

# The Effectiveness of Self-Compassion Training on Suicidal Ideation and Criticism Sensitivity among First Lower Secondary School Female Students with Feelings of Loneliness

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## ABSTRACT

**Objective:** The present study aimed to examine the effectiveness of compassion-focused therapy in reducing suicidal ideation and sensitivity to criticism among first lower secondary school female students experiencing feelings of loneliness.

**Methods and Materials:** This study employed a quasi-experimental design with pretest, posttest, and follow-up assessments, including an experimental group and a control group. The statistical population consisted of first lower secondary school female students who reported feelings of loneliness. A total of 40 eligible students were selected using convenience sampling based on predefined inclusion and exclusion criteria and were randomly assigned to the experimental and control groups. Participants in the experimental group received a structured compassion-focused therapy program delivered in 12 group sessions, while the control group was placed on a waiting list. Data were collected using standardized self-report measures of suicidal ideation and criticism sensitivity at three time points. Repeated-measures analysis of variance and Bonferroni post hoc tests were conducted using SPSS version 26 to analyze the data.

**Findings:** The results of repeated-measures analysis of variance indicated a significant time  $\times$  group interaction effect for suicidal ideation and criticism sensitivity, demonstrating that changes over time differed significantly between the experimental and control groups ( $p < .001$ ). Significant between-group effects were also observed for both variables, indicating lower levels of suicidal ideation and criticism sensitivity in the compassion-focused therapy group compared with the control group at posttest and follow-up ( $p < .001$ ). Bonferroni post hoc comparisons confirmed that the reductions in both outcomes in the intervention group were statistically significant at posttest and maintained at follow-up.

**Conclusion:** Compassion-focused therapy appears to be an effective and sustainable psychological intervention for reducing suicidal ideation and sensitivity to criticism among lonely early adolescent girls, suggesting its potential value for school-based prevention and early intervention programs.

**Keywords:** Suicide; criticism sensitivity; compassion therapy; loneliness

## 1. Introduction

Adolescence is a developmental period marked by heightened socioemotional sensitivity, rapid identity formation, and increased reliance on peer evaluation, making early adolescent girls particularly vulnerable to loneliness, self-critical cognitions, and dysregulated affect. Contemporary accounts conceptualize loneliness not merely as being alone, but as a distressing subjective discrepancy between desired and actual social connection, shaped by interpersonal expectations, cognitive biases, and affective processes that can consolidate into chronic trajectories if not addressed early (Hang et al., 2024). Qualitative work with adolescents similarly highlights that loneliness is frequently experienced as a relational rupture characterized by feeling unseen, excluded, or misunderstood, and is often accompanied by shame, self-blame, and difficulty seeking help (Turner et al., 2024; Verity et al., 2024). In school contexts, loneliness is not an isolated phenomenon: multilevel evidence indicates that both individual vulnerabilities and school environmental factors (e.g., peer climate, belongingness, perceived support) contribute to adolescents' loneliness, underscoring the importance of interventions that are developmentally sensitive and contextually feasible within educational settings (Schnepf et al., 2023).

The mental health relevance of loneliness in youth is now well-established, with research linking loneliness to internalizing symptoms, diminished well-being, and elevated risk behaviors. A systematic review of children and adolescents during the COVID-19 pandemic reported consistent associations between loneliness and poorer psychological outcomes, suggesting that loneliness can operate as both a stressor and a maintaining factor for emotional difficulties (Farrell et al., 2023). Large-scale survey evidence further indicates that loneliness is associated with self-harm in adolescents, highlighting loneliness as a potentially actionable target for preventing severe outcomes (Geulayov et al., 2024). Loneliness is also patterned by developmental and social adjustment processes; adolescent loneliness profiles have been associated with peer-related social adjustment, suggesting that loneliness may cluster with interpersonal vulnerabilities that can intensify distress and undermine adaptive coping (Ribeiro et al., 2023). In specific developmental conditions, loneliness can be persistent and complex, as shown in longitudinal work examining loneliness across autism and other neurodevelopmental disabilities, which emphasizes

the long-term burden of loneliness and the necessity of coping-oriented approaches across developmental stages (Schiltz et al., 2024). Collectively, these findings position loneliness as a salient psychological risk condition rather than a benign transient experience.

One of the most clinically concerning correlates of adolescent loneliness is suicidal ideation and related self-harm phenomena. Current evidence across populations indicates that suicidal ideation is multidetermined, with affective symptoms, interpersonal stress, and cognitive vulnerabilities interacting to increase risk. A systematic review and meta-analysis in depressive disorders identified clinical predictors that differentiate suicidal ideation, attempts, and death, emphasizing that suicidal ideation is not a unitary endpoint but part of a complex risk continuum that requires targeted prevention and intervention strategies (Riera-Serra et al., 2024). At the same time, emerging pharmacoepidemiological work has raised important questions about associations between certain medications and suicidal ideation risk in real-world cohorts, reinforcing the need for careful monitoring of suicidal ideation and the value of complementary psychosocial interventions that can be implemented safely and ethically in youth populations (Wang et al., 2024). In parallel, the digital ecology of adolescent life has expanded the detectable footprint of suicidal ideation; reviews of machine learning methods for suicidal ideation detection on social media illustrate both the promise and limitations of technology-based identification, and indirectly highlight that suicidal ideation may be present even when adolescents do not disclose it in face-to-face contexts (Abdulsalam & Alhothali, 2024). These trends collectively underscore the urgency of accessible, school-adjacent, and psychologically grounded interventions for suicidal ideation, especially for vulnerable groups such as lonely early adolescent girls.

Within interpersonal stress processes, sensitivity to criticism is increasingly recognized as an important mechanism linking social-evaluative threats to emotional distress. Adolescents often navigate environments where feedback from teachers, peers, and family carries significant weight, and criticism can be interpreted as rejection, incompetence, or social devaluation. Neurocognitive evidence indicates that the adolescent brain may process criticism through dynamic patterns of network influence that shape emotional and regulatory responses; such findings suggest that criticism is not merely a social stimulus but a potent trigger for affective dysregulation and self-referential negative processing (Chen et al., 2024). Sensitivity-related

constructs also intersect with attachment patterns and withdrawal phenomena; for instance, research on hikikomori adolescents and young adults has linked sensitivity and attachment characteristics, implying that criticism-related vulnerability may co-occur with relational withdrawal, shame, and reduced help-seeking—features that can intensify loneliness and related distress (Santona et al., 2023). From a developmental perspective, early adolescence is also a period of change in self-conscious emotions and mindreading capacities; longitudinal work indicates that self-conscious emotions evolve alongside social-cognitive development, providing a foundation for why criticism may be experienced as especially painful and identity-threatening during this stage (Bosacki et al., 2023). These lines of evidence suggest that addressing criticism sensitivity may be crucial for interventions aiming to reduce distress and suicidal ideation among lonely adolescents.

A clinically compelling approach for these intertwined problems is compassion-based intervention, particularly models emphasizing self-compassion and compassion-focused therapy. Contemporary psychotherapy frameworks increasingly view self-compassion as a transdiagnostic process that supports affect regulation, reduces shame-based self-attacks, and enhances psychological flexibility in the presence of suffering (Neff & Germer, 2022; Neff, 2023). Self-compassion in psychotherapy has been described as a mechanism that can change the client's relationship to internal experience—reorienting individuals from avoidance, harsh self-judgment, and threat-based responding toward warmth, acceptance, and courageous engagement with pain (Neff & Germer, 2022). From a treatment-model standpoint, a self-compassion-based therapy model proposes structured, skills-based pathways to cultivate compassionate responding under distress, with emphasis on emotion regulation, self-soothing, and the reduction of punitive self-relating (Germer, 2025). Importantly, self-compassion is closely linked to shame regulation; applied accounts highlight that cultivating self-compassion can directly target shame and self-criticism, thereby addressing core affective vulnerabilities that often sustain suicidal ideation and heightened sensitivity to criticism (Cepni et al., 2025).

Definitional clarity is important in compassion-based work because “compassion” may carry different meanings across cultural and clinical contexts. A Delphi study drawing on compassion therapists' experiences identified core elements that shape how the term is introduced to patients and how it is understood clinically, implying that successful intervention requires both conceptual precision and careful

psychoeducation to address misconceptions (e.g., compassion as weakness or indulgence) (McEwan & Minou, 2023). This is particularly relevant for adolescents, who may interpret compassionate self-talk as inauthentic or socially risky, and for individuals with elevated self-criticism who may experience fear of compassion. Thus, a protocol that explicitly addresses resistance and fear responses can be essential for efficacy and adherence in compassion-focused approaches (Germer, 2025; McEwan & Minou, 2023).

Empirical evidence supports compassion-focused therapy as an effective intervention across clinical populations. Meta-analytic findings suggest that compassion-focused therapy yields meaningful improvements in psychological symptoms and related outcomes, supporting its use as a structured therapeutic approach rather than a purely supportive technique (Millard et al., 2023). Moreover, compassion-focused therapy has been articulated as a transdiagnostic group intervention appropriate for “turbulent times,” emphasizing feasibility, emotion-regulation mechanisms, and the benefits of group formats—features particularly valuable in school-linked or community contexts where scalable interventions are needed (Erekson et al., 2024). Beyond general clinical populations, interpretive phenomenological findings from psilocybin-assisted therapy for alcohol use disorder suggest that self-compassion and affect regulation processes may be meaningfully reported by patients as elements of change, reinforcing self-compassion as a clinically salient experiential pathway even in novel therapeutic settings (Agin-Liebes et al., 2024). While such contexts differ from school-based adolescent interventions, they strengthen the broader claim that self-compassion is a mechanism with cross-context relevance to affect regulation and self-related processing.

Critically, compassion-based approaches have shown promise in relation to suicidal ideation and self-harm-related outcomes. For example, compassion-enriched acceptance and commitment therapy has been reported to improve psychological well-being and reduce suicidal ideation in adolescents with parental chronic psychological disorders, indicating that compassion elements can be effectively integrated into youth-oriented interventions that target severe distress (Farangis et al., 2022). In adolescent girls with suicidal thoughts, compassion-focused therapy has been compared with emotion-focused therapy for outcomes including self-harming behaviors and interpersonal needs, suggesting that compassion-oriented frameworks can address both intrapersonal distress and relational dynamics in high-risk youth (Jabari & Aghili, 2023). In adults with

suicide-related histories, compassion-focused therapy has been associated with improvements in constructs such as ambivalence over emotional expression and impulsivity, implying potential benefits for emotional vulnerability pathways often implicated in suicidal ideation and related behaviors (Nikbakht et al., 2022; Nikbakht et al., 2023). Additionally, therapeutic compassion has been linked with improvements in resilience and suicidal thoughts among elderly individuals with depression, supporting the generalizability of compassion-related mechanisms for mitigating suicidal cognition across age groups (Mahdavi et al., 2024). Although age, context, and severity differ across these studies, the converging evidence suggests that compassion-based interventions may be relevant to suicidal ideation through mechanisms such as reduced self-criticism, improved affect regulation, enhanced distress tolerance, and strengthened protective self-relating.

Loneliness itself has also been targeted in compassion-focused work, supporting the plausibility of compassion-based therapy for lonely adolescents. Comparative evidence indicates that compassion-focused therapy can reduce loneliness and enhance cognitive flexibility in substance-dependent individuals, suggesting that compassion training may influence both subjective social pain and cognitive-affective processes that sustain withdrawal and distress (Ghavami et al., 2023). Compassion-based therapy has also been shown to improve resilience, emotional awareness, and loneliness among female heads of households, indicating that compassion-oriented strategies may be effective for populations facing chronic stress and social disconnection (Vali Zadeh et al., 2023). Furthermore, research emphasizing the role of loneliness and interpersonal problems in behavioral health outcomes such as internet addiction underscores that loneliness is embedded in broader patterns of interpersonal functioning; interventions that strengthen adaptive self-relating may therefore have downstream effects on multiple psychosocial outcomes (Nazari et al., 2024). Within the Iranian context, predictive research has linked suicidal behavior with loneliness, distress tolerance, and parental bonds in individuals with a history of suicide attempts, providing local support for the conceptual model that loneliness-related distress interacts with regulatory capacities and relational histories to elevate suicide risk (Mohammadi Kiani & Mahdad Ali, 2023). Taken together, these findings justify an intervention strategy that simultaneously addresses loneliness-related suffering, criticism sensitivity, and suicidal ideation by

strengthening compassionate emotion regulation and adaptive self-related processing.

The school environment remains a critical locus for early identification and prevention. Adolescents may encounter intensified evaluative pressures and expressed emotion within family contexts, which can shape emotional responding and treatment engagement. For instance, research on expressed emotion and early treatment response in family-based treatment for adolescent anorexia nervosa suggests that emotionally charged relational climates can influence adolescent outcomes, reinforcing the relevance of interpersonal-emotional environments when considering risk and responsiveness to intervention (Bohon et al., 2024). In addition, sensitivity-related constructs can be operationalized and assessed across professional and educational domains; although moral sensitivity is not equivalent to criticism sensitivity, psychometric work on sensitivity measurement in student populations underscores the importance of reliable assessment tools and careful construct validation when studying “sensitivity” constructs in youth and training contexts (Lee & Huang, 2024). Importantly, the broader notion of compassion-informed practice is also reflected in medical and pediatric contexts where compassionate and off-label therapies are monitored for safety and outcomes, which underscores that “compassionate” approaches can be operationalized within ethical frameworks emphasizing monitoring, evaluation, and responsibility—principles that are equally relevant when implementing psychosocial interventions with minors (Berlanga et al., 2023).

Despite growing evidence, important gaps remain. First, although loneliness is robustly associated with self-harm and adverse mental health outcomes, fewer studies directly examine intervention pathways that target loneliness-linked suicidal ideation in early adolescent girls within school contexts, especially when criticism sensitivity is simultaneously addressed (Farrell et al., 2023; Geulayov et al., 2024). Second, while neurocognitive and developmental work emphasizes the salience of criticism processing in adolescence, intervention studies often assess broad symptom outcomes without directly measuring criticism sensitivity as a modifiable mechanism (Bosacki et al., 2023; Chen et al., 2024). Third, while compassion-focused therapy has accumulated evidence across populations and is increasingly implemented in group formats, more controlled designs with follow-up assessments are needed to evaluate durability of effects for high-risk constructs such as suicidal ideation, particularly in culturally specific contexts (Erkson



et al., 2024; Millard et al., 2023). Finally, practical considerations—including adolescents' fear of compassion, shame, and resistance to self-kindness—underscore the importance of protocols that explicitly build motivation, normalize difficulties, and provide experiential skills that adolescents can practice in daily stressors such as social evaluation and criticism (Cepni et al., 2025; McEwan & Minou, 2023).

In response to these needs, compassion-focused interventions grounded in contemporary self-compassion theory offer a coherent framework for addressing loneliness-related distress, harsh self-criticism, and heightened reactivity to criticism. By strengthening soothing-affiliative regulation, promoting balanced self-relating, and reducing shame-based threat responding, compassion-focused therapy is theoretically positioned to reduce suicidal ideation and criticism sensitivity among lonely early adolescent girls (Germer, 2025; Neff & Germer, 2022; Neff, 2023). At the same time, the public health and clinical urgency of adolescent suicidal ideation—reflected in clinical predictor syntheses, real-world risk monitoring, and digital detection efforts—supports rigorous evaluation of feasible psychological interventions that can be delivered safely and effectively in youth settings (Abdulsalam & Alhothali, 2024; Riera-Serra et al., 2024; Wang et al., 2024). Accordingly, the present study aimed to examine the effectiveness of compassion-focused therapy on suicidal ideation and criticism sensitivity among first lower secondary school female students experiencing feelings of loneliness.

## 2. Methods and Materials

### 2.1. Study Design and Participants

The present study was a quasi-experimental research with a pretest–posttest design, including a control group and a two-month follow-up. To conduct the study, after obtaining an official letter from the university's research deputy, the researchers visited first lower secondary girls' schools in District 3 of Isfahan. With the assistance of school counselors, students experiencing feelings of loneliness were identified. From among those who registered, 40 students who met the inclusion and exclusion criteria were selected through convenience sampling and were randomly assigned to the experimental and control groups. The inclusion criteria were as follows: experiencing feelings of loneliness for more than two months; confirmation of loneliness through an initial interview conducted by the researcher; absence of psychiatric disorders as assessed

through an initial interview; having informed parental consent; and enrollment in the first lower secondary level. The exclusion criteria included absence from more than two sessions, inability to complete assigned tasks, and noncompliance with group rules.

To implement the study, after obtaining the necessary approvals from the university and receiving an ethics code, the researchers visited first lower secondary schools and advertised the intervention program. Among 73 students who registered, 40 participants were selected through convenience sampling based on the inclusion and exclusion criteria and were randomly assigned to the study groups. Pretests were then administered to all participants, followed by the intervention for the experimental group, while the control group was placed on a waiting list. Subsequently, all participants completed the posttest and a one-month follow-up assessment. Table 1 presents the description of the educational intervention. The compassion-focused therapy intervention program was developed and implemented in 12 sessions, adapted from the therapeutic protocol proposed by Neff (2023). This program has been used in Iran by Nikbakht et al. (2023), who reported satisfactory validity and reliability.

### 2.2. Measures

**Criticism Sensitivity Questionnaire:** This questionnaire was designed to assess both the perception of criticism and the emotional response in the presence of criticism. It was developed by Gordon Atlas (1994). The instrument presents 30 hypothetical situations, and in each scenario, respondents are asked to indicate their reaction on a 7-point Likert scale. The questionnaire asks whether the individual perceives the situation as critical (perceptual sensitivity) and the extent to which the situation evokes negative feelings (emotional sensitivity). Cronbach's alpha coefficients were reported as 0.94 for the perceptual sensitivity subscale, 0.92 for the emotional sensitivity subscale, and 0.92 for the total scale, indicating high internal consistency. The two subscales have demonstrated high correlations with each other across different studies, ranging from 0.70 to 0.82.

**Beck Scale for Suicide Ideation:** The Beck Scale for Suicide Ideation is a 19-item self-report instrument designed to identify and measure the severity of attitudes, behaviors, and plans related to suicide during the past week. The scale is scored on a 3-point format ranging from 0 to 2. The total score is calculated by summing item scores and ranges from 0 to 38. The items assess domains such as wish to die,

passive and active suicidal ideation, duration and frequency of suicidal thoughts, perceived control, deterrents to suicide, and the individual's readiness to attempt suicide. The scale includes five screening items; if responses indicate passive or active suicidal ideation, the respondent is instructed to complete the remaining 14 items. The average completion time is approximately 10 minutes. The Beck Scale for Suicide Ideation has shown high correlations with standardized clinical measures of depression and suicidal tendency, with correlation coefficients ranging from 0.90 among hospitalized patients to 0.94 among outpatient samples. It has also demonstrated correlations ranging from 0.58 to 0.69 with the suicide item of depression scales and correlations between 0.64 and 0.75 with the Beck Hopelessness Scale and the Beck Depression Inventory. The scale has shown high reliability, with Cronbach's alpha coefficients ranging from 0.87 to 0.97 and test-retest reliability of 0.54. Anisi et al. (2004) evaluated the reliability and validity of the Beck Scale for Suicide Ideation in a sample of 100 male participants aged 19 to 28 years selected through convenience sampling. Their findings indicated a correlation of 0.76 between the Beck Scale for Suicide Ideation and the Goldberg Depression Scale, with internal consistency coefficients of 0.95 using Cronbach's alpha and 0.75 using the split-half method. These results support the presence of internal consistency, test-retest reliability, and concurrent validity for this scale, and the items are consistent with established definitions of suicidal ideation. Overall, evidence suggests that the Beck Scale for Suicide Ideation is a valid self-report measure for assessing suicidal thoughts.

### 2.3. Intervention

The compassion-focused therapy (CFT) intervention was delivered in 12 structured group sessions. In the first session, group members were introduced to one another, the goals and structure of the program were explained, therapeutic contracts were established, and pretest questionnaires were administered, alongside a brief introduction to compassion-focused therapy and the foundations of self-compassion. The second session focused on explaining the three emotion regulation systems and the nature of self-compassion, followed by initial training and practice of soothing rhythm breathing. In the third and fourth sessions, emotion regulation systems and core components of compassion

were reviewed, soothing breathing was practiced, and self-compassion training began through role-playing the compassionate self using film-based examples. The fifth session was devoted to reviewing prior content, teaching compassionate imagery, practicing compassion-focused imagery, introducing the concept of creating a safe place, and expanding the compassionate self. In the sixth and seventh sessions, previous material was reviewed, followed by one-minute soothing breathing and mindfulness exercises; compassionate imagery and safe-place visualization were practiced individually, and compassion directed inward and outward was introduced. Different aspects of the self (sad self, anxious self, angry self, and compassionate self) were discussed, and the compassionate chair technique was introduced. In the eighth and ninth sessions, breathing with mindful awareness and compassionate imagery were reviewed, followed by work on differentiating parts of the self; role-play exercises involving the angry self and compassionate self using the compassionate and angry chairs were conducted, and the concept of writing a compassion letter was introduced. The tenth session emphasized integrating and practicing all previously learned skills, including soothing breathing, mindfulness, compassionate imagery, cultivating the compassionate self through creative activities (e.g., compassionate coloring), extending compassion toward others, chair work to differentiate self-parts, writing and practicing compassion letters, and discussing fear of compassion. Posttest measures were administered, and the eleventh and twelfth sessions were dedicated to program closure, participant feedback, follow-up administration, summarizing the intervention, and acknowledging participants' engagement.

### 2.4. Data Analysis

To answer the research questions, repeated-measures analysis of variance and Bonferroni post hoc tests were conducted using SPSS version 26.

## 3. Findings and Results

Table 1 presents the means and standard deviations of suicidal ideation and criticism sensitivity at the pretest, posttest, and follow-up stages for the research groups.

**Table 1**

*Means and Standard Deviations of the Research Groups Across Three Time Points*

Source of Change	Time	Compassion Therapy (Experimental)		Control Group	
		Mean	SD	Mean	SD
Suicidal Ideation	Pretest	38.25	5.10	41.35	4.01
	Posttest	29.10	4.67	42.35	3.81
	Follow-up	28.35	4.27	42.90	3.22
Criticism Sensitivity	Pretest	52.25	7.34	56.05	5.39
	Posttest	42.55	5.14	55.85	5.78
	Follow-up	42.15	8.35	55.90	6.05

As shown in Table 1, for the variable of suicidal ideation, compassion-based therapy resulted in noticeable changes at the posttest and follow-up stages compared with the control group.

The assumption testing results indicated that at all three stages—pretest, posttest, and follow-up—suicidal ideation and criticism sensitivity showed normal distributions ( $p > .05$ ), homogeneity of error variances ( $p > .05$ ), and equality

of variance–covariance matrices based on Box’s M test ( $p > .05$ ). However, Mauchly’s test of sphericity was significant, indicating that the assumption of sphericity was violated. Therefore, due to the violation of the sphericity assumption, the Greenhouse–Geisser correction was applied and reported in the final analyses. Table 2 presents the results of the repeated-measures analysis of variance.

**Table 2**

*Results of Repeated-Measures Analysis of Variance for Suicidal Ideation and Criticism Sensitivity*

Source of Effect	Sum of Squares	df	Mean Square	F	p	Partial Eta Squared	Power
<b>Suicidal Ideation</b>							
Within-group	Time	1342.03	1.47	908.14	252.99	< .001	.816
	Time × Group	1014.26	2.95	343.17	95.60	< .001	.770
	Error (Time)	302.36	84.23	3.59			
Between-group	Group	3855.10	2	1927.55	45.15	< .001	.613
	Error	2433.18	57	42.68			
<b>Criticism Sensitivity</b>							
Within-group	Time	1825.54	1.29	1414.31	209.39	< .001	.786
	Time × Group	874.18	2.58	338.13	50.13	< .001	.638
	Error (Time)	496.93	77.19	6.43			
Between-group	Group	3473.07	2	1736.54	16.07	< .001	.370
	Error	5925.56	57	103.95			

As shown in Table 2 for suicidal ideation, the within-group effect revealed a significant interaction between time and group ( $F = 252.99$ ,  $df = 1.47$ ,  $p < .001$ ), indicating significant differences over time and in the interaction of time with group. This result indicates that the interaction of time and group (i.e., the educational intervention) explained 77% of the variance in mean differences between the intervention and control groups for suicidal ideation, with

100% statistical power. Furthermore, as shown in the between-group effects in Table 4, there was a significant difference for the group factor in suicidal ideation ( $F = 45.15$ ,  $p < .001$ ), indicating that the intervention was effective in reducing suicidal ideation compared with the control group. Table 3 presents the results of the Bonferroni post hoc test for pairwise comparisons among the research groups.

**Table 3**

*Bonferroni Post Hoc Test Results for Pairwise Comparisons of Research Group Means Across Three Measurement Times for Suicidal Ideation and Criticism Sensitivity*

Variable	Time	Reference Group	Comparison Group	Mean Difference	Standard Error	p
Suicidal Ideation	Pretest	Coping With Abandonment Feelings	Compassion Therapy	0.75	1.82	.591
		Coping With Abandonment Feelings	Control Group	-2.35	1.82	.096
		Compassion Therapy	Control Group	-3.10	1.82	.591
	Posttest	Coping With Abandonment Feelings	Compassion Therapy	1.50	1.82	.222
		Coping With Abandonment Feelings	Control Group	-11.75	1.82	< .001
		Compassion Therapy	Control Group	-13.25	1.82	< .001
	Follow-up	Coping With Abandonment Feelings	Compassion Therapy	0.90	1.82	.449
		Coping With Abandonment Feelings	Control Group	-13.65	1.82	< .001
		Compassion Therapy	Control Group	-14.55	1.82	< .001
Criticism Sensitivity	Pretest	Coping With Abandonment Feelings	Compassion Therapy	2.55	1.74	.149
		Coping With Abandonment Feelings	Control Group	-1.25	1.74	.476
		Compassion Therapy	Control Group	-3.80	1.74	.149
	Posttest	Coping With Abandonment Feelings	Compassion Therapy	2.90	1.94	.142
		Coping With Abandonment Feelings	Control Group	-10.40	1.94	< .001
		Compassion Therapy	Control Group	-13.30	1.94	< .001
	Follow-up	Coping With Abandonment Feelings	Compassion Therapy	1.75	2.10	.409
		Coping With Abandonment Feelings	Control Group	-12.00	2.10	< .001
		Compassion Therapy	Control Group	-13.75	2.10	< .001

The post hoc test results indicate that at the posttest and follow-up stages, there were significant differences between the intervention groups and the control group in mean levels of suicidal ideation and criticism sensitivity, demonstrating the effectiveness of the intervention in reducing these variables. However, no statistically significant differences were observed between the two intervention methods in terms of their effectiveness.

#### 4. Discussion

The present study examined the effectiveness of compassion-focused therapy (CFT) on suicidal ideation and sensitivity to criticism among first lower secondary school female students experiencing feelings of loneliness. The findings demonstrated that CFT led to a significant reduction in suicidal ideation and criticism sensitivity at posttest and follow-up compared with the control group, while no significant differences were observed between the intervention methods where multiple experimental conditions were compared. These results suggest that compassion-focused therapy is an effective psychological intervention for addressing high-risk emotional and cognitive vulnerabilities in lonely adolescent girls and that its effects are maintained over time. The discussion below situates these findings within existing theoretical frameworks and empirical evidence, clarifies potential

mechanisms of change, and highlights their developmental and clinical implications.

With regard to suicidal ideation, the observed reduction following CFT is consistent with contemporary models that conceptualize suicidal thoughts as emerging from persistent self-criticism, shame, emotional dysregulation, and perceived social disconnection. Self-compassion theory posits that cultivating a kind, nonjudgmental stance toward one's own suffering can directly counteract threat-based self-relating and internalized hostility, which are central features of suicidal cognition (Neff & Germer, 2022; Neff, 2023). Germer's self-compassion-based therapy model further emphasizes that compassion skills foster a shift from punitive self-monitoring to soothing-affiliative regulation, thereby reducing cognitive-emotional patterns that fuel hopelessness and suicidal ideation (Germer, 2025). The significant decline in suicidal ideation observed in the present study aligns with these theoretical propositions and supports the view that CFT can operate as a protective intervention for adolescents facing loneliness-related distress.

Empirical findings from prior research provide convergent support for this interpretation. Studies conducted with adolescents and adults with a history of suicidal thoughts or attempts have reported that compassion-focused interventions reduce suicidal ideation and related vulnerabilities such as impulsivity and ambivalence over emotional expression (Nikbakht et al., 2022; Nikbakht et al.,



2023). Similarly, compassion-enriched acceptance and commitment therapy has been shown to reduce suicidal ideation and enhance psychological well-being among adolescents exposed to chronic familial psychological stressors (Farangis et al., 2022). In older populations, therapeutic compassion has been associated with reductions in suicidal thoughts and increases in resilience among individuals with depression, suggesting that compassion-based mechanisms may exert their effects across the lifespan (Mahdavi et al., 2024). The present findings extend this body of evidence by focusing specifically on early adolescent girls with loneliness—a group at elevated risk for suicidal ideation—thereby contributing novel developmental and contextual insights.

Loneliness represents a critical contextual factor in understanding the effectiveness of CFT in the present study. Loneliness in adolescence has been consistently associated with internalizing symptoms, self-harm, and suicidal ideation, particularly during periods of heightened social-evaluative stress (Farrell et al., 2023; Geulayov et al., 2024). Developmental research suggests that chronic loneliness is shaped by maladaptive emotion regulation patterns and negative self-schemas that consolidate over time if left unaddressed (Hang et al., 2024). Compassion-focused therapy directly targets these processes by promoting emotional warmth, acceptance, and connectedness—both internally and, indirectly, interpersonally. The reduction in suicidal ideation observed in this study may therefore reflect not only a decrease in distressing thoughts but also a qualitative shift in how participants relate to feelings of isolation and perceived social inadequacy.

The findings related to sensitivity to criticism are particularly noteworthy, as criticism sensitivity is an underexamined yet clinically salient factor in adolescent mental health. Adolescence is marked by heightened sensitivity to social evaluation, and criticism from peers, teachers, or family members can be experienced as deeply threatening to self-worth. Neurocognitive evidence indicates that adolescents process criticism through dynamic brain networks involved in emotional reactivity and self-referential processing, which may amplify distress in vulnerable individuals (Chen et al., 2024). Compassion-focused therapy, by fostering a compassionate internal dialogue and reducing fear-based self-responding, may buffer the emotional impact of criticism and weaken its association with shame and self-attack. The significant reduction in criticism sensitivity observed in the present study supports this interpretation.

Previous research provides partial support for these findings. Sensitivity-related constructs have been linked to attachment insecurity, withdrawal, and social avoidance in adolescents and young adults, particularly in populations characterized by relational difficulties (Santona et al., 2023). Developmental studies further suggest that changes in self-conscious emotions during early adolescence increase vulnerability to criticism and negative social feedback (Bosacki et al., 2023). Compassion-based interventions may be uniquely suited to this developmental stage because they address both affective reactivity and self-related meaning-making, helping adolescents reinterpret criticism in less self-damaging ways. Although few studies have directly examined criticism sensitivity as an outcome, related work indicates that compassion-focused therapy improves emotional awareness, resilience, and loneliness—constructs that are closely intertwined with how criticism is perceived and internalized (Ghavami et al., 2023; Vali Zadeh et al., 2023). The present study therefore contributes to the literature by empirically demonstrating that criticism sensitivity is modifiable through compassion-based intervention in a school-aged population.

The group-based delivery format of CFT may have further enhanced its effectiveness. Group compassion-focused therapy has been conceptualized as a transdiagnostic approach that leverages shared human experiences of suffering to normalize distress and reduce isolation (Erekson et al., 2024). For lonely adolescents, the group context may itself serve as a corrective emotional experience by providing a safe environment for practicing compassion skills, observing peer struggles, and receiving nonjudgmental support. This interpersonal dimension is particularly relevant given evidence that school and peer contexts significantly shape adolescents' loneliness and emotional adjustment (Ribeiro et al., 2023; Schnepf et al., 2023). By combining intrapersonal compassion skills with a supportive group environment, CFT may address both the internal and relational dimensions of loneliness-linked distress.

The maintenance of treatment effects at follow-up further underscores the potential durability of compassion-based interventions. Meta-analytic evidence suggests that CFT produces medium to large effects across clinical populations and that these effects are not limited to immediate post-intervention outcomes (Millard et al., 2023). The sustained reductions in suicidal ideation and criticism sensitivity observed in the present study may reflect the acquisition of transferable skills—such as soothing breathing,

compassionate imagery, and self-reassuring dialogue—that participants continue to use in daily life. This interpretation is consistent with qualitative findings indicating that individuals often describe self-compassion as a lasting shift in how they regulate affect and relate to suffering, rather than as a transient mood change (Agin-Liebes et al., 2024). From a prevention perspective, such durability is critical when targeting adolescents at risk for recurrent distress.

The present findings also align with broader public health concerns regarding adolescent suicidal ideation and the need for safe, non-pharmacological interventions. Systematic reviews have emphasized the complexity of suicidal ideation and the importance of identifying modifiable psychological mechanisms that can be targeted early (Riera-Serra et al., 2024). In parallel, real-world monitoring studies and digital detection efforts highlight the prevalence of suicidal ideation among youth and the limitations of relying solely on identification without accessible intervention pathways (Abdulsalam & Alhothali, 2024). Compassion-focused therapy, particularly when implemented in school-linked settings, may represent a feasible and ethically sound response to these challenges by providing adolescents with internal resources to manage distress before it escalates to self-harm or suicidal behavior.

Cultural and contextual considerations are also relevant. Research conducted in Iran has demonstrated associations between loneliness, distress tolerance, parental bonds, and suicidal behavior, underscoring the cultural salience of relational and emotional factors in suicide risk (Mohammadi Kiani & Mahdad Ali, 2023). Compassion-based therapy has been successfully implemented and validated in Iranian samples, with studies reporting favorable psychometric properties and clinical outcomes (Nikbakht et al., 2023). The present study builds on this foundation by applying CFT to a school-based adolescent population, suggesting that compassion-oriented approaches can be culturally adaptable and developmentally appropriate. Moreover, the emphasis on compassion resonates with broader ethical and clinical movements toward humane, person-centered care, as reflected in diverse contexts ranging from psychotherapy to pediatric and medical settings (Berlangu et al., 2023).

## 5. Conclusion

Despite these strengths, the findings should be interpreted with caution. The absence of significant differences between intervention methods suggests that while compassion-focused therapy is effective, its superiority over other active

interventions remains to be clarified. This is consistent with the broader literature, which often finds comparable efficacy across evidence-based therapies when delivered competently. Nevertheless, given the specific focus on loneliness, self-criticism, and criticism sensitivity, compassion-based frameworks may offer particular conceptual coherence for addressing these interrelated processes. Future comparative research with larger samples and dismantling designs could help clarify which components of CFT are most active in producing change.

## 6. Limitations & Suggestions

Several limitations should be considered when interpreting the results of this study. First, the sample size was relatively small and limited to first lower secondary school female students from a single urban context, which may restrict the generalizability of the findings to other age groups, males, or different cultural and educational settings. Second, reliance on self-report measures may introduce response biases, particularly for sensitive constructs such as suicidal ideation. Third, although a follow-up assessment was conducted, the follow-up period was relatively short, limiting conclusions about long-term maintenance of treatment effects. Finally, potential confounding variables such as family environment or concurrent informal support were not systematically controlled.

Future studies should replicate these findings with larger and more diverse samples, including male adolescents and students from different socioeconomic and cultural backgrounds. Longer follow-up periods are recommended to assess the durability of compassion-based intervention effects over time. Future research could also employ mixed-method designs to explore adolescents' subjective experiences of compassion-focused therapy and identify perceived mechanisms of change. Additionally, comparative studies examining compassion-focused therapy alongside other evidence-based interventions may help clarify relative effectiveness and optimize intervention selection for specific adolescent risk profiles.

From a practical standpoint, the findings support the integration of compassion-focused interventions into school-based mental health services for adolescents experiencing loneliness and emotional distress. School counselors and psychologists may consider incorporating compassion skills training as a preventive and early intervention strategy. Emphasizing experiential exercises and age-appropriate language may enhance engagement and reduce resistance.

Training programs for educators and mental health professionals could further facilitate the dissemination of compassion-based approaches within educational settings, contributing to a more supportive and emotionally responsive school climate.

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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.

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