

Original Article

The Relationship Between Self-conscious Emotions and Self-criticism with Students' Depression: The Mediating Role of Self-injury

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Abstract

Depression is one of the most important debilitating diseases that has involved a large number of people in the world today and affects their ability to function, thinking, emotions, and excitement. Several studies investigated the relationship between depression and self-conscious emotions, self-criticism and self-injury; however, investigating the mediating role of self-injury in the relation between self-conscious emotions and self-criticism with depression, as well as developing a suitable model for it, have been neglected. This research has been carried out with correlation design and using structural equation modeling method. The research sample was 724 people who were selected among the undergraduate students of Guilan University in the academic year of 2023-2024. The research tools included Beck et al.'s depression scale-2 (1996), Wiederman and Sanson's non-suicidal self-injury scale (1998), Tangney et al.'s self-conscious emotions scale (2000), and Thompson and Zuroff's self-criticism scale (2003). Data analysis was also done using path analysis method and bootstrap test. The research results have showed that the model has a good fit. Also, the research findings have showed that self-injury plays a mediating role in the relationship between self-conscious emotions and depression, as well as between self-criticism and depression ($P < 0.001$). According to the obtained results, self-injury can intensify the negative effects of self-criticism and negative self-conscious emotions on depression. Therefore, these factors should be taken into consideration in planning prevention methods as well as educational and therapeutic programs and should be planned, compiled and implemented at the level of universities and higher institutions.

Keywords

Depression
Guilt
Self-conscious emotions
Self-criticism
Self-injury
Shame

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Introduction

University students face with various stresses and challenges in academic, personal, and social areas. These years are the time to shape their future social and economic lives, and can lead to mental health problems, including depression and anxiety (Kelemu et al., 2020). Given that students are considered a leading class and an active force in society, it is of great importance to pay attention to their problems (Mirzazaki, 2022).

Depression is an emotional and mood state characterized by symptoms such as sadness, isolation, appetite and sleep disturbances, feelings of guilt and have problem with making decisions, loss of interest and pleasure in others, and activities of daily Routine (Sadok and Sadok, 2022). This disorder is one of the most common problems in the world today, with more than 10% of people worldwide suffering from depressive disorders annually

(Ettman et al., 2020). The prevalence of depression has been reported significantly higher in students than in the general population, which has caused global concern (January et al., 2018). The prevalence of depression and its symptoms among students has been reported about 51% (Kebed et al., 2019). The prevalence of depression in different Iranian populations has varied from 5.69 to 73%. Also, in Iran, this disorder is more common in women and girls than in men. (Montazeri et al., 2013). Depressive symptoms affect a wide range of physical, cognitive, and emotional processes, which are associated with several problems in young people such as self-harm, attention deficit hyperactivity disorder, obesity, and poor academic performance (Nasiri & Shahgholian, 2021).

One of the problems that can occur with depressive disorders is self-injurious behaviors (Homartin et al., 2012). Non-suicidal self-injury (NSSI) is a serious public concern and increasing significantly and alarmingly in

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young people and point out the damage that people intentionally inflict on their own bodies (Bakken et al., 2012; Mozaffari et al., 2022; Najian et al., 2022; Van der Ven et al., 2023). Self-injury is a conscious act in which people damage their body tissues, and this action is done delicately and with sharp objects such as knives, glass and mirrors on the wrists, legs, arms and neck. These behaviors may take various forms such as cutting, scratching, burning the skin, inserting sharp objects into the body, hitting themselves, pinching etc. (Gu et al., 2020). Goals and motivations of these behaviors are generally to reduce or relieve tension, negative emotions, insensitivity, and self-punishment or dissociative experiences (Hoffmann et al., 2021). Self-injury is very common in borderline personality disorders and for this reason, it was initially classified as a criterion for borderline personality disorder (Turner et al., 2015). However, it was eventually included in the diagnostic categories with the introduction of the criterion for self-injury disorder without suicidal intent in the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) (Shaffer and Jacobsen, 2009).

The prevalence of self-injury in adolescents has been reported to be 17% and in young adults to be 13% (Muehlenkamp et al., 2013; Swannell et al., 2014). Research results show that self-injury has become a common phenomenon in schools and universities, and the prevalence of this behavior in Iranian youth is between 3.4-40.5% (Ezakian et al., 2018). Studies have shown that about 0.8-6.7% of people involved in self-injury meet the full DSM-5 criteria for NSSI (Mohammadipour & Roshan, 2022). NSSI predicts increased symptoms of depression, hopelessness, and emotional dysregulation, and depressive symptoms also predict NSSI (Faura-Garcia et al., 2024). A survey in China showed that 55.1% of NSSI patients had depression (Wang et al., 2021). Similarly, about 34.2% of Chinese youth with severe depression had a history of self-injury (Kang et al., 2021). Previous research has shown that depressive disorder and NSSI often co-occur (Liang et al., 2023). Also, in a study by Idris and Mahafar (2024) on 73 first- and second-year college students with a history of self-injurious behavior, they concluded that there was a positive and significant relationship between depression and NSSI.

One of the factors that makes people more susceptible to depression is negative self-conscious emotions such as shame and guilt (Kim et al., 2011). These people are involved in their self-conscious emotions throughout their lives. Self-conscious emotions, such as guilt, shame, pride, and embarrassment, are moral emotions that lead people to adapt to social norms and personal standards and appear in early childhood (Bitarafan et al., 2020). What plays an important and fundamental role in self-conscious emotions is self-evaluation (Siegel, 2020). The difference between shame and guilt is that the emotion of shame focuses on the self and the emotion of guilt focuses on one's behavior. In essence, the ashamed person is someone who judges themselves, and the guilty person evaluates their behavior (Scheff, 2017). Shame and guilt – two emotions that have been commonly

studied – arise when individuals fail to meet perceived moral or social standards. Shame is associated with self-consciousness and feelings of inferiority and involves condemning the whole self, not just the failed action. Indeed, shame is associated with increased withdrawal, behavioral avoidance, and depression. Guilt is also an unpleasant emotion that is strongly associated with sadness and grief, and since the focus is on understanding the problem and how to fix it, guilt is likely to reflect concerns about social image, but not a global self-concept. Accordingly, guilt is more likely to induce corrective behavior to restore one's social image and reduce the effects of harmful behavior. In support of this theory, guilt is associated with greater perspective-taking, a desire to make amends, and forgiveness-seeking behaviors (Oflazian, 2023).

A study by Kim et al. (2011) showed that shame and guilt are important predictors of depression, and their results indicated that shame and guilt were significantly associated with depression. In a study of 426 undergraduate and graduate students, they concluded that shame and guilt are related to depression, and that shame positively and guilt negatively predicted depression through suppression (Zhan-Waxler & Kochanska, 1990; Liw et al. 2022).

Another risk factor that plays a role in the occurrence and recurrence of depression is self-criticism (Gilbert & Irons, 2005). Dinger et al. in 2015, based on the Blatt personality vulnerability model, three personality traits of dependency, self-criticism, and efficacy make a person more vulnerable to depression, and among these variables, self-criticism has a more predictive role than others regarding the severity of depression. Self-criticism is a reaction to the perceived mismatch between expected and actual results (discrepancy between expectations and reality) (Kiaei & Kachouei, 2022). Self-criticism has two levels: internalized self-criticism: a negative view and opinion of oneself against personal and internal standards. Comparative self-criticism: a negative view and opinion of oneself against others (Mashak et al., 2021). A self-critical person insists on achieving their desires and goals without enjoying their achievements and judges themselves harshly. Hence, they usually feel worthless, guilty and a failure in life (Kiaei & Kachouei, 2022).

In a study by Gilbert and Miles (2000), they concluded that self-criticism is highly correlated with shame, and ultimately shame and self-criticism increase the risk of developing disorders such as depression and anxiety, and also increase the likelihood of relapse. Steen et al. (2021) in their study examined the role of self-criticism in the occurrence of depression and its clinical consequences, and the results of the study showed that self-criticism is not only related to the severity of depression, but can also be considered as an effective intervention target in clinical treatments for depression. In addition, Mahdavi et al. (2023) examined the role of self-criticism in the relationship between attachment styles and depression, and the results of the study showed that self-criticism is significantly related to depression. Also, Andrei et al.

(2023) found that there is a relationship and correlation between self-criticism and postpartum depression. Overall, it seems that people who experience negative self-conscious emotions such as shame, guilt, and high self-criticism will experience more self-injurious behaviors, which will lead to more depressive symptoms. Therefore, identifying the effective mechanisms of depressive disorder in the form of a model will lead to better understanding and insight and increase preventive and intervention programs. Also, given the high prevalence of depression in the youth community and its upward trend, despite the existence of research in the field of pathology and mental health, research has often focused on a limited study of a few variables and has not considered the role of other effective factors in this relationship. Given the research gaps seen and despite the contradictions in the research, it is necessary to conduct more studies in this field, and examining this issue is of great importance. For this reason, this study aimed to investigate the mediating role of self-injury in the relationship between self-conscious and self-critical emotions and depression in students.

The proposed conceptual model has the depression construct as the model's criterion manifest variable, the self-injury variable as the model's mediator manifest variable, and finally the self-conscious and self-critical emotion variables as the model's latent predictor variables (Figure 1).

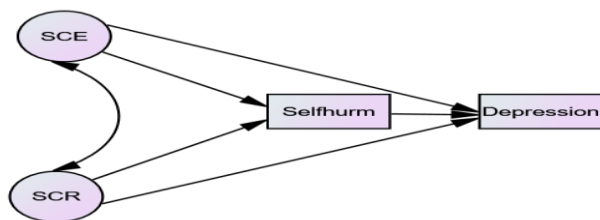


Figure 1. Proposed Conceptual Model of the Research

Method

Participants

The design of this research was correlational using causal modeling methods (structural equation modeling). The population of this research was all undergraduate students at the University of Guilan, and it should be noted that this research was conducted in the winter of 2023. The sample of this research was 724 undergraduate students who were selected through convenience sampling from the university and The faculties of literature and humanities, technology, and art and architecture, and questionnaires were distributed among them (until the sample size was completed) and some of them were distributed online. In order to determine the desired sample size in path analysis, Kline's recommendation (2023) based on "At least 200 people are needed to fit the model" was used. In order to increase external validity and accuracy in measurement, the researcher analyzed 724 questionnaires. The inclusion criteria were: the students' educational level (bachelor's degree) and their age, which was 18 to 25 years. The exclusion criteria for the study were: absence of alcohol addiction and other

psychiatric and neurological disorders (through questions in the questionnaire), as well as failure to complete the questionnaire.

Instrument

Beck Depression Inventory-2 (BDI-2):

The Beck Depression Inventory-2 is a 21-item self-report questionnaire that assesses symptoms of depression, including changes in sleep and appetite, fatigue, and difficulty concentrating (Beck et al., 1996). Each item is scored on a four-point Likert scale from 0 to 3, except for two items that only include one response option. Responses are scored by summation, with higher scores indicating greater presence and severity of depressive symptoms (0–13: minimal, 14–19: mild, 20–28: moderate, 29–57: severe). The internal consistency of this instrument in an external sample is 0.73–0.92 and the alpha coefficient for the patient group is 0.86 and 0.81 for the non-patient group. In the study by Rabiei et al. (2022), the reliability obtained using Cronbach's alpha coefficient is 0.83 and the convergent validity with the Hamilton Psychiatric Rating Scale (HRSD), Zung Self-Rating Scale, MMPI Depression Scale and Multiple Affective Traits Scale of Depression has been reported to be more than 0.60 on average. In this study, in order to examine the reliability, Cronbach's alpha coefficient was measured and its value was 0.86.

The Self-Harm Inventory (SHI):

The Non-Suicidal Self-Injury Scale was developed by Wiederman and Sanson (1998). It is a 22-item self-report questionnaire that assesses the presence of intentional self-harm, including non-suicidal self-injurious behaviors. Participants are asked to respond yes (0) or no (1) to whether they have intentionally engaged in a variety of self-harm behaviors, including "self-burning," "intentional hitting," and "self-cutting." Although the items on this questionnaire require attribution of intentionality for self-harm, they do not detect the presence or absence of suicidal intent. A total score is created by summing all positive responses and can range from 0 to 22. A score of 5 is considered the clinical cutoff for self-injurious behaviors (Sanson et al., 1998). However, research among nonclinical college populations has found that a score of 5 typically indicates mild self-injurious behavior and a score of 11 typically indicates more severe self-injurious behavior. In a study with college samples (Latimer et al., 2009), this questionnaire demonstrated the expected external validity, with good convergent validity with scores on stress, depression, and anxiety measures and good internal consistency ($\alpha = 0.83$). In a study by Sharifipour Choukani et al. (2021), the concurrent validity of this questionnaire with the Self-Injury Knowledge Questionnaire without Suicidal Intention by Warm et al. (2003) on 119 students was estimated to be 0.27 ($P < 0.05$). In the study by Mikaeli et al. (2019), the Cronbach's alpha of this questionnaire was 0.74. The reliability of this questionnaire was measured and the Cronbach's alpha coefficient was 0.82.

The Test of Self-Conscious Affect-3 (TOSCA-3):

The Self-Conscious Affect Questionnaire was developed by Tangeni et al. in 2000. This questionnaire measures responses to various scenarios of emotional, cognitive, and behavioral characteristics associated with shame-proneness and guilt-feeling traits. It also includes items that measure externalization, shame, indifference, pride in oneself (alpha pride), and pride in behavior (beta pride). The latest version of this questionnaire contains 70 items in the form of 16 scenarios, 11 of which are positive and five are negative. Each item is rated on a 5-point Likert scale from 1 (never) to 5 (very likely). The construct validity of this scale showed that there is a positive and significant correlation between the shame-proneness subscale and the 9 SCL-90-R components (correlation coefficients ranged from 0.20 to 0.40 and were significant at $p > 0.001$). In Iran, in the study by Roshan Chesley et al. (2007), Cronbach's alpha reliability and test-retest reliability were 0.78 and 0.64 for shame and 0.64 and 0.39 for guilt, respectively. This test also had a high correlation with the Tangeni and Deering Shame and Guilt Test, which indicates the desirable reliability and validity of this test. Also, in the study by Khazai et al. (2021), Cronbach's alpha for the shame and guilt scales was reported to be 0.78 and 0.82, respectively. In the present study, the reliability of this scale was calculated and the Cronbach's alpha coefficient for the shame and guilt scales was 0.81 and 0.73, respectively, and for the entire scale, 0.85.

Self-criticism Scale (LOSC):

This questionnaire was developed by Thompson and Zuroff (2004) and measures the level of self-criticism in an individual at two levels; the two levels are: Internalized self-criticism: a negative view and opinion of oneself against personal and internal standards, which includes 12 items. Comparative self-criticism: a negative view and opinion of oneself against others, which includes 10 items. This questionnaire has 22 questions, the answer to each question is in the form of a seven-point spectrum. In Iran, the validity and reliability of this scale was investigated in a study by Abdi et al. (2020) on 457 students of Iran University of Science and Technology, and they obtained the convergent validity of the "Self-Criticism Scale" through its correlation

with the "Self-Doubt Scale" of 0.44 and the "Beck Depression Inventory" of 0.48. Also, the reliability was calculated by the internal consistency method by calculating the Cronbach's alpha coefficient with the above sample size, 0.83. In our study, the reliability of this scale was obtained using Cronbach's alpha of 0.83.

Procedure

In order to collect data, 865 questionnaires were distributed, of which 126 were excluded based on the research entry and exit criteria or failure to deliver the questionnaires to the relevant person, and 15 were also removed from the research as outliers, and finally 724 people were selected as the final sample and entered into the analysis. To comply with ethical considerations, the questionnaires were anonymous and answering the questions was completely voluntary. Participants had the option to withdraw from completing the questionnaires if they did not wish to continue their cooperation. Finally, the present study was approved by the Biomedical Research Ethics Committee of the University of Guilan with the ethics code IR.GUILAN.REC.1402.066. Data analysis was also performed with SPSS26, AMOS24 software, using correlation and structural equation statistical methods, and the bootstrap method was also used to test the mediating relationships.

Results

In the present study, 40.3% (292 people) were boys and 59.7% (432 people) were girls. 23.5% (169 people) were in the age range of 18 to 19 years, 36.1% (262 people) were in the age range of 20 to 21 years, and finally 40.4% (293 people) were in the age range of 22 to 25 years. Also, 97.2% (704 people) of them were single and 2.8% (20 people) were married. Among them, 19.9% (143 people) were employed and 80.1% (581 people) were unemployed. The birth order of the students was also examined, and 45.8 percent (332) were only children, 32 percent (323) were second children in the family, 14.6 percent (106) were third children, 6.1 percent (44) were fourth children, and finally 1.5 percent (10) were fifth children in the family. The type of student participation in the research was also examined, and among them, 72.9 percent (528) answered the questionnaires in person and 27.1 percent (196) answered the questionnaires online.

Table 1. Mean, Standard Deviation, Skewness, Kurtosis and Correlation Between Research Variables

Variables	M	SD	VIF Statistics	Skewness	Kurtosis	Depression	Self-injury	Self-Conscious emotions	Self-criticism
Depression	15.58	9.64	-	0.54	-0.08	1			
Self-injury	3.85	3.64	1.154	1.26	1.32	0.49**	1		
Self-Conscious emotions	220.140	25.06	1.200	-0.03	1.91	0.34**	0.18**	1	
Self-criticism	89.18	18.40	1.322	-0.08	-0.17	0.55**	0.36**	0.40**	1

** $P < 0.01$

According to Table 1, the depression variable has a mean of (15.58) and a standard deviation of (8.44). The mediator variable of self-injury has a mean of (3.85) and a standard deviation of (3.64). The variables of self-conscious and self-critical emotions also have a mean of

(140.220 and 18.89) and a standard deviation of (25.06 and 18.40), respectively. Also, according to the results of the correlation matrix, there is a positive relationship between depression and self-injury ($p < 0.01$). There is a positive relationship between depression and self-

conscious emotions ($p < 0.01$). There is also a positive relationship between depression and self-criticism ($p < 0.01$). In addition, there is a positive relationship between self-injury and the variables of self-conscious and self-critical emotions ($p < 0.01$). And finally, there is a positive relationship between the variables of self-conscious and self-critical emotions ($p < 0.01$). Also, examining the variance inflation factor (VIF) values in Table 1 showed that all variance inflation factor values were less than the criterion of 5, and it can be concluded that the assumption of multiple noncollinearity was valid. To test the proposed model of the relationship between self-conscious and self-critical emotions mediated by self-injury in depressed students, the structural equation modeling method was used in the form of path analysis. The present study proposes a model with a total of four variables, including two exogenous variables, one endogenous variable, and one mediating variable. One of the indices used to determine the fit of a model is the chi-square, which is presented as an absolute fit index in Table 2. The model fit is inversely proportional to the chi-square value. This means that as chi-square increases, the model fit decreases. In fact, a significant chi-square value indicates a significant difference between the hypothesized and observed covariances. However, when dealing with large samples, the chi-square value is inflated due to its dependence on sample size, which often makes it statistically significant. To reduce this effect, researchers often use chi-square relative to its degrees of freedom (CMIN/DF) (Calquitt, 2001). In the relative chi-square index, values less than 3 are considered criteria for model fit. To examine the model fit indices, several other indices including goodness of fit (GFI), normalized fit index

(NFI), comparative fit index (CFI), relative fit index (RFI), incremental fit (IFI), parsimonious normalized fit index (PNFI), and root mean square error of approximation (RMSEA) are used and reported in Table 2.

Before examining the model fit, first, to check the absence of multivariate outliers, the Mahalanobis d^2 index was examined, and a significance level of less than 0.05 indicates that the outliers in question are outliers. Based on this index, 15 outliers were excluded from the analysis. In assessing the normality of single variables, the distribution of observations in the model, i.e. the main components of the study, was examined using skewness and kurtosis indices. According to Kline (2023), an absolute value of skewness less than 3 and an absolute value of kurtosis less than 10 indicate that there is no problem with the normality of single variables. There is no problem in conducting this analysis in terms of the normality of single variables. The Merdia kurtosis coefficient was used to check the normality of multivariate. This number in the present study was obtained as 8.22, which is less than the number 24. The aforementioned number was calculated using the formula $p(p+2)$, where p is the number of observed variables, which in this study are 4. According to the result obtained from the Merdia coefficient, multivariate normality is confirmed. It should be noted that before examining the assumptions in the structural equation model of the study, in the "Measurement Model" or "Confirmatory Factor Analysis" section, the "construct validity" of the measurement tools and determining how to measure the latent variables in the form of a number of observed variables were examined. The results of the confirmatory factor analysis show that the tools used in the study have a relatively good fit and have confirmed construct validity.

Table 2. Measurement Model Fit Indices of Research Instruments

Fit Indices	CMIN/DF	RMSEA	GFI	CFI	IFI	NFI
Measurement models						
Model 1- Depression	2.95	0.05	0.92	0.89	0.89	0.84
Model 2 - Self-injury	2.95	0.05	0.93	0.86	0.86	0.81
Model 3 – Self Conscious emotions With 3 latent variables	58.98	0.28	0.96	0.89	0.89	0.89
Model 4 - Self-criticism with 2 latent variables	4.66	0.07	0.88	0.86	0.86	0.83

According to Table 2, considering the fitted indices, it shows that all the tools used in the research have good construct validity and have a relatively good fit, and they can be examined in the conceptual model and structural equation model.

Then, the fit of the proposed model was examined and the degree of agreement of this model with the data was evaluated using fit indices. Despite the acceptable values

of some indices, in order to improve the fit of the proposed model, after modifying the model and creating covariance between the components of the instruments, reanalysis was performed on the data. The results show that the final model fits the mediating role of self-injury in the relationship between self-conscious and self-critical emotions and depression in students (Table 3).

Table 3. Fit Indices of the Mediating Role Model of Self-Injury in Relation to Self-Conscious Emotions and Self- Criticism with Depression in Students

Indicators	Abbreviation	Desired amount	Early model	Final model
Absolute fit indices	Chi-Square	Less than 5	11.31	3.65
	GFI	Greater than 0.9	0.96	0.99
	NFI	Greater than 0.9	0.90	0.97
Adaptive fitness indices	CFI	Greater than 0.9	0.91	0.98
	RFI	Greater than 0.9	0.78	0.93
	IFI	Between 0 and 1	0.91	0.98
Parsimonious fitness index	PNFI	Greater than 0.5	0.38	0.32
	RMSEA	Less than 0.08	0.11	0.06

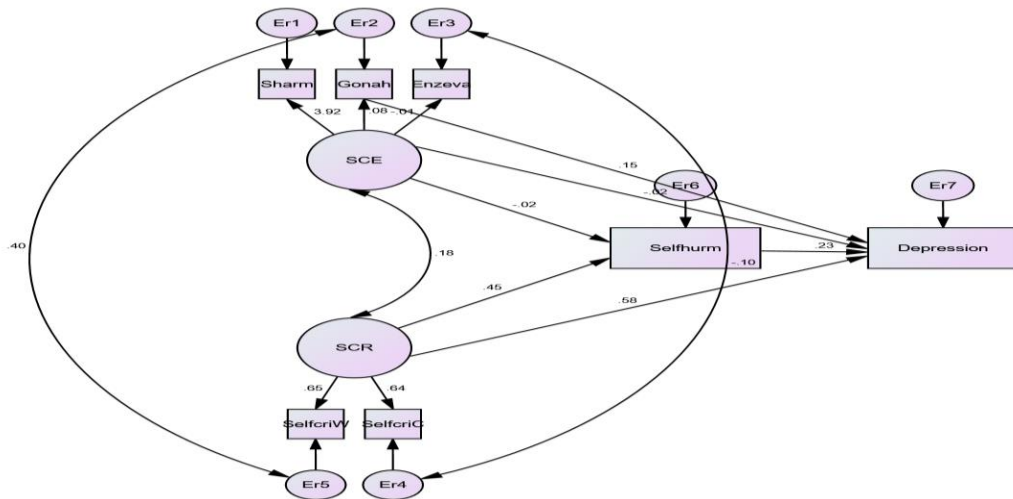


Figure 2. Standardized Regression Coefficients of the Final Model for the Mediating Role of Self- injury in the Relationship Between Self- Conscious Emotions and Self-Criticism with Depression

Table 4. Regression Coefficients of Research Variables

Paths	Coefficient	B	SE	CR	Sig
Self-conscious emotions → Depression	-0.004	-0.02	0.01	-0.26	0.790
Self-conscious emotions → self-injury	-0.002	-0.02	0.008	-0.26	0.792
self-criticism → Depression	0.93	0.58	0.09	9.78	0.001
self-criticism → self-injury	0.27	0.44	0.03	8.40	0.001
self-injury → Depression	0.59	0.22	0.10	5.73	0.001

According to Table 4, it can be seen that self-conscious emotions have no significant effect on depression ($\beta = -0.004, P > 0.05$). Self-conscious emotions have no significant effect on self-injury ($\beta = -0.002, P > 0.05$). Self-criticism has a direct effect on depression ($\beta = 0.93$) and self-injury ($\beta = 0.27$) and self-injury has a direct effect on depression ($\beta = 0.59$) ($P < 0.001$).

In the proposed model of the present study, there are two indirect paths. To determine the significance of each of the mediating relationships and the indirect effect, the process macro extension was used with a bootstrap coefficient of 2000 and a confidence level of 95%. The bootstrap results

for the mediating paths of the proposed model of the study are presented in Table 5. The amount of the indirect effect of self-injury (0.03) in relation to self-conscious emotions and depression, which is between the confidence interval range (lower limit 0.01 and upper limit 0.04), can be stated that self-injury mediates the relationship between self-conscious emotions and depression. Also, considering the amount of the indirect effect of self-injury (0.06) in relation to self-criticism and depression, which is between the confidence interval range (lower limit 0.04 and upper limit 0.08), it can be said that self-injury mediates the relationship between self-criticism and depression.

Table 5. Bootstrap Results for Indirect Paths of the Research Model

Paths	Total effect without the presence of a mediator	Direct effect in the presence of a mediator	Indirect effect	confidence interval 95% (Lower- Upper)	Conclusion
Self-conscious emotions → Depression (indirect path)	0.13 $P < 0.001$	1.17 $P < 0.001$	0.03 $P < 0.001$	(0/01- 0/04)	Mediation
self-criticism → Depression (indirect path)	0.28 $P < 0.001$	0.89 $P < 0.001$	0.06 $P < 0.001$	(0/04- 0/08)	Mediation

Discussion

In the present study, a theoretical model was proposed to investigate whether self-injury mediates the relationship between self-conscious emotions and self-criticism in depressed students. Before explaining the findings of the mediating role of self-injury in the relationship between self-conscious emotions and self-criticism in depressed students, the paths between self-conscious emotions and depression, self-conscious emotions and self-injury, self-criticism and depression, self-criticism and self-injury, and finally self-injury with depression were examined and explained.

The results of the study showed that there is a direct relationship between self-injury and depression, which is consistent with the results of studies by Homartin et al. (2012), Wang et al. (2021), Kang et al. (2021), Liang et al. (2023), Faura-Garcia et al. (2024) and Idris and Mahafar (2024). To explain this issue, we can point to the role of self-injury in emotional regulation, so that self-injury may be used as an unstable strategy to reduce or manage negative emotions such as depression, and people resort to this behavior to control or suppress their intense and painful emotions. On the other hand, self-injury behavior can lead to increased feelings of guilt, shame, and reduced

self-esteem, all of which can lead to an exacerbation of depression. Ultimately, self-injury may be considered as a sign of the severity and depth of depression in individuals. According to the results of the study, there is no direct relationship between self-conscious emotions and depression. These findings are inconsistent with the results of Zahn-Waxler and Kochanska (1990), Kim et al. (2011), Liw et al. (2022) and Oflazian (2023). To explain this issue, Gregory and Peters (2017), pointed out that individual differences such as cultural, personality, and social differences can also affect the relationship between self-conscious emotions and depression. For example, some individuals may be less likely to pay attention to conscious emotions for cultural or personality reasons, which could dilute the relationship between these two variables. Individuals may also be unable to properly explain this relationship due to their lack of awareness and recognition of their emotions, and conscious emotions are only one aspect of a complex interaction of factors that contribute to the development and maintenance of depression, as depression involves complex neural processes that may go beyond conscious emotional experiences (Pernes, 2015). The context in which conscious emotions are experienced can also significantly influence depression (Mikaeili et al., 2023). For example, experiencing guilt in a supportive environment where the individual can make amends may not lead to depression, whereas guilt in an unsupportive environment may lead to depression.

Although self-conscious emotions cannot be directly associated with depression, they are indirectly associated with depression severity through the path of self-injury; in other words, self-conscious emotions affect depressive symptoms through the activation of self-injury behavior and are related to each other. In explaining this issue, the mediating role of self-injury can be mentioned, which may be used as a coping mechanism by which the individual manages negative self-conscious emotions (such as shame and guilt). This coping mechanism can temporarily reduce these negative emotions, but ultimately leads to increased depression. Since self-injury can be temporarily relieving, the person may become more depressed due to the guilt and shame caused by self-injury, thus strengthening the link between self-conscious emotions and depression through self-injury.

In general, it can be said that self-injury behavior in this relationship initially has a protective role but ultimately leads to an aggravating role in depression, so that in the first place, self-injury can temporarily help the person to reduce the intensity of negative emotions and psychological pressures. This protective role is because self-injury can reduce stress and tension immediately, so that the person may use self-injury as a way to immediately reduce tension and psychological pressure, and also causes emotional discharge for the person, so that self-injury, by discharging negative emotions (such as anger, sadness, guilt, and shame), makes the person feel in control and manage their emotions (Schmidt et al., 2023). However, in the long term, self-injury can be recognized as an unhealthy behavior and an aggravation of

psychological problems. This aggravating role is because it increases feelings of guilt and shame, so that after self-injury, the person may experience feelings of guilt and shame, which can lead to increased depression (Klinberg et al., 2013; Rahmani, et al., 2023), and also causes dependence on this behavior. In other words, self-harm can become an addictive behavior that an individual uses repeatedly to cope with negative emotions, which can ultimately lead to an increase in psychological problems in the individual. Other reasons for this aggravating role include physical problems, as self-harm can lead to physical and medical injuries that require special treatment and care (Nock, 2014). Therefore, it can be said that self-harm has a protective role in reducing emotions of shame and guilt at the beginning and dealing with them initially, but ultimately it plays an aggravating role and leads to an increase in negative self-conscious emotions and depression.

Another finding of this study has showed that self-criticism has a direct and significant relationship with depression, and these findings were consistent with the results of studies by Gilbert and Irons (2005), Steen et al. (2021), Mahdavi et al. (2023) and Andrie et al. (2023). The closest cognitive distortion to self-criticism is all-or-nothing thinking (black-and-white thinking), in which everything is summed up at two ends of a spectrum; a spectrum with success and pride at one end and failure and shame at the other. Self-critical people become sensitive and vulnerable when faced with obstacles and problems on the way to achieving goals, and they have high expectations and demands in their efforts to improve themselves (Iancu et al., 2015). Self-critical people are prone to developing depressive disorder, which is characterized by feelings of inferiority and a sense of failure according to the standards expected of the individual (Golpour et al., 2014). Self-critical people feel that they have failed in their own lives (Stoner, 2018). These people consider their performance to be imperfect and, by setting unattainable standards for themselves, eventually distance themselves from social networks (James et al., 2015).

In addition, self-criticism is not only directly but also indirectly associated with the severity of depression through the path of self-injury; so that self-criticism also affects the symptoms of depression by activating self-injury. In other words, self-injury can act as a mediating mechanism that establishes a connection between self-criticism and depression. In such a way that self-criticism causes self-injury and self-injury in turn leads to depression. In other words, self-injury can intensify the negative effects of self-criticism and lead to increased depression. Therefore, self-injury plays an exacerbating role in the relationship between self-criticism and depression because it leads to the intensification of negative emotions in the long term and increased feelings of guilt and shame after this action. Ultimately, this behavior acts as an unhealthy coping mechanism that may reduce negative emotions in the short term, but in the long term it causes the intensification of depression and more psychological problems (Kleinberg et al., 2013).

Conclusion

Overall, this study has showed that self-criticism is directly related to depression and can act as a strong predictor of depression. Also, self-injury plays an important role as a mediating mechanism in strengthening the relationship between self-conscious emotions and depression, as well as between self-criticism and depression. In other words, self-injury can exacerbate the negative effects of self-criticism and negative self-conscious emotions on depression. Although self-conscious emotions are not directly related to depression, they can still be effective through more complex mechanisms such as self-injury. In general, it can be said that people who self-injure may have negative thought and emotional patterns as well as intense self-criticism, which can lead to depression, and self-injury acts as a maladaptive behavioral response to these negative and self-critical thoughts and feelings.

The present study, like other studies, has limitations, including the fact that the study was limited to a specific geographical and cultural location. Variables such as economic status and perception of the situation, and cultural and social levels of students were not controlled; therefore, caution should be exercised in generalizing the results. The present study was also cross-sectional and its research design was correlational; therefore, a causal relationship could not be inferred in this study. Given that the present study was conducted on young students, in order to further enrich the theoretical literature, it is suggested to future researchers to conduct this study in another population such as adolescents and students at different educational levels and, in addition to questionnaires, to use self-reporting by subjects or interviews to control for other variables. It is also suggested that in future studies, other variables such as anger, resilience, emotional regulation, and mood swings be used in the relationship between depression and self-injurious behaviors.

These findings indicate that addressing psychological factors such as self-criticism and self-conscious emotions, as well as unhealthy coping behaviors such as self-harm, is essential for reducing depression and improving mental health. Therefore, it is suggested that institutions and universities, by providing educational workshops such as emotion regulation and management skills and strengthening self-compassion, help individuals reduce negative self-conscious emotions and self-criticism and find healthier ways to deal with negative emotions, which will ultimately lead to a reduction in depression. It is also suggested that mental health professionals use the results of this study to identify the problems of individuals with depressive symptoms and design therapeutic interventions tailored to their problems. In this regard, the use of effective psychotherapy interventions, educational and support programs, and awareness-raising in different settings, and conducting further research can help improve the quality of life of individuals and reduce mental problems.

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