

The Relationship Between Ambivalence Over Emotional Expression and Impulsivity With the Mediating Role of Self-Compassion in Adolescents With Depressive Disorder

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Article Info

Article type:

Original Research

How to cite this article:

Zanjanchi Nikoo, S., & Farahani, A. (2025). The Relationship Between Ambivalence Over Emotional Expression and Impulsivity with the Mediating Role of Self-Compassion in Adolescents with Depressive Disorder. *Iranian Journal of Neurodevelopmental Disorders*, 4(2), 1-10.

<https://doi.org/10.61838/kman.jnidd.4.2.19>



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ABSTRACT

Purpose: This study aimed to investigate the mediating role of self-compassion in the relationship between ambivalence over emotional expression and impulsivity in adolescent students diagnosed with depressive disorder.

Methods and Materials: The research employed a descriptive-correlational design based on structural equation modeling (SEM). The statistical population included male adolescents in lower and upper secondary schools in Qazvin City during the 2024 academic year, all of whom were referred to the city's Educational Counseling Center and clinically diagnosed with depressive disorder. A sample of 150 students was selected through convenience sampling. Data were collected using the Beck Depression Inventory (BDI), the Barratt Impulsiveness Scale (BIS), the Emotional Expressivity Questionnaire (EEQ), and the Self-Compassion Scale (SCS). Descriptive statistics, Pearson correlation, path analysis, and bootstrapping were used to analyze the data through SPSS version 26 and AMOS.

Findings: Correlation analysis revealed a significant positive relationship between ambivalence over emotional expression and impulsivity, and a significant negative relationship between self-compassion and impulsivity ($p < .01$). Path analysis confirmed that self-compassion significantly mediates the relationship between ambivalence over emotional expression and impulsivity. Model fit indices (e.g., RMSEA = 0.070, CFI = 0.913, GFI = 0.910) indicated an acceptable model fit. Bootstrapping further verified the significance of the indirect effect (standardized indirect effect = 0.273, $p = .01$), confirming the mediating role of self-compassion.

Conclusion: Higher self-compassion is associated with lower impulsivity and reduced emotional ambivalence, suggesting that interventions aimed at enhancing self-compassion could help mitigate maladaptive emotional and behavioral responses in this population.

Keywords: emotional expression, impulsivity, self-compassion, depression.

1. Introduction

The human life cycle encompasses various developmental stages, among which adolescence holds particular importance due to the diversity and intensity of developmental changes at intrapersonal, interpersonal, and environmental levels. This stage is often associated with heightened vulnerability to behavioral problems (Chen et al., 2022). One of the most common and concerning psychological issues among adolescents is depression, which has a high prevalence and is linked to numerous negative outcomes (Hankin & Griffith, 2023).

Depression is an unpleasant mood state characterized by a set of destructive symptoms such as sadness, hopelessness, numbness, loss of interest in life activities, and avoidance of addressing the disorder. These symptoms significantly impair psychological and functional efficacy across multiple domains of life (Zhang et al., 2023). This mood disorder is highly prevalent; for instance, the National Institute of Mental Health (2017) reported that 16.2 million individuals, or 6.7% of the adolescent and young adult population in the United States, experience depression. In Iran, statistical estimates indicate that over 12% of adolescents and young adults suffer from major depressive disorder (Karimi, 2022).

Adolescents with depressive disorder often face substantial psychological tensions, one of which is elevated impulsivity (Spieser et al., 2023). Impulsivity refers to a broad range of destructive and harmful behaviors executed without sufficient forethought, typically in pursuit of a specific reward, often resulting in negative consequences across various life domains (Grant & Chamberlain, 2020; Grant et al., 2021). Individuals with impulsive tendencies generally act hastily, lack foresight, struggle with persistence and focus, fail to anticipate consequences, and engage in maladaptive behaviors driven by immediate gratification (Kopetz et al., 2018). Verbal and non-verbal impulsive behaviors form the basis of numerous functional disorders such as attention-deficit/hyperactivity disorder (ADHD), personality disorders, learning disabilities, conduct disorders, impulse control disorders, and other behavioral problems. The presence of such behaviors is critical for diagnosing these dysfunctions in both research and clinical contexts (Nikbakht et al., 2023).

Various factors contribute to the emergence and intensification of impulsivity, including interaction with impulsive individuals, deviant peers, dysfunctional family interactions, experiences of domestic violence, lack of emotional and social support, substance and alcohol abuse,

personality disorders, and psychological distress (Nabati, 2023). Each of these factors significantly predicts the likelihood of impulsivity, which in turn disrupts individual functioning across physiological, psychological, and environmental dimensions, thereby severely impairing efficiency (Herman et al., 2018). Such structural dysfunction may result in physical harm to the individual or others, compromising physical well-being and overall resilience (Karimi, 2022). In addition to physical damage, impulsive behaviors contribute to a spectrum of psychological and interpersonal distress, including depression, anxiety, stress, disrupted interpersonal relationships, and diminished emotional and social support (Nikbakht et al., 2023). The chronicity and intensification of these disorders can diminish individuals' desire to live and increase functional withdrawal and passivity.

Empirical and theoretical evidence suggests that individuals with depressive disorders exhibit higher levels of impulsivity and, due to physical and environmental stressors, display more reactive and impulsive emotions and behaviors (Changizian, 2023). Depressed individuals, particularly under high stress, tend to act more impulsively, which increases the likelihood of harm to themselves and their surroundings (Spieser et al., 2023). Razmi and Mikaeili (2023) emphasized that impulsivity is one of the most prevalent maladaptive behaviors in individuals with depressive disorders, which not only hinders adaptation to the illness but also fosters further psychological distress and social isolation (Razmi & Mikaeili, 2023). One significant factor associated with the development and persistence of impulsivity is emotional ambivalence (Grant et al., 2021).

Emotional ambivalence refers to the unsuccessful efforts of individuals to express their feelings, often resulting in long lists of complaints and exaggerated attention to minor events that typically do not elicit strong emotional responses. Other contributing factors may include dysfunctional physiological functioning, impulsivity, psychological distress, avoidance of social relationships, and poor self-care (Chen et al., 2022). Emotional expression is typically categorized into three styles: emotional expressivity, referring to the outward display of emotions regardless of their valence or modality (facial, verbal, bodily); emotional control, which denotes the tendency to inhibit emotional responses and includes subcomponents such as emotional inhibition, rumination, aggression control, and benign control (Wobeto et al., 2022).

Recent psychological research has demonstrated that emotions can affect both the processes of thought (how

individuals process social information) and the content of cognition, judgments, and behaviors, thus influencing overall human well-being (Lindsey, 2019). Studies indicate that individuals employ various strategies to manage their emotions, including emotional expressivity, emotional control, and ambivalence in emotional expression (Wang et al., 2022). These patterns underlie different emotional responses and coping mechanisms. Emotional expressivity, as a fundamental component of emotional functioning, refers to the external expression of emotions irrespective of valence or modality (Giacomoni et al., 2021). Ambivalence in emotional expression entails experiencing both positive and negative emotions regarding emotional experiences and their expression (Jalali Kandolous, 2023). This ambivalence spans a range from the desire to express emotions but being unable to do so, expressing emotions without genuine intent, to expressing and later regretting it. Emotional control or suppression involves either voluntary (active inhibition) or involuntary inhibition of emotional expressions (Nikbakht et al., 2023).

Ambivalence in emotional expression can lead to both intrapersonal and interpersonal impulsivity (Yang et al., 2023). Although ambivalence in emotional expression is directly related to impulsivity in depressed adolescents, mediating variables may influence this relationship (Changizian, 2023). One such variable is self-compassion, defined as caring for oneself and being sensitive to one's needs, desires, and aspirations (Albertson et al., 2022). Individuals with depressive disorders often exhibit low levels of self-compassion (Moradpour et al., 2023). Self-compassion involves being kind and caring toward oneself in the face of perceived suffering and failure. It comprises three components: self-kindness versus self-judgment, common humanity versus isolation, and mindfulness versus over-identification (Morley et al., 2018; Wilson et al., 2019). The combination of these dimensions forms the foundation of self-compassion.

Self-compassion is essential for psychological well-being and life satisfaction. Individuals lacking self-compassion often neglect both physical and mental self-care and show little concern for fulfilling their personal needs and goals. Consequently, they tend to experience lower levels of physical and psychological health compared to others (Wilson et al., 2019). Self-compassion promotes optimal functioning across life domains, increases self-satisfaction, and fosters hope and resilience by encouraging timely attention to needs and avoidance of hopelessness (Albertson et al., 2022). Those who practice self-compassion maintain

a positive outlook on life and, rather than ruminating on emotional distress, are more inclined to experience positive and pleasant emotions. As a result, they are less likely to develop depressive symptoms (Albertson et al., 2022; Barry et al., 2015).

Moreover, self-compassion reduces the likelihood of engaging in destructive behaviors. Those who are kind to themselves and practice self-care tend to avoid behaviors that harm their mental and physical well-being or disrupt their functioning (Morley et al., 2018). Destructive impulsive behaviors not only harm the individual but also pose a risk to others. Individuals with high self-compassion typically reject such behaviors, as their life philosophy is inconsistent with causing harm (Wang et al., 2022). Barry et al. (2023) demonstrated that self-compassion can mitigate the development and intensification of destructive verbal and non-verbal impulses in individuals with depressive disorders and facilitates the internalization of constructive behaviors (Barry et al., 2015).

Individuals with high self-compassion display greater care and patience toward themselves and exhibit lower levels of impulsivity (Cobb-Clark et al., 2023). They are more reflective and deliberate in their actions (Niu, 2023). Thus, self-compassion may act as a mediating variable that modifies or transforms the relationship between ambivalence over emotional expression and impulsivity. This is the core hypothesis explored in the present study: Does self-compassion play a significant mediating role in the relationship between ambivalence over emotional expression and impulsivity among adolescents with depressive disorder?

2. Methods and Materials

2.1. Study Design and Participants

The present study employed a descriptive-correlational design based on structural equation modeling (SEM). The statistical population consisted of all male adolescents in lower and upper secondary schools in Qazvin City in 2024 who had visited the Counseling Center of the Department of Education and were diagnosed with depressive disorder. The sampling method was convenience sampling. The researcher selected 150 students who met the inclusion criteria by visiting the Qazvin Counseling Center. To ensure the participants' diagnosis of depression, the Beck Depression Inventory (BDI) was distributed, collected, and analyzed. According to Delavar (2006), a sample size of 100 is sufficient for descriptive research; however, to enhance the

internal and external validity of the findings, 150 participants were selected, considering the number of study variables.

The inclusion criteria were as follows: participants had to reside in Qazvin, be enrolled in lower or upper secondary school, have a diagnosis of depressive disorder, and have no other psychological disorders (as determined through communication with therapists or in the absence of formal diagnostic interviews). Additionally, participants should not use drugs or alcohol, should not have received psychological treatment in the past year, and should not be at risk of suicide. Exclusion criteria included residing outside Qazvin, being at risk of suicide, and unwillingness to participate in the study.

2.2. Measures

2.2.1. Depression

Developed by Beck and Ward (1978), the BDI consists of 21 items and is designed to assess the severity of depressive symptoms. It was translated and standardized in Iran by Alipour and Noori (2006). The responses are rated on a continuum from 0 (least) to 3 (most), with a total score ranging from 0 to 63. Scores of 0–13 indicate minimal depression, 14–19 mild depression, 20–28 moderate depression, and 29–63 severe depression (A. T. Beck et al., 1988; A. T. A. U. E. N. Beck et al., 1988). Beck and Ward (1978) reported Cronbach's alpha coefficients ranging from 0.73 to 0.92, with acceptable content and face validity. In Iran, Alipour and Noori (2006) reported Cronbach's alpha ranging from 0.48 to 0.86, confirming content and face validity.

2.2.2. Impulsiveness

Developed by Patton et al. (1995) to assess the level of impulsivity, this scale was translated and standardized in Iran by Javid et al. (2012). It consists of 30 items across three subscales: non-planning impulsivity, motor impulsivity, and cognitive impulsivity. Responses are measured using a 4-point Likert scale ranging from "never" to "always," with scores ranging from 1 to 4 (Barratt et al., 2004). Patton et al. (1995) reported a Cronbach's alpha of over 0.80 and acceptable construct, face, and content validity. Javid et al. (2012) reported a total scale reliability of 0.81 and subscale reliabilities ranging from 0.47 to 0.80, with acceptable face and content validity.

2.2.3. Emotional Expressivity

Designed by King and Ammons (1990) to assess emotional expression, this 16-item questionnaire was translated and standardized in Iran by Rafieinia (2001). It includes three subscales: expression of positive emotions, expression of intimacy, and expression of negative emotions. The original response scale is a 7-point Likert scale from "strongly agree" to "strongly disagree," which was simplified to a 5-point scale for ease of response. Scores range from 1 (strongly disagree) to 5 (strongly agree), except for item 15, which is reverse scored. Rafieinia et al. (2006) reported Cronbach's alphas of 0.68, 0.65, and 0.59 for the subscales, respectively (Rafieinia, 2002). King and Ammons (1990) reported Cronbach's alphas of 0.70, 0.74, and 0.63, and a convergent validity coefficient of 0.55 with the Multidimensional Personality Questionnaire (King, 1990). Rafieinia (2001) confirmed the questionnaire's content and face validity.

2.2.4. Self-Compassion

This 26-item self-report questionnaire was developed by Neff (2003) to assess the level of self-compassion. It was translated and standardized in Iran by Momeni, Shahidi, Motabi, and Heydari (2013). The scale includes six subscales: self-kindness, self-judgment, common humanity, isolation, mindfulness, and over-identification. It evaluates an individual's relationship with personal experiences. Responses are rated on a 5-point Likert scale from "almost never" to "almost always," scored from 0 to 4 (Neff & McGehee, 2010). Neff (2003) reported a Cronbach's alpha of 0.92 for the total scale and between 0.75 and 0.81 for the subscales, with acceptable content, face, and construct validity (Neff, 2003). Momeni et al. (2013) also reported Cronbach's alpha values above 0.70 for the total scale and all subscales, confirming content and face validity.

2.3. Data Analysis

Descriptive statistics, Pearson correlation, path analysis, and bootstrapping were used to analyze the data through SPSS version 26 and AMOS.

3. Findings and Results

Table 1 presents the descriptive statistics for the variables of ambivalence over emotional expression, self-compassion, and impulsivity, including skewness and kurtosis along with

mean and standard deviation values. Based on the data, the mean score for ambivalence over emotional expression was 39.40, for self-compassion 44.23, and for impulsivity 52.11.

As the skewness and kurtosis values fall within the ± 2 range, the data distribution is considered normal at the 0.05 significance level.

Table 1

Descriptive Statistics of Research Variables

Variable	Mean	Standard Deviation	Kurtosis	Skewness
Ambivalence Over Emotional Expression	39.40	5.157	0.115	0.052
Self-Compassion	44.23	2.96	0.052	0.449
Impulsivity	52.11	5.429	1.667	-0.354

To begin inferential analysis, the correlation coefficients between the study variables were calculated and presented in Table 2. Then, path analysis was conducted to examine

the mediating role of self-compassion in the relationship between ambivalence over emotional expression and impulsivity.

Table 2

Correlation Matrix Among Research Variables

Variables	1	2	3
1. Ambivalence Over Emotional Expression	1		
2. Self-Compassion	-0.611**	1	
3. Impulsivity	0.589**	-0.640**	1

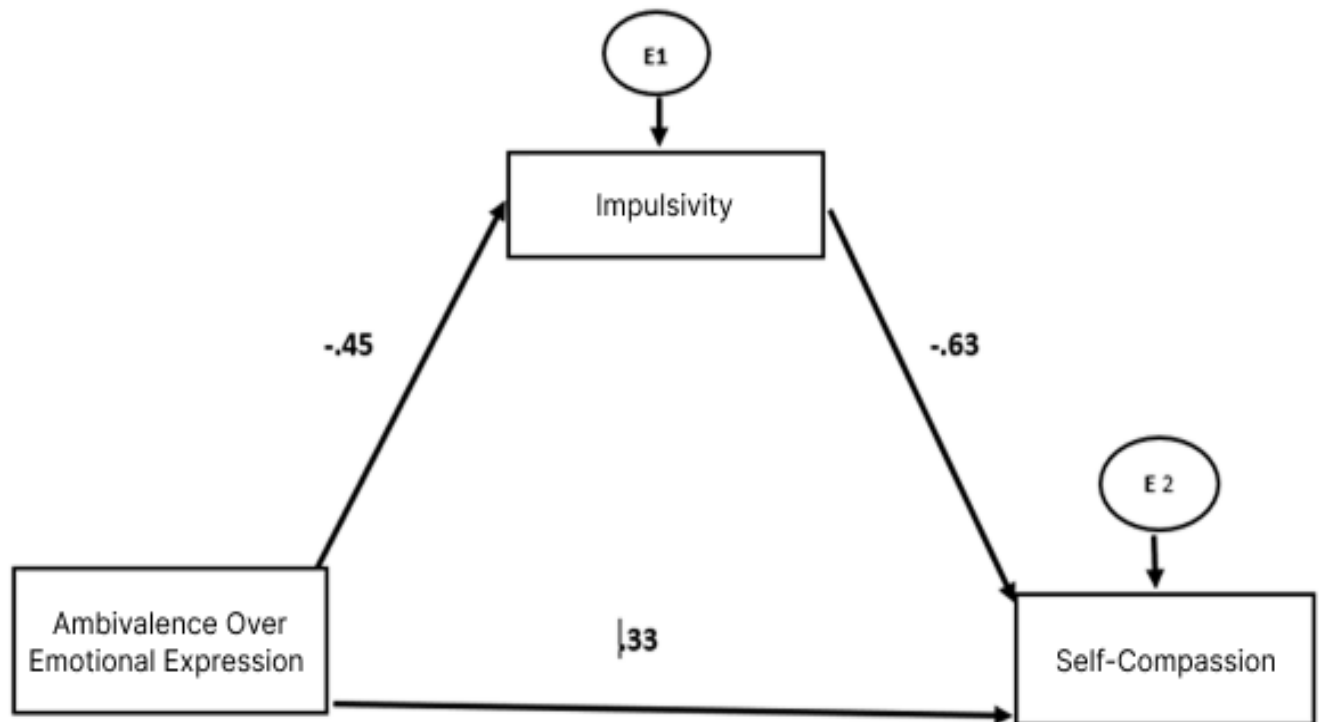
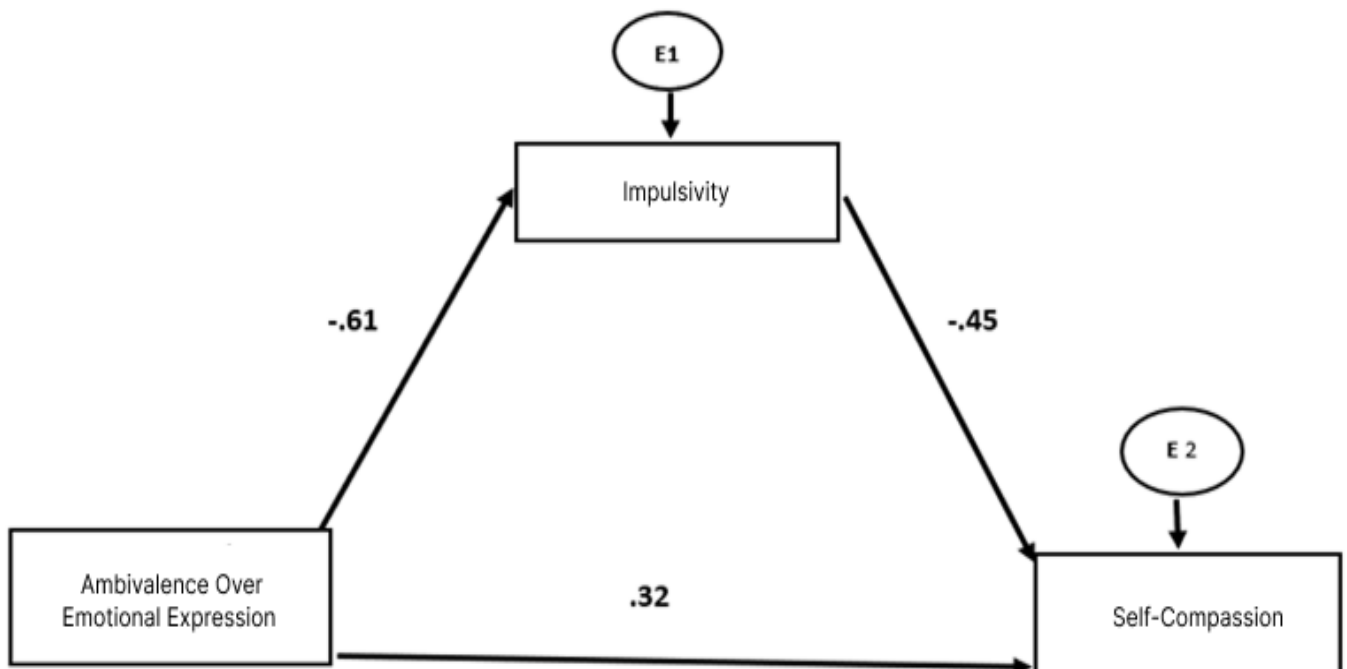
** $p < 0.01$

As shown in Table 2, the correlation between ambivalence over emotional expression and impulsivity is significantly positive, indicating a direct relationship between the two. Conversely, the correlation between self-compassion and impulsivity is significantly negative, reflecting an inverse relationship.

To assess the model fit and examine the mediating role of self-compassion between ambivalence over emotional expression and impulsivity in adolescents with depressive disorder, path analysis was conducted. Prior to this, univariate outliers were identified and excluded using box plots, while multivariate outliers were assessed and removed using the Mahalanobis distance statistic. Skewness and kurtosis values were evaluated using SPSS and none exceeded ± 1 . The Kolmogorov–Smirnov test confirmed the

normal distribution of all four model variables ($p > 0.05$). The Durbin-Watson statistic supported the assumption of error independence in regression equations. Pearson correlations between variable pairs confirmed that no bivariate correlations exceeded 0.90, indicating an absence of multicollinearity. Additionally, tolerance values and Variance Inflation Factor (VIF) statistics showed no tolerance values below 0.10 or VIF values above 10, further confirming no multicollinearity.

After confirming all assumptions, path analysis was employed to test the proposed model. Figures below illustrate the unstandardized and standardized coefficients, respectively, for the mediating role of self-compassion in the relationship between ambivalence over emotional expression and impulsivity.

Figure 1*Unstandardized coefficients of the mediating role of self-compassion***Figure 2***Standardized coefficients of the mediating role of self-compassion*

The model fit indices are presented in [Table 3](#).

Table 3*Model Fit Indices*

Fit Index	Acceptable Range	Observed Value	Evaluation
χ^2/df	≤ 5	3.219	Acceptable
IFI	> 0.90	0.914	Acceptable
RMSEA	< 0.08	0.070	Acceptable
SRMR	< 0.08	0.062	Acceptable
CFI	> 0.90	0.913	Acceptable
GFI	> 0.90	0.910	Acceptable

The chi-square/degrees of freedom ratio (χ^2/df) falls within the acceptable range of 1 to 5. The RMSEA and SRMR values are below the 0.08 cutoff, and the GFI, CFI, and IFI values all exceed the threshold of 0.90. Therefore, the model demonstrating the mediating role of self-compassion in the relationship between ambivalence over

emotional expression and impulsivity among adolescents with depressive disorder is deemed to have an acceptable fit.

To statistically confirm the significance of the mediating role of self-compassion, the bootstrap method was employed. The results are shown in [Table 4](#).

Table 4*Path Coefficient for the Indirect Effect of Ambivalence Over Emotional Expression on Impulsivity via Self-Compassion*

Indirect Path	Unstandardized Coefficient	Standardized Coefficient	Significance Level
Ambivalence \rightarrow Self-Compassion \rightarrow Impulsivity	0.288	0.273	0.01

Based on the results, the indirect effect of ambivalence over emotional expression on impulsivity through the mediating variable of self-compassion is statistically significant at the 0.01 level ($p < 0.01$). Therefore, the research hypothesis regarding the mediating role of self-compassion in the relationship between ambivalence over emotional expression and impulsivity in adolescents with depressive disorder is confirmed.

4. Discussion and Conclusion

Based on the results presented in the statistical section, the model fit for the mediating role of self-compassion in the relationship between ambivalence over emotional expression and impulsivity in adolescent students diagnosed with depressive disorder was confirmed by the data. Therefore, the study's hypothesis regarding the mediating role of self-compassion in the relationship between ambivalence over emotional expression and impulsivity in depressed adolescents is supported.

In explaining the significant role of self-compassion in determining the strength of the relationship between ambivalence over emotional expression and impulsivity in adolescents with depressive disorder, the findings are partially consistent with previous ([Abedi et al., 2023](#); [Albertson et al., 2022](#); [Barry et al., 2015](#); [Eriksson et al.,](#)

[2023](#); [Jalali Kandolous, 2023](#); [Karimi, 2022](#); [Moradpour et al., 2023](#); [Xue et al., 2023](#); [Zhang et al., 2023](#)).

To further explain the significant role of self-compassion in moderating the relationship between ambivalence over emotional expression and impulsivity in adolescents with depression, the subsidiary hypotheses clarified that there is a significant positive correlation between ambivalence over emotional expression and impulsivity. Depressed adolescents who are unable to regulate their internal emotional states typically lack a compassionate approach toward themselves and their internal experiences. Consequently, they tend to react impulsively to various situations and challenges, exacerbating depressive symptoms and diminishing their functional capacity across life domains. Therefore, reducing impulsivity in depressed adolescents is likely dependent on enhancing emotional regulation abilities and decreasing ambivalence over emotional expression. The stronger their emotional regulation capacity, the lower their impulsivity. This finding is consistent with other domestic and international studies ([Abedi et al., 2023](#); [Alizadeh, 2023](#); [Moradpour et al., 2023](#); [Wang et al., 2022](#); [Wobeto et al., 2022](#)), which collectively demonstrate that high impulsivity is associated with ambivalent emotional expression and poor emotional

regulation. Accordingly, efforts to reduce impulsivity should target improvements in emotional regulation.

Another key finding showed that self-compassion significantly influences both ambivalence over emotional expression and impulsivity. That is, individuals with higher self-compassion tend to exhibit lower levels of impulsivity. This finding is also supported by previous studies (Barry et al., 2015; Ebrahimi & Abed, 2023; Eriksson et al., 2023; Morley et al., 2018), which indicate that higher self-compassion enhances an individual's ability to regulate emotional, cognitive, and behavioral impulses. Thus, fostering self-compassion in depressed adolescents may effectively reduce impulsivity. Adolescents with depressive disorder and impaired self-compassion often lack self-acceptance in response to different emotional triggers. Eriksson et al. (2018) reported in a meta-analysis that individuals with depression exhibit deficits in their self-compassion systems, which fail to develop constructively as part of their emotional-cognitive framework (Eriksson et al., 2023). The greater the impairment in this system, the more delayed and dysregulated their responses become (Barry et al., 2015). A low level of self-compassion not only intensifies impulsivity but also contributes to disturbances in emotional expression. In contrast, individuals with high self-compassion tend to exercise greater self-monitoring and exhibit reduced impulsivity (Albertson et al., 2022). Such individuals are more accepting of their internal experiences and express them after acknowledgment. Therefore, self-compassion, acting as a mediating variable, can reshape the relationship between ambivalence over emotional expression and impulsivity.

These findings clearly demonstrate both the direct and indirect effects of self-compassion on ambivalence over emotional expression and impulsivity in adolescents with depressive disorder. Elevated self-compassion was found to reduce the link between ambivalence and impulsivity. In other words, higher levels of self-compassion create favorable conditions for decreasing both ambivalence in emotional expression and impulsivity. Accordingly, educational and therapeutic programs should target the enhancement of self-compassion to reduce the intensity and frequency of these two destructive traits in adolescents with depression. This may also contribute to a more comprehensive and effective treatment of depression and its associated symptoms.

This study was conducted in the city of Qazvin, and therefore generalizing the findings to populations in other cities or cultural contexts is limited. The study population

included only male adolescents, excluding female adolescents; hence, the results are only generalizable to the male group and lack internal validity for females. Moreover, the study focused on high school students, excluding boys in other educational levels, which restricts generalization beyond this group. Additionally, descriptive research designs like correlational studies have limited capacity to control for confounding variables. There are always latent or intervening variables in the relationship between constructs that may influence outcomes, making it unreasonable to interpret exploratory relationships as definitive. This is a methodological limitation of the present study.

It is recommended that school counseling centers utilize the findings of this study, which confirm the mediating role of self-compassion in the relationship between ambivalence over emotional expression and impulsivity. By designing and implementing interventions to enhance self-compassion in students with depressive disorder, they can help reduce ambivalence in emotional expression and impulsivity. This, in turn, may improve the psychological security and functional capacity of these students across life domains. The education system can also focus on improving ambivalence in emotional expression and impulsivity directly or indirectly through strengthening self-compassion. Counseling centers—especially those focused on academic guidance for adolescents with depression—can design and implement programs aimed at enhancing emotional expressivity, reducing impulsivity, and increasing self-compassion. By doing so, they can contribute to better psychological safety and academic performance in this vulnerable population.

Authors' Contributions

All authors significantly contributed to this study.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

Acknowledgments

We hereby thank all individuals for participating and cooperating us in this study.

Declaration of Interest

The authors report no conflict of interest.

Funding

According to the authors, this article has no financial support.

Ethical Considerations

In this study, to observe ethical considerations, participants were informed about the goals and importance of the research before the start of the study and participated in the research with informed consent.

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