental stressors.

The psychosocial environments in which adolescents develop may also contribute to NSSI. Peer relationships and school experiences are particularly salient during adolescence, and exposure to bullying, rejection, victimization, or social exclusion can intensify emotional distress and contribute to maladaptive coping responses. Evidence indicates that adolescent NSSI is associated with school bullying and peer rejection, suggesting that interpersonal adversity within the school environment may constitute an important contextual risk factor (Esposito et al., 2019). Similarly, cyberbullying victimization has been associated with nonsuicidal self-injurious behavior among adolescents, while school engagement and individual characteristics may influence the strength of this association (Yu et al., 2020). These findings indicate that adolescent self-injury cannot be adequately explained by a single intrapersonal mechanism. Rather, NSSI emerges through complex interactions among emotional vulnerabilities, cognitive processes, social stressors, interpersonal relationships, and the availability of adaptive coping resources.

Emotion regulation represents one particularly relevant mechanism in understanding psychological difficulties associated with self-injury. Difficulties in recognizing, tolerating, and modifying intense emotional states may increase adolescents' reliance on immediate but maladaptive strategies for reducing distress. Research has shown meaningful relationships among attachment-related processes, regulation of sadness and anger, depressive symptoms, anxiety, and aggression, reinforcing the broader role of emotion-regulation capacities in psychological adjustment (Clear et al., 2020). In this context, interventions for adolescents with NSSI should extend beyond merely suppressing self-injurious acts and instead strengthen the psychological capacities required to manage stress, regulate emotion, solve problems, maintain hope, and respond adaptively to adverse circumstances. This perspective directs attention toward resilience as a potentially important therapeutic target.

Psychological resilience generally refers to the capacity to maintain, regain, or develop adaptive functioning when confronted with stress, adversity, trauma, or significant

psychological challenge. Rather than representing a fixed and immutable personality trait, contemporary perspectives increasingly conceptualize resilience as a dynamic and multidimensional process involving personal, relational, and environmental resources (Sisto et al., 2019). Among young people with complex mental health needs, resilience encompasses capacities that enable individuals to navigate difficulties, sustain meaningful functioning, draw upon supportive relationships, and recover after setbacks (Thompson et al., 2019). This dynamic understanding is especially relevant to adolescents with NSSI because their developmental environment continually changes, while their emotional, cognitive, and interpersonal resources remain amenable to modification through psychological intervention. Strengthening resilience may therefore help adolescents respond to distress in ways that reduce dependence on maladaptive coping behaviors and increase their ability to tolerate and manage future stressors.

Resilience may also be relevant to the broader relationship between psychological distress and self-harm-related outcomes. Positive mental health can buffer the impact of stressful life experiences on suicidal ideation, indicating that protective psychological resources may alter the manner in which adversity is translated into self-destructive thoughts or behaviors (Brailovskaia et al., 2020). Similarly, research examining depressive symptoms, loneliness, suicidal ideation, and resilience suggests that resilience can operate as an important psychological resource within pathways linking distress to suicide-related outcomes (Yang et al., 2021). Although suicidal behavior and NSSI are distinct phenomena, their clinical overlap makes these findings relevant to the study of adolescents who self-injure. An adolescent who possesses stronger emotional regulation, greater confidence in coping, more flexible problem-solving abilities, and a more positive orientation toward the future may be better equipped to manage intense distress without resorting to self-injury. Consequently, resilience is not merely a desirable general characteristic but a clinically meaningful intervention target for young people with NSSI.

The assessment of resilience must also be developmentally and culturally appropriate. The Adolescent Resilience Questionnaire and related adolescent resilience measures have been adapted for use in different cultural contexts, including Iran. The Persian adaptation and validation work conducted among Iranian adolescents provided evidence supporting the psychometric suitability of resilience assessment within this population (Cheraghi et al.,

2017). Such culturally validated measurement is particularly important because resilience is influenced not only by individual characteristics but also by family relationships, cultural expectations, social support systems, and environmental opportunities. In Iranian adolescents presenting with psychological distress and self-injurious behavior, examining treatment-related changes in resilience can therefore provide clinically relevant information about whether psychotherapy strengthens the capacities necessary for adaptive functioning beyond the immediate reduction of symptoms.

Among psychological treatments available for adolescents experiencing emotional and behavioral difficulties, cognitive behavioral therapy (CBT) is one of the most extensively applied approaches. CBT is based on the premise that emotional distress and maladaptive behavior are maintained partly through dysfunctional patterns of thinking, behavioral avoidance, ineffective coping, and unhelpful beliefs. Treatment consequently targets the identification and modification of maladaptive cognitions while simultaneously strengthening behavioral activation, problem-solving, coping skills, and more adaptive responses to distress. These mechanisms are particularly relevant to adolescents with NSSI and depressive symptoms, who may experience persistent negative thoughts, hopeless interpretations, reduced activity, diminished perceived control, and difficulty generating alternatives to self-harming behavior. Evidence indicates that CBT-based interventions can improve resilience among high-school students, suggesting that cognitive restructuring and behavioral skill development may strengthen adolescents' capacity to respond adaptively to stressful circumstances (Firoozmokhtar et al., 2024).

CBT also provides a structured therapeutic framework through which adolescents can learn to identify triggers for emotional distress, recognize relationships among thoughts, feelings, and behaviors, question dysfunctional interpretations, and develop alternative behavioral responses. These characteristics make CBT relevant to the treatment of young people experiencing self-injurious thoughts and behaviors. Nevertheless, the literature on interventions for adolescent self-harm indicates that treatment outcomes are heterogeneous and that no single psychosocial approach can be assumed to be universally effective across young people with different psychological and contextual profiles. Reviews of psychosocial treatments for self-injurious thoughts and behaviors in youth have emphasized both the availability of promising therapeutic

approaches and the continuing need for rigorous comparative evaluation (Glenn et al., 2019). Similarly, systematic review and meta-analytic evidence concerning therapeutic interventions for adolescent self-harm has demonstrated that psychological treatment can be beneficial while highlighting substantial variation across interventions and studies (Ougrin et al., 2015). These findings support the need to investigate not only whether an intervention works, but also whether alternative, briefer therapeutic models can produce comparable benefits on protective psychological outcomes such as resilience.

Solution-focused brief therapy (SFBT) represents one such alternative. In contrast to therapeutic approaches that devote extensive attention to the causes and historical development of problems, solution-focused practice emphasizes desired outcomes, existing strengths, exceptions to problem patterns, previous successes, personal resources, and small achievable steps toward change. The approach assumes that clients possess capacities and experiences that can be mobilized to construct solutions, even when significant psychological difficulties are present. Strengths-based and solution-focused principles encourage therapists to direct attention toward what is already working, how improvement can be recognized, and what specific actions may move the client toward a preferred future (Franklin, 2015). Process research has further shown that SFBT is characterized by distinctive conversational and therapeutic practices designed to elicit goals, resources, exceptions, and client-generated pathways toward improvement (Franklin et al., 2017). These characteristics may be especially relevant for adolescents, for whom lengthy problem-oriented exploration may be less engaging than concrete, collaborative, future-focused therapeutic work.

An important conceptual link exists between solution-focused practice and resilience. Resilience theory emphasizes adaptive capacities, accessible resources, strengths, successful coping experiences, and the ability to recover from adversity, while solution-focused therapy deliberately directs therapeutic attention toward many of these same elements. Bolton and colleagues argued that resilience theory provides a meaningful framework for understanding solution-focused practice because both perspectives emphasize strengths, competencies, possibilities, and adaptive functioning rather than defining individuals primarily through deficits and pathology (Bolton et al., 2017). By helping adolescents identify occasions on which they successfully managed distress, recognize personal strengths, clarify desired futures, and take small

steps toward personally meaningful goals, solution-focused therapy may increase perceived competence and reinforce resilient responding.

The emotional processes involved in solution-focused work may also be therapeutically important. Solution-focused conversations are intended not only to identify practical solutions but also to facilitate shifts toward hope, positive emotion, self-efficacy, and perceived possibility. Kim and Franklin emphasized the role of positive emotional change in SFBT and described how solution-focused interactions may facilitate movement away from problem-saturated emotional states toward more adaptive emotional experiences (Kim & Franklin, 2015). Consistent with this perspective, solution-focused interventions have been used to strengthen hope and subjective well-being among individuals exposed to trauma, suggesting that the approach can foster positive psychological resources even in populations experiencing significant adversity (Joubert & Guse, 2022). Such mechanisms are highly pertinent to adolescents with self-injury, because diminished hope, perceived helplessness, and difficulty envisioning alternatives to current distress may undermine adaptive coping.

Empirical findings provide further support for solution-focused interventions in younger populations. Solution-focused group counseling has been shown to improve resilience, demonstrating that a relatively brief intervention centered on strengths, goals, and solutions can influence adaptive psychological capacities (Sağar, 2022). Solution-focused approaches have also demonstrated beneficial effects on anger management and violent behavior among adolescents, indicating their potential applicability to behavioral and emotional dysregulation in this developmental period (Akbaş & Yiğitoğlu, 2022). Earlier research likewise reported beneficial effects of solution-focused brief therapy on aggression in children and adolescents (Bakhshipour & Ramezanzadeh, 2016). Although aggression and NSSI represent distinct behavioral outcomes, both may emerge in the context of difficulties managing intense affect, perceived interpersonal stress, limited coping repertoires, and problems translating emotional experiences into adaptive action. These findings therefore provide a rationale for examining whether solution-focused therapeutic processes may also strengthen resilience in adolescents who direct harmful behavior toward themselves.

Comparative studies are particularly valuable because they can clarify whether different therapeutic models

produce similar outcomes despite relying on different mechanisms and treatment structures. Research comparing CBT and solution-focused approaches has suggested that both may produce meaningful psychological benefits across different populations and presenting problems. In children with anxiety disorders, a randomized controlled trial comparing brief guided parent-delivered CBT with solution-focused brief therapy provided evidence that both structured approaches can be evaluated within the same clinical framework (Creswell et al., 2017). More recent comparative research has examined CBT and solution-focused therapy in other psychological and relational contexts, further illustrating the continuing clinical interest in determining the relative value of these approaches (Olusola et al., 2024). Comparative work involving solution-focused brief therapy and CBT has also been extended to psychological functioning in trainee nurses, indicating that these interventions may offer alternative pathways toward improved adaptation and mental health (Banibensu, 2025). Although such populations differ considerably from adolescents with NSSI, the comparative logic is relevant: therapeutic approaches may achieve similar outcomes through distinct cognitive, behavioral, motivational, and strengths-oriented mechanisms.

Recent developments also illustrate the conceptual distinction between CBT and solution-focused models across emerging intervention formats. Comparative evaluation of GROW, solution-focused, and CBT-based coaching systems has highlighted differences in how these approaches support autonomy, learning, reflection, and change processes (Terblanche et al., 2026). Such work reinforces the broader point that CBT and solution-focused interventions should not simply be regarded as interchangeable techniques. CBT typically emphasizes systematic recognition and restructuring of dysfunctional cognition alongside behavioral change, whereas solution-focused practice concentrates on strengths, exceptions, preferred futures, and rapid construction of actionable solutions. These theoretical differences make direct comparison clinically informative, particularly when the outcome under investigation is resilience, a construct that may plausibly respond both to improved cognitive-behavioral coping and to strengths-based mobilization of adaptive resources.

For adolescents with NSSI, treatment efficiency is also clinically relevant. Young people referred through school counseling settings may face barriers to sustained engagement, including stigma, family constraints, academic

demands, fluctuating motivation, and limited access to specialist mental health services. A shorter and more intensive solution-focused protocol could therefore have practical value if it produces outcomes comparable to a longer established intervention such as CBT. At the same time, the absence of a difference between approaches cannot be assumed in advance, because the mechanisms through which the two therapies influence resilience differ. CBT may increase resilience by modifying dysfunctional thoughts, improving behavioral activation, strengthening problem-solving, and providing structured coping strategies, whereas solution-focused therapy may operate primarily through recognition of strengths, identification of exceptions, enhancement of hope, construction of attainable goals, and increased perceptions of competence and agency. Determining whether one approach produces greater improvement, whether both are similarly effective, and whether gains remain stable after treatment therefore has direct implications for intervention planning.

Despite growing research on NSSI, resilience, CBT, and solution-focused interventions, a meaningful gap remains in directly comparing these two treatment approaches with respect to resilience among adolescents engaging in nonsuicidal self-injury. Existing literature has established the clinical importance and complexity of adolescent NSSI (Brown & Plener, 2017; Hooley et al., 2020), documented psychosocial treatment effects for self-harm-related outcomes (Glenn et al., 2019; Ougrin et al., 2015), supported resilience as an important dimension of adaptive psychological functioning (Sisto et al., 2019; Thompson et al., 2019), and provided evidence that both CBT and solution-focused approaches can improve relevant psychological outcomes (Firoozmokhtar et al., 2024; Sağar, 2022). However, considerably less is known about their comparative effectiveness in strengthening resilience specifically among adolescents with NSSI and depressive symptoms, particularly within an Iranian school-based clinical context and across both immediate post-intervention and follow-up assessments. Addressing this gap may help clinicians and school mental health professionals select interventions that are not only effective but also feasible, developmentally appropriate, and capable of enhancing psychological resources that adolescents can draw upon when confronting future stressors.

Therefore, the present study aimed to compare the effectiveness of cognitive behavioral therapy and intensive solution-focused therapy on resilience in adolescents with nonsuicidal self-injury.

2. Methods and Materials

2.1. Study Design and Participants

This applied study employed an experimental, two-arm, pretest–posttest design with a three-month follow-up to compare the effectiveness of cognitive behavioral therapy (CBT) and intensive solution-focused therapy (ISFT) on resilience among adolescents with nonsuicidal self-injury (NSSI). Given the clinical vulnerability of the target population, particularly the presence of NSSI accompanied by depressive symptoms and the potential risk of suicidal ideation or clinical deterioration, the study was deliberately designed without a no-treatment control group. Withholding psychological treatment from adolescents experiencing clinically significant depressive symptoms and self-injurious behavior was considered ethically inappropriate because it could potentially compromise their psychological well-being and safety. Therefore, CBT, which is an established and widely used psychological intervention for depressive symptoms and related emotional and behavioral difficulties, was selected as an active comparison condition against which the effectiveness of intensive solution-focused therapy could be evaluated. Accordingly, the comparative effectiveness of the two therapeutic approaches was examined across three assessment points: pretest, posttest, and three-month follow-up. Following confirmation of eligibility, participants were randomly allocated to one of the two active intervention groups.

The statistical population consisted of all female students aged 12 to 18 years who exhibited nonsuicidal self-injurious behaviors and had been referred to school counselors in Neyshabur, Iran, during 2024. Participants were initially recruited using convenience sampling from adolescents referred to school counseling services because of self-injurious behavior. Following administrative coordination with the Neyshabur Department of Education, two schools were randomly selected from eligible schools in the city. Psychological and counseling records were reviewed to identify students with a history of NSSI, after which potentially eligible adolescents underwent further screening according to the study inclusion and exclusion criteria. The Patient Health Questionnaire-9 (PHQ-9) was administered to assess depressive symptoms, and adolescents showing moderate or severe depressive symptoms were considered for participation. In addition to questionnaire-based screening, a clinical interview was conducted by a psychologist to further evaluate depressive symptoms and determine participants' clinical suitability for the study. A

total of 44 eligible adolescents were included and randomly assigned to either the CBT group or the ISFT group, with 22 participants in each condition.

The required sample size was estimated using G*Power version 3.1.9.2. The calculation was conducted based on an analysis of covariance framework using the fixed-effects, main-effects, and interactions option. Assuming an effect size of 0.50, a significance level of .05, statistical power of .95, and three covariates, the required total sample size was estimated to be 44 participants. Accordingly, 22 adolescents were allocated to each therapeutic condition. The inclusion criteria were being between 12 and 18 years of age, having a history of nonsuicidal self-injury, presenting to school counseling services, and demonstrating moderate or severe depressive symptoms following psychological screening and clinical assessment. The exclusion criteria included current suicidal ideation, a history or occurrence of a suicide attempt requiring immediate intervention, significant clinical deterioration during the study, cognitive impairment severe enough to prevent meaningful participation in the therapeutic process, and concurrent participation in formal psychotherapy during the intervention period. Participants whose clinical condition required a level of care beyond the scope of the study were not retained in the intervention protocol.

After approval of the research proposal by the Research Council of the Department of Psychology at the Islamic Azad University, Bojnord Branch, and receipt of approval from the relevant ethics committee, the necessary administrative arrangements were made with educational authorities in Neyshabur. Eligible adolescents and, where required because of their age, their parents or legal guardians attended an orientation session in which the purpose of the research, intervention procedures, duration of treatment, assessment schedule, confidentiality of information, voluntary nature of participation, and right to withdraw from the study at any stage were explained. Written informed consent was obtained from parents or legal guardians and informed assent was obtained from participating adolescents before data collection. Participants then completed the pretest assessments under comparable conditions and under the supervision of the research team. Following the pretest, the two interventions were implemented according to their respective therapeutic protocols. Attendance and participation were monitored throughout the intervention period to promote treatment adherence and consistency. Immediately after completion of the interventions, posttest assessments were administered, and the outcome measures

were administered again three months later to evaluate the maintenance of treatment effects.

2.2. Measures

The Patient Health Questionnaire-9 (PHQ-9) was used during the screening phase to identify depressive symptoms among adolescents with a history of nonsuicidal self-injury. The PHQ-9 is a nine-item self-report instrument designed to assess the presence and severity of depressive symptoms over a recent time period, with its items corresponding to core manifestations of depression. Participants rate the frequency with which they have experienced each symptom, and higher total scores indicate greater depressive symptom severity. In the present study, the PHQ-9 was used primarily as an eligibility-screening instrument rather than as the principal outcome measure. Adolescents whose scores indicated moderate or severe depressive symptoms underwent additional clinical assessment by a psychologist before enrollment. The questionnaire-based assessment was therefore supplemented by a clinical interview to improve the accuracy of identifying adolescents with clinically meaningful depressive symptoms and to identify conditions requiring exclusion or additional clinical attention, particularly suicidal ideation, suicide attempts, marked clinical deterioration, or cognitive difficulties that could interfere with participation in psychotherapy.

The Adolescent Resilience Scale developed by Oshio et al. (2003) was used as the primary outcome measure to assess resilience. The instrument consists of 21 items scored on a five-point Likert scale ranging from responses corresponding to "completely untrue" to "completely true." It measures three major dimensions of adolescent resilience: novelty seeking, emotional regulation, and positive future orientation. Higher scores indicate greater psychological resilience and a stronger capacity to adapt effectively to stressors, regulate emotional responses, and maintain a constructive orientation toward future challenges. Oshio et al. reported a Cronbach's alpha coefficient of .85 for the total scale, while the internal consistency coefficients of its subscales ranged from .77 to .81. Test-retest reliability over an interval of approximately one to two weeks was also reported to exceed .70, indicating satisfactory temporal stability. Evidence for construct validity was established through factor-analytic procedures and associations with indicators of psychological health. The Persian version of the instrument was translated, culturally adapted, and psychometrically evaluated among Iranian adolescents by

Cheraghi et al. (2017). Their findings supported preservation of the original three-factor structure and demonstrated satisfactory construct validity and internal consistency for use within Iranian adolescent populations. In the present study, the scale was administered at pretest, immediately after completion of the interventions, and again at the three-month follow-up.

2.3. Intervention

The intensive solution-focused therapy intervention consisted of six 90-minute sessions delivered over six consecutive weeks. Consistent with the brief and goal-directed nature of solution-focused therapy, treatment emphasized the identification of clients' preferred futures, personal strengths, exceptions to problem patterns, achievable goals, and concrete indicators of therapeutic progress rather than prolonged analysis of the origins of psychological difficulties. The first session focused on establishing the therapeutic relationship, describing the presenting problems, clarifying the adolescent's hopes and expectations for treatment, defining observable therapeutic goals, and identifying existing personal resources and strengths. Participants were encouraged to consider how they would recognize meaningful improvement and to recall previous periods in which they had felt psychologically better or had coped more effectively. The second session focused on reviewing progress since the initial meeting, identifying positive changes, reinforcing successful behaviors, and exploring exceptions to the self-injury-related problem pattern. Participants were encouraged to identify occasions when the problem had been less severe or absent and to examine what was different about their behavior, environment, or coping during those periods. The third session centered on developing a detailed image of the adolescent's preferred future, identifying desired changes, clarifying specific hopes and goals, recognizing early indicators that improvement was occurring, and defining small behavioral steps that could move the participant toward those goals. Attention was also given to how successful change could influence everyday functioning and relationships with family members and peers. The fourth session emphasized recognition and consolidation of personal resources by reviewing changes that had occurred since treatment began, identifying the strengths responsible for these improvements, examining how such capacities could be generalized to other areas of life, and considering the perspectives of significant others regarding the

participant's difficulties and progress. The fifth session concentrated on evaluating therapeutic progress through scaling questions, with participants rating their current functioning on a 0-to-10 scale, identifying behaviors that had contributed to movement toward improvement, recognizing previously unnoticed achievements, and establishing additional goals for change. The sixth and final session focused on specifying subsequent small steps, consolidating positive changes, strengthening strategies for maintaining therapeutic gains, anticipating possible setbacks, developing responses to future difficulties, establishing a future-oriented plan, and preventing relapse. Participants reviewed the resources and solution-building strategies acquired during treatment and identified ways of independently applying the same framework after termination of formal sessions.

The cognitive behavioral therapy intervention consisted of eight 90-minute sessions delivered once weekly over eight consecutive weeks. The protocol was designed to address depressive symptoms and psychological processes associated with nonsuicidal self-injury through psychoeducation, behavioral activation, identification and restructuring of maladaptive cognitions, problem-solving training, coping-skill development, and relapse prevention. During the first session, participants received psychoeducation regarding nonsuicidal self-injury, low mood, and the basic principles of CBT, with particular emphasis on the reciprocal relationships among thoughts, emotions, and behaviors and on how cognitive and behavioral techniques could contribute to mood improvement. The second session focused on the relationship between activity and mood and introduced behavioral activation strategies intended to help adolescents increase their engagement in constructive, pleasurable, or meaningful activities rather than withdrawing or relying on self-injurious behaviors as a means of managing distress. The third session introduced practical tools for initiating behavioral change when motivation was low and assisted participants in setting realistic, attainable, and measurable activity goals for the following weeks. The fourth session focused on identifying negative automatic thoughts and increasing awareness of maladaptive cognitive patterns associated with low mood and self-injury. Participants learned to monitor situations, emotional responses, and the thoughts that accompanied urges to engage in self-harming behavior. The fifth session concentrated on challenging and responding to negative thoughts by examining their accuracy and usefulness, generating more balanced and adaptive alternatives, and practicing behavior consistent with these

more functional cognitions. The sixth session addressed broader dysfunctional beliefs and maladaptive assumptions contributing to emotional distress and self-injurious behavior, while participants practiced cognitive and behavioral strategies for responding to such beliefs more effectively. The seventh session focused on managing setbacks and introduced a structured five-step problem-solving procedure through which participants learned to define problems, generate potential solutions, evaluate available alternatives, implement an appropriate response, and review its effectiveness. The eighth session integrated the skills acquired throughout treatment, reviewed therapeutic achievements and areas requiring further work, identified personal warning signs for future difficulties, and developed an individualized relapse-prevention plan. The difference in the number of sessions between CBT and ISFT reflected the theoretical and procedural characteristics of the interventions: solution-focused therapy is inherently structured as a brief intervention emphasizing rapid mobilization of strengths and solutions, whereas CBT generally requires additional sessions for systematic teaching, practice, and consolidation of cognitive and behavioral skills.

2.4. Data Analysis

Data were analyzed using IBM SPSS Statistics version 26. Descriptive statistics, including means and standard deviations, were calculated to summarize resilience scores across the CBT and ISFT groups at the pretest, posttest, and three-month follow-up assessments. At the inferential level, repeated-measures analysis of variance was employed to evaluate changes in resilience over time and to compare the trajectories of change between the two intervention conditions. In the statistical model, time, consisting of the pretest, posttest, and follow-up measurements, was treated as the within-subject factor, whereas treatment condition, consisting of CBT and ISFT, was treated as the between-subject factor. The analysis therefore examined the main effect of time to determine whether resilience changed significantly across the three measurement occasions, the main effect of group to determine whether the two therapeutic conditions differed overall, and the time $\times$ group interaction to determine whether the pattern and magnitude of change across assessments differed between CBT and ISFT. Prior to conducting the repeated-measures analysis, the relevant statistical assumptions, including the distribution of the outcome variable, homogeneity of

variances, and the sphericity assumption for repeated measurements, were evaluated. When required, appropriate corrections were considered for violations of the sphericity assumption. Statistical significance was evaluated at an alpha level of .05, and the inferential analyses were interpreted in conjunction with the pattern of mean changes across the three assessment occasions.

3. Findings and Results

The participants in both intervention groups were female adolescents aged 12–18 years. The mean age was 15.50 years ($SD = 0.96$) in the cognitive behavioral therapy (CBT) group and 15.89 years ($SD = 1.26$) in the intensive solution-focused therapy (ISFT) group, indicating a broadly comparable age distribution between the two groups. The reported between-group comparison indicated no statistically significant difference in age ($p = .789$). Regarding paternal education in the CBT group, 13.6% of

fathers had less than a high-school diploma, 31.8% had a high-school diploma, 27.3% had an associate degree, 9.1% had a bachelor's degree, and 18.2% had education above the bachelor's level. The corresponding percentages in the ISFT group were 9.1%, 27.3%, 27.3%, 22.7%, and 13.6%, respectively. The difference between the two groups in paternal educational level was not statistically significant, $\chi^2 = 1.71$, $p = .790$. With respect to maternal education, 18.2%, 27.3%, 36.4%, 13.6%, and 4.5% of mothers in the CBT group had less than a high-school diploma, a high-school diploma, an associate degree, a bachelor's degree, and education above the bachelor's level, respectively. The corresponding values in the ISFT group were 13.6%, 27.3%, 27.3%, 18.2%, and 13.6%. No statistically significant between-group difference was observed in maternal educational level, $\chi^2 = 4.12$, $p = .390$. Overall, the demographic characteristics indicated that the two intervention groups were reasonably comparable at baseline.

Table 1

Descriptive Statistics for Resilience Across the Three Assessment Points

Group	Pretest Mean	Pretest SD	Posttest Mean	Posttest SD	Follow-up Mean	Follow-up SD
Intensive Solution-Focused Therapy	88.54	9.86	100.63	8.72	88.91	8.01
Cognitive Behavioral Therapy	88.27	8.21	97.59	6.64	87.59	7.32

As shown in Table 1, resilience scores increased from pretest to posttest in both intervention groups. In the ISFT group, the mean resilience score increased from 88.54 ($SD = 9.86$) at pretest to 100.63 ($SD = 8.72$) at posttest, whereas the CBT group showed an increase from 88.27 ($SD = 8.21$) to 97.59 ($SD = 6.64$). At the three-month follow-up, however, resilience scores declined in both groups. The mean follow-up score was 88.91 ($SD = 8.01$) in the ISFT group and 87.59 ($SD = 7.32$) in the CBT group. Thus, descriptively, both interventions were associated with an immediate increase in resilience, although the gains observed at posttest appeared to diminish substantially by the follow-up assessment. The similarity of the pretest means also indicated that the two intervention groups had comparable baseline levels of resilience.

Before conducting the repeated-measures analysis of variance, the relevant statistical assumptions were examined. The normality of the distribution of resilience scores was assessed using the Shapiro–Wilk test. The results were nonsignificant for both groups at all three assessment

points ($p > .05$), supporting the assumption of normality. Homogeneity of covariance matrices was examined using Box's M test, which was nonsignificant ($p > .05$), indicating that the covariance matrices could be considered homogeneous across the two intervention groups. The homogeneity of error variances was assessed using Levene's test, and the results were nonsignificant for resilience at the pretest, posttest, and follow-up assessments ($p > .05$), confirming that the assumption of equality of error variances was satisfied. The assumption of sphericity was evaluated using Mauchly's test. The test was statistically significant ($p = .004$), indicating that the assumption of sphericity had been violated. Therefore, the Greenhouse–Geisser epsilon correction was applied to adjust the degrees of freedom in the repeated-measures analysis. Given that the remaining assumptions were adequately satisfied and that the violation of sphericity was addressed using the appropriate correction, repeated-measures ANOVA was considered suitable for testing changes in resilience across time and differences between the two intervention conditions.

Table 2

Repeated-Measures Analysis of Variance for Resilience

Source of Variation	MS	df	F	p	Effect Size (η^2)	Observed Power
Time	2107.75	1.62	254.56	< .001	.86	1.00
Time $\times$ Group	26.65	1.50	3.22	.053	.07	.60
Group	78.82	1.00	0.42	.521	.01	.10

As presented in Table 2, the repeated-measures ANOVA revealed a statistically significant main effect of time on resilience, $F = 254.56$, $p < .001$, $\eta^2 = .86$. This finding indicates that resilience scores changed significantly across the pretest, posttest, and three-month follow-up assessments, irrespective of treatment condition. The effect size of .86 represented a very large effect, suggesting that a substantial proportion of the variability in resilience across repeated assessments was associated with time. The observed statistical power for this effect was 1.00. In contrast, the main effect of treatment group was not statistically significant, $F = 0.42$, $p = .521$, $\eta^2 = .01$, indicating that the overall level of resilience did not differ significantly between

participants receiving CBT and those receiving ISFT. The effect size for the group effect was negligible. Furthermore, the time $\times$ group interaction did not reach conventional statistical significance, $F = 3.22$, $p = .053$, $\eta^2 = .07$. Therefore, the trajectory of changes in resilience over time did not differ significantly between the two treatment groups. Although the interaction effect size indicated that approximately 7% of the variance was associated with the differential pattern of change across groups, this interaction was not statistically significant at the .05 level. Accordingly, the hypothesis that CBT and ISFT would differ significantly in their effects on resilience was not supported.

Table 3

Bonferroni Post-Hoc Pairwise Comparisons of Resilience Across Assessment Points

Reference Assessment	Comparison Assessment	Mean Difference	Standard Error	p
Pretest	Posttest	-10.70	0.52	< .001
Pretest	Follow-up	0.16	0.67	1.000
Posttest	Follow-up	10.86	0.44	< .001

The Bonferroni-adjusted pairwise comparisons presented in Table 3 further clarified the significant main effect of time. Resilience scores differed significantly between the pretest and posttest assessments, with a mean difference of -10.70, $SE = 0.52$, $p < .001$, indicating that resilience increased significantly immediately following treatment. A significant difference was also observed between posttest and three-month follow-up, with a mean difference of 10.86, $SE = 0.44$, $p < .001$. This result demonstrates that resilience scores declined significantly from the immediate post-intervention assessment to the follow-up assessment. In contrast, the difference between pretest and follow-up was not statistically significant, mean difference = 0.16, $SE = 0.67$, $p = 1.000$. Taken together, these findings indicate that both CBT and ISFT produced significant short-term improvements in resilience, but these improvements were not maintained over the three-month follow-up period. By follow-up, resilience had returned to a level statistically comparable to that observed before treatment. Because

neither the main effect of group nor the time $\times$ group interaction was statistically significant, there was no evidence that either CBT or ISFT was superior to the other in improving or maintaining resilience among adolescents with nonsuicidal self-injury.

4. Discussion

The present study compared the effectiveness of cognitive behavioral therapy (CBT) and intensive solution-focused therapy (ISFT) on resilience among adolescents with nonsuicidal self-injury (NSSI). The findings demonstrated a significant main effect of time on resilience, indicating that resilience changed significantly across the pretest, posttest, and three-month follow-up assessments. Specifically, participants in both treatment conditions showed a substantial increase in resilience immediately after treatment. However, this improvement was not maintained at the three-month follow-up, when resilience scores

declined to levels statistically comparable to those observed at pretest. In contrast, the main effect of treatment group was not significant, indicating that the overall level of resilience did not differ significantly between adolescents receiving CBT and those receiving ISFT. Likewise, the time $\times$ group interaction was not significant, demonstrating that the pattern of change in resilience across the three assessment points was similar in the two intervention groups. Taken together, these findings suggest that both CBT and ISFT produced meaningful short-term improvements in resilience, but neither treatment demonstrated superiority over the other, and the therapeutic gains diminished after treatment termination.

The significant improvement in resilience from pretest to posttest is consistent with the conceptualization of resilience as a modifiable psychological capacity rather than a fixed personality characteristic. Contemporary resilience perspectives describe resilience as a dynamic process involving adaptive coping, emotional regulation, access to psychological and interpersonal resources, positive orientation toward the future, and the capacity to recover from adversity (Sisto et al., 2019). This understanding implies that resilience can be strengthened through structured psychological interventions that modify the way individuals interpret, regulate, and respond to stressful experiences. Among young people with complex mental health difficulties, resilience has similarly been conceptualized as involving the capacity to maintain or regain adaptive functioning despite substantial psychological challenges (Thompson et al., 2019). The increase observed in the present study therefore suggests that both interventions successfully activated psychological processes relevant to resilient adaptation among adolescents experiencing NSSI.

The effectiveness of CBT in increasing resilience is consistent with previous evidence demonstrating beneficial effects of cognitive-behavioral interventions on resilience among adolescents and students. Firoozmokhtar and colleagues found that CBT significantly enhanced resilience among high-school students (Firoozmokhtar et al., 2024). CBT may influence resilience through several mechanisms. Adolescents engaging in NSSI frequently experience maladaptive cognitions, negative self-evaluation, hopeless expectations, impaired emotion regulation, and restricted coping repertoires. CBT explicitly targets these processes by helping clients identify dysfunctional automatic thoughts, examine the validity of maladaptive beliefs, develop more balanced interpretations, increase constructive behavioral

engagement, strengthen problem-solving abilities, and practice alternative responses to emotional distress. By modifying cognitive and behavioral patterns that amplify stress, CBT may increase adolescents' perceived control over difficult situations and their confidence in their ability to cope with future problems.

This interpretation is particularly relevant because emotional dysregulation is closely associated with internalizing and externalizing psychological difficulties. Research has demonstrated important relationships among emotion regulation, attachment-related processes, sadness, anger, depression, anxiety, and aggression (Clear et al., 2020). Adolescents who engage in self-injury may rely on NSSI partly because they lack adaptive strategies for managing intense negative emotional states. CBT can provide alternative methods of coping by teaching participants to monitor emotional triggers, recognize the cognitive processes accompanying distress, and generate more adaptive behavioral responses. As adolescents become increasingly able to interrupt maladaptive thought–emotion–behavior cycles, they may experience greater psychological competence and reduced helplessness. Such changes are compatible with increased resilience because resilient functioning involves the ability to respond flexibly and constructively when confronted with adversity.

The present findings are also aligned with the broader evidence base supporting psychosocial interventions for self-injurious thoughts and behaviors among young people. Reviews of psychological treatments for youth self-harm indicate that structured interventions can improve clinically relevant outcomes, although the magnitude of benefits and evidence supporting specific approaches vary across studies (Glenn et al., 2019; Ougrin et al., 2015). NSSI is a complex behavior associated with emotional, cognitive, interpersonal, and contextual vulnerabilities rather than a single causal mechanism (Brown & Plener, 2017; Hooley et al., 2020). Therefore, interventions capable of strengthening multiple dimensions of adaptation may be especially valuable. In the present study, CBT may have enhanced resilience not simply by reducing maladaptive cognition but by increasing behavioral activation, adaptive coping, problem-solving, and relapse-management skills, all of which may contribute to a stronger sense of psychological preparedness when dealing with future stress.

The significant improvement following ISFT is likewise consistent with theoretical and empirical literature on solution-focused interventions. Solution-focused therapy emphasizes existing strengths, client resources, exceptions

to problem patterns, achievable goals, and construction of a preferred future rather than prolonged exploration of pathology and deficits (Franklin, 2015). Through questions focusing on previous successes, moments in which the problem was less intense, existing competencies, and small behavioral steps toward meaningful goals, adolescents may develop a more adaptive perception of themselves and their ability to influence their circumstances. Such processes correspond closely to resilience theory. Bolton and colleagues specifically emphasized the conceptual relationship between resilience and solution-focused practice, noting that both approaches prioritize strengths, resources, competence, adaptive capacities, and the possibility of successful functioning despite adversity (Bolton et al., 2017). Thus, the increase in resilience found after ISFT may reflect the direct activation of strengths and coping resources already present in participants but insufficiently recognized or utilized before treatment.

The findings are also consistent with previous studies showing that solution-focused interventions can enhance resilience and related psychological outcomes. Sağar reported that solution-focused group counseling improved resilience, supporting the proposition that brief strengths-based intervention can increase adaptive functioning (Sağar, 2022). Other studies have demonstrated beneficial effects of solution-focused interventions on adolescent anger, aggression, and problematic behavior (Akbaş & Yiğitoğlu, 2022; Bakhshipour & Ramezanzadeh, 2016). Although these outcomes differ from resilience, they indicate that solution-focused therapy can meaningfully influence emotional and behavioral adjustment among younger populations. Furthermore, solution-focused intervention has been associated with enhanced hope and subjective well-being among individuals exposed to significant adversity (Joubert & Guse, 2022). Such findings are directly relevant to resilience because hope, future orientation, perceived agency, and the ability to identify realistic pathways toward change constitute important resources for coping with adversity.

One possible mechanism explaining the improvement observed following ISFT concerns the facilitation of positive emotional states and hope. Solution-focused therapy intentionally directs attention away from exclusive preoccupation with problems and toward evidence that change is already possible. Kim and Franklin emphasized that positive emotional change represents an important therapeutic process within solution-focused brief therapy (Kim & Franklin, 2015). Adolescents with NSSI may enter

treatment with a problem-saturated view of themselves, perceive emotional distress as uncontrollable, and have difficulty imagining a future in which self-injury is unnecessary. Scaling questions, exception questions, identification of personal strengths, and construction of attainable future goals may counter these perceptions by increasing awareness of competence and possibility. As perceived self-efficacy and hope increase, adolescents may become better able to tolerate setbacks and approach stressful experiences as manageable rather than overwhelming, thereby increasing resilience.

The absence of a significant difference between CBT and ISFT is another important finding. Although the two approaches differ theoretically and procedurally, both appear to influence psychological processes relevant to resilience. CBT primarily emphasizes cognitive restructuring, behavioral change, problem-solving, and coping skills, whereas solution-focused therapy emphasizes strengths, exceptions, goals, future possibilities, and perceived competence. These different pathways may ultimately converge on similar outcomes. Both may increase adolescents' sense of agency, expand their repertoire of responses to distress, reduce perceptions of helplessness, and promote more adaptive engagement with challenging situations. Comparative evidence from other populations similarly suggests that CBT and solution-focused approaches can both produce favorable outcomes even when they rely on different therapeutic mechanisms (Banibensu, 2025; Creswell et al., 2017; Olusola et al., 2024).

The similarity in treatment effects may also be interpreted in light of solution-focused process research indicating that change is facilitated through collaborative goal construction, identification of existing resources, and reinforcement of client-generated solutions (Franklin et al., 2017). CBT, although more explicitly structured around cognitive and behavioral mechanisms, also involves collaborative goal setting, skill acquisition, identification of successful coping behaviors, and systematic reinforcement of adaptive change. Therefore, the two approaches may share clinically meaningful common factors despite their different theoretical orientations. Recent comparative work examining CBT and solution-focused models across alternative intervention formats likewise suggests that these approaches differ in structure and mechanisms while potentially supporting overlapping processes such as autonomy, learning, perceived competence, and adaptive change (Terblanche et al., 2026). The nonsignificant group effect found in the present study may therefore reflect

genuine therapeutic equivalence in relation to resilience rather than absence of treatment benefit.

The absence of a significant time $\times$ group interaction further suggests that the trajectory of improvement and subsequent decline was broadly similar across the two interventions. This finding is clinically important because ISFT was delivered in fewer sessions than CBT. The comparable short-term outcomes may therefore indicate that a more condensed strengths-based intervention can produce gains in resilience similar to those achieved through a longer cognitive-behavioral protocol. This finding may have particular relevance for school-based mental health settings, where treatment duration, attendance difficulties, resource constraints, and limited availability of specialized clinicians may affect intervention feasibility. At the same time, equivalence in short-term improvement should not be interpreted as evidence that the approaches are identical or interchangeable for all adolescents. NSSI is heterogeneous in function, severity, frequency, and associated psychopathology (Plener et al., 2018), and individual adolescents may respond differently depending on their cognitive characteristics, interpersonal context, emotional regulation difficulties, motivation, and treatment preferences.

Another central finding was that improvements in resilience were not maintained at the three-month follow-up. Bonferroni comparisons showed a significant increase from pretest to posttest and a significant decline from posttest to follow-up, whereas the pretest and follow-up means were not significantly different. Several explanations may account for this pattern. First, adolescents with NSSI frequently experience ongoing environmental and interpersonal stressors that do not necessarily change simply because a brief psychotherapy program has ended. Peer rejection and bullying, for example, are associated with adolescent NSSI (Esposito et al., 2019), and cyberbullying victimization has also been linked with self-injurious behavior (Yu et al., 2020). If adolescents return to stressful social or school environments without continued therapeutic support, newly acquired psychological skills may be difficult to sustain. Initial improvement may therefore reflect successful skill use during active treatment, while later decline may occur when therapeutic reinforcement and structured monitoring are removed.

Second, adolescents with NSSI and depressive symptoms may require continued practice before therapeutic skills become sufficiently consolidated to withstand future stress. NSSI is associated with clinically significant psychological

vulnerability and may coexist with suicidal thoughts or behaviors in some adolescents (Robinson et al., 2021; Stewart et al., 2017). Resilience may therefore fluctuate according to changes in mood, interpersonal adversity, perceived support, and exposure to stressful life events. Evidence concerning positive mental health and suicide-related outcomes suggests that protective psychological resources interact dynamically with stressful experiences rather than operating as permanently established traits (Brailovskaia et al., 2020). Similarly, resilience may buffer pathways through which depressive symptoms and social isolation contribute to suicide-related cognition, but its protective effect depends on the continuing presence and activation of adaptive resources (Yang et al., 2021). From this perspective, the post-follow-up decline does not necessarily indicate that the interventions were ineffective; rather, it suggests that a short intervention period may be insufficient to produce enduring resilience without reinforcement.

5. Conclusion

Although the CBT protocol included relapse prevention and the ISFT protocol emphasized maintenance of positive changes and future-oriented coping, a single termination session may not be adequate for adolescents experiencing recurrent self-injury and depression. Resilience is shaped by repeated interactions between individuals and their environments, and maintaining treatment gains may require booster sessions, ongoing school counseling, family involvement, or periodic review of acquired coping strategies. The present results therefore extend previous evidence supporting CBT and solution-focused interventions by indicating that immediate improvements in resilience may be achievable with either approach, while maintenance represents a separate clinical challenge requiring explicit attention.

6. Limitations & Suggestions

The study also has several limitations that should be considered when interpreting the findings. First, the sample was relatively small and consisted exclusively of female adolescents aged 12–18 years who had been referred to school counseling services in Neyshabur, which limits the generalizability of the results to male adolescents, adolescents outside the school system, different geographic regions, or individuals with different clinical profiles. Second, participants were recruited through convenience

sampling before random allocation to the intervention groups, which may have introduced selection bias. Third, the study did not include a no-treatment or wait-list control condition because of ethical concerns associated with withholding intervention from adolescents presenting with NSSI and depressive symptoms. Consequently, although significant within-person changes were observed, natural fluctuations, regression to the mean, or nonspecific therapeutic factors cannot be entirely excluded as explanations for some of the observed improvement. Fourth, resilience was assessed primarily through self-report, which may be influenced by social desirability, response tendencies, or temporary mood states. Finally, the follow-up period was limited to three months, preventing evaluation of longer-term treatment trajectories and possible delayed effects.

Future research should replicate these findings using larger and more diverse samples, including male and female adolescents from different educational, socioeconomic, and geographical backgrounds. Studies should consider multicenter designs and stratified recruitment to improve external validity. When ethically feasible, future trials could use alternative comparison conditions, such as treatment-as-usual, enhanced school counseling, or stepped-care designs, to provide stronger estimates of treatment-specific effects. Longer follow-up periods of six months, one year, or more would be valuable for determining whether resilience gains can be maintained or recovered over time. Future studies should also examine potential moderators and mediators of treatment response, including baseline severity of NSSI, depressive symptoms, emotion regulation, family support, bullying exposure, therapeutic alliance, hopelessness, and treatment adherence. Qualitative interviews with adolescents could additionally clarify how participants experience CBT and solution-focused treatment and which therapeutic components they perceive as most useful. Research comparing standard protocols with versions containing booster sessions would be particularly valuable for addressing the decline observed after treatment termination.

In clinical and educational practice, both CBT and intensive solution-focused therapy can be considered viable interventions for enhancing short-term resilience among adolescents with NSSI, particularly when accompanied by depressive symptoms. Selection between the approaches may therefore be guided by clinical formulation, therapist expertise, treatment setting, adolescent preference, available resources, and the amount of time available for intervention

rather than by an assumption that one approach is universally superior. School counselors and mental health professionals should place particular emphasis on maintaining treatment gains after termination through scheduled booster sessions, periodic follow-up contacts, continued practice of coping and problem-solving skills, and individualized relapse-prevention plans. Where appropriate, parents and school personnel may also be involved in supporting adaptive coping and recognizing early signs of deterioration. Because the present findings suggest that improvement can diminish after treatment ends, resilience-enhancing interventions for adolescents with NSSI should be conceptualized not merely as short-term courses of therapy but as components of an ongoing support system designed to consolidate and sustain adaptive psychological functioning.

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Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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Authors' Contributions

All authors equally contributed to this article.

References

- Akbaş, E., & Yiğitoğlu, G. T. (2022). The Effect of Solution-Focused Approach on Anger Management and Violent Behavior in Adolescents: A Randomized Controlled Trial.

- Archives of Psychiatric Nursing*, 41, 166-174. <https://doi.org/10.1016/j.apnu.2022.07.029>
- Bakhsipour, B., & Ramezanzadeh, S. (2016). The Effect of Solution-Focused Brief Therapy on Aggression in Children and Adolescents. *Psychological studies*, 12(3), 141-156.
- Banibensu, A. A. (2025). *The Effect of Solution-Focused Brief Therapy and Cognitive Behaviour Therapy on Psychological Functioning of Trainee-Nurses in Ledzokuku Greater-Accra University of Education, Winneba*.
- Bolton, K. W., Hall, J. C., Blundo, R., & Lehmann, P. (2017). The Role of Resilience and Resilience Theory in Solution-Focused Practice. *Journal of systemic therapies*, 36(3), 1-15. <https://doi.org/10.1521/jsyt.2017.36.3.1>
- Brailovskaia, J., Teismann, T., & Margraf, J. (2020). Positive Mental Health, Stressful Life Events, and Suicide Ideation. *Crisis*. <https://doi.org/10.1027/0227-5910/a000652>
- Brown, R. C., & Plener, P. L. (2017). Non-Suicidal Self-Injury in Adolescence. *Current psychiatry reports*, 19, 1-8. <https://doi.org/10.1007/s11920-017-0767-9>
- Cheraghi, M. A., Ebadi, A., Gartland, D., Ghaedi, Y., & Fomani, F. K. (2017). Translation and Validation of "Adolescent Resilience Questionnaire" for Iranian Adolescents. *Asian Journal of Psychiatry*, 25, 240-245. <https://doi.org/10.1016/j.ajp.2016.12.001>
- Clear, S. J., Gardner, A. A., Webb, H. J., & Zimmer-Gembeck, M. J. (2020). Common and Distinct Correlates of Depression, Anxiety, and Aggression: Attachment and Emotion Regulation of Sadness and Anger. *Journal of Adult Development*, 27, 181-191. <https://doi.org/10.1007/s10804-019-09333-0>
- Creswell, C., Violato, M., Fairbanks, H., White, E., Parkinson, M., Abitabile, G., Leidi, A., & Cooper, P. J. (2017). Clinical Outcomes and Cost-Effectiveness of Brief Guided Parent-Delivered Cognitive Behavioural Therapy and Solution-Focused Brief Therapy for Treatment of Childhood Anxiety Disorders: A Randomised Controlled Trial. *The Lancet Psychiatry*, 4(7), 529-539. [https://doi.org/10.1016/S2215-0366\(17\)30149-9](https://doi.org/10.1016/S2215-0366(17)30149-9)
- Esposito, C., Bacchini, D., & Affuso, G. (2019). Adolescent Non-Suicidal Self-Injury and Its Relationships with School Bullying and Peer Rejection. *Psychiatry research*, 274, 1-6. <https://doi.org/10.1016/j.psychres.2019.02.018>
- Firoozmokhtar, M., Arefi, M., & Golparvar, M. (2024). The Effectiveness of Cognitive-Behavioral Therapy on Resilience in High School Students. *Iranian Evolutionary Educational Psychology Journal*, 6(1), 153-163.
- Franklin, C. (2015). *An Update on Strengths-Based, Solution-Focused Brief Therapy*. Oxford University Press.
- Franklin, C., Zhang, A., Froerer, A., & Johnson, S. (2017). Solution-Focused Brief Therapy: A Systematic Review and Meta-Summary of Process Research. *Journal of marital and family therapy*, 43(1), 16-30. <https://doi.org/10.1111/jmft.12193>
- Glenn, C. R., Esposito, E. C., Porter, A. C., & Robinson, D. J. (2019). Evidence Base Update of Psychosocial Treatments for Self-Injurious Thoughts and Behaviors in Youth. *Journal of Clinical Child & Adolescent Psychology*, 48(3), 357-392. <https://doi.org/10.1080/15374416.2019.1591281>
- Hooley, J. M., Fox, K. R., & Boccagno, C. (2020). Nonsuicidal Self-Injury: Diagnostic Challenges and Current Perspectives. *Neuropsychiatric Disease and Treatment*, 16, 101-112. <https://doi.org/10.2147/NDT.S198806>
- Joubert, J., & Guse, T. (2022). Implementing Solution-Focused Brief Therapy to Facilitate Hope and Subjective Well-Being Among South African Trauma Survivors: A Case Study. *Counselling and Psychotherapy Research*, 22(1), 147-156. <https://doi.org/10.1002/capr.12416>
- Kim, J. S., & Franklin, C. (2015). Understanding Emotional Change in Solution-Focused Brief Therapy: Facilitating Positive Emotions. *Best Practices in Mental Health*, 11(1), 25-41. <https://doi.org/10.70256/167814cunsta>
- Lim, K. S., Wong, C. H., McIntyre, R. S., Wang, J., Zhang, Z., Tran, B. X., Tan, W., Ho, C. S., & Ho, R. C. (2019). Global Lifetime and 12-Month Prevalence of Suicidal Behavior, Deliberate Self-Harm and Non-Suicidal Self-Injury in Children and Adolescents Between 1989 and 2018: A Meta-Analysis. *International journal of environmental research and public health*, 16(22), 4581. <https://doi.org/10.3390/ijerph16224581>
- Olusola, J. A. F., Fehintola, J. O., & Falaye, A. O. (2024). Cognitive Behavioural and Solution-Focused Therapies on Marital Stability Among Christian Couples in Ibadan Metropolis. *International Journal of Innovative Education Research*, 12(3), 103-113.
- Ougrin, D., Tranah, T., Stahl, D., Moran, P., & Asarnow, J. R. (2015). Therapeutic Interventions for Suicide Attempts and Self-Harm in Adolescents: Systematic Review and Meta-Analysis. *Journal of the American Academy of Child & Adolescent Psychiatry*, 54(2), 97-107. <https://doi.org/10.1016/j.jaac.2014.10.009>
- Plener, P. L., Kaess, M., Schmahl, C., Pollak, S., Fegert, J. M., & Brown, R. C. (2018). Nonsuicidal Self-Injury in Adolescents. *Deutsches Ärzteblatt International*, 115(3), 23. <https://doi.org/10.3238/arztebl.2018.0023>
- Robinson, K., Garisch, J. A., & Wilson, M. S. (2021). Nonsuicidal Self-Injury Thoughts and Behavioural Characteristics: Associations with Suicidal Thoughts and Behaviours Among Community Adolescents. *Journal of affective disorders*, 282, 1247-1254. <https://doi.org/10.1016/j.jad.2020.12.201>
- Sağar, M. E. (2022). The Effect of Solution-Focused Group Counseling on the Resilience of University Students. *International Journal of Educational Research*, 13(1), 103-117. <https://doi.org/10.19160/e-ijer.1034931>
- Sisto, A., Vicinanza, F., Campanozzi, L. L., Ricci, G., Tartaglini, D., & Tambone, V. (2019). Towards a Transversal Definition of Psychological Resilience: A Literature Review. *Medicina*, 55(11), 745. <https://doi.org/10.3390/medicina55110745>
- Stewart, J. G., Esposito, E. C., Glenn, C. R., Gilman, S. E., Pridgen, B., Gold, J., & Auerbach, R. P. (2017). Adolescent Self-Injurers: Comparing Non-Ideators, Suicide Ideators, and Suicide Attempters. *Journal of psychiatric research*, 84, 105-112. <https://doi.org/10.1016/j.jpsychires.2016.09.031>
- Terblanche, N., Rutschmann, R., & Reitz, J. (2026). Comparing GROW, Solution-Focused and CBT Coaching Chatbots: A Self-Determination and Transformative Learning Perspective. *Coaching: An International Journal of Theory, Research and Practice*. <https://doi.org/10.1080/17521882.2026.2625707>
- Thompson, E. G., Knowles, S. F., & Greasley, P. (2019). Understanding Resilience in Young People with Complex Mental Health Needs: A Delphi Study. *Clinical Child Psychology and Psychiatry*, 24(3), 405-416. <https://doi.org/10.1177/1359104518794789>
- Yang, Y., Wang, R., Zhang, D., Zhao, X., & Su, Y. (2021). How Loneliness Worked on Suicidal Ideation Among Chinese Nursing Home Residents: Roles of Depressive Symptoms and Resilience. *International journal of environmental research and public health*, 18(10), 5472. <https://doi.org/10.3390/ijerph18105472>
- Yu, C., Xie, Q., Lin, S., Liang, Y., Wang, G., Nie, Y., Wang, J., & Longobardi, C. (2020). Cyberbullying Victimization and Non-Suicidal Self-Injurious Behavior Among Chinese

Adolescents: School Engagement as a Mediator and Sensation Seeking as a Moderator. *Frontiers in psychology*, 11, 572521. <https://doi.org/10.3389/fpsyg.2020.572521>