

The Effect of Emotional Intelligence on Depression among Chinese University Students: The Chain Mediating Role of Forgiveness and Psychological Resilience

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Abstract: This study aims to explore the implication of emotional intelligence on depression and the mediating role of resilience and forgiveness among Chinese college students. Participants (N=291) were asked to complete the “Emotional Intelligence Scale”, “Psychological Resilience Scale”, “The Forgiveness Scale”, and “The Flow Centre Depression Scale”. The correlation analysis shows a positive correlation between depression and emotional intelligence, psychological resilience, and forgiveness. The chain mediation effect analysis shows that emotional intelligence indirectly affects depression through psychological resilience and forgiveness, psychological resilience and forgiveness play a fully mediating role, and emotional intelligence depends on psychological resilience and forgiveness and helps to reduce depression. Therefore, it is recommended that college students improve emotional intelligence, promote psychological resilience, increase control over emotions as well as learn forgiveness and self-forgiveness, avoid impulsive emotions, reduce depressive episodes, and achieve a reduced risk of suicide.

Keywords: Emotional intelligence, Depressed mood, Psychological resilience, Forgiveness

1. Introduction

Depressed mood is one of the most dominant and frequently occurring mood disorders in humans and is not the same as depression, which is shorter in duration and less severe than depression. However, once depression has lasted for more than three weeks, it can have a significant negative impact on an individual's learning, work, and life. Severe depression can not only impair motivation and behaviour, but may even lead to risky behaviors such as suicide. In the current epidemic, domestic scholars have found that the detection rate of depressive tendencies among Chinese university students has been as high as 10.4% to 79.3% [1]. Therefore, there is a great need to explore the factors influencing depressive mood and the mechanisms of action.

Emotional intelligence was first proposed by Peter Salovey and John Mayer in the 1990s as a way for individuals to promote the development of their emotional thinking through self-regulation and control. According to Carnegie, people's achievements are largely determined by their emotional

intelligence. In our daily lives, people encounter a variety of problems, such as difficulties in adapting to new environments and poor interpersonal communication, which can lead to a range of negative emotions, such as depression, anxiety, frustration, and fear. Up to now, there have been few foreign studies on the content of emotional intelligence. However, in the last two years, more research scholars have focused on emotional intelligence and mental emotions such as depression. It has been found that the level of emotional intelligence of university students is mostly a positive development and that the level of emotional intelligence can positively regulate depression, enhance psychological well-being, and have a positive effect on reducing depression and other negative emotions [2]. Given this, it is hypothesized that emotional intelligence affects the depressed mood of college students and not directly, and it is hypothesized that emotional intelligence affects depressed mood through mediating variables.

Psychological resilience is the “ability to bounce back” from adversity, trauma, tragedy, threat, hardship, and other life stressors [3]. Research has found that emotional intelligence is a prerequisite for psychological resilience and that emotional intelligence enhances psychological resilience and helps individuals adapt successfully to challenging and threatening situations [4]. Some studies have found that psychological resilience is significantly associated with emotional intelligence in early adult depressive disorder [5]. This may be since people with high levels of emotional intelligence are better at perceiving, understanding, using, and managing emotions, and are therefore able to deal with negative effects in a more effective way when faced with stressful life situations or negative events, thus facilitating the ‘rebound effect’ and increasing psychological resilience.

Luo Chunming et al. define forgiveness as “the process of changing from complex negative mood such as fear and anger, doubt and fear and sadness, fear and disgrace to positive emotions” [6]. Forgiveness is divided into self-forgiveness, which is related to anger, anxiety, and shame, and other forgiveness, which is relevant to anger, anxiety, and guilt. Research has shown that forgiveness is significantly and negatively associated with depression and that forgiveness tendencies can significantly and negatively predict depressive symptoms [7]. In other words, those with high psychological resilience should be those who can perceive, understand and regulate their emotions and adapt to social pressures. They can use forgiveness and behavior methods to resolve interpersonal problems, the effect of which is that they are less likely to conflict with friends. It has also been shown in several studies that psychological resilience partially moderates the correlation between forgiveness and well-being and that the tendency to forgive appears to significantly affect an individual’s ability to recover from adversity [8].

There is preliminary evidence for the effect of emotional intelligence on depressive mood, and most studies classify emotional intelligence as a moderator or mediator of depressive mood or use emotional intelligence as a dependent variable for depressive mood. There were few studies on forgiveness and emotional intelligence, forgiveness and psychological resilience, and even fewer studies on the interrelationship between forgiveness, psychological resilience, and emotional intelligence. Based on the above, this study, using Chinese undergraduate students (18-23) as the study population, argues that the effect on depressed mood can be discussed by increasing emotional intelligence as the independent variable, promoting two dimensions of the two variables of psychological resilience and forgiveness, and examining the mediating role of forgiveness and psychological resilience.

In the abstract, it is reasonable to make two hypotheses that

Hypothesis 1 (direct effect): Emotional intelligence directly predicts depressed mood.

Hypothesis 2 (indirect effect): Forgiveness mediates the impact of emotional intelligence on depression.

Resilience mediates the impact of emotional intelligence on depressed mood.

Resilience mediates the impact of forgiveness on depressed mood.

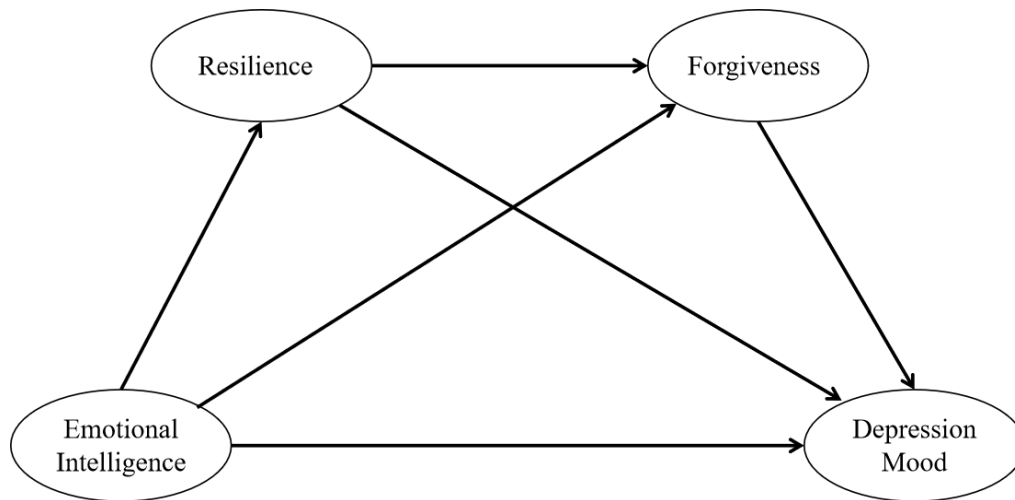


Figure 1: The proposed theoretical model to be tested.

As shown in Figure1.

2. Method

2.1. Participants

This study adopted a questionnaire sampling method to survey students in university during September 2022. With an effective rate of 95.72%, 304 questionnaires were distributed by WenJuanXing, and 291 samples were decided. 186 were male students and 105 were female students.

2.2. Measurements

2.2.1. Emotional Intelligence Scale (EIS)

This scale with a total of 16 questions, including four subscales: the problem solving ability and the ability to express one's own emotions, the ability to identify and solve the emotions of others, the ability to manage one's own emotions, and the ability to use emotions. The average or total score can be calculated. In the research, the Cronbach was 0.932.

2.2.2. The Forgiveness Scale

This scale was developed by Heartland and is divided into two dimensions: forgiveness of self and forgiveness of others, and is designed to measure the subject's tendency to forgive others and forgive themselves (e.g., "I always hold a grudge against those who have hurt me", "I have an inexplicable sense of guilt"). The scale contains 24 items, with the forgiveness of others and forgiveness of self sub-dimensions each consisting of 12 questions on a 7-point scale (1 = not at all, 7 = fully), with higher scores being associated with a greater tendency to forgive others and forgive oneself. The Cronbach in the study was 0.829.

2.2.3. Psychological Resilience Scale

Connor-Davison developed the Psychological Resilience Scale(CD-RISC), and this scale was revised by Xiao Nan and Jianxin Zhang. The scale consists of three dimensions - optimism, resilience, and self-improvement - and contains a total of 25 question days. The scale is scored on a 5-point Likert

scale (from 0 to 4 for “never” to “always”). The scores for each question are added up to a total score and divided by the number of items to give a psychological resilience score. The higher the score, the higher the level of psychological resilience. The scale has been shown to have good validity and reliability in other studies. the Cronbach was 0.954.

2.2.4. The Flow Centre Depression Questionnaire

The Chinese version of the Flow Centre Depression Questionnaire, developed by Radloff and revised by Chen Ziyang et al was used. A total of 20 questions were used, ranging from depressive mood, positive mood, somatic symptoms, psychological resilience, interpersonal, physical symptoms, and activity retardation. Likert 4-point scale: 1=“hardly ever (less than a day)”, 4= “most of the time (5-7 days)”. Some questions were reverse scored to give a total score for all items. Higher scores indicate higher levels of depression. The Cronbach of this scale in this study was 0.911.

2.3. Procedure and Data Processing

This study used the questionnaire strategy to collect data. For the purpose of ensuring that the subjects could answer the questionnaire carefully, participants have been informed that the questionnaire was anonymous and that the data collected would be explored for scientific research purposes only, and that the subjects should answer the questionnaire according to their real situation. The data collected were entered using SPSS software and tested for common method bias. The Mplus software was used to test the impact of emotional intelligence on depression in college students, and on the basis that emotional intelligence significantly affects depression, the chain-mediated mediating effects of forgiveness and psychological resilience were analyzed.

2.4. Data Analysis

SPSS 26.0 was used in this study and Mplus 8.3 calculate descriptive statistics of all study variables and bivariate correlations between them. To analyze the mediation influence, the pilot program of 1000 iterations was used in this study. The Bootstrap method gives estimates of indirect and direct effects. For the impact estimates, 95% bias-corrected (BC) confidence intervals (CI) are shown on the meditation path, excluding the zero of the impact.

3. Results

3.1. Common Method Bias Test

To examine errors and common method biases due to four questionnaires, this study conducted Harman’s single-factor test and the factor analysis for all items containing four variables. Explained that the characteristic root was better than 1 for 15 factors, and the first factors took up 27.01% of the total variation, lower than the threshold of 40% proposed. Thus, there were no serious problems of common method bias in the study.

3.2. Correlation Analysis and Descriptive Stats

The means, correlation coefficients and standard deviations between the variables in the study are given in Table 1. In this study, correlation analysis was used to investigate the correlation between depressed mood and emotional intelligence, psychological resilience, and forgiveness, and Pearson’s correlation coefficient indicates the strength of the correlations. According to the results of the study, depressed mood was significantly correlated with emotional intelligence, psychological resilience, and forgiveness, with correlation coefficients of 0.33, 0.21, 0.42, respectively, which were greater than

0. This indicates that there is a significant positive correlation between emotional intelligence and depressed mood psychological resilience, and forgiveness.

3.3. Tests of Mediating Effects

For Ind1 (emotional intelligence-resilience-depressed mood): 95% confidence interval excluding 0 (0.560-0.575), indicating the presence of this mediating effect path; for Ind2 (emotional intelligence-forgiveness-depressed mood):95% confidence interval excluding 0 (0.312-0.755), indicating the presence of this mediating effect path; for Ind3 (emotional intelligence-forgiveness-resilience-depressed mood): 95% confidence intervals did not include 0 (2.213-0.027), indicating the presence of this mediating effect path. Table 2 for this data.

The data analysis in this paper is shown in Figure 2.

Table 1: Descriptive statistics and correlation analysis (N=291)

Variables	M	SD	Depressed mood	Emotional intelligence	Psychological resilience	Forgiveness
Depressed mood	1.34	1.19	1			
Emotional intelligence	2.46	4.84	0.33**	1		
Psychological resilience	1.50	2.20	0.21**	0.59**	1	
Forgive	1.32	1.35	0.42**	0.32**	0.18**	1

* $p < 0.05$ ** $p < 0.01$

Table 2: Mediating impact

	Effect	Boot SE	BootLLCI	BootULCI
Total effect	0.000	0.001	-0.056	0.955
Ind1	0.000	0.001	0.560	0.575
Ind2	0.000	0.000	0.312	0.755
Ind3	0.001	0.000	2.213	0.027
Diff1	0.000	0.001	0.246	0.805
Diff2	0.000	0.001	-0.302	0.763
Diff3	0.000	0.000	-0.848	0.396

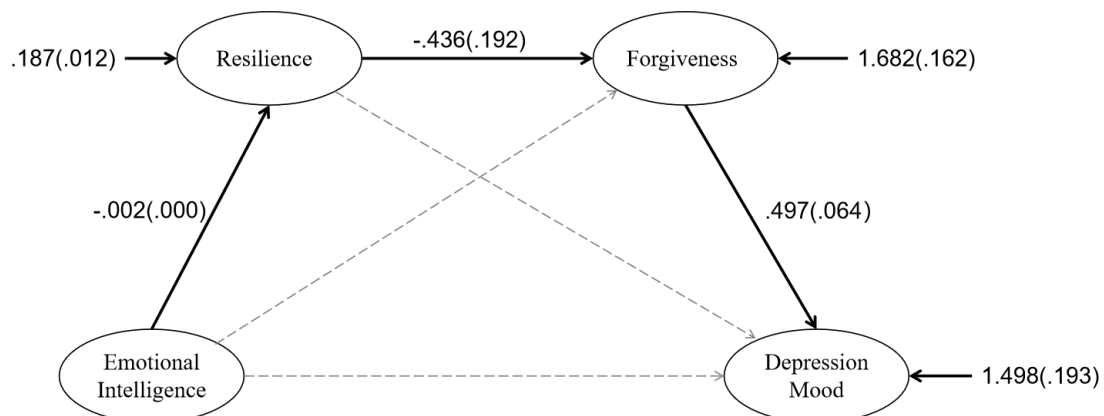


Figure 2: Full mediation of forgiveness and resilience between emotional intelligence and depression.

4. Discussion

This study focuses on the pathways through which emotional intelligence influences depressed mood. Through the construction of a chain mediation model, it was found that emotional intelligence affects depression through the combined effect of two mediating variables, which suggests the mechanism by which emotional intelligence affects depression: emotional intelligence affects depression indirectly through psychological resilience and forgiveness, and the two mediating variables, psychological resilience, and forgiveness, play a fully mediating effect in the inhibitory exertion of positive facilitative effects of emotional intelligence on depression. Emotional intelligence is not a core factor that significantly influences depressed mood or is not directly responsible for the reduction of depressed mood, but is entirely dependent on good psychological resilience and forgiveness to affect the reduction of depressed mood.

As discussed in the self-management and other-management dimensions of emotional intelligence, high emotional intelligence makes individuals better at perceiving, understanding, using, and managing their emotions, and therefore enhances their psychological resilience in situations such as when faced with life stress or negative events, helping them to adapt successfully in challenging and threatening situations or to be able to adopt more effective ways of dealing with negative effects. Thus promoting Psychological resilience works to promote an individual's social adjustment and well-being [5].

Previous studies have shown a statistically significant positive correlation between forgiveness and resilience. This relationship implies that university students who can recover from adversity and let go of their negative emotions, thoughts, and transgressions are also more able to forgive others and themselves, thereby reducing stress and experiencing fewer symptoms of depression.

Forgiveness can be used as an emotion-centered coping strategy. As forgiveness is a choice and a process, highly resilient adolescents who have learned cognitive behavioural skills to control these emotions are less likely to resort to impulsive, vindictive, or retaliatory behaviour when angered and are more likely to choose to forgive the offender and to deal with frustration rationally and positively [9].

Non-forgiveness is defined as a stress response. Self-forgiveness can reduce the shame associated with the perception of another person's burden. Self-forgiveness is defined as a form of acceptance that reduces uncomfortable emotions and impulses. promote a reduction in the onset of depression and reduce the risk of suicide [10].

We suggest that adolescents can benefit from practising forgiveness by acquiring more ways to increase their psychological resilience and more positive coping skills.

5. Conclusions

This study mainly explores the impact path of emotional intelligence on depressive mood, and explains the mechanism of emotional intelligence on depression: emotional intelligence indirectly affects depressive mood through psychological resilience and forgiveness, rather than a single effect. When emotional intelligence exerted a positive facilitation effect on the suppression of depressive emotions, the two mediator variables, resilience, and forgiveness, jointly played a fully mediating role.

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